



Renfrew

TOWN OF RENFREW
127 Raglan Street South
Renfrew, Ontario
K7V 1P8

Tender 2025-10-LCRS - Ma-te-way Park Power Supplies - Phase 1

Section I – Information

Background

The Corporation of the Town of Renfrew, hereinafter referred to as the “Town”, is seeking bids for upgrade/replacement of electrical equipment required to update the power supplies and lighting within Ma-te-way Park. This includes the supply, delivery, and installation of materials for panels, enclosures, underground feeders to panels and enclosures, and feeders to existing light standards. Phase 1 of the project is to update Block Building Electrical Upgrades, Tye Field new UG feeders to existing light standards, new UG feeder and enclosure at Seeley Field.

The lowest or any bid will not necessarily be accepted, and the Town reserves the right to award any portion of this tender. This offer shall be irrevocable for a period ninety (90) calendar days following the date bids are to be received.

Registration and Communications

It is mandatory that you register as a bidder with the Corporation of the Town of Renfrew. **Failure to register will result in non-acceptance of your submission.**

Please remit Name of Company, Name of Contact Person, and Contact Information to:

Ashley Robertson, Purchasing Assistant, Town of Renfrew

Email: arobertson@renfrew.ca

All communications must reference **Tender 2025-10-LCRS** in the subject line.

Questions related to this tender or the requirements are to be received by **2:00 p.m. on August 19th, 2025**. Inquiries should be directed to the Municipal Contact listed.

Municipal Contact: Ashley Robertson, Purchasing Assistant, Town of Renfrew

Email: arobertson@renfrew.ca

Where a bidder finds discrepancies or omissions in the tender requirements or otherwise requires any clarification, the bidder should contact the Corporation of the Town of Renfrew in writing by email as noted above. Where the Corporation of the Town of Renfrew deems that an explanation or interpretation is necessary or desirable, an addendum may be issued.

Only documents provided to bidders by the Town or found on Biddingo are to be considered the **official** documents. The Town accepts no responsibility for the accuracy of information found on other websites. The onus is on the bidder to check on the Town's and Biddingo's website to verify they have received all relevant information. The Town



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reserves the right to not accept a bid submission if determined that the documents have been altered from the Town's own official documents.

Delivery and Closing Time

Tenders must be received no later than **2:00 p.m. August 26th, 2025**. The time clock in the main counter service area in the Renfrew Town Hall Office is the official time for the deadline for submission. The Town is not responsible for submissions which arrive late or are not properly marked.

- (a) All Tenders shall be submitted on the supplied Tender Form, in a sealed envelope and shall be clearly marked as to the contents and bidders name.
- (b) Tenders received by this time, date and at the location specified above, shall be opened and read in a virtual public opening. The virtual public reading of a tender does not imply any decision by the Corporation of the Town of Renfrew on whether a tender is or is not irregular.
- (c) All Tenders must be completed in full, in ink and be legible.
- (d) The Tender Document shall not be modified in any way.
- (e) An officer of the company, designating their position shall sign the Tender Form and execute with the company seal. In the case of an individual trading as a company the signature of the person signing the Tender shall be witnessed.
- (f) Late Tenders **will not** be accepted beyond the closing date/time as set out. Tenders received after the established closing will be returned unopened.
- (g) Tenders transmitted by fax or email **will not** be considered.
- (h) **The lowest or any Tender is not necessarily accepted.**
- (i) Should a dispute arise regarding the meaning or intent of the contract documents, the decisions of the Town shall be final.
- (j) The Town of Renfrew will make documents available in an accessible format or via appropriate communication supports upon request.

The Bidder Declares

- a) No person, firm, or corporation, other than the Bidder, has any interest in this Tender in the proposed contract for which this tender is made.
- b) This Tender is made without any connection, comparison of figures or arrangements with or knowledge of any other corporation, firm or person making a tender for the same work and is in all respects fair and without collusion or fraud.
- c) No member of Council and no officer or employee of the Town is or will become interested directly or indirectly as a contracting party, partner, shareholder, surety or



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otherwise in any portion of the profits thereof, or in any of the monies to be derived there from.

Insurance

The successful bidder shall provide at all times the following insurances with issuers, satisfactory to the Town and in amounts stated below and ensure that such insurance is enforced and effective.

- (a) Workplace Safety & Insurance Board fully complying with the laws of the Province, with a Certificate of Clearance from the Workplace Safety & Insurance Board Independent Owner/Operator Status Form to show that the Bidder is in good standing.
- (b) The successful tenderer shall provide the Corporation of the town of Renfrew with an original Certificate of Insurance for **General Liability Insurance** for its operations in the amount of at least Five million dollars (\$5,000,000).
- (c) An **Installation Floater** with limits of not less than seventy-five thousand (\$75,000) Dollars. For coverage of materials to be installed while in transit and stored on the site/premises.
- (d) A policy of **Motor Vehicle Liability Insurance** of standard wording, covering motor vehicles owned, leased or operated by or on behalf of the Bidder, in connection with the Services provided or to be provided under this Agreement, with coverage of not less than Five Million (\$5,000,000) Dollars exclusive of interest or costs per occurrence and equipment leased, borrowed, rented or operated with coverage of not less than Five Million (\$5,000,000) exclusive of interest or costs per occurrence;
- (e) The Contractor's insurance shall name the following as additional named insured:

The Corporation of the Town of Renfrew
127 Raglan Street South, Renfrew ON, K7V 1P8

Damages and Responsibilities

- (a) The Contractor shall employ such methods as necessary to avoid defacement or damage to the Town's property.
- (b) The Contractor shall be responsible for all damage caused by his/her employees, equipment or supplies to the Town's property, equipment, buildings and building contents.

Freedom of Information

All written Quotations received by the Town of Renfrew become a **public** record. Once a Tender is accepted and a contract is signed, all information contained in them is available to the **public**, including personal information.



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Section I – Information

Scope of Work

The Town of Renfrew is requesting bids from qualified contractors for upgrade/replacement of electrical equipment required to update the power supplies and lighting within Ma-te-way Park.

The contractor is responsible to fully review the documents to understand the Scope of Work, the below summary is a high level overview. Overall, the Scope of Work is to correct existing code deficiencies and replace underground conductors that failed megger tests.

The scope of work is detailed in the attached drawings prepared by JP2G Consultants for project No. 25-4029A

Drawing List for project No. 25-4029A	
Symbol	Description
E-001	Titlepage
E-100	Specifications, legends and general notes
E-200	Electrical site plan - demolition and new work
E-201	Single line diagram and panel schedules
E-202	Site plan details

Ma-te-way Park - Ball Diamonds Phase 1:

1. Block Building

- 1.1. Remove existing splitter, fused disconnect switches, panel 'b' and all obsolete equipment, conduit and wiring in the small building.
- 1.2. Provide new 400a, 120/208v, 3ph, 4w, 42cct panel board 'b' c/w new circuit breakers to re-establish connections to existing branch circuit loads. Provide new junction boxes and wiring as required.
- 1.3. Panel 'b' remove existing 3 x 70a,3p feeders to Tye field lighting.
- 1.4. Provide in panel 'b' a 200a, 3p circuit breaker and feeder to new Tye field. Provide 200a lighting contactor and 225a panel board 'lpt' for Tye field lighting. refer to Tye field below.
- 1.5. Provide in panel 'b' a 200a,3p circuit breaker and feeder to new Seeley field enclosure panel board's'. Refer to Seeley field below.



2. Tye Field

- 2.1. Existing six (6) 50ft, direct buried, precast concrete poles with 6 or 7 1,000w metal halide luminaries to remain.
- 2.2. Remove existing underground duct bank and conductors (failed megger test) for the existing six (6) light standards back to new panel board 'b' in Block Building and make safe.
- 2.3. New panel board (located in block building) 'lpt' 225a, 120/208v, 3-phase, 4w, 24cct c/w six (6) 30a,3p circuit breakers to re-feed existing light standards.
- 2.4. New panel board to be controlled by new 200a, 120/208v, 3-phase lighting contactor c/w 120v coil. Coil to be controlled by timeclock and manual override switch.
- 2.5. Provide new underground duct banks c/w conductors from panel 'lpt' to existing six (6) tye field light standards. Refer to single line diagram for conductor sizing (upsized to accommodate voltage drop).
- 2.6. Sawcut and patch existing asphalt parking lot as required to accommodate the installation of new duct banks.
- 2.7. **Separate Pricing:** Contractor shall investigate existing vertical pole wiring and luminaire terminations per light standard. Allow for lift, replacement of vertical conductors and re-wiring luminaries to 120v in accordance with OESC 30-104. Existing wiring terminations are not known. Pole manufacturing date is 2020, Alternate pricing required because this may not be required. Existing may have luminaries already wired 120v.

3. Seeley Field

- 3.1. Remove existing rusted outdoor enclosure, contactor, panel board, load center, receptacles, timeclock and accessories. Reutilize the existing underground conduit and location. Remove existing posts and concrete base.
- 3.2. Remove existing 200a, 120/208v underground duct bank and feeder from Block Building to Seeley enclosure (failed megger tests).
- 3.3. Provide new 200a, 3p circuit breaker and underground duct bank feeder from Block Building panel 'b' to new Seeley outdoor enclosure panel board 's'.
- 3.4. Provide new nema 3r outdoor free-standing enclosure on a concrete pad to house new electrical distribution equipment. Enclosure shall be lockable and gasketed doors c/w drip shield.



- 3.5. Provide new 225a, 120/208v, 3-phase 4-wire, 24cct panel board 's' c/w circuit breakers. Provide junction box to safely terminate existing Seeley field conductors that have failed megger test. Provide new receptacles mounted on exterior of enclosure c/w while-in-use wp covers. Future phase to provide lighting contactor and panel board 'lps' for Seeley field lighting and re-establish connections to luminaires

General Notes

1. Patch, repair, repaint and make good all assemblies (including but not limited to walls, floors and ceilings) that are damaged as part of this work.
2. Electrical contractor shall coordinate power shut-down and re-energization with Renfrew Hydro as required to support demolition and new work connections. Electrical contractor shall schedule and coordinate work with Renfrew Hydro and pay all associated fees for disconnect and reconnection of power in accordance with the electric utility's requirements.
3. All dimensions are units of metric unless noted otherwise.
4. Contractor shall obtain locates of existing buried services prior to commencing site works.
5. When pulling conductors through existing manholes provide labeling above each duct entry and exit point describing source and termination point.
6. Work that requires lane closures must be planned and coordinated with town representative. Work to be done in only one lane at a time so that one or more lanes can remain open to process travelers. Exact times and days to be coordinated with Town representative.
7. This contractor shall provide temporary barricades and adequate traffic control measures to maintain vehicular traffic.
8. All existing underground services are not shown on this drawing for clarity. Coordinate exact underground routing onsite with other trades and with existing underground services (gas, water, sewer etc.). Refer to related site services drawings. Alternate routing proposals shall receive sign-off from the Town of Renfrew representative.
9. Electrical duct bank shall be installed with a minimum 1 meter clearance from all other services. Where this separation cannot be achieved advise JP2G/Town of Renfrew representative.



10. All necessary ESA inspections to be coordinated by this contractor as required.
11. Excavation, backfill and concrete, reinforcing associated with electrical work to be by general contractor.
12. Provide rises and drops in conduit run as required to accommodate changes in elevation and existing underground services. Report all changes in direction to engineer prior to installation. Low spots and sudden changes in direction will not be accepted.
13. When electrical duct bank is routed within 1 meter of Enbridge natural gas line the contractor shall follow Enbridge's requirements. Mechanical excavation is not permitted within 3m of pipeline unless verified and exact location has been determined. Vertical and horizontal clearances shall be as per Enbridge's requirements as it relates to the gas pipe size and pressure.
14. Restoration; upon completion of cleanup, grade surface as indicated or restore to original conditions. Replace topsoil and prepare for restoration of lawns. See civil drawings for further details. Restore pavement, concrete, interlock walkways and curbs to original conditions. If retaining wall is altered then restore to match existing.
15. All civil construction methods and materials to follow the latest Ontario provincial standards drawings (OPSD) and specifications (OPSS), unless otherwise noted.
16. Contractor responsible for obtaining all civil permits prior to commencing construction.
17. The position of pole lines, conduits, watermains, sewers and other underground and overhead utilities and structures is not necessarily located where shown on the drawings, and where shown, the accuracy of the position of such utilities and structures is not guaranteed. Before starting work, the contractor shall inform themselves of the exact location of all such utilities and structures and shall assume all liability for damage to them.
18. The Contractor is responsible for providing protection for all existing underground and overhead utilities during construction in accordance with OPSS muni 491 and the utility company requirements.
19. Protect trees not designated for removal in accordance with OPSS muni 801.
20. All existing signs, mailboxes, posts, etc., which must be removed to accommodate construction shall be salvaged and reinstated after restoration works are completed.



21. Contractor is responsible for all geotechnical quality control (qc) testing as noted in the applicable Ontario Provincial Standard Specifications (OPSS).
22. Contractor to submit all shop drawings, product data sheets and mix designs to the contract administrator for review a minimum of 10 working days prior to installation.
23. Existing underground duct bank routing shown on site plan is diagrammatic. Contractor shall determine exact routing of existing services to be removed.
24. Contractor shall take the necessary steps to stabilize and protect light standard poles when working near and replacing underground duct banks and wiring.
25. Splicing of underground cables will not be accepted

Schedule

The total project should commence upon award of tender and be completed by **November 30, 2025**.

Inspection

The Town reserves the right to:

- (a) Inspect all work performed by the Bidder under this Tender.
- (b) Shut down any operation, which gives an indication of poor workmanship or substandard materials being supplied under this Tender.
- (c) Refuse acceptance of workmanship until it is proven to be of a satisfactory quality.

Materials

Materials and equipment shall be supplied by the Contractor unless specifically stated in the Specifications.

Labour

- (a) All work shall be performed by workers who are qualified and skilled to carry out and perform the duties required in the Contract.
- (b) Increases in the cost of performing the work due to wage increases or adjustments shall be borne by the Contractor without additional cost to the Town.



