

IT/COMMUNICATIONS DRAWINGS

1 ALL CABLEING SHALL BE ROUTED TO MINIMIZE CROSS-OVERS AND CONGESTION.
2 ALL CABLES SHALL BE NEATLY BUNDLED AND DRESSED WITH VELCRO STRAPS. SECURE BUNDLES TO AVAILABLE VERTICAL AND HORIZONTAL SUPPORTS AND NEATLY FASTEN TO PLYWOOD
3 BACKSPLASHES AND TERMINATION PANELS.
4 ROUTE ALL CABLES TO MAINTAIN MINIMUM SEPARATIONS FROM SOURCES OF LIGHTING, POWER CABLES, HVAC AND OTHER ELECTRICAL EQUIPMENT AS INDICATED BY THE MINIMUM SEPARATION
5 SCHEDULE. WHERE REQUIRED THE CONTRACTOR WILL BE REQUIRED TO INSTALL ADDITIONAL MATERIALS IN ORDER TO MEET THE SEPARATION SCHEDULE.
6 ALL CABLES THAT ARE RUN "FREE AIR" FOR ANY DISTANCE IN A PLENUM SPACE MUST BE CSA F185 RATED OR CMP RATED CABLES.
7 EXERCISE CAUTION WHEN EXCAVATING THE WORK AREA TO PREVENT DAMAGE TO EXISTING PLUMBING AND MINIMUM BEND RADIUS SPECIFICATIONS ARE ADHERED TO.
8 WHEN TERMINATING THE MODULAR JACKS AND TERMINATION PANELS, THE CABLE SHEATH SHALL BE LEFT INTACT AS CLOSE AS POSSIBLE TO WITHIN A MINIMUM OF ONE INCH (25 mm) TO THE
9 TERMINATING HARDWARE. THE LENGTH OF UNJACKETED CONDUCTORS SHALL NOT EXCEED ONE INCH (25 mm). THE AMOUNT OF UNWISTING OF CABLE CONDUCTORS MUST NOT BE GREATER THAN
10 1/8 (3mm) AT ANY POINT.
11 EACH CABLE AND TERMINATION JACK TO BE AFFIXED WITH MECHANICALLY PRINTED IDENTIFICATION LABEL. CABLE LABELS TO BE OF SELF-LAMINATING VINYL CONSTRUCTION WITH WHITE MARK-ON
12 COLOUR AND CLEAR OVERLAPS. CABLE LABEL SHALL BE A MINIMUM OF TWO (2) INCHES WIDE AND OF SUFFICIENT LENGTH TO PERMIT CLEAR OVERLAP TO BE WRAPPED COMPLETELY AROUND
13 AT LEAST ONE ANGLE OF THE CABLE. THE IDENTIFICATION LABELS FOR EACH MODULAR JACK TO BE LABELED WITH MECHANICALLY PRINTED
14 LABEL AND COMPLETE WITH SYMBOLIC AND COLOUR CODED (CN TAB) CABLES IDENTIFYING THE JACK AS VOICE OR DATA.
15 ROUTE HORIZONTAL COMMUNICATIONS CABLES FROM WORKSTATION, UP TO CEILING VIA WORKSTATION PATHWAY, TO OVERHEAD CABLE TRAY AND OVER TO THE TERMINATION ROOM.
16 ROUTE HORIZONTAL CABLES ROUTED THROUGH FLOOR SLAB TO CEILING SPACE OF FLOOR BELOW BE ROUTED BACK UP AND OVER TO THE TERMINATION ROOM ON THE SAME FLOOR AS THE
17 CABLES TO BE COMMUNICATED TO. THE CONTRACTOR SHALL INDICATE THE EXACT ROUTING OF ALL COMMUNICATIONS CABLES ON A RECORD DRAWING SET. THIS DRAWING MUST SHOW THE EXACT ROUTING THROUGH THE EXACT
18 CONDUIT OR PATHWAY STRUCTURE.
19 IMMEDIATELY UPON TENANT CONSTRUCTION FLOOR IS OCCUPIED BY A THIRD PARTY, MAKE ALL NECESSARY ARRANGEMENTS FOR AFTER HOURS ACCESS FOR ALL CABLE
20 INSTALLATION THROUGH CEILING SPACE OF FLOOR BELOW. EXERCISE EXTREME CAUTION SO NO DISRUPTION OCCURS TO THE OCCUPIED AREA.
21 ALL CABLEING SHALL BE NEATLY DRESSED WITH VELCRO STRAPS ALONG BACK OF PLYWOOD BACKSPLASHES AND AT ALL TERMINATION PANEL LOCATIONS.
22 PROVIDE CABLE SUPPORTS, HARNESSES AND SLEEVES AS REQUIRED, ALL FREE RUNNING CABLES SHALL BE SECURELY FASTENED TO APPROPRIATE CABLE SUPPORTS AND HARNESSES WITH A
23 MINIMUM INTERSPACING OF 12 INCHES. ALL CABLE SUPPORTS SHALL BE COMPLETELY SUPPORTED AND SECURED TO ANY OTHER EXISTING FIXTURE OR
24 CEILING SPACE STRUCTURE. CABLE SUPPORTS SHALL BE CADDY CABLED (J) OR EQUIVALENT, INSTALLED SUCH THAT THE INTERSPACING SAG OF 6" IS NOT EXCEEDED.
25 ALL WORK SHALL BE PHASED IN ACCORDANCE TO SCHEDULING DICTATED BY THE OWNER/DESIGNER/GENERAL CONTRACTOR AND/OR PROJECT MANAGER.
26 NECESSARY ACCESS TO THE WORK AREA THROUGH EXISTING DOORWAYS AND THROUGH SYSTEMS FURNITURE INCLUDING ALL NECESSARY AFTER HOURS OR WEEKEND WORK NECESSARY TO
27 THE FURNITURE INSTALLATION SCHEDULE. ON MOVE WEEKENDS, PROVIDE SUPPORT TO RESOLVE ANY CABLEING RELATED ISSUES.

SHEET NUMBER	
IT-001	IT/COMMUNICATIONS GENERAL NOTES, LEGEND & DRAWING LIST
IT-002	IT/COMMUNICATIONS SPECIFICATIONS
IT-303	LEVEL 3 - IT/COMMUNICATIONS PLAN
IT-601	IT/COMMUNICATIONS LAN ROOM LAYOUT AND RISER DETAILS
IT-602	IT/COMMUNICATIONS DETAILS 1/3
IT-603	IT/COMMUNICATIONS DETAILS 2/3
IT-604	IT/COMMUNICATIONS DETAILS 3/3

SHEET NAME

EACH OUTLET TO CONSIST OF THE INDICATED QUANTITY OF FT6/CMP RATED, EIA/ITA CATEGORY 6A, 100 OHM, FOUR (4) UNSHIELDED TWISTED PAIR DATA CABLES. CABLES TO BE TERMINATED ON EIA/ITA CATEGORY 6A TERMINATION HARDWARE AT BOTH ENDS. AT THE STATION END, TERMINATION HARDWARE TO CONSIST OF CATEGORY 6A RJ45 TYPE JACK IN T568A PIN-OUT CONFIGURATION. AT THE IT ROOM END, CABLING TO BE TERMINATED ONTO CATEGORY 6A RATED PATCH PANELS AS SHOWN AND SPECIFIED. QUANTITY OF CABLES AND OUTLETS PER EACH SPECIFIED GROUP TO BE AS DETAILED IN COMMUNICATIONS LEGEND BELOW.

