1.1 GENERAL CONDITIONS

.1 SUPPLY ALL LABOUR, EQUIPMENT, AND MATERIALS NECESSARY TO INSTALL. COMPLETE AND OPERATIONAL. THE ELECTRICAL SYSTEMS DESCRIBED HEREIN AND SHOWN ON THE DRAWINGS. THE REQUIREMENTS OF THIS SECTION ARE IN ADDITION TO THOSE CONTAINED IN THE GENERAL CONDITIONS AND OTHER PORTIONS OF THE CONTRACT DOCUMENTS.

1.2 DRAWINGS & SPECIFICATIONS

.1IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO PROVIDE FOR AN ELECTRICAL INSTALLATION COMPLETE AND IN OPERATING CONDITION. THE RESPONSIBILITY FOR SUPPLYING AND INSTALLING ALL MATERIAL NECESSARY TO ACCOMPLISH THIS, EXCEPT WHERE SPECIFICALLY NOTED THAT SUCH WORK OR MATERIALS IS NOT INCLUDED, SHALL BE PART OF THIS SECTION.

.2 DRAWINGS ARE SHEMATIC: EXACT LOCATIONS, DISTANCES, LEVELS AND OTHER DIMENSIONS SHALL BE GOVERNED BY THE BUILDING AS CONSTRUCTED.

1.3 LOCAL RULES AND COSTS

.1 THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT FDITION OF THE CANADIAN ELECTRICAL CODE AND THE BY-LAWS OF THE PROVINCE AND MUNICIPAL ELECTRICAL ENERGY INSPECTION DEPARTMENT WHOSE AUTHORITY COVERS THE AREA IN WHICH THE WORK IS BEING DONE.

.2 OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED TO EXECUTE

1.4 EQUIVALENT PRODUCTS

.1 EQUIVALENT PRODUCTS MAY BE SUBSTITUTED ONLY AFTER REVIEW AND APPROVAL BY THE CONTRACT ADMINISTRATOR IN ACCORDANCE WITH

1.5 CO-ORDINATION OF WORK

.1 CO-ORDINATE WITH OTHER TRADES ON THE LOCATION OF EQUIPMENT SUPPLIED BY OTHERS PRIOR TO THE INSTALLATION OF CONDUIT, OUTLETS, ETC. WHERE ELECTRICAL EQUIPMENT IS BEING BUILT-IN, SUPPLY THE EQUIPMENT OR NECESSARY DIMENSION TO THE OTHER

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

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

REQUIREMENTS SHOWN ON THE SHOP DRAWINGS OR MANUFACTURERS' INSTALLATION INSTRUCTIONS.

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

.6 USE OF CLIPS FOR SECURING AC90 TO CEILING SYSTEM PROHIBITED.

1.6 MATERIALS

.1 ALL MATERIALS SUPPLIED SHALL BE NEW (OR AS NOTED) AND OF THE QUALITY INDICATED IN THE SPECIFICATIONS AND SHALL CONFORM TO THE STANDARDS OF THE C.S.A. AND THE U.L.C. AND APPROVED BY THESE

AGENCIES WHERE APPLICABLE.

.2 IN THE EVENT THAT A MATERIAL SPECIFIED DOES INDICATE C.S.A., U.L.C.OR EQUAL APPROVAL, CONTRACTOR IS TO OBTAIN THE APPROVAL OF THE LOCAL INSPECTION AUTHORITY. PAY ALL CHARGES LEVIED BY THE INSPECTION AUTHORITY AND MAKE ANY MODIFICATIONS REQUIRED, AT NO ADDITIONAL EXPENSE TO THE LANDLORD

1.7 LOCATING EQUIPMENT

.1 MATERIALS AND LABOUR SHALL BE ADDED TO THE CONTRACT FOR OUTLETS MOVED WITHIN 10' OR 3.0m FROM THE LOCATION SHOWN ON THE PLANS PRIOR TO ROUGH-IN AT NO EXTRA CHARGE.

