

ELECTRICAL SPECIFICATIONS:GENERAL

1. INSTALLATION AND ALL RELATED WORK SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE CANADIAN ELECTRICAL CODE, THE CURRENT EDITION OF THE CSA, ALL LOCAL CODES AND BYLAWS, AND THE MANUFACTURER'S RECOMMENDATIONS.
2. EXAMINE ALL PLANS AND SPECIFICATIONS PERTAINING TO THIS CONTRACT. NOTIFY CONTRACT ADMINISTRATOR OF ERRORS OR OMISSIONS BEFORE SUBMITTING THE PRICE. FAILING SUCH NOTIFICATION, THIS CONTRACTOR SHALL MEET ALL SUCH REQUIREMENTS WITHOUT EXTRA COST TO THE CITY.
3. PROVIDE ALL MATERIALS, LABOUR AND EQUIPMENT NECESSARY FOR INSTALLING, TESTING AND REPLACING IN INITIAL OPERATION THE COMPLETE ELECTRICAL SYSTEM.
4. ALL WORK PERFORMED SHALL MEET WORKPLACE SAFETY AND HEALTH ACT STANDARDS. CONTRACTOR SHALL ENSURE THAT ALL WORKERS FOLLOW SAFE WORKING PRACTICES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED PERMITS AND INSPECTIONS, INCLUDING ALL ASSOCIATED FEES. ON COMPLETION OF WORK, SUBMIT CERTIFICATES OF ACCEPTANCE FROM THE ELECTRICAL AUTHORITY TO THE CONTRACT ADMINISTRATOR.
6. ALL NEW EQUIPMENT AND MATERIAL SHALL BE CSA AND/OR ULC CERTIFIED.
7. PROVIDE LAMACOID NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT/DEVICES. MOUNT NAMEPLATES ON ALL EQUIPMENT TO INDICATE FUNCTION, DESIGNATION, VOLTAGE AND POWER OF DEVICES, WHITE/BLACK LETTERS. PROVIDE LISTING OF LAMACOIDS TO CONTRACT ADMINISTRATOR FOR APPROVAL PRIOR TO ORDERING.
8. THE CONTRACTOR IS TO EXAMINE THE CONDITIONS OF THE SITE AND BE RESPONSIBLE FOR RELOCATING OR REMOVING AND REPLACING ALL EQUIPMENT NECESSARY FOR THE WORK REQUIRED FOR THIS PROJECT.
9. ALL WORK COMPLETED SHALL BE ACCOMPLISHED IN A FIRST CLASS AND WORKMANLIKE STYLE.
10. SUBMIT 3 COPIES OF SHOP DRAWINGS TO CONTRACT ADMINISTRATOR, WITHIN 2 DAYS OF AWARD OF CONTRACT FOR APPROVAL AND INCLUSION IN O&M MANUALS.
11. THIS SPECIFICATION IS NOT INTENDED TO RESTATE THE APPLICABLE CODES. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ALL GROUNDING, ACCESS PANELS, ETC. AND FOLLOWING ALL WIRING METHODS.
12. PRIOR TO SCHEDULING FINAL INSPECTION, CONTRACTOR IS TO ENSURE THAT ALL WORK IS COMPLETED AND IN PARTICULAR THAT O&M'S ARE COMPLETED, ALL NAMEPLATES INSTALLED, VERIFICATION TESTS HAVE BEEN DONE AND CERTIFICATES HAVE BEEN RECEIVED THAT INDICATE WORK INSTALLED CONFORMS TO REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
13. CONTRACTOR SHALL LEAVE THE SITE IN A CLEAN AND SECURE CONDITION DAILY.

TEMPORARY POWER

14. TEMPORARY SERVICE SHALL COMPLY WITH SECTION 76 OF THE CANADIAN ELECTRICAL CODE.

WIRING METHODS

15. CONDUCTORS SHALL BE COPPER. MINIMUM WIRE SIZE SHALL BE #12 AWG RW90 UNLESS AS NOTED.
16. INSTALL A SEPARATE EMT CONDUIT FOR EACH ELECTRICAL SYSTEM RUN. BX WILL BE ALLOWED IN FINISHED WALLS ONLY.
17. MARK ALL WIRES TO INDICATE DESIGNATION AND/OR FUNCTION WITH SELF ADHESIVE NUMBERS AT EACH TERMINATION AND JUNCTION.
18. OUTLET, JUNCTION AND SWITCH BOXES SHALL BE GALVANIZED STEEL AND SIZED ACCORDING TO THE LATEST EDITION OF THE CEC AND TO SUIT EACH APPLICATION.
19. ALL CONDUITS TO HAVE SEPARATE INSULATED GROUND CONDUCTOR.
20. THE ENTIRE INSTALLATION SHALL BE GROUNDED IN CONFORMANCE WITH LATEST EDITION OF THE CEC.
21. RUN CONDUIT PARALLEL TO BUILDING LINES WITH MAXIMUM 4 (FOUR) 90 DEGREE BENDS.
22. ALL VERTICAL CONDUITS AND WIRING TO BE IN WALLS.
23. ALL DEVICES, WIRING AND ELECTRICAL EQUIPMENT SHALL BE SECURELY ATTACHED TO THE BUILDING STRUCTURE TO ACCEPTABLE INDUSTRY STANDARDS.

