

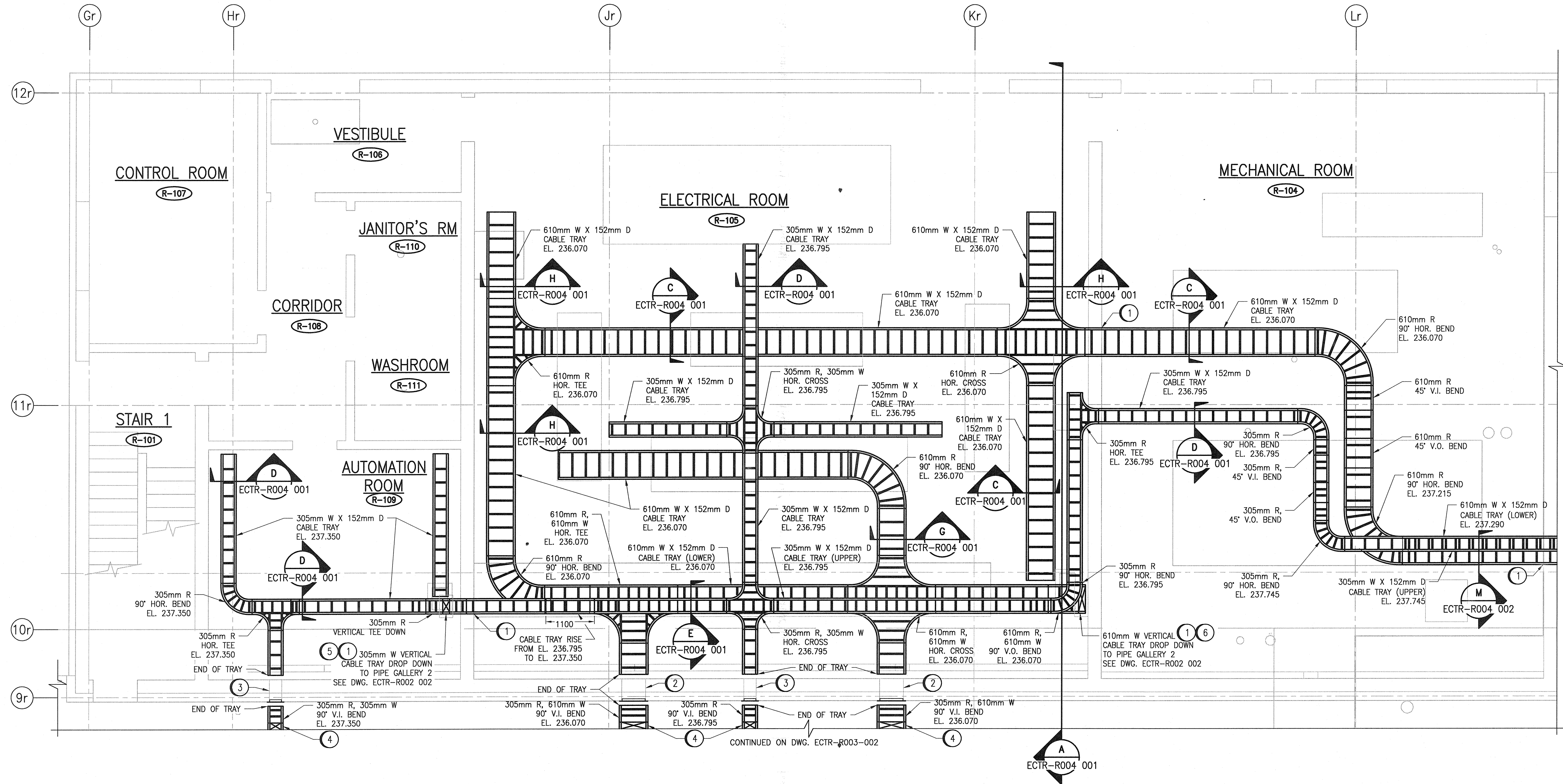
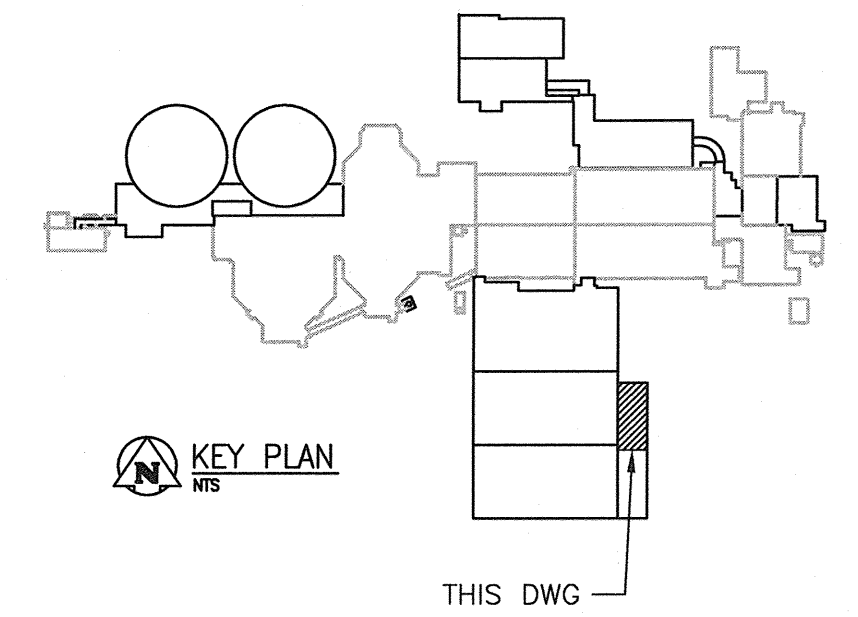
**GENERAL NOTES:**