.2 PUSHBUTTONS SHALL BE MOUNTED 9" OR 225mm OR 36" OR 900mmT0 CENTER ABOVE FINISHED FLOOR.

.3 RECEPTACLES TO BE MOUNTED AT 12" AFF, 18" AFF ON AN ACCESSIBLE ROUTE. SWITCHES TO BE MOUNTED AT 52" AFF, 48"AFF ON AN ACCESSIBLE ROUTE. CONTACT ENGINEER FOR ANY ROUGHIN ELEVATION THAT MAY BE IN QUESTION.

.4 ALL EQUIPMENT SHALL BE INSTALLED WHERE THE INSTALLATION DOES NOT LEAVE THE DEVICE OR FIXTURE OBSTRUCTED IN ANY WAY. CONTRACTOR IS TO RELOCATE EQUIPMENT AS

1.8 WARRANTY

.1 WARRANTY ALL WORK FOR ONE YEAR. FOLLOWING FINAL ACCEPTANCE. THIS WARRANTY SHALL INCLUDE ALL PROBLEMS CAUSED BY IMPROPER INSTALLATION OR EQUIPMENT FAILURE.

1.9 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 ONE SET OF CORRECTED 'AS-BUILT' DRAWINGS DONE IN RED TO THE CONTACT ADMINISTER. CONFIRM

REQUIREMENTS PRIOR TO COMPLETION. 1.10 PANELS AND EQUIPMENT

1 PROVIDE ACCURATE TYPEWRITTEN DIRECTORIES FOR ALL EQUIPMENT

.2 EQUIPMENT TO BE OF SAME MANUFACTURER THROUGHOUT. PROVIDE ALL NECESSARY HARDWARE AND COVER PLATES FOR COMPLETE INSTALLATION. FULL SIZE BREAKERS PREFERRED .. ENSURE ALL EQUIPMENT IS RATED AND SUPPLIED TO COORDINATE WITH ALL POSSIBLE FAULT CONDITIONS PRESENT

1.11 GROUNDING SYSTEM

.1 GROUNDING SYSTEM SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CANADIAN ELECTRICAL CODE. ENSURE GROUND RESISTANCE IS SUITABLE FOR GRID LOCATION.

.2 PROVIDE GROUNDING TO ALL RACEWAYS, AND EQUIPMENT TO C.E.C.

1.12 DISCONNECT SWITCHES

.1 SUPPLY AND INSTALL DISCONNECT SWITCHES AS INDICATED AND AS REQUIRED BY CODE. INCLUDE W/P FOR

1.13 AUXILLARY EQUIPMENT

EXTERIOR LOCATIONS.

.1 PROVIDE WIRING, CONTROL TRANSFORMERS AND AUXILIARY CONTACTS AS REQUIRED FOR CONTROL CONNECTIONS. CO-ORDINATE ALL INTERLOCKS AND CONNECTIONS WITH

EQUIPMENT 1.14 WIRING METHODS

.1 ALL WIRING SHALL BE COPPER IN EMT

UNLESS INDICATED OTHERWISE.

.2 CIRCUIT WIRING TO BE MINIMUM #12 AWG RW90 UNLESS OTHERWISE INDICATED. WHERE WIRE SIZE IS NOT SHOWN, AMPACITY MUST MATCH OR EXCEED THAT OF PROTECTIVE DEVICE AND ANY ALLOWANCE FOR VOLTAGE DROP IS TO BE APPLIED. CABLE TO BE UPSIZED AS NECESSARY.

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

.4 ALL DIMMING DEVICES, COMPUTER AND COPIER RECEPTACLE CIRCUITS MUST BE CONNECTED WITH A SEPARATE NEUTRAL FOR EACH CIRCUIT.

