ADDRESS: 491 PORTAGE AVENUE PROJECT No: 2013-127-01 SHEET TITLE: PARTIAL MAIN FLOOR PLAN - RENO - LIGHTING DATE: 2015.08.11 FILE NAME: 20131127VME1.dwg

NOTES:

1.1 ELECTRICAL SPECIFICATIONS

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL WORK .

2. REFER TO ARCHITECTURAL SPECIFICATIONS AND OTHER GENERAL CONDITIONS.

3. PROVIDE FOR A COMPLETE AND WORKING INSTALLATION AS HEREIN SPECIFIED AND AS SHOWN ON THE DRAWINGS.

4. THE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE, PROVINCIAL AND MUNICIPAL CODES AND REGULATIONS.

5. OBTAIN ALL PERMITS, APPROVALS AND PAY ALL RELATED FEES REQUIRED FOR THIS INSTALLATION.

6. ALL EQUIPMENT SUPPLIED UNDER THIS CONTRACT SHALL BE NEW AND BE C.S.A. APPROVED.

7. COORDINATE ALL CONDUIT RUNS AS SPECIFIED OR AS PER CONTRACT ADMINISTRATOR BEFORE INSTALLATION BEGINS.

8. ARRANGE FOR, AND COORDINATE, ROUGH-IN AND FINAL INSPECTIONS WITH INSPECTION AUTHORITIES, CONTRACT ADMINISTRATOR.

9. VISIT EXISTING SITE WHERE SUCH EQUIPMENT IS PRESENTLY INSTALLED, AND/OR OBTAIN OUTLETS, WIRING AND RECEPTACLE CONFIGURATIONS FROM EQUIPMENT MANUFACTURERS. EXACT CONFIGURATIONS MAY DIFFER FROM THOSE SHOWN ON THE DRAWINGS. INCLUDE ALL COSTS TO PROVIDE NECESSARY OUTLETS WIRING AND RECEPTACLES.

1.2 EXAMINATION

.1 EXAMINE THE ARCHITECTURAL AND MECHANICAL DRAWINGS TO ENSURE THAT THE WORK UNDER THIS CONTRACT CAN BE SATISFACTORILY CARRIED OUT. REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR.

.2 THE CONTRACTOR SHALL EXAMINE THE SITE, LOCAL CONDITIONS AND CONSIDER HOW THEY MAY AFFECT THE PROJECT.

1.3 SUPERVISION

.1 SUPERVISE THE WORK AT ALL TIMES THROUGH A RESPONSIBLE AND COMPETENT JOURNEYMEN ELECTRICIAN / SUPERVISOR.

.2 FULL COOPERATION SHALL BE SHOWN WITH OTHER TRADES TO FACILITATE INSTALLATIONS AND TO AVOID DELAYS IN CARRYING OUT THE WORK.

1.4 ACCURACY OF DATA

.1 DRAWINGS ARE SCHEMATIC; EXACT LOCATIONS, DISTANCES, LEVELS AND OTHER DIMENSIONS SHALL BE GOVERNED BY THE BUILDING AS CONSTRUCTED.

.2 OUTLETS OR EQUIPMENT SHALL BE MOVED TO ANY POINT WITHIN A 10' RADIUS WHEN RELOCATION IS REQUESTED BY THE CONTRACT ADMINISTRATOR BEFORE THE WORK HAS BEEN SUBSTANTIALLY COMPLETED, WITHOUT ADDITIONAL COST.

.3 BRANCH CIRCUIT WIRING SHALL BE INSTALLED WITH CIRCUITS ARRANGED EXACTLY AS SHOWN ON THE DRAWINGS. CONDUIT AND CABLE RUNS MAY BE MODIFIED TO SUIT THE INSTALLATION.

1.5 APPROVAL OF MATERIAL

.1 REQUEST FOR APPROVAL OF MATERIAL AS EQUALS OR ALTERNATES TO THAT SPECIFIED SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR IN ACCORDANCE WITH B6.

1.6 SHOP DRAWINGS

.1 PROVIDE A SET OF SHOP DRAWINGS (HARD COPY OR PDF) FOR REVIEW BY THE CONTRACT ADMINISTRATOR. HARD COPY SHOP DRAWINGS MUST BE ASSEMBLED INTO COMPLETE BROCHURES, WITH NO LOOSE SHEETS.