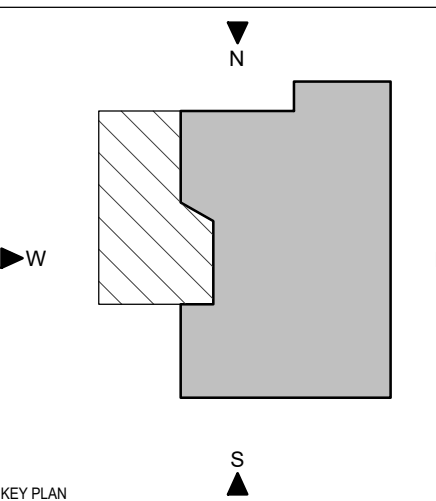
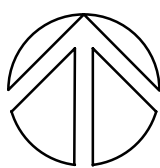
COMMUNICATIONS DATA TYPE LIST

SEC	COMMUNICATION OUTLET DEDICATED FOR SECURITY DEVICE / EQUIPMENT. COORDINATE EXACT LOCATION WITH SECURITY CONTRACTOR.
CAM	COMMUNICATIONS OUTLET DEDICATED FOR SECURITY CAMERA. CONTRACTOR TO COORDINATE EXACT LOCATIONS WITH SECURITY CONTRACTOR.
MFP	COMMUNICATIONS OUTLET DEDICATED FOR MULTI-FUNCTION PRINTER.
WAP	COMMUNICATIONS OUTLET DEDICATE FOR WIRELESS ACCESS POINT.
DTP	COMMUNICATIONS OUTLET DEDICATE FOR DESKTOP PRINTER.
ICT	TYPICAL COMMUNICATIONS OUTLET.
WKS	COMMUNICATION OUTLET DEDICATED FOR WORKSTATIONS.
BAS	COMMUNICATIONS OUTLET DEDICATED FOR BASE DEVICE. DATA CABLES TO BE ROUTED TO AND TERMINATED WITHIN LEVEL 4 F&S DATA RACK. CORRESPONDING CONDUITS SHALL BE IDENTIFIED WITH PERMANENT ORANGE MARKINGS ON THE CONDUIT.
LAB	COMMUNICATION OUTLET DEDICATED FOR TECHNICAL LAB EQUIPMENT.

COMMUNICATIONS DATA TYPE LIST DEDICATED FOR AV

MIC	COMMUNICATION OUTLET DEDICATED FOR AV MICROPHONE.
RBD	COMMUNICATION CEILING OUTLET DEDICATED FOR ROOM BOOKING DEVICE.
DMD	COMMUNICATIONS OUTLET DEDICATED FOR AV DISPLAY MONITOR, SCREEN, FLIGHTBOARD, IPTV, COORDINATE EXACT LOCATIONS WITH AV DESIGNER AND ARCHITECTURAL DRAWINGS.
AVD	COMMUNICATIONS OUTLET DEDICATED FOR AV EQUIPMENT/DEVICE. COORDINATE EXACT APPLICATION, LOCATIONS AND OUTLET MOUNTING HEIGHTS WITH AV DESIGNER AND ARCHITECTURAL DRAWINGS.
ATP	COMMUNICATIONS OUTLET DEDICATED FOR AV TOUCH PANEL.
AVC	COMMUNICATIONS OUTLET DEDICATED FOR AV CAMERA.
SPK	COMMUNICATIONS OUTLET DEDICATED FOR BACKGROUND LOUDSPEAKER.

PROJECT LOGO



6	ISSUED FOR TENDER	2025-11
5	ISSUED FOR 100% CD	2025-11
4	ISSUED FOR 90% CD	2025-10
3	ISSUED FOR 100% DD R1	2025-09
2	ISSUED FOR 100% DD	2025-07
1	ISSUED FOR 50% DD	2025-06
No.	DESCRIPTION	DATE

DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT / ENGINEER BEFORE PROCEEDING.

ONLY FIGURED DIMENSIONS MUST BE USED.

THE CONTRACTOR MUST CHECK THE DIMENSIONS ON SITE.

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DRAWING TITLE:

**IT/COMMUNICATIONS
GENERAL NOTES, LEGEND
DRAWING LIST**

SHEET SIZE:	SCALE:
ARCH D (610x914)	1 : 1

PROJECT NO.: 251016

DRAWING NO.:

IT-00

IT/COMMUNICATIONS SPECIFICATIONS

GENERAL COMMUNICATIONS REQUIREMENTS

1. COMPLETE THE INSTALLATION OF THE WORK IN ACCORDANCE WITH LATEST EDITIONS OF THE ONTARIO BUILDING CODE, PROVINCIAL ELECTRICAL SAFETY CODE, CSA AND/ETIA/IEA ULC, NFPA, O.S.H.A. AND/ETIA/IEA ULC, AS REQUIRED. COMPLY WITH THE ELECTRICAL AND BUILDING CODE BULLETINS IN FACE OF BID SUBMISSION. ALSO, ALL COMMUNICATION WORK SHALL COMPLY WITH LANDLORD'S REQUIREMENTS AND BASEBUILDING STANDARDS.
2. VISIT THE SITE AND EXAMINE THE EXISTING CONDITIONS AFFECTING THE WORK OF THIS DIVISION. NO CLAIM FOR EXTRA PAYMENT SHALL BE MADE FOR EXTRA WORK MADE NECESSARY BY CIRCUMSTANCES ENCOUNTERED DUE TO CONDITIONS WHICH WERE VISIBLE UPON, OR REASONABLY INFERRABLE FROM AN EXAMINATION OF THE SITE PRIOR TO SUBMISSION OF THE BID. THIS INCLUDES THE EXISTING SERVICES ABOVE CEILING.
3. WHEREVER THE WORDS "PROVIDE" OR "SUPPLY AND INSTALL," ARE USED, IT SHALL BE UNDERSTOOD TO MEAN "PROVIDE AND INSTALL, INCLUSIVE OF ALL LABOUR, MATERIALS, INSTALLATION, TESTING, AND CONNECTIONS FOR THE ITEM TO WHICH REFERRED."
4. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, AND UNUSED PRODUCTS OF ONLY THE MOST RECENT MANUFACTURER MODEL OR VERSION NUMBER, CSA CERTIFIED, AND MANUFACTURED TO THE STANDARDS SPECIFIED. WHERE THERE IS NO ALTERNATIVE TO SUPPLYING EQUIPMENT WHICH IS NOT CSA CERTIFIED, OBTAIN SPECIAL APPROVAL FROM THE LOCAL INSPECTION DEPARTMENT.
5. SUBMIT TO THE LOCAL ELECTRICAL INSPECTION DEPARTMENT, THE NECESSARY NUMBER OF DOCUMENTS FOR EXAMINATION, SPECIAL INSPECTION AND APPROVAL, PRIOR TO THE COMMENCEMENT OF THE WORK, AND PAY ALL COSTS AND ASSOCIATED FEES. PROVIDE CERTIFICATE(S) OF ACCEPTANCE FROM THE AUTHORITIES INSPECTION DEPARTMENT, UPON COMPLETION OF WORK.
6. PROVIDE TOOLS AND CLEAN UP EQUIPMENT. OBTAIN THE LANDLORD'S PERMISSION FOR THE USE OF ELECTRICAL, ELEVATOR, PLUMBING OR DRAINAGE OUTLETS. PROVIDE DAILY CLEAN-UP AND PROPER DISPOSAL OF DEBRIS GENERATED BY DAILY OPERATIONS. ON COMPLETION OF THE WORK, ALL TOOLS, SURPLUS MATERIALS AND WASTE MATERIALS SHALL BE REMOVED AND THE PREMISES LEFT IN A CLEAN, PERFECT CONDITION.
7. PROVIDE AND MAINTAIN INSURANCE TO PROTECT THE LANDLORD, TENANT AND TRADES FROM ALL POSSIBLE CLAIMS. SUBMIT WITH BID FOR AN AMOUNT ACCEPTABLE TO LANDLORD AND TENANT.
8. WHEREVER ANY BASE BUILDING REQUIRES ACCESSIBILITY, MAINTENANCE OR ADJUSTMENT, PROVIDE ACCESS DOORS APPROVED BY DESIGN CONSULTANT/ARCHITECT AND LANDLORD, ARRANGE FOR ITS INSTALLATION BY THE TRADE IN WHOSE WORK IT OCCURS.
9. ANY DISCREPANCIES BETWEEN DRAWINGS AND/OR SPECIFICATIONS AND EXISTING CONDITIONS, MUST BE REFERRED TO THE DESIGN CONSULTANT/ARCHITECT BEFORE ANY WORK AFFECTED IS BEGUN.
10. THE DRAWINGS FOR THE COMMUNICATIONS WORK ARE DIAGRAMMATIC PERFORMANCE DRAWINGS ONLY, INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE THE GENERAL ARRANGEMENT AND APPROXIMATE LOCATION OF ELECTRICAL EQUIPMENT. THE DRAWINGS DO NOT INTEND TO SHOW ARCHITECTURAL, INTERIOR DESIGN, MECHANICAL, STRUCTURAL OR BASE BUILDING DETAILS. BE RESPONSIBLE FOR A THOROUGH KNOWLEDGE OF SAME BEFORE PROCEEDING WITH THE WORK.
11. PROVIDE CABLE SUPPORTS, HARNESSSES AND SLEEVES AS REQUIRED. ALL FREE RUNNING CABLES SHALL BE SECURELY FASTENED TO APPROPRIATE CABLE SUPPORTS AND HARNESS WITH A MAXIMAL INTERSUPPORT CABLE SAG OF 6" ALL CABLES SHALL BE COMPLETELY SUPPORTED BY THE HARNESSSES SO THAT NO WEIGHT IS TRANSFERRED TO ANY OTHER EXISTING NON-STRUCTURAL FIXTURE OR CEILING CABLE STRUCTURE. CABLE SUPPORTS SHALL BE CADDY CABLECAT INSTALLED SUCH THAT THE INTERSUPPORT SAG OF 6" IS NOT EXCEEDED AND SPACED A MAXIMUM OF 6' APART. CABLECATS NOT TO BE SUPPORTED FROM T-BAR PENCIL RODS.
12. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS THAT THE CONTRACTOR PROVIDE COMPLETE AND OPERATIONAL SYSTEMS AS REQUIRED, WHERE DIFFERENCES OCCUR, THE MAXIMUM CONDITION SHALL GOVERN. ANY MISCELLANEOUS ITEMS, HARDWARE, DEVICES, WIRING, ETC., NOT SPECIFICALLY DESCRIBED, BUT REQUIRED FOR THE OPERATION OF THE SYSTEM, MUST BE PROVIDED AND INCLUDED AS PART OF THE BID.
13. REFER TO DESIGN CONSULTANT'S/ARCHITECT'S DRAWINGS FOR EXACT LOCATIONS OF ALL COMMUNICATIONS OUTLETS. CHANGE LOCATION OF WALL OUTLETS AT NO COST OR CREDIT, PROVIDING CABLE LENGTH DOES NOT INCREASE MORE THAN 3M (10'-0") AND INFORMATION IS GIVEN BEFORE INSTALLATION. CHANGE LOCATION OF ALL SYSTEMS FURNITURE OUTLETS TO ANYWHERE WITHIN SYSTEMS FURNITURE MODULE. PROVIDE 3M (10'-0") OF CABLE SLACK AT EACH LOCATION.
14. PROVIDE, INSTALL AND TERMINATE THE INDICATED QUANTITIES OF HORIZONTAL DISTRIBUTION CABLES FROM THE TERMINATION PANELS IN THE HUB/COMPUTER ROOM TO THE INDICATED COMMUNICATIONS OUTLET LOCATIONS ON THE FLOOR PLANS. LEAVE TEN FEET (3 METRES) OF SLACK IN NEAT CABLE COILS SECURED WITH VELCRO TIE WRAPS IN EACH CABLE AT THE TOP OF EACH WORKSTATION STUB CONDUIT LOCATION OR IN THE CEILING SPACE OF THE FLOOR BELOW. ADDITIONALLY, LEAVE THREE FEET OF SLACK IN EACH CABLE IN A "DUMMY LOOP" AT THE COMMUNICATIONS HUB ROOM END.
15. ALL CUTTING AND PATCHING REQUIRED TO THE EXISTING BUILDING STRUCTURE FOR THE WORK SHALL BE INCLUDED UNDER THE CONTRACT AND BE ACCEPTABLE TO THE LANDLORD BEFORE COMMENCEMENT OF WORK AND AFTER THE WORK IS COMPLETE. OBTAIN WRITTEN APPROVAL FROM LANDLORD BEFORE ANY CUTTING IS CARRIED OUT.
16. BEFORE CORE DRILLING FLOOR SLAB OR STRUCTURAL WALLS, X-RAY SLAB OR WALLS AND HAVE THE LOCATIONS ACCEPTED BY LANDLORD IN WRITING. ANY EXISTING BUILDING SERVICE DAMAGED BY CORE DRILLING MUST BE REPAIRED IMMEDIATELY AT NO COST TO LANDLORD OR TENANT. FLOOR DRILLING TO BE CARRIED OUT AFTER NORMAL WORKING HOURS AND AT A TIME ACCEPTABLE TO LANDLORD AND ALLOWANCES FOR THIS WORK SHALL BE INCLUDED IN PRICE SUBMITTED.
17. PROVIDE NON-PERMANENT CSA APPROVED INTUMESCENT FIRE-STOPPING STUFFED AROUND ALL CABLING TO SEAL ALL CONDUIT, CABLE TRAY, RACEWAY, DUCT, SLEEVE AND SLOT OPENINGS.
18. PROVIDE ALL IDENTIFICATION LABELS FOR ALL CABLES, OUTLETS, PANELS AND OTHER RELEVANT CABLING SYSTEM ACCESSORIES. CABLE LABELS SHALL BE OF SELF-LAMINATING VINYL CONSTRUCTION. EACH IDENTIFICATION LABEL SHALL BE MECHANICALLY PRINTED WITH IDENTIFYING INFORMATION PROVIDED BY THE CONSULTANT PRIOR TO INSTALLATION. ALL CABLES SHALL BE LABELLED AT BOTH ENDS AND ALL TERMINATION PANELS SHALL BE LABELLED IN THE FRONT AND BACK.