.5 AC-90 CABLE MAY BE USED WHEN RUN DIRECTLY TO A DEVICE OR FIXTURE FROM A JUNCTION BOX ATTACHED TO A CONDUIT SYSTEM.CABLE LENGTH NOT TO EXCEED

1.15 INSTALLATION

.1 INSTALL WIRING CONTINUOUSLY WITHIN RACEWAYS. SPLICES WILL BE PERMITTED ONLY AT OUTLETS AND JUNCTION BOXES. ADEQUATE CABLE SHALL BE PROVIDED TO PERMIT PROPER CONNECTION OF ALL EQUIPMENT.

.2 ALL WIRING TO RUN CONCEALED IN CEILING, WALLS OR FLOORS WHEREVER POSSIBLE. ANY EXPOSED CONDUITS OR CABLES SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES TO BUILDING LINES AND IN A NEAT MANNER.

.3 INSTALL PULL BOXES AS REQUIRED BY THE CANADIAN ELECTRICAL CODE. PULL BOXES SHALL BE LOCATED IN INCONSPICUOUS SPACES, PROVIDE RATED ACCESS DOORS AS REQUIRED.

.4 PROVIDE ALL MOUNTING BRACKETS. STRAPS AND SUPPORTS TO SECURE ELECTRICAL DEVICES IN ACCORDANCE TO SPECIFICATIONS AND C.E.C REQUIREMENTS.

1.16 WIRING DEVICES

1.17 LIGHTING

.1 LIGHT SWITCHES TO BE SPEC COMMERCIAL GRADE, NYLON FACE, 15A, PROVIDE 20A SWITCHES WHERE INDICATED. ALL SWITCHES SHALL BE WHITE UNLESS OTHERWISE NOTED.

.2 RECEPTACLES SHALL BE SPEC COMMERCIAL GRADE, NYLON FACE, 15A FINISH TO BE WHITE UNLESS OTHERWISE NOTED. IG RECEPTACLES TO BE ORANGE IN COLOUR.

.3 WIRING DEVICES AND COVER PLATES SHALL BE ONE MANUFACTURER. ALL COVER PLATES SHALL MATCH EXISTING UNLESS OTHERWISE NOTED.

.4 GROUND FAULT CIRCUIT INTERRUPTING (GFI) DUPLEX RECEPTACLE SHALL BE ÈQUÁL TO COOPER # VGF—15W.

.1 SUPPLY AND INSTALL ALL LUMINARIES AND LAMPS AS INDICATED ON THE LUMINAIRE SCHEDULE EXCEPT AS NOTED OTHERWISE. ALL SUPPORTS AND WIRING TO MAKE THE LIGHTING SYSTEM OPERATIONAL IS TO BE SUPPLIED AND INSTALLED. FIXTURES ARE TO BE INDEPENDENTLY SUPPORTED FROM THE

CEILING BY FASTENING TO THE

1.18 EXIT AND EMERGENCY LIGHTING

BUILDING STRUCTURE.

.1 SUPPLY AND INSTALL EXIT LIGHTING AS INDICATED WITH WIRING RUN IN DEDICATED CONDUIT SYSTEM. WIRING SHALL BE MINIMUM #12 AWG WITH TYPE RW-90 INSULATION FXIT LIGHTS TO COMPLY WITH C860, NBC AND LOCAL BYLAWS. PROVIDE BATTERY UNITS AS SHOWN AND CONNECT TO ACTIVATE UPON LOSS OF AREA LIGHTING. PRODUCT SHALL BE EMERGI-LITE: EXIT SIGN: LPEX50 SERIES OR UNIVERSAL DESIGN AS PER LOCAL AUTHORITY BATTERY UNIT: 12ESL144 REMOTE HEADS: EF9-D12V20W,12W IN

1.19 LABELS

.1 PROVIDE AND INSTALL ADHESIVE LAMACOID LABELS TO IDENTIFY AL CIRCUITING AND MAJOR EQUIPMENT

.2 IDENTIFY ALL CONDUCTORS INCLUDING NEUTRAL AND GROUND CONDUCTORS AT EVERY JUNCTION BOX, OUTLET,

1.20 MISCELLANEOUS EQUIPMENT

.1 PROVIDE WIRING, CONNECTIONS, STARTERS, DISCONNECTS AND CONTROLS FOR ANY EQUIPMENT SUPPLIED AND INSTALLED BY OTHERS.