.2 THE REVIEW OF THE SHOP DRAWINGS IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THE REVIEW SHALL NOT MEAN APPROVAL OF THE DETAILED DESIGN INHERENT IN THE EQUIPMENT, THE RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR. THE REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR CONFIRMING AND CORRELATING THE DIMENSIONS ON THE JOBSITE, AND FOR INFORMATION THAT PERTAINS TO THE FABRICATION PROCESS, CONSTRUCTION TECHNIQUES, AND INSTALLATION DETAILS, AND FOR COORDINATING ALL WORK OF THE RELATED SUB-TRADES.

.3 FABRICATION OF EQUIPMENT SHALL NOT COMMENCE UNTIL SHOP DRAWINGS OF SUCH EQUIPMENT HAVE BEEN REVIEWED AND APPROVED BY THE CONTRACT ADMINISTRATOR. TWO SETS SHALL BE SUBMITTED WITH LOCAL INSPECTION DEPARTMENT APPROVAL WHERE REQUIRED.

.4 THE ELECTRICAL SUB-CONTRACTOR SHALL REVIEW ALL MECHANICAL SHOP DRAWINGS - REQUIRING ELECTRICAL CONNECTION - AND COORDINATE VOLTAGE AND SIZES WITH DIVISION 15 AND THE GENERAL CONTRACTOR.

1.7 AS-BUILT DRAWINGS

.1 KEEP A RECORD SET OF DRAWINGS ON THE SITE AT ALL TIMES RECORDING ANY CHANGES THAT MAY OCCUR. SUBMIT THESE DRAWINGS TO THE CONTRACT ADMINISTRATOR UPON COMPLETION OF THE WORK. AS-BUILTS SHALL INCLUDE TAGGING EXISTING AND NEW CIRCUITS AND EQUIPMENT.

.2 SUBMIT A CERTIFICATE OF INSPECTION FROM THE LOCAL INSPECTION AUTHORITY UPON COMPLETION OF WORK AND INCLUDE IN "AS-BUILT" DRAWINGS.

.3 THE CONTRACT ADMINISTRATOR RESERVES THE RIGHT TO RECOMMEND A PORTION OF THE CONTRACT FUNDS BE WITHHELD PENDING SUBMISSION OF ACCEPTABLE AS-BUILT DRAWINGS.

1.8 TESTING

.1 THE ELECTRICAL INSTALLATION SHALL BE COMPLETELY TESTED DEMONSTRATING THE EQUIPMENT AND SYSTEMS INSTALLED PERFORM IN THE MANNER INTENDED.

1.9 GROUNDING

.1 THE ENTIRE INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF CANADIAN ELECTRICAL CODE AND AS SHOWN ON DRAWINGS.

1.10 WORKMANSHIP

.1 INSTALL EQUIPMENT, CONDUIT AND CABLES IN A WORKMANLIKE MANNER TO PRESENT A NEAT APPEARANCE TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR. INSTALL CONDUIT AND CABLE RUNS PARALLEL AND PERPENDICULAR IN CHASES, BEHIND FURRING OR ABOVE CEILINGS. IN AREAS WHERE SYSTEMS ARE TO BE EXPOSED, INSTALL NEATLY AND GROUP TO PRESENT A TIDY APPEARANCE.

.2 INSTALL EQUIPMENT AND APPARATUS REQUIRING MAINTENANCE, ADJUSTMENT OR EVENTUAL REPLACEMENT WITH ADEQUATE CLEARANCES AND ACCESSIBILITY FOR SAME.

.3 INCLUDE, IN THE WORK, ALL REQUIREMENTS SHOWN ON THE SHOP DRAWINGS OR MANUFACTURERS' INSTALLATION INSTRUCTIONS.

.4 REPLACE WORK UNSATISFACTORY TO THE CONTRACT ADMINISTRATOR WITHOUT EXTRA COST.

.5 USE OF CLIPS FOR SECURING AC90 TO CEILING SYSTEM IS PROHIBITED.

.6 ALL CONDUITS MUST BE CLIPPED TO STRUCTURAL CONCRETE BY MEANS OF SUITABLE ANCHORS OR SUPPORTED BY UNISTRUT HANGERS AS CLOSE TO UNDERSIDE AS POSSIBLE. TYE WRAPS FOR WIRE HANGING AND FASTENING IS NOT ACCEPTABLE. PERFORATED STRAPPING IS ALSO UNACCEPTABLE. ALL ELECTRICAL COMPONENTS MUST BE SUPPORTED INDEPENDENTLY.

.7 ALL ELECTRICAL SUPPORTS AND HANGER SHALL CONFORM TO LATEST EDITION OF CANADIAN ELECTRICAL CODE AND/OR MANUFACTURER'S INSTALLATION INSTRUCTIONS .