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Supervision and Coordination

- (a) The Contractor shall appoint an experienced Supervisor to be responsible for all the work required under the Contract.
- (b) The Supervisor shall be readily accessible to the Town personnel at all times.
- (c) The Contractor shall supervise and coordinate all phases of the Work and shall cooperate fully with all supervisory representatives of the Town during the performance of the Work of this Contract.

Commencement and Termination

- (a) The Contractor shall commence work on the date stated in the Agreement as agreed upon by the Contractor and the Owner and shall continue for the period of time designated therein unless terminated in accordance with the provisions of this Contract.
- (b) The Town reserves the right to terminate the Contract upon giving seven (7) days written notice to the Contractor in the event of the Contractor neglecting or failing to perform the Work properly or diligently.

Change in the Work

- (a) The Town, without invalidating the Contract, may make changes by altering, adding to, or deducting from the Work. All additional work shall be executed under the conditions of this Contract.
- (b) No variations from the work that may result in a change to the amount of the Contract shall be proceeded with, until proper approval has been obtained by the Contractor in writing from the Town.

Miscellaneous

The Contractor and support staff should be prepared to make presentations to Town of Renfrew management, elected officials, and the general public, if required.

Site visits must be requested in advance and will be scheduled based on facility operating restrictions. Organized tours/briefings will be scheduled.

Verbal information, directions, and opinions, from whatever source, do not supersede nor elaborate on the requirements of this document. Changes in specifications and requirements (if required) will be provided in writing to all proponents by the contact identified above, in the form of a numbered addendum.



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Delivery and Official Closing Time of Proposals

All submissions shall be in a sealed envelope with covering pages (Mailing Label) and delivered to:

Town of Renfrew (Town Hall)

127 Raglan Street South

Renfrew, Ontario K7V 1P8

Attention: Ashley Robertson, Purchasing Assistant

Tender submissions must be received not later than **2:00 p.m. on August 26th, 2025.**

The time clock at the main counter service area in the Renfrew Town Hall shall be the official time for the submission deadline. The Corporation of the Town of Renfrew is not responsible for submissions which arrive late or are not properly marked. Submissions shall be officially opened after closing time.

Timeline

The expected timeline for selection is as follows:

Task	Target Date
Tender Issued	August 11, 2025
Question Deadline	August 19, 2025
Town Published Addendum (if applicable)	August 21, 2025
Closing date for Proposal Submissions	August 26, 2025
Approval at Town Council	September 9, 2025
Anticipated Award (on or about)	September 11, 2025



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Section III – Form of Tender

Bidder's Information

1.	Company Name	
2.	Bidder Contact Individual	
3.	Address (incl. Postal Code)	
4.	Office Phone Number	
5.	Cellular Phone Number	
6.	Fax Number	
7.	Email Address	
8.	HST Account Number	

I/We hereby submit the attached documents to satisfy the requirements as issued by the Corporation of the Town of Renfrew.

I/We agree that we have reviewed and understand the tender documents and I/We are capable and qualified to perform the requirements of the contract.

I/We agree that this offer shall be irrevocable from the time the quotations are opened and extended for a period of 90 days.

I/We agree that this offer acknowledges all addenda and that the pricing quoted includes the provision set out in such addenda.

Acknowledgement to Receipt of Addenda

This will acknowledge receipt of the following addenda and, that the pricing quoted includes the provision set out in such addendum(s)

Addendum #	Date Received
# _____	_____
# _____	_____
# _____	_____

☐ Check here if No Addenda considered.



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Basis of Payment

The contract price is in Canadian funds, and the price includes any specified cash and contingency allowances and all the applicable taxes in force at this date except as may be otherwise provided in the Tender Documents.

Method of Payment:

Payments shall be made upon scope completion, receipt of an itemized invoice sent in by the Successful Bidder to the Treasury Department and acceptance by the Project Manager. The invoice should include a breakdown of separate line items with descriptions, the subtotal, HST and total amount due. Additional back-up documentation shall also be provided where sub-contracted works form part of the overall work.

Cost Estimate Breakdown (excludes HST)

Description:	Cost:
Block Building	\$
Tye Field	\$
Tye Field Separate Pricing	\$
Seeley Field	\$
Additional Requirements (drawings, permits, etc.)	\$

Overall Project Quotation:

Description:	Cost:
Bid Price (as specified) No HST	\$
HST	\$
Total Upset Cost (including HST)	\$

Bid Submission

The undersigned affirms that they are duly authorized to execute this bid and that all costs associated with this proposal have been submitted in the fee envelope.

BIDDER'S SIGNATURE AND SEAL: _____

NAME AND POSITION: _____

WITNESS SIGNATURE: _____

NAME AND POSITION: _____

DATED AT: _____

THIS _____ DAY OF _____ 202__

Tender 2025-10-LCRS - Ma-te-way Park Power Supplies - Phase 1

From:

Contact:

Telephone:

Deliver to:

**The Town of Renfrew
127 Raglan Street South
Renfrew, ON K7V 1P8
Attention: Ashley Robertson, Purchasing Assistant**

Tender Number:

Closing Date and Time:

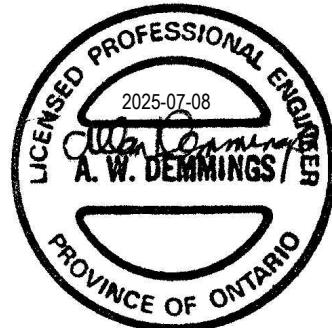
Description:

MA-TE-WAY PARK - BALL DIAMONDS LIGHTING
PHASE 1 - BLOCK BUILDING, TYE FIELD & SEELEY FIELD ENCLOSURE



DRAWING LIST	
SYMBOL	DESCRIPTION
E-001	TITLEPAGE
E-100	SPECIFICATIONS, LEGENDS AND GENERAL NOTES
E-200	ELECTRICAL SITE PLAN - DEMOLITION AND NEW WORK
E-201	SINGLE LINE DIAGRAM AND PANEL SCHEDULES
E-202	SITE PLAN DETAILS

SCOPE OF WORK	
THE CONTRACTOR IS RESPONSIBLE TO FULLY REVIEW THE DOCUMENTS TO UNDERSTAND THE SCOPE OF WORK. THE BELOW SUMMARY IS A HIGH LEVEL OVERVIEW. OVERALL, THE SCOPE OF WORK IS TO CORRECT EXISTING CODE DEFICIENCIES AND REPLACE UNDERGROUND CONDUCTORS THAT FAILED MEGGER TESTS.	
MA-TE-WAY PARK - BALL DIAMONDS PHASE 1:	
1. BLOCK BUILDING	
1.1. REMOVE EXISTING SPLITTER, FUSED DISCONNECT SWITCHES, PANEL 'B' AND ALL OBSOLETE EQUIPMENT. CONDUIT AND WIRING IN THE SMALL BUILDING.	
1.2. PROVIDE NEW 400A, 120/208V, 3PH, 4W, 420CT PANELBOARD 'B' C/W NEW CIRCUIT BREAKERS TO RE-ESTABLISH CONNECTIONS TO EXISTING BRANCH CIRCUIT LOADS. PROVIDE NEW JUNCTION BOXES AND WIRING AS REQUIRED.	
1.3. PANEL 'B' REMOVE EXISTING 3 X 70A, 3P FEEDERS TO TYE FIELD LIGHTING.	
1.4. PROVIDE IN PANEL 'B' A 200A, 3P CIRCUIT BREAKER AND FEEDER TO NEW TYE FIELD. PROVIDE 200A LIGHTING CONTACTOR AND 225A PANELBOARD 'LPT' FOR TYE FIELD LIGHTING. REFER TO TYE FIELD BELOW.	
1.5. PROVIDE IN PANEL 'B' A 200A, 3P CIRCUIT BREAKER AND FEEDER TO NEW SEELEY FIELD ENCLOSURE PANELBOARD 'S'. REFER TO SEELEY FIELD BELOW.	
2. TYE FIELD	
2.1. EXISTING SIX (6) 50FT, DIRECT BURIED, PRECAST CONCRETE POLES WITH 6 OR 7 1,000W METAL HALIDE LUMINAIRES TO REMAIN.	
2.2. REMOVE EXISTING UNDERGROUND DUCT BANK AND CONDUCTORS (FAILED MEGGER TEST) FOR THE EXISTING SIX (6) LIGHT STANDARDS BACK TO NEW PANELBOARD 'B' IN BLOCK BUILDING AND MAKE SAFE.	
2.3. NEW PANELBOARD (LOCATED IN BLOCK BUILDING) LPT 225A, 120/208V, 3-PHASE, 4W, 240CT C/W SIX (6) 30A, 3P CIRCUIT BREAKERS TO RE-FEED EXISTING LIGHT STANDARDS.	
2.4. NEW PANELBOARD TO BE CONTROLLED BY NEW 200A, 120/208V, 3-PHASE LIGHTING CONTACTOR C/W 120V COIL. COIL TO BE CONTROLLED BY TIMECLOCK AND MANUAL OVERRIDE SWITCH.	
2.5. PROVIDE NEW UNDERGROUND DUCT BANKS C/W CONDUCTORS FROM PANEL LPT TO EXISTING SIX (6) TYE FIELD LIGHT STANDARDS. REFER TO SINGLE LINE DIAGRAM FOR CONDUCTOR SIZING (UPSIZED TO ACCOMMODATE VOLTAGE DROP).	
2.6. SAWCUT AND PATCH EXISTING ASPHALT PARKING LOT AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF NEW DUCT BANKS.	
2.7. SEPARATE PRICING:	
CONTRACTOR SHALL INVESTIGATE EXISTING VERTICAL POLE WIRING AND LUMINAIRE TERMINATIONS PER LIGHT STANDARD. ALLOW FOR LIFT, REPLACEMENT OF VERTICAL CONDUCTORS AND RE-WIRING LUMINAIRES TO 120V IN ACCORDANCE WITH OESC 30-104. EXISTING WIRING TERMINATIONS ARE NOT KNOWN. POLE MANF. DATE IS 2020. ALTERNATE PRICING REQUIRED BECAUSE THIS MAY NOT BE REQUIRED. EXISTING MAY HAVE LUMINAIRES ALREADY WIRED 120V.	
3. SEELEY FIELD	
3.1. REMOVE EXISTING RUSTED OUTDOOR ENCLOSURE, CONTACTOR, PANELBOARD, LOAD CENTER, RECEPTACLES, TIMECLOCK AND ACCESSORIES. REUTILIZE THE EXISTING UNDERGROUND CONDUIT AND LOCATION. REMOVE EXISTING POSTS AND CONCRETE BASE.	
3.2. REMOVE EXISTING 200A, 120/208V UNDERGROUND DUCT BANK AND FEEDER FROM BLOCK BUILDING TO SEELEY ENCLOSURE (FAILED MEGGER TESTS).	
3.3. PROVIDE NEW 200A, 3P CIRCUIT BREAKER AND UNDERGROUND DUCT BANK FEEDER FROM BLOCK BUILDING PANEL 'B' TO NEW SEELEY OUTDOOR ENCLOSURE PANELBOARD 'S'.	
3.4. PROVIDE NEW NEMA 3R OUTDOOR FREE-STANDING ENCLOSURE ON A CONCRETE PAD TO HOUSE NEW ELECTRICAL DISTRIBUTION EQUIPMENT. ENCLOSURE SHALL BE LOCKABLE AND GASKETED DOORS C/W DRIP SHIELD.	
3.5. PROVIDE NEW 225A, 120/208V, 3-PHASE 4-WIRE, 240CT PANELBOARD 'S' C/W CIRCUIT BREAKERS. PROVIDE JUNCTION BOX TO SAFELY TERMINATE EXISTING SEELEY FIELD CONDUCTORS THAT HAVE FAILED MEGGER TEST. PROVIDE NEW RECEPTACLES MOUNTED ON EXTERIOR OF ENCLOSURE C/W WHILE-IN-USE WP COVERS. FUTURE PHASE TO PROVIDE LIGHTING CONTACTOR AND PANELBOARD 'LPS' FOR SEELEY FIELD LIGHTING AND RE-ESTABLISH CONNECTIONS TO LUMINAIRES.	



1	2025-07-08	P/S	ISSUED FOR TENDER
No.	YYYY-MM-DD	BY	DESCRIPTION

Jp2g Consultants Inc.
ENGINEERS • PLANNERS • PROJECT MANAGERS

12 INTERNATIONAL DR.
PEMBROKE, ON, K8A 4W5
T: 613-735-2007
PEMBROKE@JP2G.COM

1150 MORRISON DR., #410
OTTAWA, ON, K2H 8S9
T: 613-628-7600
OTTAWA@JP2G.COM

16 EDWARD ST. S., #211
ARNPRIOR, ON, K7S 3W4
T: 613-628-0760
ARNPRIOR@JP2G.COM

Jp2g PROJECT No.: 25-4029A

1. GENERAL

- 1.1. ALL WORK TO BE COMPLETED IN ACCORDANCE WITH OPSS MUNI 100 GENERAL CONDITIONS OF CONTRACT.
- 1.2. CONFORM TO REQUIREMENTS OF THE GENERAL CONDITIONS. PROVIDE ALL LABOUR, MATERIALS, PRODUCTS, EQUIPMENT, SERVICES AND ALL INCIDENTALS REQUIRED TO COMPLETE, TEST AND COMMISSION ALL ELECTRICAL WORK SHOWN ON THE DRAWINGS AND/OR NOTED HEREUNDER. ELECTRICAL WORK SHALL BE CARRIED OUT BY A CONTRACTOR HOLDING A VALID CONTRACTOR'S LICENSE AND QUALIFIED ELECTRICIANS WHO HOLD VALID ONTARIO CERTIFICATES OF QUALIFICATION.
- 1.3. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT TO COMPLETE THE WORK REQUIRED UNDER THIS CONTRACT. THIS INCLUDES BUT IS NOT LIMITED TO TEMPORARY SERVICES, LIFTS/SCAFFOLDING AND ACCESSORIES/OUTLINES/HARDWARE OF ALL SYSTEM COMPONENTS.
- 1.4. CONFORM TO REQUIREMENTS OF THE GENERAL CONDITIONS. PROVIDE ALL LABOUR, MATERIALS, PRODUCTS, EQUIPMENT, SERVICES AND ALL INCIDENTALS REQUIRED TO COMPLETE, TEST AND COMMISSION ALL ELECTRICAL WORK SHOWN ON THE DRAWINGS AND/OR NOTED HEREUNDER. ELECTRICAL WORK SHALL BE CARRIED OUT BY A CONTRACTOR HOLDING A VALID CONTRACTOR'S LICENSE AND QUALIFIED ELECTRICIANS WHO HOLD VALID ONTARIO CERTIFICATES OF QUALIFICATION.