.2 ALL CONTROL WIRING WILL BE BY THE ELECTRICAL SUBCONTRACTOR UNLESS OTHERWISE NOTED. WHERE 120V POWER IS REQUIRED FOR MECHANICAL EQUIPMENT, WIRING AND CONNECTIONS ARE TO BE PROVIDED BY THE ELECTRICAL SUBCONTRACTOR.

1.21 TELEPHONE/DATA SYSTEM

.1 PROVIDE A COMPLETE TESTED AND OPERATING VOICE DATA SYSTEM IN A DEDICATED RACEWAY IN ACCORDANCE TO CAN/CSA-T529 AND T530

> .2 APPROVED MANUFACTURE IS: BELDON/CDT. CONTRACTORS ARE TO BE CERTIFIED AS INSTALLERS: BELDEN CSV. CONTRACTOR MUST HAVE A RCDD(REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER RECOGNIZED BY BICSI ON STAFF, AND BE EXPERIENCED IN THE SCOPE OF WORK REQUIRED IN THIS PROJECT.

.3 OUTLETS MUST BE RJ45 TYPE. DATA JACKS TO BE WHITE AND VOICE TO BE BLUE. INSTALL BOTH TYPES IN SAME OUTLET COVER WHEREVER POSSIBLE.

.4 ALL RACEWAYS TO HAVE A PULL STRING AND 33% SPARE CAPACITY FOR FUTURE. CABLES MUST BE INSTALLED IN A CONDUIT OR BASKET TYPE CABLE TRAY. J-HOOKS MAY BE USED AT THE DISCRETION OF THE ENGINEER. CABLE ARE TO BE BUNDLED AND SECURED USING HOOK AND LOOP STRAPS. TY-WRAPS ARE NOT PERMITTED.

.5 PROVIDE LABELS ON A BRADY OR PANDUIT LABEL MAKER ON SELF ADHESIVE, NON SMEAR LABELS WITH BLACK LETTERING. COORDINATE LETTER SIZE AND IDENTIFICATION WITH TENANT

.6 TESTING TO BE AS PER TIA 568 AND 526. PROVIDE COMPLETE TEST RESULTS IN INDIVIDUAL AND SUMMARY PDF PRIOR TO OCCUPANCY

1.22 TESTING

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

1.23 CUTTING AND PATCHING

.1 ARRANGE AND PAY FOR ALL CUTTING AND PATCHING AS REQUIRED FOR THE ELECTRICAL INSTALLATION.

.2 PROVIDE & INSTALL APPROPRIATE ULC LISTED FIRE STOP SYSTEMS AT ALL FIREWALL &/OR FLOOR PENETRATIONS. ACCEPTABLÉ MANUFACTURES: HILTI. DOW CORNING, FIRE-STOP SYSTEMS (ELASTA-SEAL) OR G.E. SILICONE.

1.24 DISTRIBUTION

.1 GENERAL ARRANGEMENT AND SIZE OF COMPONENTS SHALL BE AS SHOWN ON

.2 ALL DISTRIBUTION EQUIPMENT IS TO BE COMPLETE WITH LOCKING DOOR AND TO BE BOLTED ON HALE SIZE BREAKERS ARE NOT PREFERRED COORDINATE ALL TRIP SETTINGS WITH THE EQUIPMENT MANUFACTURER AND SET ACCORDINGLY.

.3 ALL EQUIPMENT IS TO INCLUDE ALL NECESSARY HARDWARE MOUNTING ACCESSORIES.

1.25 SECURITY SYSTEM

.1 COORDINATE AND PROVIDE RELOCATION AS NECESSARY FOR ALL CARD ACCESS AND SECURITY SYSTEM DEVICES. ENSURE ALL WORK IS APPROVED BY THE CONTRACT ADMINISTRATOR.