1.11 MATERIALS AND INSTALLATION

1.12 OUTLET BOXES

.1 OUTLET, JUNCTION AND SWITCH BOXES SHALL BE GALVANIZED PRESSED STEEL OF SIZE AND TYPE TO SUIT EACH INDIVIDUAL APPLICATION.

.2 OUTLETS SHALL NOT BE LOCATED ANYWHERE ON THE EXTERIOR CURTAIN WALL. OUTLETS SHOWN SHALL BE MOUNTED ON THE NEAREST DIVIDING WALL 2' FROM OUTSIDE WALL, OR NEAREST FURRED OUT COLUMN.

.3 PROVIDE ALL REQUIRED ACCESS PANELS WITH SUITABLE FIRE RATINGS FOR THE WALL OR CEILING THEY ARE BEING INSTALLED IN.

1.13 WIRING METHODS

.1 UNLESS OTHERWISE SHOWN ON THE DRAWINGS, ALL WIRE SHALL BE COPPER, MINIMUM #12 AWG WITH 90 DEGREES CELSIUS X-LINK INSULATION. WIRING TO BE INSTALLED IN CONDUIT (INCLUDING WIRING ON ROOF DECK FLUTES WHERE APPROVED).

.2 WIRING IN CONCRETE OR MASONRY CONSTRUCTION SHALL BE INSTALLED IN STEEL ELECTRICAL METALLIC TUBING (EMT). PROVIDE A SEPARATE GROUNDING CONDUCTOR IN EMT CONDUIT RUNS EMBEDDED IN CONCRETE SLABS. CONDUITS INSTALLED IN AREAS EXPOSED TO MOISTURE SHALL HAVE WATERTIGHT FITTINGS.

.3 ALL WIRING IN FINISHED AREAS SHALL BE CONCEALED. ALL CONDUCTORS AND CONDUITS SHALL BE RUN PERPENDICULAR OR PARALLEL TO THE BUILDING CORE WALLS.

.4 CONDUIT AND WIRING SHALL BE GROUPED WHERE POSSIBLE AND CLIPPED IN A NEAT AND WORKMANLIKE MANNER.

.5 AC-90 CABLE TO BE USED FOR DROPS FROM CONDUIT SYSTEMS TO RECESSED LIGHTING FIXTURES IN ACCESSIBLE CEILINGS OR OUTLET BOXES IN STEEL STUD WALLS ONLY. HOME RUNS SHALL BE IN CONDUIT. MAXIMUM RUN OF AC-90 IN ACCESSIBLE CEILING SPACE SHALL BE 5'-0". .

.6 EACH CIRCUIT FOR COMPUTER EQUIPMENT, PRINTERS AND COPIERS SHALL HAVE A SEPARATE NEUTRAL CONDUCTOR. .

.7 PROVIDE ONE ISOLATED GROUND CONDUCTOR PER THREE 2 WIRE ISOLATED GROUND CIRCUITS.

.8 CONDUIT RUNS SHALL BE INSTALLED AND INSPECTED BEFORE AC-90 RUNS ARE INSTALLED TO ENSURE CONFORMANCE WITH ITEM .5 HEREIN.

.9 THREE WIRE AC-90 SHALL NOT BE USED FOR ISOLATED GROUND WIRING, UNLESS IT INCLUDES A GREEN INSULATED CONDUCTOR FOR THIS PURPOSE.

.10 ALL AC-90 USED FOR DROPS SHALL BE RUN TIGHT TO DECK AND FOLLOW LINES OF BEAMS AND BUILDING.

.11 ALL WIRING IN SERVICE AREAS TO BE IN SURFACE MOUNTED EMT. DO NOT RUN CONDUIT HORIZONTALLY ON WALLS, VERTICAL DROPS ONLY.

1.14 IDENTIFICATION OF EQUIPMENT

.1 ALL EQUIPMENT SHALL BE IDENTIFIED WITH 3/8" X 1-1/2" (1/8" LETTERS) ENGRAVED LAMACOID NAMEPLATES INDICATING PANEL AND CIRCUIT NUMBER OR FIRE ALARM HORN DESIGNATION. LAMACOIDS SHALL BE EITHER SCREWED OR RIVETED IN PLACE. WITH EXCEPTION TO RECEPTACLES AND LIGHTING SWITCHES, SELF ADHESIVE TYPE IS NOT ACCEPTABLE. LAMACOIDS SHALL BE WHITE LETTERING ON RED FACE FOR EMERGENCY AND FIRE ALARM DEVICES AND WHITE LETTERING ON BLACK FACE TO NORMAL POWER DEVICES AND COMMUNICATION PANELS.

