

ELECTRICAL SPECIFICATIONS

SCOPE OF WORK

THE SCOPE OF WORK FOR THIS PROJECT IS TO SUPPLY AND INSTALL ALL REQUIRED ELECTRICAL ITEMS FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH THE INTENT OF THESE SPECIFICATIONS AND DRAWINGS AND ALL APPLICABLE CODES. THESE ITEMS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

- DISCONNECT AND REMOVE THE EXISTING PARKING LOT LIGHTING FIXTURES AND POLE IN ACCORDANCE WITH THE DRAWINGS.
- SUPPLY AND INSTALL ALL PARKING LOT FIXTURES AND POLES IN ACCORDANCE WITH THE DRAWINGS.
- SUPPLY AND INSTALL ALL POWER FEEDER REQUIREMENTS FOR NEW PARKING LOT FIXTURES. POWER FEEDERS SHALL BE PUSHED BETWEEN POLES.
- SUPPLY AND INSTALL A NEW ASTRONOMICAL TIME CLOCK AND TIE IT INTO THE EXISTING CONTROL SYSTEM.
- PROVIDE LOCATES AND SOFT EXCAVATIONS AS REQUIRED
- PATCH AND RESTORE ANY DAMAGE TO THE ASPHALT CAUSED BY THIS SCOPE OF WORK.

EXECUTION SPECIFICATION

THE CONTRACT INCLUDES THE FURNISHING OF LABOUR, MATERIAL, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS AND OPERATING TO THE COMPLETE SATISFACTION OF THE CONTRACT ADMINISTRATOR.

ALL ELECTRICAL WORK AND MATERIAL SHALL CONFORM WITH THE CURRENT RELEVANT AND/OR APPLICABLE BUILDING CODE, CANADIAN ELECTRICAL CODE AND TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AND THE DESIGN PROFESSIONAL. FOR THE PURPOSE OF THIS SPECIFICATION INTERPRETATION OF THE WORD "CODE" SHALL MEAN ALL CODES, REGULATIONS AND REQUIREMENTS AS STATED ABOVE.

EXAMINE THE SITE, BUILDING AND LOCAL CONDITIONS AFFECTING WORK OF THIS CONTRACT. EXAMINE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL CONDITIONS TO ENSURE WORK CAN BE PERFORMED WITHOUT CHANGES, AS SHOWN ON CONTRACT DRAWINGS. NO ALLOWANCE SHALL BE MADE LATER FOR NECESSARY CHANGES, UNLESS IT HAS BEEN BROUGHT TO CONTRACT ADMINISTRATORS ATTENTION IN WRITING, PRIOR TO CLOSING OF BID.

APPLY FOR ALL PERMITS, SERVICES, FEES AND INSPECTIONS AND PAY FOR ALL FEES TO THE AUTHORITIES HAVING JURISDICTION. INCLUDE ALL COSTS IN BID.

OBTAIN APPROVALS FROM THE ELECTRICAL INSPECTION AUTHORITY AND NOTIFY THE CONTRACT ADMINISTRATOR OF ANY CHANGES REQUESTED BY THE INSPECTION AUTHORITY.

WHERE DOUBT EXISTS AS TO THE MEANING OF THE DRAWINGS OR SPECIFICATIONS, OBTAIN CLARIFICATION PRIOR TO BID.

INCLUDE ALL FEDERAL, PROVINCIAL AND MUNICIPAL TAXES FOR THE WORK IN THE BID PRICE.

ALL MATERIALS USED SHALL BE NEW, OF THE TYPE SPECIFIED, AND APPROVED BY CERTIFICATION AGENCY RECOGNIZED BY THE AUTHORITY HAVING JURISDICTION, AND FREE FROM DEFECTS.

CLEAN ALL EQUIPMENT DURING CONSTRUCTION AND AGAIN ON COMPLETION OF THE CONTRACT.

REMOVE ALL SURPLUS MATERIALS, CUTTINGS, PACKAGING AND DEBRIS FROM THE SITE DURING THE PROGRESS AND AT FINAL COMPLETION OF THE WORK.