19. WHERE SPECIFIED, INSTALL ALL EQUIPMENT PROVIDED BY THE TENANT. RECEIVE, STORE AND INSTALL EQUIPMENT AND ACCEPT FULL RESPONSIBILITY FOR ITS CORRECT OPERATION, CONFIRM POWER REQUIREMENTS OF ALL EQUIPMENT SUPPLIED AND ALSO ENSURE THAT ALL ELECTRICAL EQUIPMENT SUPPLIED BY OTHER TRADES IS SUITABLE FOR THE RESPECTIVE VOLTAGE.
20. PLYWOOD BACKBOARDS SHALL BE 19MM (3/4") THICK, OF HIGHEST QUALITY FIRE RETARDANT FIR. REFER TO DRAWINGS FOR SIZE, PRIME AND PAINT BACKBOARDS WITH FIRE RETARDANT PAINT EQUAL TO CGSB SPEC. #1-GP-151M, OF A COLOUR AS SELECTED BY THE DESIGNER/ARCHITECT. PROVIDE ALL PLYWOOD BACKBOARDS IDENTIFIED IN THE COMMUNICATIONS DRAWINGS.
21. SUBMIT FOUR (4) COPIES OF SHOP DRAWINGS OF ALL EQUIPMENT, WHICH IS OTHER THAN THAT SPECIFIED HEREIN AND WHICH IS BEING SUBMITTED BY THE CONTRACTOR FOR CONSIDERATION AS "APPROVED EQUAL", FOR REVIEW AND RECORDS BEFORE COMMENCEMENT OF WORK.
22. ALL EQUIPMENT MUST BE CLEANED AND TESTED, BEFORE FINAL ACCEPTANCE BY THE CONSULTANT. FROM THE DATE OF ISSUANCE OF A "CERTIFICATE OF SUBSTANTIAL PERFORMANCE", ALL EQUIPMENT, MATERIALS AND WORKMANSHIP, MUST BE UNCONDITIONALLY WARRANTED FOR NOT LESS THAN 1 (ONE) YEAR. DEFECTS AND DEFICIENCIES WHICH ORIGINATE OR BECOME EVIDENT DURING THE WARRANTY PERIOD MUST BE REPAIRED OR REPLACED, AT NO COST. ALL WORK RELATING TO THE REPLACEMENT OF DEFECTIVE ITEMS MUST BE CARRIED OUT AFTER NORMAL WORKING HOURS AND AT A TIME WHICH IS TOLERABLE TO THE TENANT.
23. ALL DATA/VOICE CABLES SHALL BE TESTED AFTER COMPLETE INSTALLATION FROM TERMINATION END TO TERMINATION END. ALL FOUR (4) PAIRS OF EACH HORIZONTAL CABLE SHALL BE TESTED. PROVIDE TABULATED RESULTS OF THE TESTS FOR EVERY CABLE WITH THE FOLLOWING INFORMATION: CABLE IDENTIFICATION, CABLE LENGTH, PAIR ATTENUATION (dB) FOR ALL 4-PAIRS, WORST PAIR NEXT, END-TO-END WIRE MAP FOR ALL 8 CONDUCTORS, INDUCED NOISE (dB) AND INDICATE WHETHER THE CABLE HAS PASSED TESTING FOR CATEGORY 6A PERMANENT LINK COMPLIANCE IN ACCORDANCE TO ANSI/TIA/EIA 568-B.10 AND C.2 STANDARDS.
24. THE CONTRACTOR MUST UTILIZE A LEVEL IV TESTER IN ACCORDANCE WITH TIA SP-2840A STANDARDS THAT SCANS AND TESTS THE CABLING SYSTEM UP TO AND INCLUDING 500MHZ. FOR EACH CABLE, TWO WAY NEXT MUST BE PERFORMED WITH NEXT MEASURED AT BOTH ENDS OF THE CABLE.
25. AFTER THE WORK IS COMPLETED, GIVE A WRITTEN GUARANTEE FOR ONE YEAR COVERING WORKMANSHIP AND MATERIALS. REPAIR OR REPLACE, WITHOUT EXPENSE TO THE TENANT, ANY DEFECTS IN WORKMANSHIP OR MATERIALS WHICH ARE NOT DUE TO MISUSE OR NEGLECT.
26. PROVIDE A END TO END CATEGORY 6A/6 CABLING CERTIFICATION FROM THE SYSTEM/MANUFACTURER WITH PART LABOUR AND APPLICATION WARRANTY.
27. SUBMIT WRITTEN VERIFICATION OF MANUFACTURER'S CERTIFICATION OF INSTALLER. ALL COSTS INVOLVED IN OBTAINING CERTIFICATION, INCLUDING TRAINING, SHALL BE INCURRED BY THE CONTRACTOR.
28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL OF ANY EXISTING UNUSED COMMUNICATIONS CABLING LEFT IN ALL COMMUNICATIONS PATHWAYS, ROOMS, ETC., ON THE FLOOR OR COMMUNICATIONS ROOMS. EXERCISE EXTREME CAUTION WHEN REMOVING EXISTING CABLES TO AVOID DISRUPTING THE OPERATION OF ANY EXISTING STATIONS OR TERMINALS. TEST ALL CABLES TO BE REMOVED, AVOID DAMAGING ANY EXISTING CABLING THAT MAY BE ROUTED THROUGH THE SAME CONDUIT OR PATHWAY WHEN REMOVING THE OLD OR UNUSED COMMUNICATIONS CABLES.
29. THE CONTRACTOR SHALL PROVIDE NEW PULL STRINGS IN ALL COMMUNICATIONS CONDUITS IN WHICH CABLES HAVE BEEN ADDED OR REMOVED TO ALLOW FOR FUTURE CABLE PULLING.
30. THIS JOB SITE IS CURRENTLY UNDER CONSTRUCTION, HOWEVER AT TIME OF CABLE INSTALLATION THE SITE MAY HAVE INSTALLED CEILING TILES, ACCESS FLOOR TILES, FINISHED WALLS, FLOORS AND CARPETING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
- THE REMOVAL AND REPLACEMENT OF ANY CARPETING, ACCESS FLOOR AND/OR CEILING TILES REQUIRED TO INSTALL THE COMMUNICATIONS CABLING.
 - THE MOVEMENT AND REPLACEMENT OF ANY OBSTRUCTING FURNITURE.
 - DAILY "END-OF-DAY" CLEANUP OF ALL MATERIALS, DUST AND DEBRIS CREATED BY THE CURRENT DAYS INSTALLATION ACTIVITIES.
 - ANY DAMAGES TO BASE BUILDING AND FINISHED STRUCTURES, FURNITURE, WALLS, ACCES FLOOR OR CEILING TILES, CARPETS, FLOORS, ETC., THAT ARE CAUSED BY THE CONTRACTOR'S PERSONNEL AND/OR EQUIPMENT.
 - GENERAL CONTRACTOR WILL PROVIDE CONSTRUCTION PHASING AND SCHEDULING OF ALL MOVES. WORK SHALL BE DONE IN ACCORDANCE WITH THE GENERAL CONTRACTOR'S SCHEDULE.
31. AT THE COMPLETION OF WORK AND BEFORE FINAL ACCEPTANCE, PREPARE FROM CAD DRAWINGS PROVIDED BY THE CONSULTANT, AS-BUILT DRAWINGS OF THE INSTALLATION (IN AUTOCAD 2004 FORMAT), INCORPORATE CABLE ROUTING (INCLUDING CONDUIT SIZE AND ZONE CONDUIT NUMBERING), ALL CHANGES AND DEVIATIONS FROM TENDER DRAWINGS, UTILIZING NORMAL, RECOGNIZED DRAFTING PROCEDURES THAT MATCH THE ORIGINAL DRAFTING METHODOLOGY IN ELECTRONIC FORMAT IN THE CAD DRAWINGS, INCLUDE THE SAME CAD BLOCKS, OBJECTS, LAYERS AND ORIGINAL CAD METHODOLOGY, PRESENT IN THE CAD DRAWINGS. SUBMIT THE UPDATED CAD DRAWINGS ON DISK (OR EMAIL) TO THE CONSULTANT FOR REVIEW. UPON ACCEPTANCE BY THE CONSULTANT, PREPARE A DISK SET OF DRAWINGS TOGETHER WITH 3 (THREE) SETS OF PRINTS FOR PRESENTATION TO THE LANDLORD AND TENANT ALSO SEND ONE DISK SET AND ONE HALF-SIZE PRINT SET TO THE COMMUNICATIONS CONSULTANT.
32. PROVIDE 2 (TWO) SETS OF OPERATION AND MAINTENANCE MANUALS. INCLUDE THE FOLLOWING INFORMATION IN THE OPERATIONS AND MAINTENANCE MANUALS:
- MANUFACTURER'S CABLING SYSTEM CERTIFICATION AND APPLICATION WARRANTY.
 - CONTRACTORS 1 YEAR GUARANTEE.
 - PRODUCT CUT-SHEETS FOR ALL MATERIAL INSTALLED INCLUDING CABLING, JACKS, PATCH PANELS, RACKS AND CABINETS, ETC.
 - NAMES AND ADDRESS OF LOCAL SUPPLIERS FOR THE ITEMS INCLUDED.
 - THE CONSULTANTS REVIEWED SHOP DRAWINGS.
 - HARDCOPY PRINTOUTS OF CABLE TEST RESULT SUMMARY.
 - SOFTCOPY OF CABLE TEST RESULT SUMMARY AND DETAILED TEST RESULTS FOR EVERY CABLE IN PDF FORMAT.
33. FORWARD ONE MAINTENANCE MANUAL TO THE COMMUNICATIONS CONSULTANT FOR REVIEW. PRESENT THE OTHER MAINTENANCE MANUAL TO THE CLIENT. REVIEW INFORMATION PROVIDED IN THE MAINTENANCE MANUAL WITH THE CLIENT. DISCUSS MAINTENANCE INSTRUCTIONS AS WELL AS THE COMMUNICATIONS EQUIPMENT AND SYSTEMS AND THEIR OPERATION.