- INSTALL THE CABLE TRAY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND IN ACCORDANCE WITH NEMA VE2.
- CABLE TRAY ELEVATIONS ARE MEASURED FROM THE BOTTOM OF THE CABLE TRAY.
- INDOOR CABLE TRAYS SHALL BE CSA CLASS C1 AND OUTDOOR CABLE TRAYS SHALL BE CSA CLASS D. ALL CABLE TRAYS SHALL BE ALUMINUM, HEAVY DUTY, 229mm RUNG SPACING, 152mm SIDE RAIL. STANDARD COMPONENTS, FACTORY MADE TEES, CROSSES, REDUCERS, EXPANSION JOINTS, COVERS AND ELBOWS. USE ACCESSORIES FROM SAME MANUFACTURER.
- INSTALL CABLE TRAYS WITHOUT KINKS AND SAGS. COMPLETE WITH SUPPORTS, BRACKETS, AND HARDWARE. PROVIDE A COMPLETE, RIGID AND CONTINUOUS INSTALLATION.
- NOT ALL REQUIRED TRAY BENDS, FITTINGS, ETC. ARE SHOWN. PROVIDE THESE AS REQUIRED TO SUIT THE EXACT INSTALLATION.
- SUPPORT TRAYS FROM STRUCTURAL MEMBERS OF THE BUILDING ONLY, SUCH MEMBERS INCLUDE COLUMNS, BEAMS AND MASONRY. INSTALL TRAY SUPPORTS AT SPACING OF NOT MORE THAN 2500mm ON CENTRE FOR HORIZONTAL RUNS AND NOT MORE THAN 1800mm ON CENTRE FOR VERTICAL RUNS.

- ENSURE THAT BOLTED CONNECTIONS ARE TIGHT, THAT TRAYS ARE FREE OF BURRS, SHARP CORNERS AND OTHER PROJECTIONS, WHICH MIGHT DAMAGE CABLE JACKETS.
- PROVIDE #2/0 AWG GREEN INSULATED BONDING CONDUCTOR ALONG THE ENTIRE LENGTH OF TRAY, CONNECTED TO ALL MEMBERS WITH BONDING CLAMPS.
- ONLY MAIN CABLE TRAY RUNS ARE SHOWN. THE CONTRACTOR SHALL PROVIDE CABLE CHANNEL WHERE MOTORS AND/OR EQUIPMENT ARE LOCATED AWAY FROM THE MAIN CABLE TRAY.
- PROVIDE VERTICAL UNISTRUT SUPPORTS ANCHORED TO THE CEILING STRUCTURE AND THE FLOOR FOR CABLES RUN VERTICALLY DOWN FROM THE CABLE TRAY SYSTEM TO THE EQUIPMENT BELOW.
- REFER TO STRUCTURAL DRAWINGS FOR BUILDING EXPANSION JOINTS. PROVIDE EXPANSION COUPLINGS AND FITTINGS FOR ALL CABLE TRAY CROSSING JOINTS.
- NOT ALL CABLE TRAYS ARE SHOWN ON THIS DRAWING FOR CLARITY. REFER TO DWG. ECTR-R001 003 FOR ADDITIONAL CABLE TRAY LAYOUT.