2. CODES AND STANDARDS

- 2.1. DO COMPLETE INSTALLATION IN ACCORDANCE WITH APPLICABLE CODES, INCLUDING BUT NOT NECESSARILY LIMITED TO: CURRENT ELECTRICAL CODE CSA C22.1, PERTINENT ESA (ELECTRICAL SAFETY AUTHORITY) BULLETINS AND THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION.

3. PERMITS AND FEES

- 3.1. OBTAIN PERMITS NECESSARY FOR THE EXECUTION OF THE ELECTRICAL WORK. ON COMPLETION OF THE WORK FURNISH COPIES OF THE CERTIFICATES OF ACCEPTANCE FROM THE INSPECTION AUTHORITY AND PERTINENT AUTHORITIES HAVING JURISDICTION. PAY ALL ASSOCIATED COSTS AND FEES, INCLUDING ANY PREMIUMS APPLICABLE DUE TO REQUIREMENTS FOR "AFTER OFFICE HOURS" INSPECTIONS.

4. SITE VISIT

- 4.1. ACQUIRE FULL WORKING KNOWLEDGE OF BUILDING SITE AND ANY EXISTING CONDITIONS, WHICH MAY AFFECT THE WORK. VISIT SITE PRIOR TO TENDER SUBMISSION.
- 4.2. ELECTRICAL CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING SHOP DRAWINGS TO CONFIRM VOLTAGE AND POWER SOURCE, MOUNTING LOCATIONS AND REQUIRED MODIFICATIONS TO COMPLETE INSTALLATION.

5. CONTRACT DRAWINGS

- 5.1. CONTRACT DRAWINGS FOR ELECTRICAL WORK ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK AND GENERAL ARRANGEMENT OF EQUIPMENT, CONDUIT AND OUTLETS BEFORE INSTALLATION. VERIFY THE PHYSICAL LOCATION OF ALL ELECTRICAL EQUIPMENT WITH ALL OTHER INSTALLATIONS AND REPORT ANY OBSTRUCTIONS OR INTERFERENCES. NO EXTRA PAYMENTS ARISING FROM FAILURE TO MAKE THIS VERIFICATION WILL BE CONSIDERED. DRAWINGS INDICATE THE GENERAL LAYOUT OF THE COMPLETE ELECTRICAL SYSTEM, ARRANGEMENT OF FEEDERS, CIRCUITS, SWITCHBOARDS, FIXTURES, PANELBOARDS, DISTRIBUTION BOXES AND OTHER WORK. THE DRAWINGS INDICATE THE GENERAL LOCATION AND ROUTES TO BE FOLLOWED, BUT DO NOT SHOW ALL CONDUIT AND/OR WIRING OR ALL THE STRUCTURAL, MECHANICAL AND ARCHITECTURAL DETAILS. PLAN AND INSTALL CONDUIT RUNS RESPECTING ALL APPLICABLE CONDITIONS INCLUDING STRUCTURAL, ARCHITECTURAL AND MECHANICAL DETAILS. BRING OBVIOUS DISCREPANCIES OR OMISSIONS TO THE ATTENTION OF THE CONSULTANT DURING THE TENDER PERIOD, AT LEAST FIVE WORKING DAYS PRIOR TO TENDER CLOSING.

6. EXISTING SERVICES

- 6.1. GIVE THE OWNER AMPLE NOTICE OF EACH NECESSARY INTERRUPTION OF ELECTRICAL SERVICE DURING THE COURSE OF THE WORK. UNAVOIDABLE INTERRUPTIONS TO EXISTING SYSTEMS/INSTALLATIONS, IF ANY, SHALL BE OF THE SHORTEST POSSIBLE DURATION AND EACH SUCH INTERRUPTION SHALL REQUIRE THE SPECIFIC APPROVAL OF THE OWNER. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF ALL ANTICIPATED INTERRUPTIONS, IDENTIFYING EXACTLY WHAT THE INTERRUPTION IS, HOW LONG IT WILL BE, WHEN IT IS PLANNED TO OCCUR AND WHICH AREAS WILL BE AFFECTED. GIVE THE OWNER A MINIMUM OF TWO WEEKS NOTICE RELATED TO EACH NECESSARY INTERRUPTION. THE OWNER RESERVES THE RIGHT TO DENY APPROVAL FOR AN INTERRUPTION ON ANY SPECIFIC DATE OR TIME. IN THIS CASE AN ALTERNATIVE TIME SLOT BE MUTUALLY SELECTED. CONTRACTOR SHALL ALLOW FOR ANY POWER SHUTDOWN WORK TO BE COMPLETED OUTSIDE OF REGULAR WORKING HOURS UNLESS APPROVED OTHERWISE.

7. DEMOLITION

- 7.1. REFER TO DEMOLITION NOTES ON DRAWINGS. RENDER SAFE THE INSTALLATIONS AT LOCATIONS FROM WHICH THE EXISTING INSTALLATIONS AND EQUIPMENT HAS BEEN REMOVED AS PART OF THIS WORK.
- 7.2. REMOVE FROM THE SITE ALL EXISTING EQUIPMENT AND MATERIALS, WHICH BECOMES OBSOLETE AS A RESULT OF THIS WORK EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.

8. SHOP DRAWINGS

- 8.1. SUBMIT ONE (1) COPY OF SHOP DRAWINGS IN PDF FORMAT TO THE CONSULTANT FOR REVIEW. REVIEW OF SHOP DRAWINGS INDICATES ONLY THAT THE QUALITY AND GENERAL DESIGN OF THE EQUIPMENT IS ACCEPTABLE. VERIFICATION OF DETAILED DESIGN COMPLIANCE, DIMENSIONS AND QUANTITIES, OR THE LOCATION OF CONNECTIONS TO EQUIPMENT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 8.2. SHOW DETAILS OF CONSTRUCTION, DIMENSIONS, CAPACITIES, WEIGHTS, ALL ELECTRICAL DATA AND PERFORMANCE CHARACTERISTICS, ON SHOP DRAWINGS, ALL WIRING DIAGRAMS, CONTROL SCHEMATICS AND DESCRIPTIONS OF OPERATION MUST ALSO BE INCLUDED. SUBMIT SHOP DRAWINGS FOR POWER DISTRIBUTION EQUIPMENT, INCLUDING WEATHERPROOF ENCLOSURE, PANELBOARDS, BREAKERS, RECEPTACLES, SWITCHES, ETC. LIGHTING FIXTURES WITH COMPLETE INFORMATION ON DIMENSIONS, WEIGHTS, ETC.
- 8.3. UPON SHOP DRAWING APPROVAL, THE CONTRACTOR SHALL PROVIDE OWNER AND JP2G WITH SUFFICIENT OFFICIAL PROOF, IN WRITING, CONFIRMING THE MATERIALS HAVE BEEN ORDERED AND INDICATING THE EXPECTED DELIVERY DATE TO SITE. IF LEAD TIME OF COMPONENTS IMPACTS OVERALL CONSTRUCTION SCHEDULE, THE CONTRACTOR SHALL IDENTIFY THIS TO ENGINEER AND OWNER IN A TIMELY MANNER TO DISCUSS ALTERNATIVE SOLUTIONS.

9. APPROVAL OF ALTERNATIVES

- 9.1. MANUFACTURER'S NAMES AND MODEL NUMBERS OF EQUIPMENT INCLUDED IN THE SPECIFICATIONS ARE CONSIDERED ACCEPTABLE.
- 9.2. MANUFACTURERS, THEIR AGENTS, OR CONTRACTORS WISHING ALTERNATIVE PRODUCTS TO BE CONSIDERED FOR ACCEPTANCE SHALL SUBMIT WRITTEN APPLICATIONS TO THE ENGINEER AT LEAST FIVE (5) WORKING DAYS PRIOR TO TENDER CLOSING DATE.
- 9.3. ACCEPTANCE OF ALTERNATIVES DOES NOT ABSOLVE THIS CONTRACTOR FROM MAKING ALL NECESSARY ADJUSTMENTS TO THE WORK OF OTHER TRADES INCURRED BY SELECTION OF ALTERNATIVE EQUIPMENT OR MATERIALS. SUCH ADJUSTMENTS ARE TO BE MADE AT NO ADDITIONAL COST.

10. OPERATION AND MAINTENANCE MANUAL

- 10.1. SUBMIT A DRAFT ELECTRONIC FORM (PDF) COPY OF OPERATION AND MAINTENANCE MANUAL TO ENGINEER FOR APPROVAL. O&M MANUAL SHALL INCLUDE BUT NOT BE LIMITED TO:
- 10.1.1. TITLE PAGE
- 10.1.2. LETTER OF WARRANTY FROM DATE OF SUBSTANTIAL COMPLETION
- 10.1.3. SHOP DRAWINGS C/W STAMPED CONSULTANTS' ACCEPTED "REVIEWED"
- 10.1.4. OPERATION AND MAINTENANCE DATA SHALL FOR ALL ELECTRICAL SYSTEMS AND OR DEVICES SUFFICIENTLY DETAILED WITH RESPECT TO DESIGN ELEMENTS, OPERATIONAL PROCEDURES, TECHNICAL DATA, CONSTRUCTION FEATURES, COMPONENT FUNCTIONS AND MAINTENANCE REQUIREMENTS TO PERMIT EFFECTIVE START-UP, OPERATION, MAINTENANCE, REPAIR, MODIFICATION, EXTENSION AND EXPANSION OF ANY PORTION OF THE SYSTEM.
- 10.1.5. ALL TESTING AND COMMISSIONING RESULTS, START-UP, SHUT DOWN AND EMERGENCY PROCEDURES FOR EQUIPMENT INSTALLED AND CERTIFICATE OF ACCEPTANCE BY AUTHORITIES HAVING JURISDICTION
- 10.1.6. APPROPRIATE WIRING DIAGRAMS, SCHEMATICS, ELEVATIONS, MOUNTING REQUIREMENTS, AS IT PERTAINS TO EACH SYSTEM AND/OR DEVICE
- 10.1.7. EQUIPMENT OPERATION, INCLUDE NAMEPLATE INFORMATION: MAKE, SIZE, CAPACITY AND SERIAL NUMBER
- 10.1.8. ESA INSPECTION REPORTS
- 10.1.9. FAILURE TO SUBMIT MANUALS SPECIFIED, WILL INCUR ADDITIONAL 10% HOLDBACK AGAINST PROGRESS PAYMENTS. SUBMIT THREE (3) HARD COPIES WITHIN FOUR (4) WEEKS OF ACCEPTANCE OF DRAFT MANUALS TO OWNER.

11. AS-BUILT DRAWINGS

- 11.1. ELECTRICAL CONTRACTOR SHALL MARK ALL CHANGES AS WORK PROGRESSES AND AS CHANGES OCCUR ON A RECORD SET OF CONTRACT DOCUMENTS, CHANGES SHALL REPRESENT WORK AS ACTUALLY INSTALLED. USE DIFFERENT INK FOR EACH SERVICE. DRAWING SET SHALL BE AVAILABLE FOR REFERENCE PURPOSES AND INSPECTION AT ALL TIMES. EACH DRAWING SHALL BE IDENTIFIED IN TITLE BLOCK ON RIGHT HAND SIDE "AS-BUILT DRAWINGS. THIS DRAWING HAS BEEN REVISED TO SHOW ELECTRICAL SYSTEMS INSTALLED". INCLUDE SIGNATURE OF CONTRACTOR AND DATE.
- 11.2. SUBMIT HARD COPY TO ENGINEER FOR APPROVAL AND MAKE CORRECTIONS AS DIRECTED. FOLLOWING APPROVAL, SUBMIT COMPLETED HARD COPY AS-BUILT DRAWINGS TO ENGINEER, INCLUDE A COLOURED HARD COPY OF AS-BUILT WITH OPERATING AND MAINTENANCE MANUALS.

12. GUARANTEES AND WARRANTIES

- 12.1. PRIOR TO SUBSTANTIAL COMPLETION OF WORK COLLECT ALL MANUFACTURER'S GUARANTEES AND WARRANTIES AND SUBMIT TO ENGINEER. ELECTRICAL CONTRACTOR TO SUBMIT SIGNED GUARANTEE STATING THAT ALL SYSTEMS AND COMPONENTS HAVE BEEN INSTALLED TO MANUFACTURER'S RECOMMENDATIONS AND THAT SYSTEMS ARE OPERATING SATISFACTORILY AND MEET THE DESIGN REQUIREMENTS, AND ALL MATERIAL AND LABOUR DEFICIENCIES WILL BE CORRECTED, AT NO COST, FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION.

13. PROTECTION

- 13.1. CONTRACTOR IS RESPONSIBLE FOR USING PROPER LOCK OUT / TAG OUT PROCEDURES WHILE WORKING AT THIS FACILITY. CONTRACTOR TO DEMONSTRATE TO THE OWNER, THEIR LOCK OUT / TAG OUT PROCEDURES BEFORE ANY WORK AT THE FACILITY.
- 13.2. TAKE PRECAUTIONS TO PROTECT THE OCCUPANTS AND PERSONNEL FROM INJURY DUE TO LIVE CIRCUITS. PROTECT ALL FINISHED AND UNFINISHED WORK FROM DAMAGE DUE TO CARRYING OUT OF THIS WORK. ALSO PROVIDE FULL DUST PROTECTION DURING CONSTRUCTION. KEEP EQUIPMENT DRY AND CLEAN AT ALL TIMES. PROTECT ALSO ALL EXISTING SERVICES TO REMAIN IN AND AROUND THE AREAS OF RENOVATION.