.2 PROVIDE 1" X 3" LAMACOIDS FOR EACH NEW COP BREAKER, INDICATING PANEL OR FEED BEING FED.

CATEGORY 6 DATA CABLING SPECIFICATIONS

CONTRACTOR QUALIFICATIONS

THE CONTRACTOR PERFORMING THE DATA CABLING INSTALLATION SHALL HAVE A STRUCTURED CABLING INDUSTRY AFFLIATION SUCH AS BICSI (BUILDING INDUSTRY CONSULTANTS INTERNATIONAL) MEMBERSHIP, RCDD (REGISTERED COMMUNICATIONS DISTRIBUTOR DESIGNER) AND/OR A STRUCTURED CABLING VENDOR CERTIFICATION.

ALL DATA CABLING INSTALLERS SHALL BE LICENSED AND INSURED.

THE DATA CABLING CONTRACTOR SHALL PROVIDE REFERENCES OF SIMILAR PROJECTS.

HORIZONTAL CABLING

1.1 CATEGORY 6 CABLING SHALL BE CERTIFIED AND TESTED TO A MINIMUM OF 250 MHZ. THE CATEGORY 6 HORIZONTAL CABLING SHALL MEET THE MINIMUM TECHNICAL SPECIFICATIONS IN (TELECOMMUNICATIONS INDUSTRY ASSOCIATION) TIA 568A. COLOUR TO BE BLUE.

1.2 ALL DATA TELECOMMUNICATIONS JACKS SHALL BE OF CATEGORY 6 CONNECTORS AND SHALL BE TIA CERTIFIED CATEGORY 6. COLOUR TO BE BLUE.

1.3 NO INSTALLED CABLING MAY BE EXPOSED TO VIEW OUTSIDE OF THE WIRING ROOM. IT SHALL BE WITHIN A RACEWAY, CONDUIT, POWER POLE OR BEHIND SUSPENDED CEILING.

1.4 ALL HORIZONTAL CABLING RUNS SHALL RUN FROM EACH WORK AREA IN A STAR TOPOLOGY TO A WIRING ROOM OR AS SHOWN. THERE SHALL BE NO CONNECTOR IN THE CABLE RUN BETWEEN THE OUTLET IN THE WORK AREA AND THE WIRING ROOM , EXCEPT FOR DATA ZONE BOXES. ALL CABLES SHALL SUPPORTED BY J-HOOKS OR SUPPORTED BY EXISTING WIRE TRAY. ALL EXPOSED CATEGORY 6 CABLING SHALL BE PLENUM-RATED.

1.5 NO CABLING RUN MAY EXCEED A LENGTH OF 90 METERS.

1.6 ALL CATEGORY 6 CABLING SHALL BE TERMINATED IN THE WIRING CLOSET ON RACK MOUNT CATEGORY 6 PATCH PANELS (MAXIMUM OF 48 JACKS PER PANEL). SUPPLY PATCH PANELS, COMPONENTS, WIRE MANAGEMENT, IF THERE IS INSUFFICIENT DATA PORTS IN EXISTING PATCH PANEL SUPPLY & INSTALL COMPLETE DATA CABLING FROM PATCH PANEL TO ORIGINAL SOURCE IN BUILDING, CONTACT THE CITY OF WINNIPEG, THROUGH CONTRACT ADMINISTRATOR.

1.7 THE CATEGORY 6 CABLING IN THE RACKS SHALL BE INSTALLED WITH SUFFICIENT AND APPROPRIATE MOUNTING CLIPS, BRACKETS, AND CABLE MANAGEMENT TO PROVIDE A SECURE AND MAINTAINABLE SYSTEM. CARE SHALL BE TAKEN TO NOT CAUSE THE CABLES TO BE OVERLY CRIMPED.