EXECUTE WORK IN A FIRST-CLASS AND WORKMANLIKE MANNER.

EXCAVATION AND FILL:

- WHERE REQUIRED THE CONTRACTOR SHALL PERFORM ALL EXCAVATION AND BACK-FILLING PERTAINING TO THIS PORTION OF THE CONTRACT. FILL MATERIAL SHALL BE EQUIVALENT TO THE SURROUNDING MATERIAL. CONTRACTOR SHALL COORDINATE ALL WORK REQUIRED.
- UNDER NO CIRCUMSTANCES SHALL A CONTRACTOR PROCEED WITH EXCAVATION WITHOUT CHECKING WITH PERTINENT PARTIES AND/OR AUTHORITIES REGARDING ANY EXISTING UNDERGROUND SERVICES DUCTS, STRUCTURES ETC.

DRAWINGS ARE DIAGRAMMATIC ONLY AND DO NOT SHOW ALL DETAILS. INFORMATION INVOLVING ACCURATE MEASUREMENTS OF THE BUILDING, STRUCTURAL STEEL, EXISTING WALLS, ETC. ARE TO BE TAKEN IN THE FIELD. THE CONTRACTOR SHALL MAKE, WITHOUT ADDITIONAL EXPENSE TO OWNER NECESSARY CHANGES OR ADDITIONS TO RUNS TO ACCOMMODATE STRUCTURAL OR ARCHITECTURAL CONDITIONS.

LOCATION OF DEVICES MAY BE ALTERED WITHOUT CHARGE TO THE CITY, PROVIDED THE CHANGE IS MADE BEFORE FINAL INSTALLATION, IT DOES NOT NECESSITATE ADDITIONAL MATERIALS, AND ALL SUCH CHANGES ARE RATTIFIED BY THE CITY'S REPRESENTATIVE. RECORD CHANGES ON RECORD SET OF DRAWINGS.

INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS, THE CANADIAN ELECTRICAL CODE AND ALL OTHER AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO ENSURE PROPER INSTALLATION.

CONTRACTOR SHALL KEEP AN ONGOING SET OF "RECORD" DRAWINGS ON SITE FOR REVIEW BY THE CITY OR CONTRACT ADMINISTRATOR AT ANY TIME. DRAWINGS TO BE TURNED OVER UPON COMPLETION OF PROJECT.

CONDUITS SHALL NOT HAVE MORE THAN ONE VOLTAGE LEVEL OF WIRING RUNNING WITHIN THEM.

SUBMITTALS

SUBMIT PRODUCT DATA FOR ALL EQUIPMENT. ACCEPTABLE MATERIALS SHALL BE AS SPECIFIED, CODE APPROVED OR APPROVED BY THE CITY. ALL MATERIAL SHALL BE NEW, UNLESS SPECIFIED OTHERWISE.

SUBMISSION SHALL INCLUDE FIXTURE CUTSHEETS AND A PHOTOMETRIC CALCULATION SHALL STATE THE ASSUMED LIGHT LOSS FACTOR AND INCLUDE THE FOOT CANDLES (FC) DELIVERED TO THE PARKING LOT AS WELL AS SURROUNDING AREAS.

SHOP DRAWINGS FOR ELECTRICAL EQUIPMENT/MATERIALS SHALL BE SUBMITTED FOR REVIEW BY THE CONTRACT ADMINISTRATOR BEFORE MANUFACTURING AND INSTALLATION CAN PROCEED.

SUBMIT TO THE CONTRACT ADMINISTRATOR UPON COMPLETION OF THE CONTRACT, ONE MARKED UP SET OF RECORD DRAWINGS AND THREE SETS OF MAINTENANCE MANUALS FOR SERVICE, DISTRIBUTION, PANELS, LIGHT FIXTURES, LAMPS, EXITS, EMERGENCY UNITS, EMERGENCY HEADS, AND FIRE ALARM EQUIPMENT.

AFTER WORK IS COMPLETED, FURNISH TO THE CITY A WRITTEN GUARANTEE THAT FOR ONE YEAR FROM DATE OF ACCEPTANCE, ANY DEFECTS IN MATERIALS OR WORKMANSHIP WILL BE CORRECTED AT NO COST TO THE CITY. SUBMIT COPY OF GUARANTEE TO CONTRACT ADMINISTRATOR.