14. CUTTING AND PATCHING

- 14.1. ARRANGE FOR THE GENERAL CONTRACTOR TO DO ALL CUTTING/CORE DRILLING AND PATCHING REQUIRED FOR THE ELECTRICAL INSTALLATIONS, BEFORE CARRYING OUT ANY CUTTING. OBTAIN WRITTEN APPROVAL FROM THE OWNER.

15. CLEAN UP AND REPAIR

- 15.1. CARRY OUT THE REQUIRED CLEANUP AT THE END OF EACH DAY IN WORK AREAS. REMOVE ALL TOOLS, EQUIPMENT, LADDERS AND EMPTY CARDBOARD BOXES ETC. AND LEAVE THE PREMISES BROOM CLEAN.
- 15.2. THE ELECTRICAL CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAKING GOOD ANY DAMAGE TO WALLS, FLOORS, CEILINGS, WOODWORK, FINISHES, ETC. CAUSED DIRECTLY OR INDIRECTLY AS A RESULT OF THIS WORK.

16. CONDUIT

- 16.1. WIRING SHALL BE IN CONDUIT UNLESS SPECIFICALLY INDICATED OTHERWISE. INSTALL RIGID PVC THROUGHOUT EXCEPT WHERE SPECIFIED OTHERWISE. CONTRACTOR SHALL SUBMIT FOR ENGINEER, ARCHITECT OR ENGINEER APPROVAL PRIOR TO SURFACE MOUNTING CONDUIT OUTSIDE OF SERVICE ROOM AREAS. ALL SURFACE MOUNT CONDUIT SHALL BE PAINTED TO MATCH COLOUR OF SURFACE IT IS ROUTED ON.
- 16.2. ALL VISIBLE CONDUIT, JUNCTION BOXES, DEVICES AND FIXTURES SHALL BE CLEANED TO HANDPRINTS, STICKERS, PRODUCTION LABELS AND SIMILAR.

17. WIRING

- 17.1. TYPE RW 90 COPPER, 60V, XLPE INSULATION, COLD CONDUCTORS TO #10 AWG, STRANDED CONDUCTORS #8 AWG AND LARGER, TYPE RW 90 COPPER, 1000V, XLPE INSULATION FOR FEEDERS AT 600V OPERATING VOLTAGE. MINIMUM BRANCH CIRCUIT CONDUCTORS SHALL BE #12 AWG EXCEPT FOR 120 VOLT CIRCUIT, CIRCUITS, MINIMUM SIZE OF WIRE SHALL BE #14 AWG. WIRING FOR BRANCH CIRCUITS SHALL BE SIZED TO LIMIT THE VOLTAGE DROP FROM THE PANELBOARD TO THE FARTHEST OUTLET TO 3% WHEN CARRYING 80% OF THE BRANCH CIRCUIT BREAKER RATED CURRENT. TWIST ON PRESSURE TYPE WIRE CONNECTORS FOR #10 AND SMALLER AND SPLIT BOL. TYPE FOR #8 AND LARGER.

- 17.2. WIRING HAS BEEN INCREASED TO ACCOMMODATE VOLTAGE DROP. ELECTRICAL CONTRACTOR SHALL PROVIDE ADAPTERS, REDUCERS AND REQUIRED ACCESSORIES TO COMPLETE TERMINATIONS.
- 17.3. TYPE RW90 SHALL BE USED FOR ALL UNDERGROUND INSTALLATIONS.

18. FASTENING AND SUPPORTS

- 18.1. USE LEAD ANCHORS TO SECURE EQUIPMENT TO SOLID MASONRY, TILE AND PLASTER SURFACES. USE EXPANDABLE INSERTS TO SECURE EQUIPMENT TO POURED CONCRETE. USE TOGGLE BOLTS TO SECURE EQUIPMENT TO HOLLOW MASONRY WALLS OR SUSPENDED CEILINGS.
- 18.2. SUPPORT GROUPS OF CONDUITS AND CABLES, AND EQUIPMENT ON 4 MM X 41 MM X 2.5 MM THICK GALVANIZED CHANNELS EQUAL TO UNISTRUT P SERIES, USING CLIPS, SPRING LOADED BOLT, CABLE CLAMPS AND THE LIKE, DESIGNED AS ACCESSORIES TO BASIC CHANNEL EMBERS. FOR SURFACE MOUNTING OF TWO OR MORE CONDUITS USE CHANNELS AT 150 OR LESS C.C. SPACING.
- 18.3. PROVIDE PLYWOOD MOUNTING PLATE PAINTED WITH GRAY FIRE RETARDANT PAINT FOR ALL SURFACE MOUNTED ELECTRICAL DISTRIBUTION EQUIPMENT. PROVIDE UNISTRUT FRAMING/BRACING FOR MOUNTING DISCONNECT SWITCHES. COORDINATE EXACT MOUNTING LOCATIONS ONSITE WITH MECHANICAL TRADES.

19. GROUNDING

- 19.1. GROUND ALL EQUIPMENT WITH APPROVED FITTINGS AND GROUND CONDUCTORS OF AMPL E CAPACITY AS REQUIRED BY GROUNDING TO ONTARIO ELECTRICAL SAFETY CODE, CSA STANDARD C22.1. INSTALL COMPLETE PERMANENT, CONTINUOUS, SYSTEM AND CIRCUIT, EQUIPMENT, GROUNDING SYSTEMS INCLUDING ELECTRODES, CONDUCTORS, CONNECTORS, ACCESSORIES, AS INDICATED, TO CONFORM TO REQUIREMENTS OF CONSULTANT, AND LOCAL AUTHORITY HAVING JURISDICTION OVER INSTALLATION. GROUND WIRES SHALL BE INSTALLED FOR ALL BRANCH CIRCUITS AND MOTOR CIRCUITS BY RUNNING THE GROUND WIRES IN THE SAME CONDUIT AS FOLLOWS:
- 19.1.1. FOR BRANCH CIRCUITS USING SHARED NEUTRALS, INSTALL ONE GROUND WIRE PER NEUTRAL.
- 19.1.2. FOR CIRCUITS USING INDIVIDUAL NEUTRALS FOR EACH CIRCUIT, USE ONE GROUND WIRE PER CIRCUIT.
- 19.1.3. MINIMUM SIZE OF GROUND WIRE TO BE #12 AWG COPPER. INSTALL CONTINUOUS GROUNDING CONDUCTORS THROUGH ALL CONDUIT/RACEWAYS FOR SYSTEMS OPERATING ABOVE 50 VOLTS (DO NOT USE CONDUIT AS GROUND), BOND AT EACH BOX AND DEVICE. GROUND ALL METALLIC RACEWAYS FOR SYSTEMS, I.E. FIRE ALARM, ETC.

20. FIREPROOF PATCHING

- 20.1. ALL PENETRATIONS IN FIRE RATED ASSEMBLIES SHALL BE FIRE STOPPED WITH THE SAME FIRE RATING AS THE ASSEMBLY THAT IT PENETRATES.
- 20.2. WHERE CONDUITS OR SINGLE CONDUCTOR CABLES OR CABLE TRAYS PASS THROUGH FIRE RATED FLOOR SLABS, FIRE RATED CEILING OR FIRE RATED WALLS, SEAL OPENING AROUND SAME TO MAINTAIN FIRE SEPARATION USING 3M FIRE BARRIER SEALANT CP 259MB* OR APPROVED ULC RATED EQUIVALENT.

21. EQUIPMENT IDENTIFICATION

- 21.1. IDENTIFY ALL ELECTRICAL EQUIPMENT USING SUITABLY SIZED LAMACOID NAMEPLATES, INCLUDING BUT NOT LIMITED TO SWITCHBOARDS, SPLITTER TROUGHS, PANELBOARDS, CONTACTORS, DISCONNECT SWITCHES, TIMECLOCKS, AND TRANSFORMERS. LAMACOID NAMEPLATES TO BE 2MM THICK WITH BLACK PLASTIC FACE AND WHITE CORE. SCREW FASTEN OR POP RIVET TO EQUIPMENT. PROVIDE LAMACOID LABELS FOR ALL POWER DISTRIBUTION EQUIPMENT, INCLUDING DISCONNECT SWITCHES, 4.76MM MINIMUM TEXT HEIGHT, WHITE LAMACOID WITH BLACK CHARACTERS. TAG SHALL INCLUDE ELECTRICAL EQUIPMENT TAG, ELECTRICAL CHARACTERISTICS, ASSOCIATED MECHANICAL EQUIPMENT (WHEN APPLICABLE), CIRCUIT AND FED FROM XXXX.

22. WIRING IDENTIFICATION

- 22.1. IDENTIFY WIRING WITH PERMANENT INDELIBE IDENTIFYING MARKINGS EITHER NUMBERED OR COLOURED PLASTIC TAPES, ON BOTH ENDS OF PHASE CONNECTORS OF FEEDERS AND BRANCH CIRCUIT WIRING. COLOUR CODE: TO CSA C22.1.

23. CONDUIT AND CABLE IDENTIFICATION

- 23.1. COLOUR CODE CONDUITS, BOXES AND METALLIC SHEATHED CABLES. FOR BOXES, IDENTIFY THE COVER AS WELL AS INSIDE EACH BOX. FOLLOW BASE BUILDING SYSTEM OF IDENTIFICATION, OTHERWISE AGREE ON IDENTIFICATION SYSTEM WITH THE CONSULTANT.

24. MATERIALS AND EQUIPMENT

- 24.1. EQUIPMENT AND MATERIAL SUPPLIED AS PART OF THE ELECTRICAL WORK SHALL BE NEW AND CERTIFIED TO APPLICABLE CSA STANDARDS FOR THE APPLICATION.

25. PANELBOARDS

- 25.1. 250V PANELBOARD, TIN PLATED COPPER MAINS BUS, NUMBER OF CIRCUITS, NUMBER AND SIZE OF BOLT-ON BRANCH CIRCUIT BREAKERS AS INDICATED ON DRAWINGS 3 PHASE, 4 WIRE PANELBOARDS COMPLETE WITH GROUND BUS AND 200% RATED NEUTRAL, TRIM WITH CONCEALED FRONT BOLTS AND HINGES, TRIM AND DOOR MINIMUM 12 GAUGE, AND FINISHED BAKED GREY ENAMEL. TWO KEYS FOR EACH PANELBOARD. MINIMUM SYMMETRICAL INTERRUPTING RATING FOR 200V PANELS 10,000 RMS.

26. MOULDED CASE BREAKERS

- 26.1. BOLT ON MOULDED CASE CIRCUIT BREAKERS: QUICK MAKE, QUICK BREAK TYPE, FOR MANUAL AND AUTOMATIC OPERATION WITH TEMPERATURE COMPENSATION FOR 40°C AMBIENT. COMMON TRIP BREAKERS, WITH SINGLE HANDLE FOR MULTI POLE APPLICATIONS. MOULDED CASE CIRCUIT BREAKER TO OPERATE AUTOMATICALLY BY MEANS OF THERMAL AND MAGNETIC TRIPPING DEVICES TO PROVIDE INVERSE TIME CURRENT TRIPPING AND INSTANTANEOUS TRIPPING FOR SHORT CIRCUIT PROTECTION. KA RATING SHALL MATCH EXISTING PANELBOARD RATINGS ON-SITE.

27. MOUNTING HEIGHTS

- 27.1. MOUNTING HEIGHT OF EQUIPMENT IS FROM FINISHED FLOOR TO CENTRELINE OF EQUIPMENT UNLESS SPECIFIED OR INDICATED OTHERWISE. IF MOUNTING HEIGHT OF EQUIPMENT IS NOT INDICATED, VERIFY WITH THE ENGINEER BEFORE PROCEEDING WITH INSTALLATION. INSTALL ELECTRICAL EQUIPMENT AT THE FOLLOWING HEIGHTS ABOVE FINISHED FLOOR (AFF), OVER COUNTER (OC) OR UNDER COUNTER (UC) UNLESS INDICATED OTHERWISE:
- 27.1.1. TOP OF PANELBOARD 2000 MM (6'-4") OR AS SPECIFIED BY APPLICABLE CODES
- 27.1.2. ELECTRICAL ROUGH-IN FOR OWNER SUPPLIED EQUIPMENT TO BE COORDINATED WITH OWNER OR EQUIPMENT SUPPLIER

28. TESTING AND COMMISSIONING OF GENERAL ELECTRICAL INSTALLATIONS

- 28.1. INSPECT, TEST AND COMMISSION ALL EQUIPMENT AND SYSTEMS PROVIDED UNDER THIS CONTRACT TO DEMONSTRATE AND VERIFY CORRECT OPERATION, RECTIFY AND REPLACE, AT NO COST TO THE OWNER, ANY FAULTY EQUIPMENT AND RECTIFY ANY FAULTY OPERATION. PRIOR TO ENERGIZING, MEGGER ALL FEEDERS USING A 500V INSTRUMENT FOR UP TO 347V SYSTEMS, AND RECORD RESULTS ON APPROVED VERIFICATION FORMS. CHECK INSULATION RESISTANCE TO GROUND BEFORE ENERGIZING. PERFORM GROUND CONTINUITY AND RESISTANCE TESTS USING METHOD APPROPRIATE TO SITE CONDITIONS AND TO APPROVAL OF CONSULTANT AND LOCAL AUTHORITY HAVING JURISDICTION OVER INSTALLATION. INSPECT, TEST AND COMMISSION ALL LIGHTING FIXTURES, LIGHTING COMPONENTS E.G. BALLASTS, LAMPS, ETC., RELATED SWITCHING AND EQUIPMENT OF EMERGENCY AND EXIT LIGHTS.