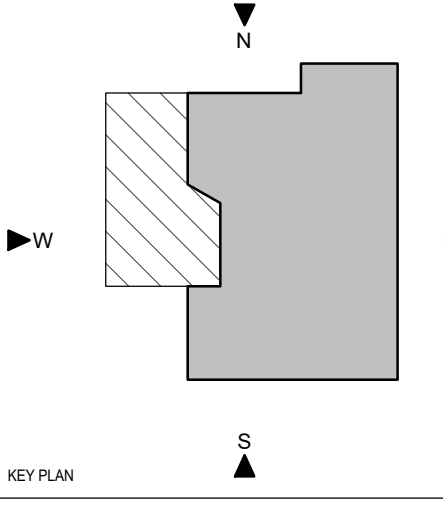
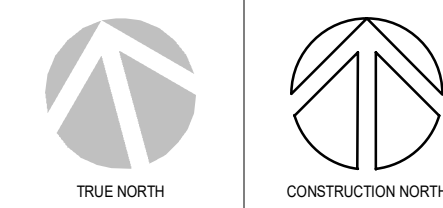
MATERIALS AND INSTALLATION

1. **HORIZONTAL CABLING**
- 1.1. PROVIDE AND INSTALL ALL HORIZONTAL DATA COMMUNICATIONS CABLING AS INDICATED. HORIZONTAL DATA COMMUNICATIONS CABLES SHALL BE 4-PAIR UNSHIELDED TWISTED PAIR, CSA FT6/CMP FIRE RATED, CERTIFIED TO ETIA/IA CATEGORY 6A SPECIFICATIONS. THE CABLES SHALL BE AS FOLLOWS:
- PANDUIT TX6A CATEGORY 6A, 4-PAIR, U/UTP, CMP.
- 1.2. HORIZONTAL DATA CABLES SHALL BE BLUE.
- 1.3. PROVIDE AND INSTALL FLEX FOR PROTECTION OF HORIZONTAL CABLES FROM WALL/FLOOR FEED. LOW HEIGHT PARTITIONS, FLEX TO BE BLACK SPLIT LOOM TUBING SIZED TO FIT CABLE BUNDLE.
- 1.4. ALL CAT. 6A RATED DATA CABLES SHALL BE FROM THE SAME MANUFACTURER.
2. **MODULAR JACKS AND ADAPTORS**
- 2.1. PROVIDE AND INSTALL ALL MODULAR JACKS AS INDICATED, THE MODULAR JACKS FOR HORIZONTAL DATA CABLES SHALL BE 8-POSITION IN ETIA/IA-T568A CONFIGURATION. THE CAT. 6A RATED MODULES SHALL BE AS FOLLOWS:
- MINI-COM TX6A 10GG CATEGORY 6A UTP RJ45 MODULAR JACKS.
- 2.2. MODULAR CAT.6A DATA JACKS SHALL BE COLOR CODED AS FOLLOWS:
- TYPICAL DATA OUTLETS WITHIN LAN ROOM AND AT FIELD/USER-END UNLESS NOTED OTHERWISE : BLUE.
 - WIRELESS ACCESS POINT DATA OUTLETS AT FIELD/DEVICE-END: WHITE.
 - WIRELESS ACCESS POINT DATA OUTLETS WITHIN LAN ROOM RACK: ORANGE.
 - BAS DEVICES WITHIN LAN ROOM RACK AND AT FIELD-DEVICE END: GREEN.
 - BUILDING SECURITY END DEVICES WITHIN LAN ROOM RACK AND FIELD-DEVICE END (SALTO DEVICES): RED.
- 2.3. PROVIDE AND INSTALL ALL FLOOR AND WALL PLATES AS INDICATED (FLOOR AND WALL PLATE COLOURS TO MATCH ELECTRICAL):
- PANDUIT THREE PORT DECORA STRAPS.
- 2.4. COMMUNICATIONS CONTRACTOR TO COORDINATE EXACT FINISHES OF FLOOR AND WALL PLATES WITH INTERIOR DESIGNER AND ARCHITECT PRIOR TO SUPPLY AND INSTALLATION.
- 2.5. PROVIDE AND INSTALL ALL SYSTEMS FURNITURE MOUNTING PLATES AND HOUSING C/W MODULAR JACK INSERTS AS INDICATED. FURNITURE PLATES AND HOUSING TO BE MINIMUM 3-PORT SYSTEMS FURNITURE ADAPTER PLATES OF THE CABLE SYSTEM MANUFACTURER.
3. **TERMINATION FIELDS FOR VOICE AND DATA**
- 3.1. PROVIDE AND INSTALL NEW DATA AND VOICE TERMINATION PANELS AS SHOWN. DATA AND VOICE HORIZONTAL TERMINATION FIELDS TO BE 1RU HIGH, FLAT, 24-PORT MODULAR UNLOADED JACK PATCH PANELS FULLY LOADED WITH MODULES IDENTIFIED IN ITEM 2.1 OF THE SELECTED CABLE SYSTEM MANUFACTURER.
- MINI-COM 24-PORT 1RU MODULAR PATCH PANEL WITH FACEPLATE.
4. **CONNECTIVITY COMPONENTS**
- 4.1. THE UTP PATCH CORD FOR CONNECTING A DATA OR VOICE PATCH PANEL JACK TO ITS CORRESPONDING EQUIPMENT JACK SHALL BE OF UNSHIELDED TWISTED PAIR CORDAGE WITH EIGHT 28 AWG THERMOPLASTIC PLATED, BONDED PAIR, SOLID COPPER CONDUCTORS FORMED INTO FOUR INDIVIDUALLY TWISTED PAIRS WITHIN THE CORD LENGTHS WITH DATA OUTLET AND DEVICE MOUNTING LOCATIONS. SEE ITEM 4.9 FOR LINE CORD SUPPLY SCOPES. (WIRELESS ACCESS POINT DATA CABLES SHALL RECEIVE 1 FEET PATCH CORDS WITHIN THE LAN ROOM RACK).
- 4.2. THE UTP PATCHLINE CORD SHALL BE WIRED EIA-TA TO EIA/IA WITH A ONE-TO-ONE CORRESPONDENCE STRAIGHT-THROUGH AND TERMINATED ON BOTH ENDS ON 8-POSITION MODULAR LONG PULLS WITH MINIMUM OF 50 MICRO-INCH GOLD PLATING. THE UTP PATCH CORDS SHALL BE C/W REMOVABLE TAGS WITH PRINTED LABELS AT BOTH ENDS.
- 4.3. PATCH CORDS AND LINE CORDS SHALL BE OF THE SAME MANUFACTURER AS THE HORIZONTAL CABLE AND SHALL MEET OR EXCEED THE PERFORMANCE CHARACTERISTICS OF THE HORIZONTAL DATA CABLES LISTED IN SECTION 1.1.
- 4.4. PROVIDE ONE (1) PATCH CORD (INSIDE THE LAN ROOM) FOR EACH DATA INSTALLED + 10% EXTRA FOR SPARE. PATCH CORDS ARE TO BE 6 INCHES TO 1 FEET IN LENGTH. CONTRACTOR TO COORDINATE EXACT PATCH CORD LENGTHS WITH CLIENT PROVIDED PATCHING SCHEDULES. ACTIVE RACK EQUIPMENT MOUNTING LOCATIONS AND PATCH PANEL LOCATIONS. SEE ITEM 4.9 FOR PATCH CORD SUPPLY SCOPES. (WIRELESS ACCESS POINT DATA CABLES SHALL RECEIVE 1 FEET PATCH CORDS WITHIN THE LAN ROOM RACK).
- 4.5. PROVIDE ONE (1) LINE CORD (AT DEVICE/FIELD-END) FOR EACH DATA OUTLET LOCATION + 10% SPARE. LINE CORDS ARE TO BE 10 FEET IN LENGTH. COORDINATE EXACT LINE CORD LENGTHS WITH DATA OUTLET AND DEVICE MOUNTING LOCATIONS. SEE ITEM 4.9 FOR LINE CORD SUPPLY SCOPES. (WIRELESS ACCESS POINT DATA CABLES SHALL RECEIVE 2 FEET PATCH CORDS ON THE DEVICE END).
- 4.6. PATCH & LINE CORDS SHALL BE COLOURED AS FOLLOWS:
- LAN ROOM/END PATCH CORDS (UNLESS SPECIFIED OTHERWISE) : BLUE.
 - FIELD/USER-END LINE CORDS (UNLESS SPECIFIED OTHERWISE) : BLUE.
 - LAN ROOM/END PATCH CORDS FOR WIRELESS ACCESS POINTS: ORANGE.
 - FIELD/USER-END LINE CORDS FOR WIRELESS ACCESS POINTS: WHITE.
- 4.7. ALL LINE CORDS IN PLENUM SPACE MUST BE CMP/FT6 RATED AND OF THE SAME MANUFACTURER AS THE HORIZONTAL CABLE. PLENUM LINE CORDS SHALL BE OF THE SAME CONSTRUCTION AS THE NON-PLENUM RATED CORDS (WITH THE EXCEPTION OF THE CABLE JACKET MATERIAL).