COORDINATION

THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE SCOPE OF WORK REQUIRED FOR EACH TRADE. WORK SHALL BE DONE BY THE APPROPRIATE SKILLED TRADE. ALL TRADES MUST COORDINATE WORK TO ENSURE THAT THE ENTIRE SCOPE OF THE PROJECT IS COVERED. THERE SHALL BE NO ALLOWANCES PROVIDED FOR ITEMS WHICH RESULT FROM A FAILURE TO COORDINATE. THE CONTRACTOR WILL REVIEW THE DRAWINGS WITH ALL TRADES PRIOR TO BID SUBMISSION TO RESOLVE ALL COORDINATION ISSUES.

RESPONSIBILITY TO DETERMINE WHICH DIVISION OR SECTION PROVIDES VARIOUS PRODUCTS AND WORK, RESTS WITH THE CONTRACTOR. ADDITIONAL COMPENSATION WILL NOT BE CONSIDERED BECAUSE OF DIFFERENCES IN INTERPRETATION OF TECHNICAL PROVISIONS.

THE CONTRACTOR SHALL COORDINATE WITH THE OWNER DURING ANY DEMOLITION AND CONSTRUCTION PHASES OF THE WORK FOR ALL TEMPORARY ELECTRICAL CONNECTIONS REQUIRED AND FOR THE REMOVAL OF EXISTING POWER SERVICES AND THE INSTALLATION OF NEW SERVICES. CONTRACTOR SHALL COMPLETE ALL PRELIMINARY WORK PRIOR TO ANY POWER OUTAGES.

CONTRACTOR SHALL COORDINATE, NOTIFY AND ARRANGE WITH THE CITY, GENERAL CONTRACTOR AND CONSULTANT ALL STAGING REQUIREMENTS TO MINIMIZE ALL POWER DISRUPTIONS AND ANY POWER OUTAGES NECESSARY TO COMPLETE THE WORK AT NO ADDITIONAL COST.

PRODUCT SPECIFICATIONS:

CONDUIT, WIRE AND CONNECTIONS

DRAWINGS ARE SCHEMATIC ONLY. CONDUIT RUNS SHOWN INDICATE POINTS TO BE JOINED. RUNS MAY BE ALTERED BY THE CONTRACTOR TO SUIT ACTUAL FIELD CONDITIONS. ELECTRICAL DRAWINGS ONLY GIVE INDICATION OF OTHER TRADES EQUIPMENT.

WIRING DEVICES IN FINISHED AREAS SHALL BE RECESSED MOUNTED AND FOR ALL UNFINISHED AREAS MAY BE SURFACE MOUNTED.

UNLESS OTHERWISE NOTED, FOR ALL OUTSIDE LIGHTING, USE MINIMUM #10 RW90 RUN C/W BOND WIRE. INCREASE WIRE GAUGE ACCORDING TO LOAD AND DISTANCE.

TEST SYSTEM AND RECORD SAME FOR THE CONTRACT ADMINISTRATOR'S APPROVAL:

- VOLTAGE DROP
- PHASE BALANCE
- INSULATION RESISTANCE
- GROUND RESISTANCE

ALL WIRE AND CABLE SHALL BE COPPER, 98% CONDUCTIVITY, COLOUR CODED, NEW AND MARKED AS PER CODE REQUIREMENTS AND INSTALLED IN RACEWAYS. WIRES SHALL BE RATED MINIMUM 600V RW90 FOR UNDERGROUND RACEWAY INSTALLATIONS.

ALL WIRING SHALL BE SIZED AS PER CODE MINIMUM ALLOWABLE WIRE SIZE IS #12 AWG. CONDUCTORS #8 AWG AND LARGER TO BE STRANDED. ALL WIRES INSTALLED IN CONDUIT SHALL BE PULLED IN AT THE SAME TIME. ONLY APPROVED PULLING LUBRICANT SHALL BE USED. COLOUR CODE CONDUCTORS WITH DIFFERENT COLOURS FOR EACH PHASE, NEUTRAL, GROUND AND BOND WIRES AS REQUIRED BY CODE.