29. SEISMIC RESTRAINT

- 29.1. DESIGN AND CONSTRUCT ELECTRICAL SERVICES AND THEIR FASTENINGS AND SUPPORTS, INCLUDING, BUT NOT LIMITED TO EQUIPMENT, FIXTURES, RACEWAYS, TO BE IN ACCORDANCE WITH CLAUSE 4.1.8 OF THE 2012 ONTARIO BUILDING CODE WITH AN IMPORTANCE FACTOR, I, AS SPECIFIED IN THE CODE. DESIGN OF STRUCTURAL ELEMENTS, INCLUDING CONNECTIONS, SHALL BE CARRIED OUT BY A STRUCTURAL ENGINEER, ENGAGED BY THE CONTRACTOR AND LICENSED IN THE PROVINCE OF ONTARIO, WHO SHALL SEAL AND SIGN THE DESIGN DRAWINGS. THE SEALED DRAWINGS SHALL BE SUBMITTED ALONG WITH THE ELECTRICAL SHOP DRAWINGS FOR REVIEW. THE STRUCTURAL ENGINEER WHO SEALS THE DRAWINGS SHALL CARRY OUT SUFFICIENT ON-SITE REVIEW OF THE ELECTRICAL WORK TO ENSURE AND TO CERTIFY IN WRITING THAT THE WORK IN GENERAL COMPLIANCE WITH THE DESIGN.

30. TERMINATIONS

- 30.1. PROVIDE LIQUID-TIGHT FITTINGS AT ALL CONDUIT AND CABLE TERMINATIONS IN A WET LOCATION ENVIRONMENT. ALL CONDUITS AND CABLES SERVING EQUIPMENT RATED NEMA 3R/4X SHALL BE PROVIDED WITH LIQUID-TIGHT FITTINGS.

31. NEMA TYPE 3R ENCLOSURE

- 31.1. NEMA TYPE 3R GALVANIZED STEEL ELECTRICAL ENCLOSURE COMPLETE WITH THE FOLLOWING FEATURES:
- 31.1.1. MINIMUM DIMENSIONS OF 60" X 60" X 16"
- 31.1.2. CSA APPROVED
- 31.1.3. 0.060" AND 0.075" THICK GALVANIZED STEEL
- 31.1.4. BLACK QUARTER TURN LATCH WITH PADLOCKING PROVISIONS
- 31.1.5. CONCEALED HINGES
- 31.1.6. OIL AND WATER RESISTANT GASKET
- 31.1.7. FLANGE TROUGH COLLAR AROUND ALL SIDES OF DOOR OPENING
- 31.1.8. COLLAR STUDS PROVIDED FOR MOUNTING OPTIONAL SUB-PANELS
- 31.1.9. FREE-STANDING LEG/BASE C/W ANCHOR HOLE MOUNTS
- 31.1.10. MOUNTING HARDWARE, SEALING WASHERS AND HOLE PLUGS INCLUDED
- 31.1.11. GROUND STUD ON DOOR AND BODY
- 31.2. REFER TO DRAWINGS FOR COMPONENTS TO BE MOUNTED IN ENCLOSURE. ELECTRICAL CONTRACTOR SHALL INSTALL ALL COMPONENTS AND PROVIDE ALL NECESSARY ACCESSORIES TO MAKE CONNECTIONS.

32. ELECTRICAL SITE SERVICES

32.1 REMOVALS

1. PERFORM REMOVAL ACTIVITIES IN ACCORDANCE WITH OPSS MUNI 501.

2. ASPHALT REMOVAL

- 2.1. ALL EXISTING ASPHALT SHALL BE SAWCUT STRAIGHT TO PROVIDE A PROPER BUTT JOINT. WHERE THE EXISTING ASPHALT STRUCTURE CONSISTS OF TWO (2) OR MORE LIFTS, THE SURFACE ASPHALT COURSE SHALL BE MILLED TO A MINIMUM DEPTH OF 40mm TO CREATE A 300mm STEP JOINT FROM THE LOWER ASPHALT COURSE.

32.2 EXCAVATION AND BACKFILL

1. MATERIALS

- 1.1. BEDDING MATERIAL SHALL BE GRANULAR 'A' AS PER OPSS MUNI 1010.
- 1.2. EMBEDMENT MATERIAL FOR DIRECT BURY CONDUIT SHALL BE MORTAR SAND AS PER OPSS MUNI 1004.
- 1.3. BACKFILL MATERIAL SHALL BE AS NOTED ON DIRECT BURIED DUCT BANK DETAIL, AND GRANULAR 'A' AS PER OPSS MUNI 1010 BENEATH PARKING LOT, ROADWAYS AND SIDEWALKS/PAVEMENTS.

2. EXCAVATION

- 2.1. PERFORM EXCAVATION OPERATIONS IN ACCORDANCE WITH OPSS MUNI 401.
- 2.2. EXCAVATE UTILITY TRENCHES TO THE DEPTHS AND IN THE LOCATIONS SHOWN ON THE DRAWINGS. MAINTAIN ADEQUATE HORIZONTAL AND VERTICAL SEPARATION DISTANCES FROM ADJACENT UTILITIES AND INFRASTRUCTURE, IN ACCORDANCE WITH THE UTILITY COMPANY SEPARATION REQUIREMENTS.
- 2.3. CONTRACTOR TO CORRECT UNAUTHORIZED OVER-EXCAVATION WITH GRANULAR 'A' (AS PER OPSS MUNI 1010) COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (SMD), AT NO ADDITIONAL COST TO THE CONTRACT.

BACKFILL

- 2.1. PERFORM BACKFILL OPERATIONS IN ACCORDANCE WITH OPSS MUNI 401.
- 2.2. BACKFILL TO DEPTHS SHOWN ON DIRECT BURIED DUCT BANK DETAIL.
- 2.3. LIFT THICKNESS:
- 1.3.1. LIFT THICKNESS OF GRANULAR MATERIALS SHALL NOT EXCEED 150mm.
- 1.3.2. LIFT THICKNESS OF EARTH MATERIALS SHALL NOT EXCEED 300mm.

32.3 COMPACTON

1. GRANULAR & EARTH COMPACTION

- 1.1. PERFORM COMPACTION OPERATIONS IN ACCORDANCE WITH OPSS MUNI 501.
- 1.2. CONTRACTOR TO PERFORM QUALITY CONTROL (QC) COMPACTION TESTING IN ACCORDANCE WITH OPSS MUNI 501 METHOD A AND WITH THE FREQUENCIES ESTABLISHED IN TABLE 1.
- 1.3. COMPACTION DENSITY:
- 1.3.1. GRANULAR MATERIALS TO BE COMPACTED TO MIN 100% MAXIMUM DRY DENSITY (MDD).
- 1.3.2. EARTH MATERIALS (INCL. NATIVE SOILS) TO BE COMPACTED TO A MIN 95% MAXIMUM DRY DENSITY (MDD).
- 1.4. LIFT THICKNESS:
- 1.4.1. LIFT THICKNESS OF GRANULAR MATERIALS SHALL NOT EXCEED 150mm.
- 1.4.2. LIFT THICKNESS OF EARTH MATERIALS SHALL NOT EXCEED 300mm.

2. ASPHALT COMPACTION

- 2.1. PERFORM ASPHALT COMPACTION TESTING IN ACCORDANCE WITH OPSS MUNI 310.
- 2.2. CONTRACTOR TO PERFORM QUALITY CONTROL (QC) COMPACTION TESTING OF THE PLACED ASPHALT. ASPHALT SHALL MEET THE MINIMUM COMPACTION REQUIREMENTS IN OPSS MUNI 310 TABLE 10.

3. TOPSOIL COMPACTION

- 3.1. COMPACT TOPSOIL TO A MAXIMUM OF 85% MAXIMUM DRY DENSITY (MDD).
- 1.4. LIFT THICKNESS:
- 1.4.1. LIFT THICKNESS OF EARTH MATERIALS SHALL NOT EXCEED 300mm.

32.4. RESTORATIONS

1. MATERIALS

- 1.1. GRANULAR MATERIALS SHALL BE AS PER OPSS MUNI 1010.
- 1.1.1. GRANULAR 'A'
- 1.2. ASPHALT SHALL BE AS PER OPSS MUNI 1150 (FOR MARSHALL MIXES) AND OPSS MUNI 1151 (FOR SUPERPAVE)
- 1.2.1. SURFACE COURSE: HOT MIX HLB OR SUPERPAVE 12.5
- 1.2.2. BASE COURSE: HOT MIX HLB OR SUPERPAVE 19
- 1.3. TACK COAT SHALL BE AS PER OPSS MUNI 1103
- 1.3.1. SS-1 OR SS-1H
- 1.4. PERFORMANCE GRADED ASPHALT CEMENT (PGAC) SHALL BE AS PER OPSS MUNI 1101.
- 1.5. CONCRETE MATERIALS SHALL BE AS PER OPSS MUNI 1350 AND CSA A23.1.
- 1.5.1. SIDEWALKS, WALKWAYS, CURBS & GUTTERS, CONCRETE ENTRANCES: EXPOSURE CLASS C-2, COMPRESSIVE STRENGTH OF 32MPa AT 28d
- 1.5.2. TACTILE WALKING SURFACE INDICATOR PLATES (TWSIs) AS PER OPSS 310.039: CAST IRON
- 1.5.3. WELDED WIRE MESH (WWM), 150mm X 150mm
- 1.6. BEDDING SAND SHALL BE AS PER OPSS MUNI 1004.
- 1.6.1. MORTAR SAND
- 1.7. TOPSOIL SHALL BE AS PER OPSS MUNI 802.
- 1.8. SODDING SHALL BE AS PER OPSS MUNI 803.
- 1.8.1. COMMERCIAL GRADE TURF GRASS NURSERY 500, EITHER KENTUCKY BLUEGRASS OR KENTUCKY BLUEGRASS/FESCUE
- 1.9. SEED MIX SHALL BE AS PER OPSS MUNI 804.
- 1.9.1. STANDARD ROADSIDE MIX AS NOTED ON OPSS 804 TABLE 1
- 1.10. PAVEMENT MARKING (LINES) SHALL BE FACICTION PAINT AS PER OPSS MUNI 1712 (SOLVENT) OR OPSS MUNI 1716 (WATER)
- 1.10.1. TRAFFIC LINE PAINT WITHIN LOCAL R.O.W. TO BE CW GLASS BEADS
- 1.11. PAVEMENT MARKING (SYMBOLS) SHALL BE AS PER OPSS MUNI 1713 (THERMOPLASTIC PAVEMENT MARKING), OPSS MUNI 1714 (FIELD REACTED POLYMERIC PAVEMENT MARKING), OR OPSS MUNI 1715 (PREFORMED PLASTIC PAVEMENT MARKING).
- 1.11.1. SYMBOLS AT ALL INTERSECTIONS, ALL CROSSWALKS AND CROSSOVERS, STOP BARS AT ALL INTERSECTIONS, YIELD TO PEDESTRIANS LINE (SHARK TEETH) AT PEDESTRIAN CROSSOVERS

2. ASPHALT RESTORATION

- 2.1. PERFORM GRANULAR BASE AND SUB-BASE OPERATIONS IN ACCORDANCE WITH OPSS MUNI 314.
- 2.2. PERFORM GRADING OPERATIONS OPERATIONS IN ACCORDANCE WITH OPSS MUNI 206.
- 2.3. PERFORM HOT MIX ASPHALT OPERATIONS IN ACCORDANCE WITH OPSS MUNI 310.
- 2.4. ASPHALT ROADWAYS
- 2.4.1. PAVEMENT STRUCTURE: 40mm SURFACE COURSE ASPHALT, 50mm BASE COURSE ASPHALT, 300mm GRANULAR 'A' BASE ASPHALT PARKING LOTS
- 2.5. ASPHALT ENTRANCES
- 2.5.1. PERFORM ASPHALT ENTRANCES OPERATIONS IN ACCORDANCE WITH OPSS MUNI 311.
- 2.5.2. PAVEMENT STRUCTURE (RESIDENTIAL): 50mm SURFACE COURSE ASPHALT, 150mm GRANULAR 'A' BASE
- 2.5.3. PAVEMENT STRUCTURE (COMMERCIAL/INDUSTRIAL/INSTITUTIONAL): 40mm SURFACE COURSE ASPHALT, 50mm BASE COURSE ASPHALT, 150mm GRANULAR 'A' BASE
- 2.6. ASPHALT WALKWAYS, MULTI-USE PATHWAYS & BOULEVARDS
- 2.6.1. PERFORM ASPHALT WALKWAYS & BOULEVARD OPERATIONS IN ACCORDANCE WITH OPSS MUNI 311.
- 2.6.2. PAVEMENT STRUCTURE: 50mm SURFACE COURSE ASPHALT, 150mm GRANULAR 'A' BASE
- 2.7. ASPHALT CURB & GUTTER
- 2.7.1. PERFORM ASPHALT CURB AND GUTTER OPERATIONS IN ACCORDANCE WITH OPSS MUNI 312.
- 2.7.2. CONSTRUCT ASPHALT CURB & GUTTER AS PER OPSS 601.010.

3. GRANULAR ENTRANCES

- 3.1. PERFORM GRANULAR BASE AND SUB-BASE OPERATIONS IN ACCORDANCE WITH OPSS MUNI 314.
- 3.2. PERFORM GRADING OPERATIONS OPERATIONS IN ACCORDANCE WITH OPSS MUNI 206.
- 3.3. GRANULAR ENTRANCES DEPTHS:
- 3.3.1. GRANULAR ENTRANCE (RESIDENTIAL): 150mm GRANULAR 'A'
- 3.3.2. GRANULAR ENTRANCE (COMMERCIAL/INDUSTRIAL/INSTITUTIONAL): 200mm GRANULAR 'A'

4. TOPSOIL & SODDING & SEEDING

- SOD REQUIRED FOR EXCAVATION WITHIN BALL DIAMOND PLAYING FIELD AREAS. OTHER AREAS SEEDING IS ACCEPTABLE.
- 4.1. PERFORM TOPSOIL OPERATIONS IN ACCORDANCE WITH OPSS MUNI 802.
- 4.2. PERFORM SODDING OPERATIONS IN ACCORDANCE WITH OPSS MUNI 801.
- 4.3. PERFORM SEEDING OPERATIONS IN ACCORDANCE WITH OPSS MUNI 804.
- 4.4. AFTER COMPLETION OF TOPSOIL TO FINISH GRADE, THE TOPSOIL SHALL BE FLUSH TO THE TOP OF THE BACK EDGE OF CURB, SIDEWALK, OR ADJACENT AREA.
- 4.5. IF DURING THE MAINTENANCE PERIOD, THE TOPSOIL SETTLES TO GREATER THAN 25mm, THE CONTRACTOR SHALL SUPPLY, PLACE, AND COMPACT ADDITIONAL TOPSOIL, AND APPLY ADDITIONAL SEEDING AND MULCHING, OR NURSERY SODDING TO THE AFFECTED AREAS, AT NO ADDITIONAL COST TO THE CONTRACT.