- 4.8. ALL PATCH/LINE CORDS CATEGORY RATING SHALL MATCH THE CATEGORY RATING OF THE HORIZONTAL CABLE.
- 4.9. SUPPLY, INSTALLATION AND PATCHING OF ALL PATCH & LINE CORDS SHALL BE BY THE COMMUNICATIONS CONTRACTOR WITH PATCHING INSTRUCTIONS TO BE PROVIDED BY THE CLIENT.
5. **GROUNDING**
- 5.1. GROUND WIRE SHALL BE STRANDED #6AWG, GREEN INSULATED JACKET, COPPER WIRE.
- 5.2. ALL RACKS, CABINETS AND CABLE TRAY MUST BE GROUNDED. ALL RACKS AND CABINETS MUST BE GROUNDED WITH ITS OWN GROUND WIRE. NO DAISY CHAINING SHALL BE PERMITTED. EACH SECTION OF TRAY NOT ELECTRICALLY BONDED MUST BE GROUNDED WITH ITS OWN GROUND WIRE. CONTRACTOR TO ENSURE ALL COMPONENTS OF CABINET (DOORS, SIDE PANELS, TOP AND BOTTOM PANELS, ETC.) ARE BONDED.
- 5.3. COMMUNICATIONS CONTRACTOR TO ENSURE TWO-HOLE COMPRESSION LUGS ARE INSTALLED AT THE GROUND BAR END OF ALL CORRESPONDING GROUND WIRES FOR COMMUNICATIONS COMPONENTS.
6. **OVERHEAD CABLE TRAY**
- 6.1. ALL CABLE TRAY SHALL BE PRE-GALVANIZED BEFORE FABRICATION. POST GALVANIZED TRAYS WILL NOT BE ACCEPTED.
- 6.2. PROVIDE ALL NECESSARY MOUNTING CLIPS, SIDE SUPPORTS AND WASHERS, HARNESSSES, 90 AND 7" KITS AND SECTION SPICE COMPONENTS TO INSTALL COMPLETE CABLE TRAY SYSTEMS IN ACCORDANCE TO MANUFACTURER'S RECOMMENDED INSTALLATION. PROVIDE RADISED 90DEGREE PLATES OR PROTECTORS AT ALL BENDS FOR CABLE PROTECTION.
- 6.3. CABLE BASKET TRAY MANUFACTURER SHALL BE:
- LEGRAND CABLOFIL
 - WBT
 - EATON
- CABLE LADDER RACK TRAY MANUFACTURER SHALL BE:
- CHATSWORTH CPI
 - NEDAX
 - EATON
 - LEGRAND
- 6.4. WIRE ENDS ALONG SIDES (FLANGES) SHALL BE ROUNDED DURING MANUFACTURING FOR SAFETY OF INSTALLERS AND TO PREVENT DAMAGE TO CABLES.
- 6.5. REFER TO IT/COMMUNICATIONS FLOOR PLANS AND DETAIL SHEETS FOR EXACT CABLE TRAY SIZING. COMMUNICATIONS CONTRACTOR TO PROVIDE CABLE TRAY IN APPROXIMATE LOCATION AND GENERAL ROUTING AS SHOWN ON DRAWINGS.
- 6.6. CABLE TRAY MAY REQUIRE INSTALLATION OF RISERS, BENDS, ETC. TO ADJUST TRAY UP OR DOWN AS WELL AS SIDEWAYS FOR THE TRAY ROUTING TO FIT WITHIN LIMITS OF SPACE AVAILABLE, AND TO CLEAR OTHER SERVICES, DUCTS, PIPES ETC. ALONG THE ROUTE. ROUTING MAY BE ADJUSTED AS NECESSARY TO ENABLE INSTALLATION OF SERVICES UNDER OTHER TRADES. THESE FIELD ADJUSTMENTS ARE TO BE DONE AT NO EXTRA COST TO THE OWNER.
- 6.7. DO NOT CUT THE BASKET TRAY FOR CABLE EXIT. INSTEAD USE MANUFACTURER DROPOUT THAT IS DESIGNED TO BE ATTACHED TO THE TRAY SIDE WITH THE DROPOUT HANGING OVER THE TRAY. ADJUST THE TRAY LAYOUT SUCH THAT THE DROPOUT ENABLES THE CABLES TO BE ROUTED DIRECTLY AND FULLY INTO ENTIRE CROSS SECTIONAL AREA OF THE VERTICAL CABLE MANAGERS, GIGABIX CABLE MANAGEMENT MODULES OR FALSE WALL. PERIMETER BASKET TRAY INSIDE THE COMMUNICATIONS ROOM SHALL BE OFFSET AT A MINIMUM OF 250 MM FROM THE WALL, TO THE NEAR SIDE OF THE TRAY FOR ATTACHMENT OF TRAY DROPOUTS TO DELIVER CABLES INTO GIGABIX CABLE MANAGEMENT MODULES AND ANY LOW VOLTAGE WALL-MOUNT PAC-S.
- 6.8. SHARP METAL EDGES IN CABLE TRAYS WHICH COULD CUT THE CABLE SHALL BE SMOOTHED AND THE CABLE DRESSED AWAY FROM THESE EDGES. MANUFACTURER SURFACE IMPERFECTIONS SHALL BE TOUCHED UP WITH A COLD GALVANIZING COATING BEFORE INSTALLING CABLE.
- 6.9. PROVIDE SUPPORTS FOR CABLE TRAY SYSTEM AT A MAXIMUM 1200 MM ON CENTRE AND AT BOTH SIDES OF EACH TRAY TRANSITION PER A GIVEN ROUTE. SUPPORTS MUST BE DUAL SUPPORT HANGERS, TRAPEZE HANGERS OR WALL BRACKETS. TRAPEZE HANGERS SHALL BE SUPPORTED BY STRUCTURALLY APPROVED ANCHORING SYSTEM, AND SHALL CONSIST OF 9.5 MM (MAXIMUM SIZE) THREADED ROD WITH APPROPRIATE HARDWARE (NUTS, WASHERS, ETC.).
- 6.10. PROVIDE MATERIALS NECESSARY TO PROPERLY SUPPORT SYSTEM FROM EXISTING BUILDING CONSTRUCTIONS PER MANUFACTURER'S INSTRUCTIONS AND MEETINGS OR EXCEEDING RECOGNIZED INDUSTRY PRACTICES, AND AS APPROPRIATE FOR THIS PROJECT. PROVIDE SPECIAL ACCESSORIES AS REQUIRED TO PROTECT, SUPPORT AND INSTALL A CABLE TRAY SYSTEM.
- 6.11. INTERFACE WITH OTHER WORK:
- 6.11.1 FIELD VERIFY ROUTE PRIOR TO INSTALLATION.
 - 6.11.2 COORDINATE THE INSTALLATION OF THE CABLE TRAY SYSTEM WITH OTHER TRADES.
 - 6.11.3 DO NOT SUPPORT FROM DUCTWORK, PIPING, OR OTHER EQUIPMENT HANGERS.
- 6.12. INSTALLATION CLEARANCES:
- 6.12.1 INSTALL SYSTEM A MINIMUM OF 1200MM FROM ANY MOTOR.
 - 6.12.2 INSTALL SYSTEM A MINIMUM OF 50 MM FROM FLUORESCENT LIGHT FIXTURES, OR OTHER EMI SOURCES.
 - 6.12.3 INSTALL SYSTEM A MINIMUM OF 250 MM FROM THE ADJACENT WALL, UNLESS OTHERWISE INSTRUCTED BY THE COMMUNICATIONS CONSULTANT.
 - 6.12.4 FOR OVERHEAD CABLE TRAY SYSTEMS, INSTALL SYSTEM TO ALLOW A MINIMUM OF 300 MM ABOVE, 300 MM IN FRONTSIDES, AND 75MM BELOW OF CLEARANCE FROM PIPING, CONDUITS, DUCTWORK, ETC.
 - 6.12.5 PROVIDE CABLE TRAY HANGERS BETWEEN 150 MM AND 305 MM ABOVE CEILING GRID.
 - 6.12.6 INSIDE IDF & MDF ROOMS, PROVIDE A MINIMUM OF 152MM CLEARANCE BETWEEN THE TOP OF THE COMMUNICATIONS CABINET AND BOTTOM OF CORRESPONDING CABLE TRAY.