MAXIMUM VOLTAGE DROP SHALL BE AS PER CODE REQUIREMENTS.

ALL WIRE CONNECTIONS TO BE SECURELY FASTENED BY MEANS OF APPROVED CONNECTORS.

ALL NON-CURRENT CARRYING METAL PARTS SHALL BE GROUNDED AND/OR BONDED IN ACCORDANCE WITH THE CODE.

OPENINGS IN ALL ELECTRICAL METAL BOXES SHALL BE PUNCHED OR CUT. BURNING OF HOLES SHALL NOT BE PERMITTED.

INSTALL ALL CONDUITS, ETC. TO ACCOUNT FOR EXPANSION AND INSTALL APPROVED EXPANSION JOINTS WHERE REQUIRED.

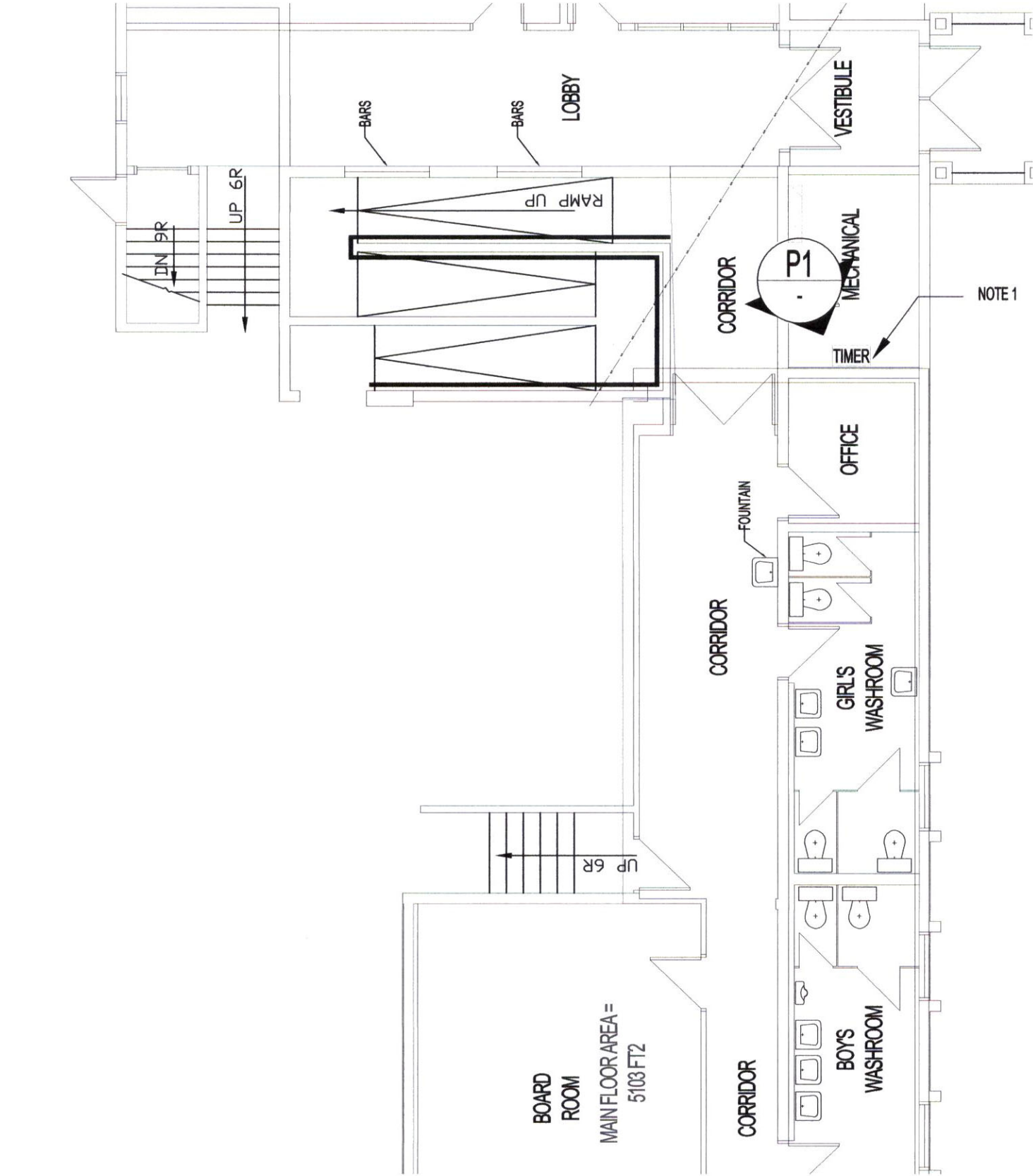
RACEWAYS SHALL BE RIGID METAL CONDUITS, EMT OR FLEXIBLE CONDUIT AS SHOWN ON THE DRAWINGS. ALL CONDUIT INSTALLED IN CONCRETE FLOOR SHALL BE RIGID PVC OR RIGID GALVANIZED STEEL CONDUIT C/W BOND CONDUCTOR.

