



CI-0203

### TAB 2: SITE INFRASTRUCTURE AND DEVELOPMENT Parking Infrastructure

- > All electrical components, panels, ducts are to be mounted on standoffs. No direct connections to the wall or ceilings are permitted.
- > Lightning protection and surge suppression systems shall be part of the design.
- > Provide Fire Alarm and Security Systems as applicable.
- > Provide cathodic protection on underground metal piping.
- > Provide heat tracing on all water pipes and down spouts.
- > Power and communication lines should be provided to accommodate future payment equipment at point of entry and exit, as well as for dynamic and/or illuminated signage.

#### **ILLUMINATION OF THE STRUCTURE**

- > LED lighting to be used in all areas except service rooms. For more details on LED requirements refer to TAB 7: CI-0703 Electrical LED Lighting Minimum requirements.

#### **PROVISION FOR INFRASTRUCTURE FOR FUTURE EV CHARGING STATIONS**

- > When planning/building a new or rehab parking area, consider the following five factors to determine whether to provision for future Electric Vehicle (EV) charging stations (should GO Transit's current pilot become a standard):
  - o Electric Vehicle demand (MTO current EV ownership and projections data, surrounding amenities, proximity to regional roads and highways).
  - o Profile of GO Rail Station/Mobility Hub (visibility of service)
  - o Location of the space (Covered/Uncovered)
  - o Cost of providing empty conduit (vs. trenching and patching later)
  - o Feedback from the pilot (once available)
- > The order of priority for the location of EV Charging Station spaces is as follows:
  - I. Barrier Free,
  - II. Carpool to GO,
  - III. EV Charging Stations Spaces
- > EV charging stations should be placed indoors if a parking structure exists.



CI-0203

### TAB 2: SITE INFRASTRUCTURE AND DEVELOPMENT Parking Infrastructure

- > EV Charging Station Electrical details as per Tab 7 CI-0703 Electrical.

#### **MECHANICAL SERVICES AND DESIGN CRITERIA**

- > Mechanical systems to be designed without confined spaces
- > The Electrical and Communications rooms shall be heated and air conditioned by a split heat pump A/C unit with R410A refrigerant, variable compressor speed, refer to the DRM for ambient cooling range tables. Also, provide in these two rooms low and high temperature alarms. Refer DRM for HVAC requirements within these service rooms.
- > If drainage from level 1 cannot be connected to the proposed building sanitary sewer by gravity, provision shall be made for a sanitary sump pit including:
  - Duplex sump pump system, pumps shall be epoxy coated with two totally independent seal assemblies;
  - Guide bars; Four float level control system; Lifting equipment including lifting davit, chain hoist, lifting device, chain hook; Gas tight access frame and self-opening cover complete with piston kit and safety grid cover shall be traffic bearing where needed and completely assembled stainless steel control panel shall be provided
  - There shall be no need for personnel to enter the wet well to service the pumps.
- > Complete storm and sanitary systems shall be provided as part of the parking structure design.
- > Utility water meter to municipal standards shall be provided with 3 valve by-pass arrangement.
- > Water service on every level including the roof should be accommodated for.
- > Provide exterior non-freeze water hydrants evenly spaced along the perimeter.
- > Incorporate heat tracing where needed to prevent freezing.
- > All pipes and mechanical fixtures shall be designed to be corrosion free.
- > No Copper type M is permitted.
- > Provide heavy duty parking area drains complete with heavy duty grate and sediment buckets.