IDENTIFICATION

- 7.1. EACH HORIZONTAL CABLE AND PATCH CORD SHALL BE AFFIXED WITH MECHANICALLY PRINTED LABELLING TABS OR TYPED LETTER SELF-ADHESIVE MYLAR TAPE AT BOTH ENDS (THE LETTERING SHALL NOT BE EXPOSED).
- 7.2. PATCH PANELS, RACKS, CABINETS AND CONSOLIDATION POINTS SHALL BE LABELLED WITH ONE INCH (1") LETTER HEIGHT LAMACOID LABELS SECURED ON WITH TAP SCREWS. ALL HORIZONTAL RACKS, FRAMES AND CABINETS SHALL BE LABELLED AT THE FRONT AND REAR SIDES AT THE TOP OF THE RACK, FRAME OR CABINET.
- 7.3. PATCH PANEL MODULE BLOCKS SHALL BE LABELLED WITH STANDARD BLOCK LABELS/STRIPS.
- 7.4. AT THE WORKSTATION END, OUTLETS SHALL BE LABELLED WITH 1/4 INCH LETTER HEIGHT LAMACOID LABELS FOR FLOOR MONUMENTS AND SELF-ADHESIVE MYLAR TAPE ON THE COVERPLATE FOR WALL OUTLETS.
- 7.5. FOR ZONE OR HORIZONTAL DISTRIBUTION CONDUITS, USE SELF-ADHESIVE LABELS ALONG THE LENGTH OF CONDUIT ON TEN INCH (10") CENTRES. LETTER HEIGHT SHALL BE MINIMUM ONE INCH (1") AND READ "COMMUNICATIONS CABLES".
- 7.6. RISER CABLES SHALL BE LABELLED WITH RIGID PLASTIC YELLOW LABELS. LABELS SHALL BE SECURED WITH PLASTIC TIE WRAPS.
- 7.7. ALL FIBRE OPTIC CABLES AND UTP RISERS SHALL BE LABELLED IN EACH FLOOR OF ANY RISER ROOM, AND AT BOTH ENDS OF THE CABLE, WITH THE SOURCE, AND DESTINATION LOCATION.
8. **COMMUNICATIONS CONTRACTOR QUALIFICATIONS**
- 8.1. THE COMMUNICATIONS CABLING CONTRACTOR/INSTALLER MUST BE A CERTIFIED INSTALLER OF THE IDENTIFIED MANUFACTURER'S CABLING SYSTEMS. CERTIFICATION BY THIRD PARTY OR ANY OTHER MEANS IS NOT ACCEPTABLE. PROVIDE HARDCOPY EVIDENCE OF MANUFACTURER'S CERTIFICATION WITH TENDER SUBMISSION.
9. **CABLE TV REQUIREMENTS**
- 9.1. THE COMMUNICATIONS CONTRACTOR IS TO SUPPLY AND INSTALL ALL IDENTIFIED CABLE TV OUTLETS AS IDENTIFIED ON THE DRAWINGS. ALL CABLING SHALL BE CMP/FT6 RG-6 COAXIAL CABLE COMPLETELY CONNECTED TO THE CABLE COMPLETELY CONNECTED TO THE CABLE WITH A WALL PLATE AND SNAP-AND-SEAL TYPE F-CONNECTOR. ALL CABLING MUST ROUTE BACK TO THE BASE BUILDING SERVICE PROVIDER HEADEND AND MUST BE COILED IN THIS ROOM WITH 20FT. LOOP SLACK FOR TERMINATION BY OTHERS.
10. **RISER CABLES**
- 10.1. THE VOICE UTP RISER CABLE AND THE CABLES SHALL CONSIST OF MULTIPAIR COPPER UTP CABLING WHICH SHALL BE CSA FT6/CMP RATED AND CERTIFIED TO ETIA/IA CATEGORY 6E SPECIFICATIONS.
11. **RACKS**
- 11.1. SUPPLY AND INSTALLATION OF RACKS AND ACCESSORIES AS SHOWN IN THE DRAWINGS SHALL BE BY THE COMMUNICATIONS CONTRACTOR.
- 11.2. COMMUNICATIONS CONTRACTOR TO COORDINATE WITH LAN ROOM LAYOUT AND RACK ELEVATION DETAIL SHEETS FOR CABINET/RACK DIMENSIONS, QUANTITIES AND GENERAL LOCATIONS.
- 11.3. SUPPLY AND INSTALLATION (MOUNTING) OF CABINET/RACK POWER DISTRIBUTION UNITS (PDU) SHALL BE BY THE COMMUNICATIONS CONTRACTOR. PROVIDE AND INSTALL ALL PDUs C/W ALL REQUIRED ACCESSORIES AS SHOWN ON ACCOMPANYING RACK ELEVATION DIAGRAMS.
- 11.4. COMMUNICATIONS CONTRACTOR TO ENSURE PDUs ARE SECURED TO CORRESPONDING COMMUNICATIONS CABINETS AND RACKS WITH MANUFACTURER SPECIFIED MOUNTING EQUIPMENT. PDU MOUNTING USING ZIP-TIES SHALL NOT BE PERMITTED.
12. **FIRESTOPPING**
- 12.1. PROVIDE NON-PERMANENT, ULC APPROVED INTUMESCENT FIRE-STOPPING TO CAP ALL EMPTY CONDUIT ENDS, DUCTS, SLEEVES AND SLOTS. ALL FIRESTOP SYSTEM INSTALLATION MUST MEET REQUIREMENTS OF CAN4-S115-M OR ULC S-115-M. ALL FIRESTOP MUST BE HILT OR APPROVED EQUIVALENT.
- 12.2. PROVIDE NON-PERMANENT, ULC APPROVED INTUMESCENT FIRE-STOPPING STUFFED ALL AROUND CABLING TO SEAL ALL CONDUIT, CABLE TRAY, RACEWAY, DUCT, SLEEVE AND SLOT OPENINGS. ALL FIRESTOP SYSTEM INSTALLATION MUST MEET REQUIREMENTS OF CAN4-S115-M OR ULC S-115-M.
- 12.3. PROVIDE NON-PERMANENT, ULC APPROVED INTUMESCENT FIRE-STOPPING STUFFED AROUND ALL CONDUIT, CABLE TRAY, RACEWAY, DUCT, SLEEVE AND SLOT PENETRATIONS OF FIRE-SEAL AND FIRE-RATED WALL, FLOORS AND CEILING.
- 12.4. THE NON-PERMANENT FIRE-STOPPING FOR ALL SLAB SLOT OPENINGS AND CABLE TRAY FIRE BARRIER PENETRATIONS TO CONSIST OF ULC APPROVED FIRE PREVENTION PILLOW/SEALBAG SYSTEM CONSISTING OF INTUMESCENT MATERIAL ENCLOSED IN A MOISTURE AND HUMIDITY RESISTIVE BAG.
- 12.5. THE FIRESTOP MATERIAL SHALL BE FREE OF ASBESTOS AND NOT EMT TOXIC FUMES.
- 12.6. PROVIDE AND INSTALL ALL MATERIALS AND LABOUR REQUIRED FOR THE INSTALLATION OF ALL FIRE-STOPPING AT ALL COMMUNICATIONS CABLING SYSTEM OPENINGS INCLUDING ALL CONDUITS AND SLEEVES. THIS SHALL ALSO INCLUDE ALL COMMUNICATIONS CONDUIT END POINTS.
- 12.7. ALL FIRESTOPPING REMOVED FROM EXISTING BASE BUILDING COMMUNICATIONS CABLING SYSTEM OPENINGS THROUGH WHICH CABLING HAS BEEN INSTALLED UNDER THIS CONTRACT MUST BE REPLACED. ALL EXISTING COMMUNICATIONS CABLING SYSTEM OPENINGS THROUGH WHICH CABLING HAS BEEN INSTALLED UNDER THIS CONTRACT MUST BE FIRESTOPPING IN BASE BUILDING SLEEVES MUST MATCH EXISTING BASE BUILDING MATERIALS AND METHODOLOGY AND COMPLY WITH ULC AND BASE BUILDING FIRE STOPPING REQUIREMENTS.
13. **SHOP DRAWINGS**
- 13.1. **CONTRACTOR MUST PROVIDE SHOP DRAWINGS FOR CONSULTANT AND CLIENT-TECH TEAM REVIEW & APPROVAL PRIOR TO MATERIAL ORDER, SUPPLY AND INSTALLATION.**
14. **WIRELESS ACCESS POINT (WAP) INSTALLATION BEST PRACTICES:**
- 14.1. ANY WAP PLACEMENT DEVIATION WHEN FOLLOWING THE BEST PRACTICES NEEDS TO BE COMMUNICATED TO AND APPROVED BY CLIENT PRIOR TO WAP INSTALLATION.
- 14.2. DO NOT INSTALL WAP NEXT TO A DAS ANTENNA. ALLOW 6FT BETWEEN THE DAS AND WAP.
- 14.3. DO NOT PLACE WAP TOO CLOSE TO A METAL DOOR OR ANY LARGE METAL REFLECTIVE OBJECT. ALLOW MINIMUM OF 3FT BETWEEN THE WAP AND THE METAL OBJECT.
- 14.4. ALLOW A MINIMUM OF 2FT BETWEEN WAP AND FLUORESCENT LIGHTING.
- 14.5. DO NOT INSTALL WAP NEAR METAL DUCTS AND/OR HVAC OR BEHIND FIRE ALARM CEILING MOUNTED EQUIPMENT (FOR EXAMPLE "EXIT" SIGNS). USE CONDUIT OR METAL ROD OR SPECIAL BRACKET TO BRING WAP DOWN TO AVOID THE METAL DUCT OR OTHER METAL WOODEN OBJECTS. COORDINATE EXACT MOUNT TYPE WITH CLIENT.
- 14.6. DO NOT INSTALL WAP ADJACENT TO BEAM AND OBSTACLES. ALLOW A MINIMUM OF 5FT BETWEEN WAP AND OBSTACLE, SUCH AS A WALL OR BEAM WHEN INSTALLING WAP.
- 14.7. DO NOT PUT WAP BEHIND OR INSIDE OF AN ENCLOSED METAL MESH.
- 14.8. DO NOT INSTALL WAP ABOVE CEILINGS, INCLUDING BAFFLE CEILING. USE CONDUIT AND METAL ROD C/W 2 GANG BOX (BY ELECTRICAL) OR SPECIAL BRACKET (BY COMMS) TO BRING WAP DOWN TO 8-10 FT FROM THE GROUND. FOR BAFFLE CEILING COORDINATE MOUNT TYPE AND HEIGHT WITH CONSULTANT, CLIENT AND GC PRIOR TO PROCEEDING.
- 14.9. DO NOT INSTALL WAP ON A HIGH CEILING GREATER THAN 15FT. USE CONDUIT OR METAL ROD (BY ELECTRICAL) TO GET THE WAP DOWN TO HEIGHT SPECIFIED BY CLIENT.
- 14.10. COORDINATE WAP INSTALLATION (LOCATION AND HEIGHT) WITH ELECTRICAL/MECHANICAL CONTRACTORS, GC AND OTHER TRADES ON SITE. FOR ADDITIONAL REFERENCES SEE DETAIL PAGES.
- 14.11. ALL WAPs SHALL BE PHYSICALLY ORIENTED IN ONE (1) DIRECTION. COORDINATE EXACT INSTALLATION DETAILS WITH CLIENT-IT TEAM.
15. **COMMUNICATIONS CONDUIT PULL-BOXES**
- 15.1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL APPROPRIATELY SIZED PULL-BOXES IN A CONDUIT RUN WHERE:
- 15.1.1 THE LENGTH IS OVER 30M (100FT).
 - 15.1.1 THERE ARE MORE THAN TWO (2) 90 DEGREE BENDS, OR EQUIVALENT, OR
 - 15.1.1 THERE IS A REVERSE (U-SHAPED) BEND IN THE RUN.
- 15.2. PULL BOXES SHALL BE PLACED IN A STRAIGHT SECTION OF CONDUIT. THEY SHALL NOT BE USED IN LIEU OF A BEND. THE CORRESPONDING CONDUIT ENDS SHALL BE ALIGNED WITH EACH OTHER.
- 15.3. ALL COMMUNICATIONS PULL BOXES SHALL BE READILY ACCESSIBLE. PULL BOXES SHALL NOT BE PLACED IN A FIXED FALSE OR INACCESSIBLE CEILING SPACE UNLESS IMMEDIATELY ABOVE A SUITABLE MARKED ACCESS PANEL.
- 15.4. METALLIC PULLBOXES SHALL BE GROUNDED IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION (AHJ).