5. PAVEMENT MARKINGS

- 5.1. PERFORM PAVEMENT MARKING OPERATIONS IN ACCORDANCE WITH OPSS MUNI 710.
- 5.2. PAVEMENT MARKING COLOUR AND LINE WIDTHS TO MATCH EXISTING.

32.5 DIRECT BURIED UNDERGROUND CABLE DUCTS

1. ALL REFER TO CIL DRAWINGS AND SPECIFICATIONS FOR EXCAVATION, BACKFILL, COMPACTION AND SURFACE RESTORATION REQUIREMENTS. CONTRACTOR SHALL COMPLETE ALL WORK IN ACCORDANCE WITH THE APPLICABLE OPSS STANDARDS.

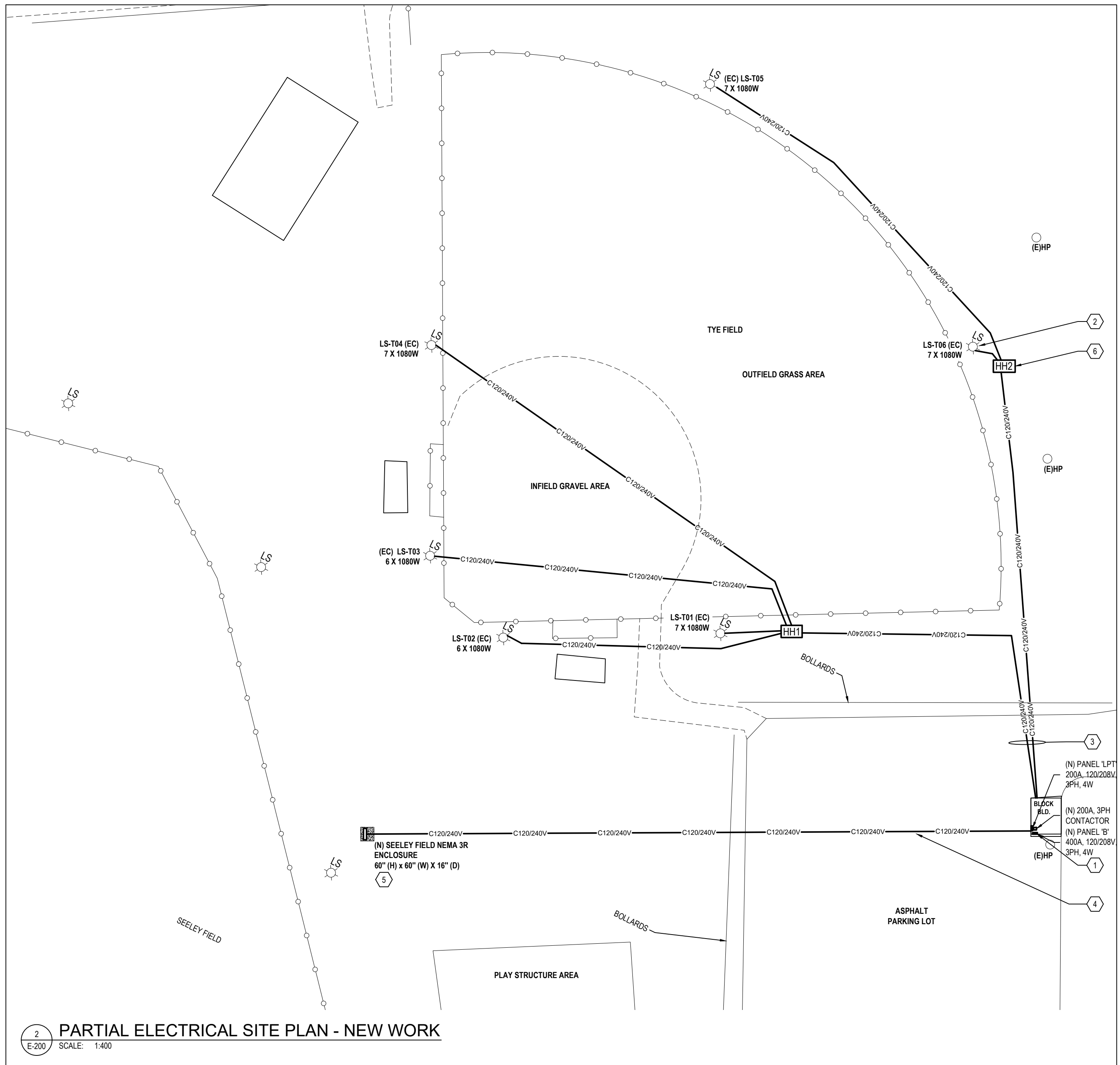
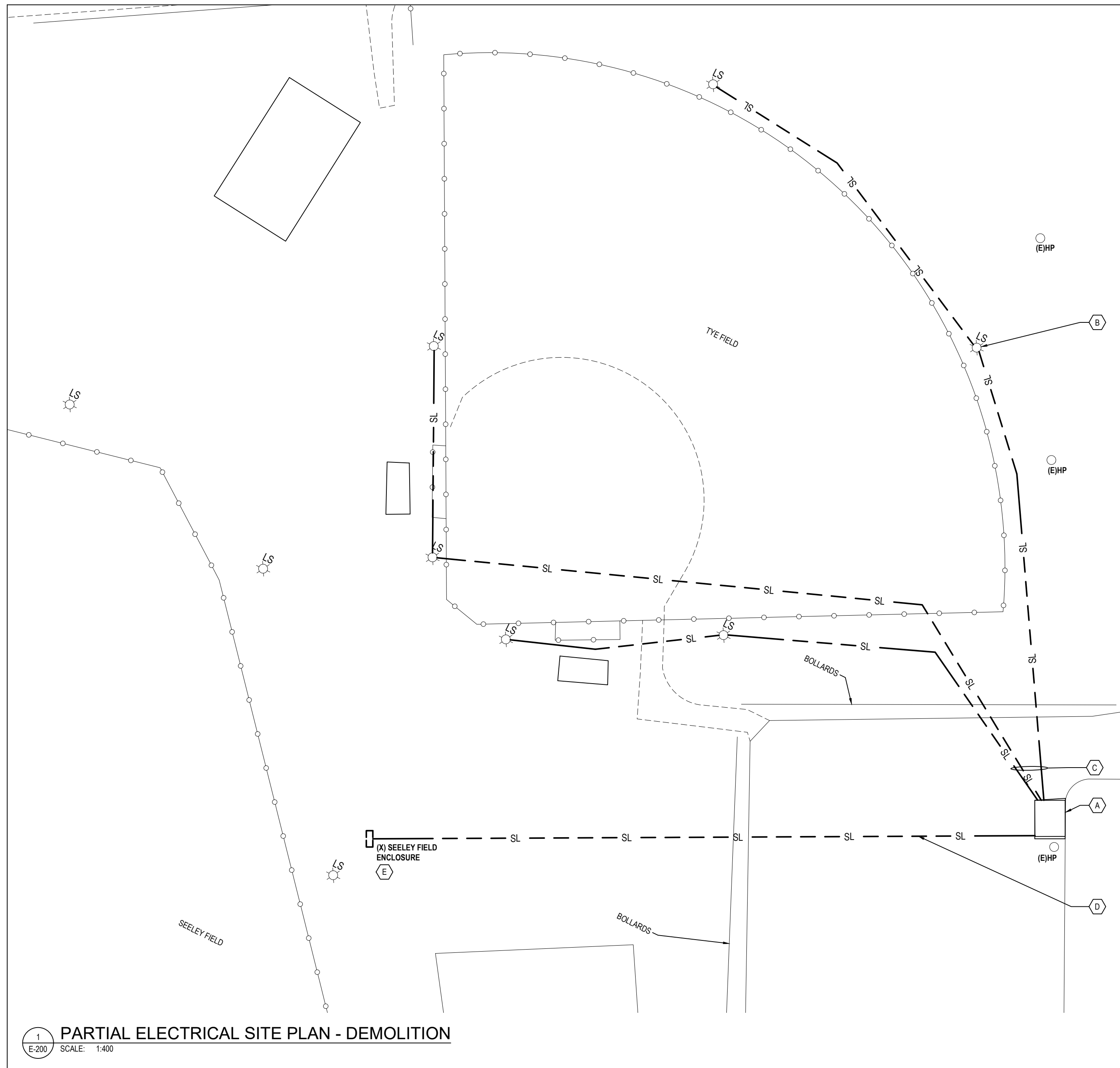
2. IF ANY EXISTING UNDERGROUND UTILITY LINES/PIPES BECOME DAMAGED AS PART OF THIS WORK, CONTRACTOR SHALL INFORM THE UTILITY AND COMPLETE ALL REQUIRED REPAIRS AT THE CONTRACTOR COSTS.

- 1.3 CABLE PULLING EQUIPMENT
1. 6 MM STRANDED NYLON PULL ROPE TENSILE STRENGTH 5 KN.

PART 2

EXECUTION

- 2.1. INSTALLATION OF DUCTS
1. INSTALL DIRECT BURIED DUCTS ACCORDING TO DRAWINGS AND SPECIFICATIONS.
2. OPEN TRENCH COMPLETELY BEFORE DUCTS ARE LAID AND ENSURE THAT NO OBSTRUCTIONS WILL NECESSITATE CHANGE IN GRADE OF DUCTS.
3. FOR SECTIONS OF THE DUCTS ACROSS BUILDING FOUNDATIONS AND UNDERNEATH BUILDINGS, USE GALVANIZED RIGID STEEL CONDUITS IN LIEU OF RIGID PVC DUCTS. BOND THE STEEL CONDUITS IN THE DUCT BANK AND CONNECT TO THE GROUND GRID AT THE POINT OF ENTRY BELOW THE BUILDING. MINIMUM BONDING AND GROUND WIRE SIZE TO BE #10. USE CONDUIT TO DUCT ADAPTERS WHEN CONNECTING TO CONDUITS.
4. CLEAN DUCTS BEFORE LAYING