PANELBOARDS

24. TYPED PANEL SCHEDULES MUST BE COMPLETED FOR ALL PANELS. PANEL SCHEDULES SHALL BE PROTECTED FROM DIRT BY A PLASTIC SLEEVE ON THE INSIDE COVER OF THE PANEL.
25. PROVIDE NAMEPLATE FOR EACH PANELBOARD TO INDICATE PANEL DESIGNATION, FEEDING FROM AND VOLTAGE.
26. ELECTRICAL EQUIPMENT SHALL BE FIELD MARKED TO WARN OF POTENTIAL ELECTRIC SHOCK AND ARC FLASH HAZARDS AS PER CEC SECTION 2-306

HAZARDOUS MATERIALS

29. THE SITE CONDITIONS IDENTIFY THE LOCATION AND CONDITION OF ALL KNOWN ASBESTOS-CONTAINING MATERIAL (ACM) IN THE WORKING AREA. THIS INFORMATION IS PROVIDED FOR REFERENCE PURPOSES ONLY. REMOVAL OF HAZARDOUS MATERIALS SHALL BE DEALT WITH BY THE CITY.
30. EVERY EFFORT HAS BEEN MADE BY THE CITY TO IDENTIFY KNOWN ACM WITHIN THE WORK AREA. WHERE MATERIAL IS ENCOUNTERED BY THE CONTRACTOR THAT IS SUSPECTED OF CONTAINING ASBESTOS FIBRES, THE CONTRACTOR IS TO IMMEDIATELY STOP WORK IN THE AREA AND NOTIFY THE CONTRACT ADMINISTRATOR. DO NOT RESUME WORK IN THE AREA UNTIL THE ASBESTOS CONTENT OF THE MATERIAL HAS BEEN DETERMINED AND THE CONTRACT ADMINISTRATOR HAS GRANTED AUTHORIZATION.

31. REFER TO ASBESTOS INVENTORY CONTROL SHEET FOR FURTHER INFORMATION.

PRODUCTS

32. BREAKERS
 - 32.1. SHALL MATCH THE EXISTING
 - 32.2. MULTI-POLE BREAKERS SHALL BE OF ONE PIECE CONSTRUCTION WITH COMMON TRIP.
33. MOTION SENSOR SWITCH
 - 33.1. SHALL BE USING INFRARED AND ULTRASONIC TECHNOLOGY, AS WELL SELF-ADAPTIVE TECHNOLOGY
 - 33.2. SHALL HAVE COVERAGE PATTERN OF 180 DEGREES
 - 33.3. SHALL COVER MINIMUM OF 220m²
 - 33.4. SHALL BE CAPABLE OF SWITCHING 1200VA AT 120V
 - 33.5. SHALL HAVE TIME DELAY AND SENSITIVITY SETTINGS AUTOMATICALLY ADJUSTED TO THE OCCUPANTS PATTERNS
 - 33.6. TO BE MANUFACTURED BY LEVITON. PART NUMBER OSSMT-GDW, OR APPROVED EQUAL IN ACCORDANCE WITH B6.
- LUMINAIRES
 34. TYPE A
 - 34.1. BALLAST TO HAVE BALLAST FACTOR 1.00 (±2%), THD<10%, INPUT POWER ≤65W, POWER FACTOR ≥0.98
 - 34.2. BALLAST TO BE ADVANCE ICN-3P32-SC-120V OR APPROVED EQUAL IN ACCORDANCE WITH B6.
 35. TYPE B
 - 35.1. BALLAST TO HAVE BALLAST FACTOR 0.77 (±2%), THD<10%, INPUT POWER ≤96W, POWER FACTOR ≥0.98
 - 35.2. BALLAST TO BE ADVANCE IOP4P32LWSC-120V OR APPROVED EQUAL IN ACCORDANCE WITH B6.
 36. TYPE C
 37. LUMINAIRE TO BE LITHONIA 2SRT-3-32-FW-A12125V OR APPROVED EQUAL IN ACCORDANCE WITH B6.
 - 37.1. BALLAST TO HAVE BALLAST FACTOR 1.18 (±2%), THD<10%, INPUT POWER ≤110W, POWER FACTOR ≥0.98
 - 37.2. BALLAST TO BE ADVANCE IOPA3P32-HLSC-120V OR APPROVED EQUAL IN ACCORDANCE WITH B6.
 38. TYPE D
 - 38.1. LUMINAIRE TO BE LITHONIA N2S-32-120-GEB10PS OR APPROVED EQUAL IN ACCORDANCE WITH B6.
39. LENS TO MATCH EXISTING
40. LAMPS TO BE PHILIPS PRODUCT No. F32T8/TL841/PLUS/ALTO OR APPROVED EQUAL IN ACCORDANCE WITH B6.


PLATES

41. ALL PLATES TO BE STAINLESS STEEL OR APPROVED EQUAL IN ACCORDANCE WITH B6.

ORIGINAL STAMPED BY: D.A PALEY, PENG
DATE: 2010.09.21

NO.	REVISION/DESCRIPTION	BY	DATE
SEALS			

DRAWN BY	VC	CHECKED BY	VC	APPROVED	APR
DATE	2010.09.20	USER APPROVAL			

 CITY OF WINNIPEG
PLANNING, PROPERTY AND
DEVELOPMENT DEPARTMENT
CIVIC ACCOMMODATIONS DIVISION
300 - 65 GARRY ST. R3C 4K4

PROJECT
PUBLIC SAFETY BUILDING
EXHIBIT PROCESSING AREA DEVELOPMENT

151 PRINCESS STREET

SHEET TITLE
ELECTRICAL
SPECIFICATIONS

SCALE	PROJECT NO.	SHEET NO.
AS SHOWN	2008-067	E3