ALL CONDUITS MUST BE SECURELY FASTENED WITH APPROVED CLIPS AND SCREWS IN PARTITIONS AND CADDY CLIPS IN CEILING. NAILS SHALL NOT BE ACCEPTED.

ALL CONDUIT, CONDUCTORS, WIRES, ETC. SHALL BE LABELED IN INDELEBIL INK AT PANEL AND JUNCTION BOXES INDICATING DEVICE FED, PANEL NAME AND CIRCUIT NUMBER.

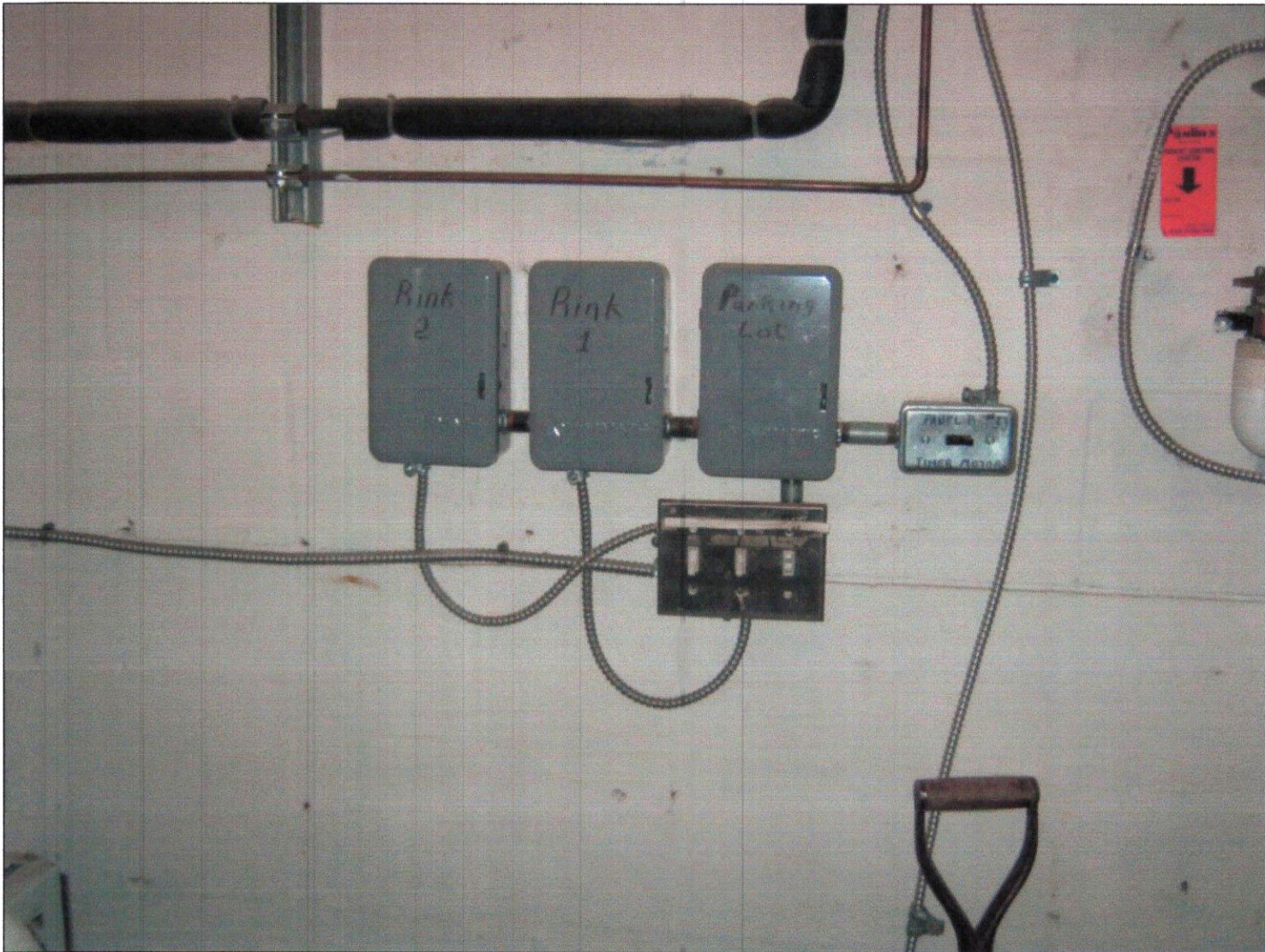
LUMINAIRES

LUMINAIRES SHALL BE AS DETAILED ON THE FIXTURE SCHEDULE AND INSTALLED AS INDICATED IN LOCATIONS SHOWN. INSTALL COMPLETE WITH HANGERS, GASKETS AND SUPPORTS FOR A COMPLETE AND FINISHED OPERATION



CHALMERS COMMUNITY CENTRE PARTIAL MAIN FLOOR PLAN

SCALE: 1/8"=1'-0"



P1 EXISTING PARKING LOT LIGHTING CONTROLS

SCALE: N.T.S.

ELECTRICAL NOTES:

1. REPLACE THE EXISTING TIME CLOCK WITH A NEW TORK DIGITAL ASTRONOMICAL TIME CLOCK COMPLETE WITH DROT DRY CONTACT AND SUPER CAPACITOR BATTERY (TORK - DSH100AY OR EQUIVALENT). CONTRACTOR SHALL SCHEDULE THE PARKING LOT LIGHTING TO SWITCH ON AT DUSK AND SWITCH OFF AT DAWN.
2. CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL SETTINGS OF TIME CLOCK.