DEMOLITION NOTES

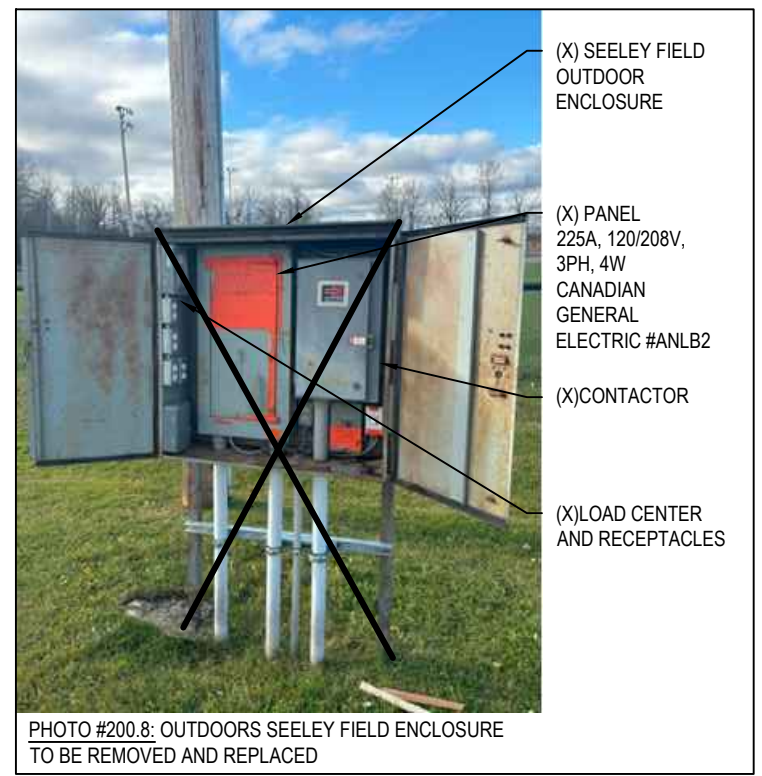
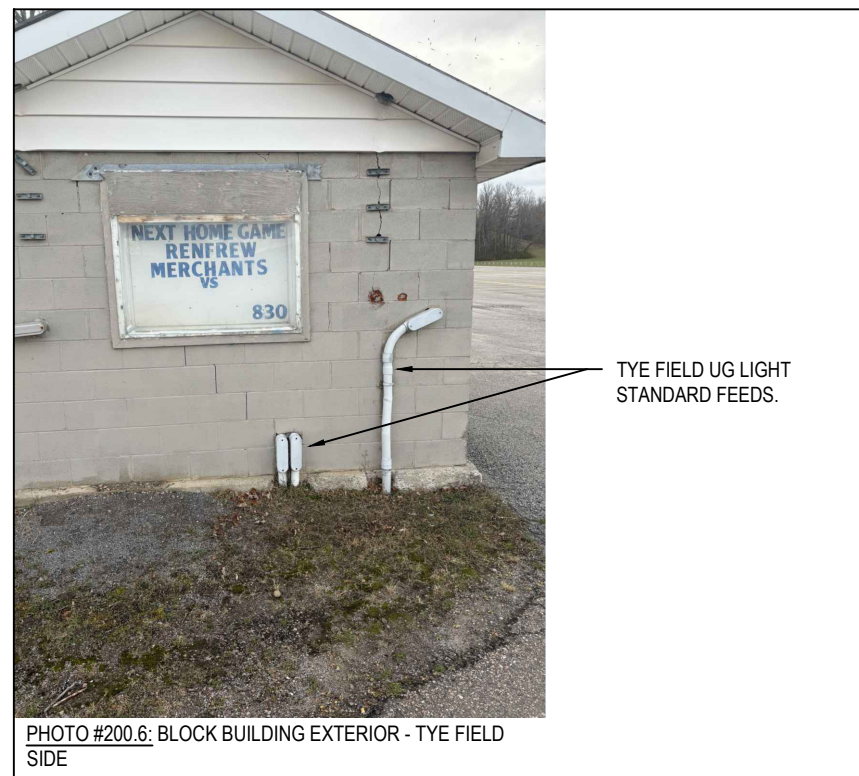
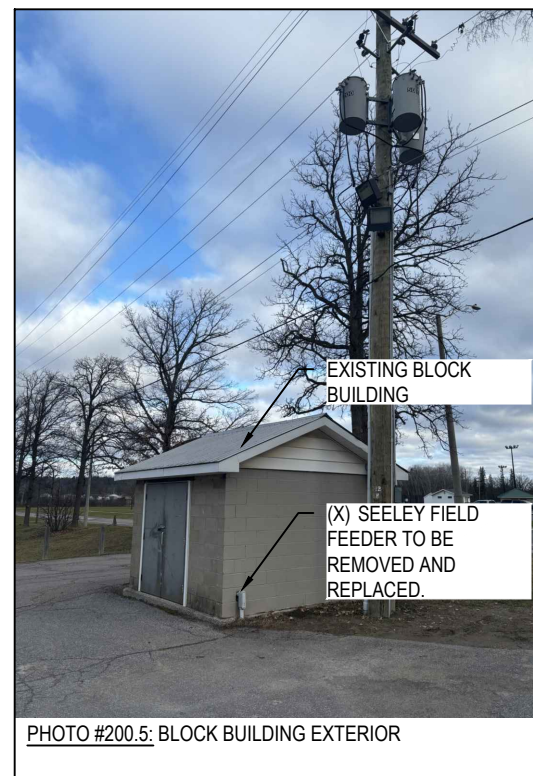
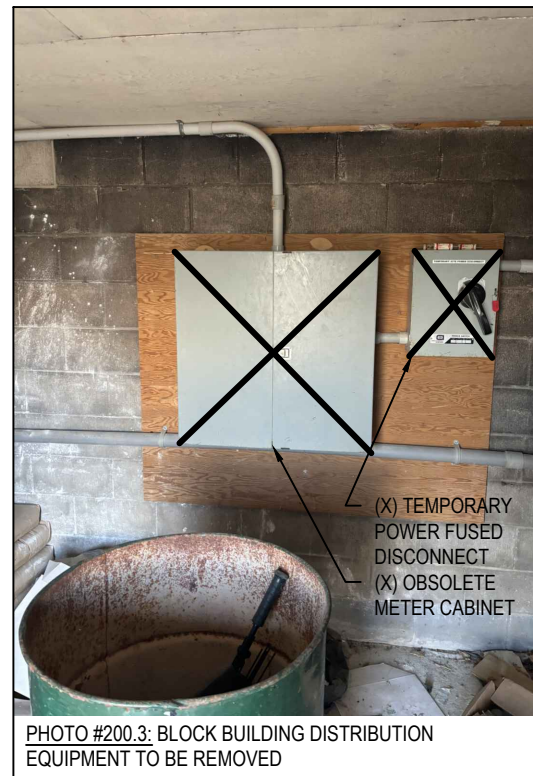
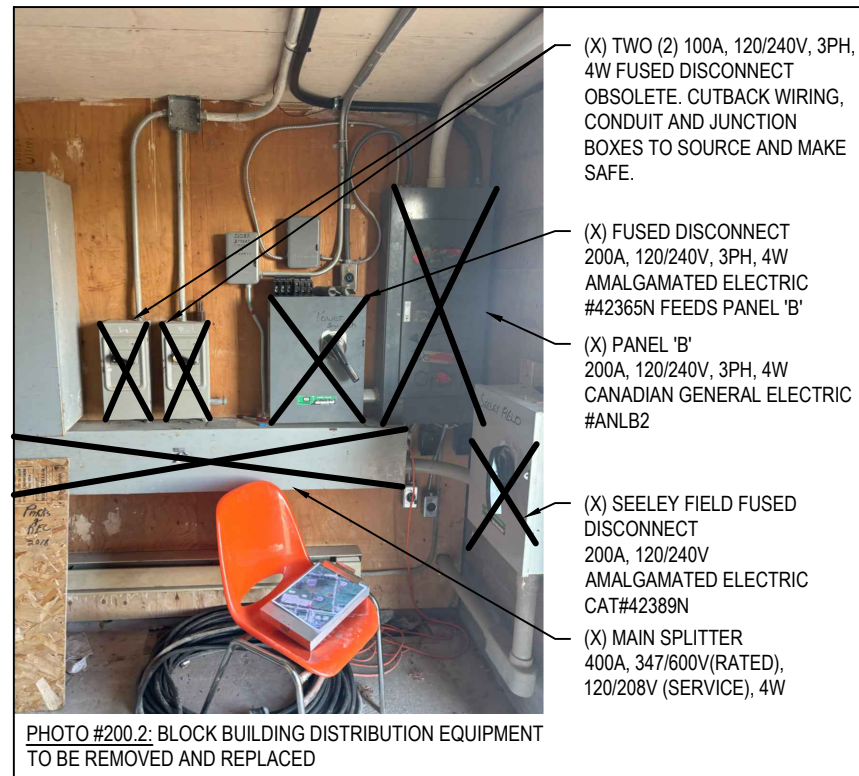
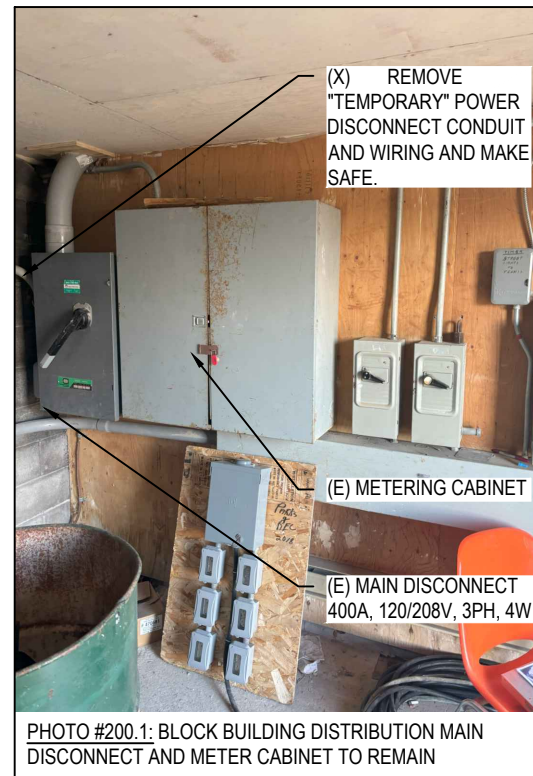
- A** BLOCK BUILDING - POWER DISTRIBUTION MODIFICATIONS:
REMOVE EXISTING SPLITTER, PANEL 'B', DISCONNECT SWITCHES, OBSOLETE EQUIPMENT AS SHOWN IN PHOTOS ON THIS DRAWING AND SINGLE LINE DIAGRAM ON DRAWING E-201. CUT BACK WIRING AND CONDUIT TO SOURCE AND MAKE SAFE.
- B** TYE FIELD - LIGHT STANDARDS, TYPICAL OF 6:
EXISTING LIGHT STANDARDS ARE 50FT DIRECT BURIED PRECAST CONCRETE POLE WITH 6 OR 7 METAL HALIDE LUMINARIES TO REMAIN. INVESTIGATE EXISTING WIRING, ALLOW FOR LIFT, REFER TO NEW WORK FOR FURTHER DETAILS.
- C** TYE FIELD - DUCT BANKS:
REMOVE EXISTING UNDERGROUND DUCT BANKS AND WIRING FROM TYE FIELD LIGHT STANDARDS TO BLOCK BUILDING PANELBOARD 'B'. EXISTING CONDUCTORS FAILED MEGGER TEST AND CONDUIT IS ASSUMED TO BE IN POOR CONDITION. REFER TO DEMOLITION SINGLE LINE DIAGRAM ON DRAWING E-201 FOR FURTHER DETAILS.
- D** SEELEY FIELD - FEEDER DUCT BANK:
REMOVE EXISTING UNDERGROUND DUCT BANK AND WIRING FROM SEELEY FIELD ENCLOSURE TO FUSED DISCONNECT IN BLOCK BUILDING. EXISTING CONDUCTORS FAILED MEGGER TEST AND CONDUIT IS ASSUMED TO BE IN POOR CONDITION. REFER TO DEMOLITION SINGLE LINE DIAGRAM ON DRAWING E-201 FOR FURTHER DETAILS.
- E** SEELEY FIELD - ENCLOSURE:
REMOVE EXISTING RUSTED OUTDOOR ENCLOSURE AND THE ASSOCIATED POWER DISTRIBUTION EQUIPMENT, REFER TO PHOTO #200.8. CAREFULLY REMOVE TO REUTILIZE EXISTING CONDITION AND BRANCH CIRCUIT UNDERGROUND CONDUIT STUB UP LOCATIONS FOR NEW ENCLOSURE.

CONSTRUCTION NOTES

- 1** BLOCK BUILDING - POWER DISTRIBUTION MODIFICATIONS:
PROVIDE NEW 400A, 120/208V, 3-PHASE, 4W, 420CCT PANELBOARD 'B' AND RE-ESTABLISH EXISTING AND NEW BRANCH CIRCUITS. PROVIDE NEW 200A LIGHTING CONTROLLER, PANELBOARD LPT FOR TYE FIELD LIGHTING. REFER TO NEW WORK SINGLE LINE DIAGRAM AND PANEL SCHEDULE ON DRAWING E-201. RECONNECT EXISTING STREET LIGHTING, TIMECLOCK AND RECEPTACLE BRANCH CIRCUITS.
- 2** TYE FIELD - LIGHT STANDARDS:
EXISTING LIGHT STANDARDS ARE 50FT DIRECT BURIED PRECAST CONCRETE POLE WITH 6 OR 7 METAL HALIDE LUMINARIES TO REMAIN. PROVIDE NEW 48AWG-GND VERTICAL RISER WIRING IN POLE AND RE-WIRE LUMINARIES AT THE TOP TO 120V WIRING C/W NEW BALLASTS IF REQUIRED TO COMPLY WITH CESC 30-104, b), ii), b). (SEPARATE PRICING TO BE APPROVED UPON RESULTS OF INVESTIGATION.)
- 3** TYE FIELD LIGHT STANDARDS - DUCT BANKS, TYPICAL TO SEVEN (7) LIGHT STANDARDS:
PROVIDE 1 X 63mmC DIRECT BURIED DUCT BANK AS PER DETAIL #1/E-202. REFER TO SINGLE LINE DIAGRAM ON DRAWING E-201 FOR CONDUCTOR QUANTITY AND SIZING.
- 4** SEELEY FIELD - FEEDER DUCT BANK:
PROVIDE 1 X 78mmC DIRECT BURIED DUCT BANK AS PER DETAIL #1/E-202. REFER TO SINGLE LINE DIAGRAM ON DRAWING E-201 FOR CONDUCTOR QUANTITY AND SIZING.
- 5** SEELEY FIELD - ENCLOSURE:
PROVIDE NEW OUTDOOR NEMA 3R ENCLOSURE MOUNTED ON CONCRETE PAD AS PER DETAIL #2 ON DRAWING E-202. PROVIDE NEW PANELBOARD 'S', JUNCTION BOX AND OUTDOOR RECEPTACLES AS SHOWN. PROVIDE SPARE CONDUIT STUBS PAST EDGE OF PAD/INSULATION AS SHOWN. RECONNECT EXISTING TOBOSGAN HILL TIMECLOCK AND LIGHTING CONTROLS.
- 6** HANDWELL, TYPICAL OF 2:
PROVIDE 12" (W) X 20" (L) X 30" (H) IN ACCORDANCE WITH OPS# 2112.05 C/W 20" X 28" X 3" (H) FRAME & COVER

ELECTRICAL LEGEND - SITE PLAN

SYMBOL	DESCRIPTION
	UNDERGROUND DUCT BANK
	SMALL MANHOLE / HANDHOLE - SIZE AS NOTED ON DRAWINGS
	SERVICE ROOM
	FUSED DISCONNECT SWITCH
	UNFUSED DISCONNECT SWITCH



CLIENT LOGO:



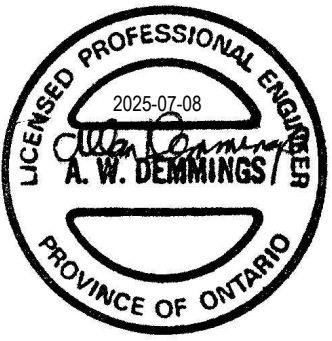
PROJECT ENGINEER:



NOTES:

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No	DATE	REVISION COMMENTS	ENG/ DRFT