1.26 FIRE ALARM SYSTEM

.1 INSTALL WIRING CONTINUOUSLY WITHIN RACEWAYS. SPLICES WILL BE PERMITTED ONLY AT OUTLETS AND JUNCTION BOXES, CABLE TO BE FAS OR EQUIVALENT RATED CABLE FOR THE APPLICATION. ALL CABLING TO BE IN EMT OR HAVE A SUITABLE METAL ARMOUR.USE CLASS A MANNER OF

.2 ALL WIRING TO RUN CONCEALED IN CEILING, WALLS OR FLOORS WHEREVER POSSIBLE. ANY EXPOSED CONDUITS OR CABLES SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES TO BUILDING LINES AND IN A NEAT MANNER.

.3 PROVIDE ALL NECESSARY RELOCATION AND ADDITION OF DEVICES AS SHOWN AND TO MEET THE INTENT OF THE RENOVATION. PROVIDE NEW EQUIPMENT TO MATCH EXISTING SYSTEM

.4 THE SYSTEM WILL BE COMPLETELY INSTALLED AND THEN VERIFIED BY A CERTIFIED FIRE ALARM COMPANY, THE CONTRACTOR IS TO ENSURE THAT THE SYSTEM INSTALLATION COMPLIES TO ALL CODES AND IS LEFT IN A COMPLETE AND OPERATIONAL CONDITION.

1.27 AREAS NOT IN SCOPE

1 CONTRACTOR IS TO TAKE CARE IN CORRIDORS, STAIRS, ETC WHERE NO WORK IS SHOWN. REPAIR OR REPLACE ANY DAMAGED MATERIAL.

1.28 COORDINATION AND SUPPLY OF WORK ON EXISTING EQUIPMENT

> .1 WHERE EXISTING SERVICES SUCH AS ELECTRICAL POWER, ETC. ARE REQUIRED TO BE DISRUPTED AND/OR SHUT DOWN, CO-ORDINATE THE SHUTDOWNS AND CARRY OUT THE WORK AT AN ACCEPTABLE TIME TO THE CITY CAREFULLY SCHEDULE ALL DISRUPTION AND/OR SHUT-DOWNS AND ENSURE THAT THE DURATION OF SAME IS KEPT TO THE ABSOLUTE MINIMUM. SUBMIT FOR APPROVAL A WRITTEN, CONCISE SCHEDULE OF EACH DISRUPTION AT LEAST 120 HOURS IN ADVANCE OF PERFORMING WORK AND OBTAIN THE CITY'S WRITTEN CONSENT PRIOR TO IMPLEMENTING.

.2 SHOULD ANY TEMPORARY CONNECTIONS BE REQUIRED, SUPPLY AND INSTALL ALL NECESSARY MATERIAL AND EQUIPMENT AND PROVIDE ALL LABOUR AT NO EXTRA COST. SHOULD ANY EXISTING SYSTEM BE DAMAGED, MAKE FULL REPAIRS WITHOUT EXTRA COST. AND TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.

1.29 SITE REVIEW

.1 CONTACT THE CONTRACT ADMINISTRATOR FOR SITE REVIEW AT THE FOLLOWING STAGES OF CONSTRUCTION:

- ROUGH-IN OF WALLS AND FEEDERS SUBSTANTIAL PERFORMANCE - COMPLETION OF DEFICIENCIES (IF REQUIRED) NOTE: ALL REVIEWS ARE AT THE DISCRETION OF THE CONTRACT ADMINISTRATOR.

.2 PROVIDE FIVE (5) WORKING DAYS NOTICE FOR ALL REVIEWS.