1.8 THE UTP CATEGORY 6 CABLE TAIL SHALL BE TERMINATED WITH A MINIMUM OF 14" OF SLACK BUT NOT TO EXCEED 18".

1.9 AFTER DRESSING CABLE TO THE FINAL LOCATION, THE SHEATH SHALL BE REMOVED TO A POINT THAT ALLOWS THE CONDUCTORS TO BE SPLAYED AND TERMINATED IN A NEAT AND UNIFORM FASHION. EVERY EFFORT MUST BE MADE TO MAINTAIN SHEATH INTEGRITY BY REMOVING ONLY AS MUCH AS IS PRACTICAL TO ACCOMPLISH TERMINATION. CABLE PAIR TWIST SHALL BE MAINTAINED UP TO THE POINT OF TERMINATION. AS STATED IN TIA-568A, THE PAIRS IN A CABLE SHOULD NEVER BE UNTWISTED MORE THAN 0.5 INCH FROM THE POINT OF TERMINATION. UNDER NO CIRCUMSTANCES SHALL CABLE PAIRS BE UNTWISTED OR OTHERWISE ALTERED PRIOR TO TERMINATION.

1.10 ANY UNUSED HORIZONTAL CABLING SHALL BE LABELED AND LOOSELY COILED.

1.11 CONTRACTOR SHALL SPECIFY CABLES PROPOSED FOR USE AND SUBMIT DOCUMENTATION PROVING THE PROPOSED CABLES MEET THESE SPECIFICATIONS.

LABELLING

2.1 ALL CABLES (EXISTING, NEW & RELOCATED) SHALL BE LABELED WITH TAG WRAPS OR SOME OTHER PERMANENT MARKER CAPABLE OF WITHSTANDING MULTIPLE PULLING OF CABLE THROUGH RACEWAYS. LABELS SHALL BE LOCATED 0.5 METER FROM THE WORK AREA END.

2.2 ALL TERMINATIONS SHALL BE CLEARLY IDENTIFIED ON PATCH PANELS IN NETWORK ROOM. ALL JACKS IN THE PATCH PANEL MUST BE IN SEQUENTIAL ORDER.

2.3 AT EACH WORK AREA, FACEPLATE OUTLET SHALL BE PROFESSIONALLY PRINTED WITH JACK NUMBERS CLEARLY VISIBLE WITHOUT REMOVING OUTLET FACEPLATE. THE LABELING SHALL BE METAL OR VINYL ADHESIVE TAPE WITH EMBOSSED OR INDELIBLE PRINTING FOR EACH OUTLET.

FIELD TEST QUALITY

3.1 THE CONTRACTOR SHALL VISUALLY INSPECT ALL CABLES, CABLE REELS, AND SHIPPING CARTONS TO DETECT CABLE DAMAGE INCURRED DURING SHIPPING AND TRANSPORT. VISIBLY DAMAGED ITEMS SHALL NOT BE INSTALLED.

3.2 CONDUCT CABLE TESTING ONLY UPON COMPLETION OF INSTALLATION.

3.3 A MINIMUM OF A LEVEL II-E FIELD TESTER SHALL BE USED TO VERIFY CABLING PERFORMANCE.

3.4 IN ADDITION TO HARD COPY TEST RESULTS, ACCEPTABLE ELECTRONIC FORMAT FOR TEST RESULTS ARE MICROSOFT EXCEL FOR EACH LINK.

3.5 THE CONTRACTOR SHALL DESCRIBE IN DETAIL ITS PROPOSED TEST PLAN TO DETECT ANY DEFECTIVE COMPONENTS AND TO DEMONSTRATE THAT THE INSTALLATION COMPLIES WITH THE SPECIFICATION.

RECORD DRAWINGS

4.1 THE CONTRACTOR SHALL KEEP A RECORD SET OF DRAWINGS ON THE SITE AT ALL TIMES RECORDING ALL CHANGES THAT MAY OCCUR. AS-BUILT DRAWINGS ARE TO BE SUBMITTED WITH CONTRACTOR'S NAME , SIGNATURE AND DATE OF AS-BUILT.

No.	REVISION/DESCRIPTION	BY	DATE
1	ISSUED FOR CONSTRUCTION	DTA	2015.08.24
0	REVISED TO REFLECT CLIENT CHANGES.	DTA	2015.07.29

SEAL

PROVINCE OF MANITOBA — X. WU — Member — 30166 — REGISTERED PROFESSIONAL ENGINEER

DRAWN	CHECKED	DESIGNED	APPROVED
DTA		DTA	
DATE 2015.08.11	USER APPROVAL		

Winnipeg

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

PROJECT

RICE BUILDING
WINNIPEG PARKING AUTHORITY
RENOVATION DESIGN
491 PORTAGE AVENUE

SHEET TITLE

PARTIAL MAIN FLOOR REFLECTED CEILING PLAN
RENOVATION
ELECTRICAL AND DATA SPECIFICATIONS

SCALE	PROJECT No:	SHEET No:
AS SHOWN	2013-127-01	E5R1

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