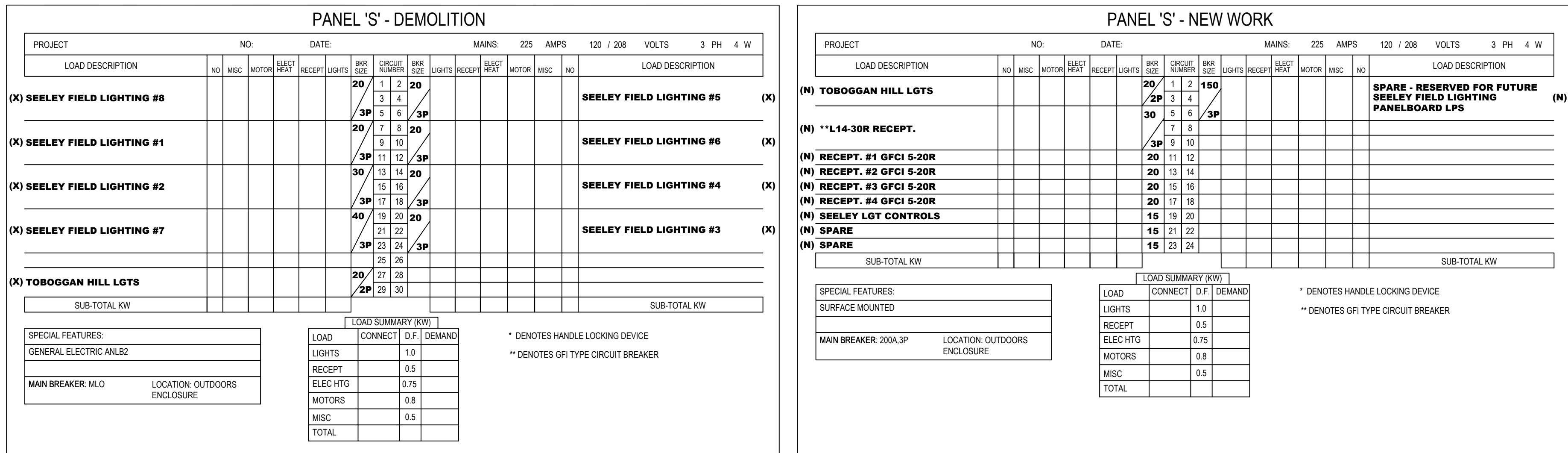
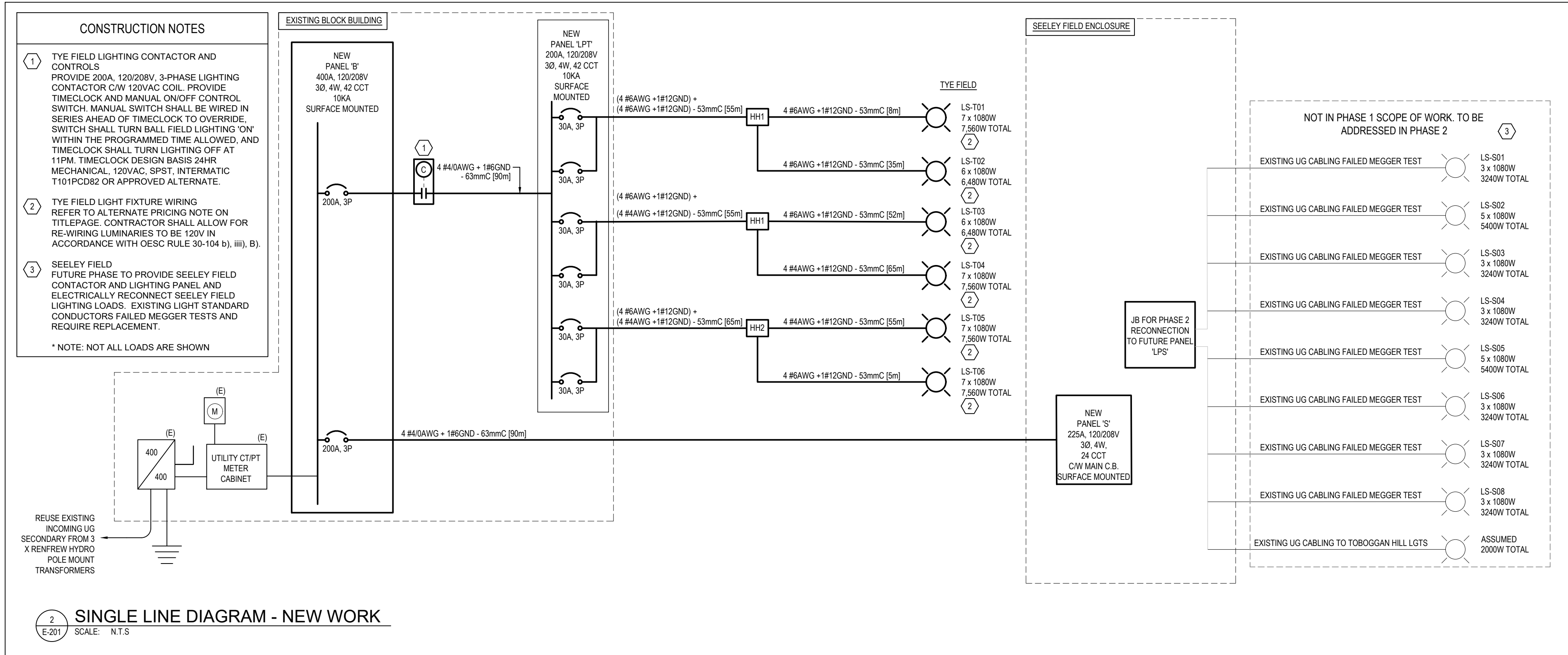
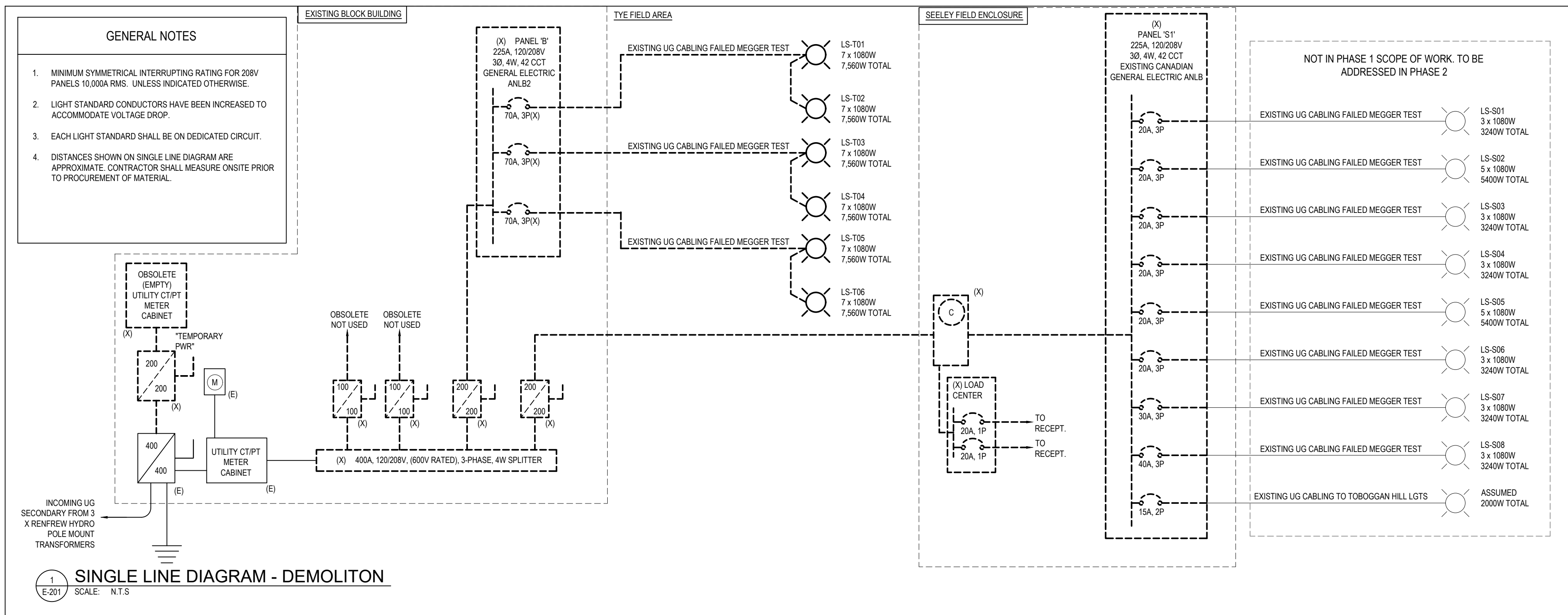
TOWN OF RENFREW MA-TE-WAY PARK - BALL DIAMONDS LIGHTING PHASE 1 - BLOCK BUILDING & TYE FIELD

MATEWAY PARK DRIVE, RENFREW, ON

ELECTRICAL SITE PLAN DEMOLITION AND NEW WORK

DESIGNED BY:	P.SCOISSONS	PROJECT No.:	25-4029A
DRAWN BY:	H.BAOBAID	CLIENT No.:	
CHECKED BY:	A.DEMMINGS	SCALE:	AS NOTED
APPROVED BY:	A.DEMMINGS	SHEET No.:	2 OF 4

E-200



PANEL 'B' - DEMOLITION

LOAD DESCRIPTION	NO	MISC	MOTOR	ELECT HEAT	RECEPT	LIGHTS	BKR SIZE	CIRCUIT NUMBER	BKR SIZE	LIGHTS	RECEPT	ELECT HEAT	MOTOR	MISC	NO	LOAD DESCRIPTION
(X) UNLABELLED							15	1	2	70						DIAMOND LIGHTS
(X) UNLABELLED							15	3	4							DIAMOND LIGHTS
(X) UNLABELLED							20	5	6	3P						DIAMOND LIGHTS
(X) STREET LIGHTING							15	7	8	70						DIAMOND LIGHTS
(X) STREET LIGHTING							15	9	10							DIAMOND LIGHTS
(X) STREET LIGHTING							15	11	12	3P						DIAMOND LIGHTS
(X) STREET LIGHTING							15	13	14	70						DIAMOND LIGHTS
(X) STREET LIGHTING							15	15	16							DIAMOND LIGHTS
(X) STREET LIGHTING							20	17	18	3P						DIAMOND LIGHTS
(X) STREET LIGHTING							2P	19	20	20						DIAMOND LIGHTS
(X) STREET LIGHTING							30	21	22	2P						DIAMOND LIGHTS
(X) STREET LIGHTING							3P	23	24	30						DIAMOND LIGHTS
(X) STREET LIGHTING							3P	25	26	2P						DIAMOND LIGHTS
(X) STREET LIGHTING							27	28								DIAMOND LIGHTS
(X) STREET LIGHTING							29	30								DIAMOND LIGHTS
(X) STREET LIGHTING							31	32								DIAMOND LIGHTS
(X) STREET LIGHTING							33	34								DIAMOND LIGHTS
(X) STREET LIGHTING							35	36								DIAMOND LIGHTS
(X) STREET LIGHTING							37	38								DIAMOND LIGHTS
(X) STREET LIGHTING							39	40								DIAMOND LIGHTS
(X) STREET LIGHTING							41	42								DIAMOND LIGHTS
SUB-TOTAL KW																SUB-TOTAL KW

SPECIAL FEATURES:

LOAD SUMMARY (KW)

SPECIAL FEATURES:

PANEL 'B' - NEW WORK

LOAD DESCRIPTION	NO	MISC	MOTOR	ELECT HEAT	RECEPT	LIGHTS	BKR SIZE	CIRCUIT NUMBER	BKR SIZE	LIGHTS	RECEPT	ELECT HEAT	MOTOR	MISC	NO	LOAD DESCRIPTION
(R) UNLABELLED							15	1	2	200						TYE FIELD LIGHTING PANEL 'LPT'
(R) UNLABELLED							15	3	4							TYE FIELD LIGHTING PANEL 'LPT'
(R) UNLABELLED							20	5	6	3P						TYE FIELD LIGHTING PANEL 'LPT'
(R) UNLABELLED							15	7	8	200						TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							15	9	10							TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							15	11	12	3P						TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							15	13	14							TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							15	15	16							TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							20	17	18							TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							2P	19	20	20						TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							30	21	22	2P						TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							3P	23	24	30						TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							3P	25	26	2P						TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							27	28								TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							29	30								TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							31	32								TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							33	34								TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							35	36								TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							15	37	38							TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							15	39	40							TYE FIELD LIGHTING PANEL 'LPT'
(R) STREET LIGHTING							15	41	42							TYE FIELD LIGHTING PANEL 'LPT'
SUB-TOTAL KW																SUB-TOTAL KW

SPECIAL FEATURES:

LOAD SUMMARY (KW)

SPECIAL FEATURES:

PANEL 'LPT' - NEW WORK

PROJECT		NO:		DATE:		MAINS:		225	AMPS		120 / 208		VOLTS		3 PH	4 W			
LOAD DESCRIPTION		NO	MISC	MOTOR	ELECT HEAT	RECEPT	LIGHTS	BKR SIZE	CIRCUIT NUMBER	BKR SIZE	LIGHTS	RECEPT	ELECT HEAT	MOTOR	MISC	NO	LOAD DESCRIPTION		
(N) TYE FIELD LST-02	6						6.48	30	1	2	30	7.56					7	TYE FIELD LST-01	(N)
								3	4	3									
								3P	5	6	3P								
(N) TYE FIELD LST-04	7						7.56	30	7	8	30	6.48					6	TYE FIELD LST-03	(N)
								9	10										
								3P	11	12	3P								
(N) TYE FIELD LST-06	7						7.56	30	13	14	30	7.56					7	TYE FIELD LST-05	(N)
								15	16										
								3P	17	18	3P								
									19	20									
									21	22									
									23	24									
SUB-TOTAL KW							21.6				21.6						SUB-TOTAL KW		

LOAD SUMMARY (KW)

LOAD	CONNECT	D.F.	DEMAND
LIGHTS	43.2	1.0	43.2
RECEPT	0.0	0.5	0.0
ELEC HTG	0.0	0.75	0.0
MOTORS	0.0	0.8	0.0
MISC	0.0	0.5	0.0
TOTAL	43.2		43.2

* DENOTES HANDLE LOCKING DEVICE
** DENOTES GFI TYPE CIRCUIT BREAKER

SPECIAL FEATURES:

SURFACE MOUNTED

MAIN BREAKER: MLO

LOCATION: BLOCK BUILDING

CLIENT LOGO:

Renfrew

Bringing Charm and Convenience

PROJECT ENGINEER:

Jp2g Consultants Inc.

ENGINEERS • PLANNERS • PROJECT MANAGERS

1150 MORRISON DRIVE, SUITE 410, OTTAWA, ON K2H 8S9
PHONE: 613-628-7800 FAX: 613-628-2020

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2025-07-08

PROVINCE OF ONTARIO

TOWN OF RENFREW

MA-TE-WAY PARK - BALL DIAMONDS LIGHTING PHASE 1 - BLOCK BUILDING & TYE FIELD

MATEWAY PARK DRIVE, RENFREW, ON

SINGLE LINE DIAGRAM AND PANEL SCHEDULES

DESIGNED BY: P.SCOISSONS PROJECT No.: 25-4029A

DRAWN BY: H.BAOBAID CLIENT No.:

CHECKED BY: A.DEMINGS SCALE: AS NOTED

APPROVED BY: A.DEMINGS SHEET No.: 3 OF 4

E-201