**SPECIFIC NOTES:**

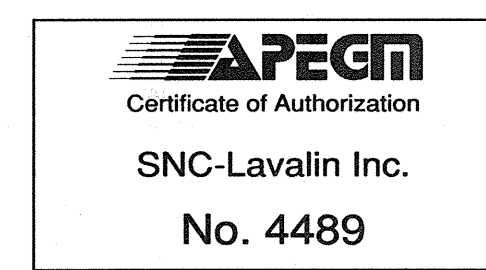
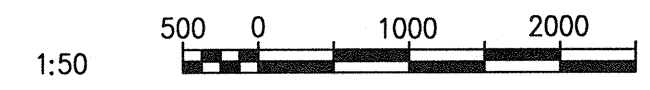
- PROVIDE FIRE RATED ASSEMBLY AND SEAL ALL CABLES PENETRATING THE WALL OR FLOOR TO SEPARATE THE AREAS.
- CONSTRUCT A WALL OPENING OF 539mm W X 305mm H FOR THE INSTALLATION OF ROXTEC SEAL SYSTEM FOR CABLE/CONDUIT EXITING THE BUILDING. COORDINATE WORK WITH STRUCTURAL. INSTALL ROXTEC SEAL SYSTEM IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- CONSTRUCT A WALL OPENING OF 278mm W X 305mm H FOR THE INSTALLATION OF ROXTEC SEAL SYSTEM FOR CABLE/CONDUIT EXITING THE BUILDING. COORDINATE WORK WITH STRUCTURAL. INSTALL ROXTEC SEAL SYSTEM IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- CABLE TRAY RISE TO EL. 238.387. REFER TO DRAWING ECTR-R003 002 FOR CONTINUATION.
- PROVIDE CONCRETE FLOOR HOLE PENETRATION (305mm BY 508mm) TO ALLOW FOR CABLE TRAY PENETRATION TO THE GALLERY BELOW.
- PROVIDE CONCRETE FLOOR HOLE PENETRATION (305mm BY 800mm) TO ALLOW FOR CABLE TRAY PENETRATION TO THE GALLERY BELOW.



**PARTIAL GROUND FLOOR PLAN**

SCALE: 1 : 50

1-0102-ECTR-R004	CABLE TRAY DETAILS
REFERENCE DRAWINGS	DESCRIPTION



00	ISSUED FOR TENDER - B.O. 899-2015	01/2016	SLJ	DEB
NO.	REVISIONS	DATE	DESIGN	CHECK

**CH2MHILL**  
SNC-Lavalin

DESIGNED BY: S. JUGANAS  
DRAWN BY: S. JUGANAS  
SCALE: 1:50  
DATE: 2015/08/25

CHECKED BY: D. BECKER  
APPROVED BY: E. RYCKOWSKI  
ISSUED FOR CONSTRUCTION BY: T. TURZAK  
DATE: 2016/01/29

CONSULTANT NO.: 474248

ENGINEER'S SEAL  
PROVINCE OF MANITOBA  
E. M. RYCKOWSKI  
REGISTERED PROFESSIONAL ENGINEER  
Member 4771  
2016/01/27

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

SOUTH END WATER POLLUTION CONTROL CENTRE  
SEWPPCC UPGRADING/EXPANSION PROJECT  
ELECTRICAL - CABLE TRAY LAYOUT  
BIOREACTORS/BLOWER BUILDING  
GROUND FLOOR PLAN

CITY DRAWING NUMBER: 1-0102-ECTR-R001  
SHEET: 001  
REV: 00  
SIZE: A1