NOTES:

THESE DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL VISIT THE SITE AND SATISFY ONESELF ALL DIMENSIONS, DATUM, AND DETAILED INFORMATION SHOWN ARE CORRECT.

ALL PRODUCTS AND MATERIALS TO BE USED AND INSTALLED SHALL CONFORM WITH MANUFACTURER'S SPECIFICATIONS & APPLICABLE CODES.

LEGEND:

- PANEL BOARD
- TIMER
- TIMER PANEL

0	ISSUED FOR CONSTRUCTION		15.03.19
No.	REVISION/DESCRIPTION	BY	DATE

SEAL

PROVINCE OF MANITOBA  
REGISTERED PROFESSIONAL ENGINEER  
CL  
SARARAS  
Member  
32618  
MAR 25 2015

DRAWN

DATE

2014.11.10

CHECKED

DESIGNED

APPROVED

USER

APPROVAL

THE CITY OF WINNIPEG  
PLANNING, PROPERTY AND  
DEVELOPMENT DEPARTMENT  
MUNICIPAL ACCOMMODATIONS DIVISION  
3-65 GARRY STREET, R3C 4K4

PROJECT  
CHALMERS COMMUNITY CENTRE  
PARKING LOT LIGHTING UPGRADE

480 CHALMERS AVENUE

SHEET TITLE  
ELECTRICAL  
SPECIFICATION AND PARTIAL PLAN

SCALE	PROJECT No:	SHEET No:
AS SHOWN	2015-78	E2

DRAWING SHEET SIZE: A1 (841mm x 594mm) PLOT 1:1