1.30 SUBSTANTIAL PERFORMANCE

.1 BEFORE REQUESTING A SUBSTANTIAL PERFORMANCE REVIEW, THE FOLLOWING ARE AMONG ITEMS THAT MUST BE

- EMERGENCY LIGHTING SYSTEM MUST BE FULLY OPERATIONAL AND TESTED BY THE ELECTRICAL CONTRACTOR. - ALL EXIT LIGHTS MUST BE INSTALLED AND FULLY OPERATIONAL - ANY DEVICES NOT INSTALLED MUST HAVE THE WIRING MADE SAFE AND TERMINATED IN AN OUTLET BOX COMPLETE WITH COVER.

- ALL OUTLETS MUST HAVE COVER PLATES INSTALLED. - ALL ELECTRICAL EQUIPMENT MUST HAVE COVERS AND/OR DOORS INSTALLED COMPLETE. - THE FIRE ALARM MUST BE VERIFIED

AND FREE OF DEFICIENCIES - PROVIDE CERTIFICATE OF ACCEPTANCE FROM ELECTRICAL INSPECTION DEPARTMENT.

UMINAIRE, FLUORESCENT 2x4 LUMINAIRE, FLUORESCENT 4' STRIP OR 2' STRIP RECESSED, SURFACE OR PENDANT MOUNT FIXTURE

ELECTRICAL SYMBOLS

LUMINAIRE, FLUORESCENT 1x4

LUMINAIRE, WALL MOUNT

DUPLEX RECEPTACLE:

DIRECT CONNECTION

MOTOR EQUIPMENT DISCONNECT

RECEPTACLE, QUADRUPLEX

JUNCTION BOX

FIRE ALARM HORN

THERMOSTAT

POWER PANEL

SWITCH, SINGLE-POLE: D = DIMMER

DUPLEX RECEPTACLE: GROUND FAULT INTERRUPTER

MOTOR CONNECTION. PROVIDE REQUIRED DEVICE

CARD READER, WALL MOUNTED, 21mm EMT TO PANEL

REQUEST TO EXIT, RELEASE OF ELECTRIC STRIKE

VOICE/DATA OUTLET C/W 3/4" CONDUIT TO RACK

DATA OUTLET C/W 3/4" CONDUIT TO RACK

MOTION DETECTOR, WALL MOUNTED

a = MOUNTED ABOVE COUNTER

wp = WEATHER PROOF

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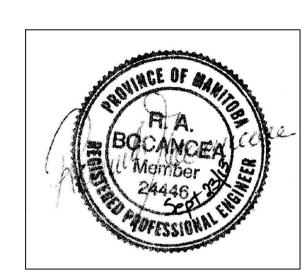
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	LUMINAIRE	SCHEDULE: For existing fix	tures reused, r	eplace all	needed lamps and ballasts with new
TYPE	MANUFACTURER	CATALOG NO.	LAMP	VOLTAGE	COMMENTS
AA	EXISTING		2-32W T8	347	RECESSED TROFFER WITH PERF BASKET.
Α	NEW	MATCH EXISTING TYPE AA	2-32W T8	347	RECESSED TROFFER WITH PERF BASKET.
В	EUREKA	MIO-3406-CHR-50W	1-50W BIPIN	120	WALL MOUNT, CENTER ABOVE FEATURE PANELS
С	EXISTING		1-50W MR16	120	SALVAGE EXISTING RECESSED FIXTURES FROM LOBBY
DD	EXISTING			347	RECESSED TROFFER, REMOVE AND RELOCATE TO ROOM 501
EE	EXISTING	SUSPENDED DIRECT/INDIRECT		347	REMOVE AND RELOCATE. SALVAGE ALL PARTS TO MAKE FIXTURES FIT NEW LOCATIONS INDICATED ON PLANS.

CHECKED DESIGNED APPROVED DRAWN **DATE** 2010.08.31 **USER** APPROVAL

ISSUED FOR CONSTRUCTION

REVISION / DESCRIPTION

KO 23/09/1



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

PROJECT

WASTE WATER SERVICES ALTERATIONS TO WASTE WATER OFFICE AREAS

1199 PACIFIC AVENUE

SPECIFICATION AND LEGEND

SCALE	PROJECT No:	SHEET No:	
AS SHOWN	2013-101		E0

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