PROJECT LOGO



3 ISSUED FOR TENDER 2025-11-27

2 ISSUED FOR 100% CD 2025-11-21

1 ISSUED FOR 90% CD 2025-10-17

No. DESCRIPTION DATE

REVISIONS:

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DRAWING TITLE:




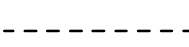
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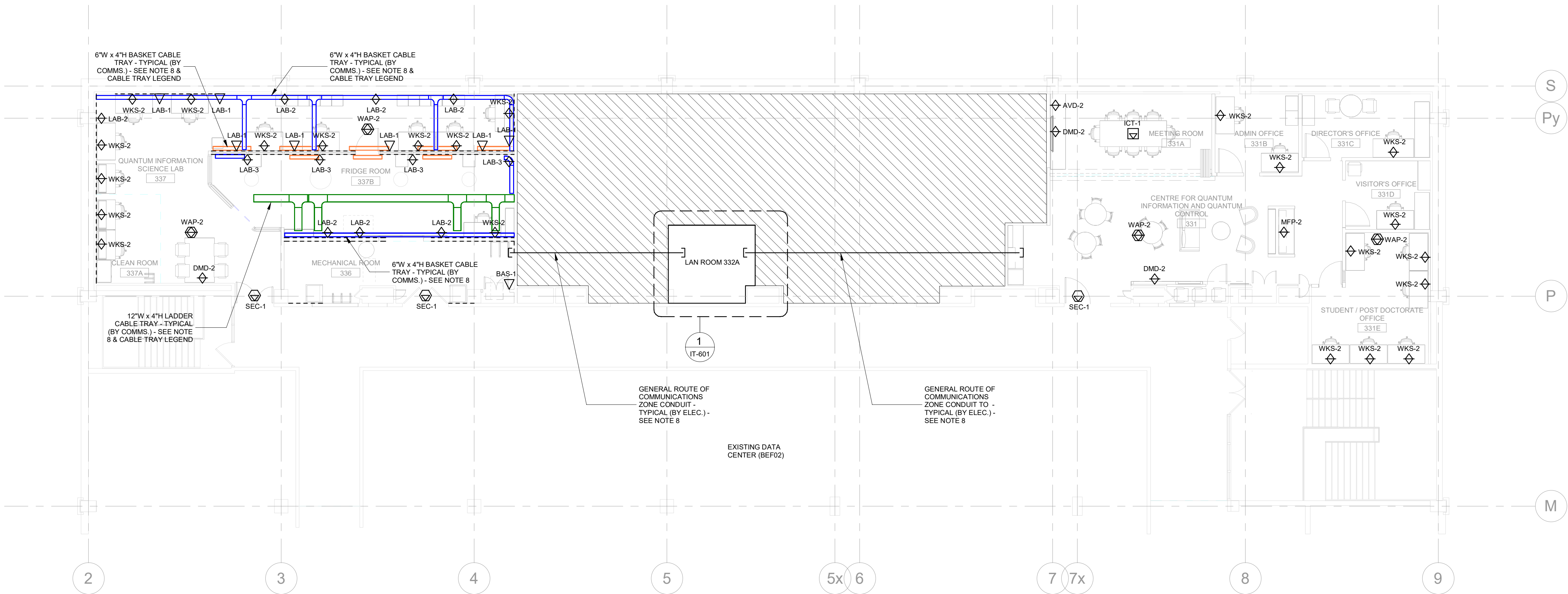
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PROJECT NO: 251016

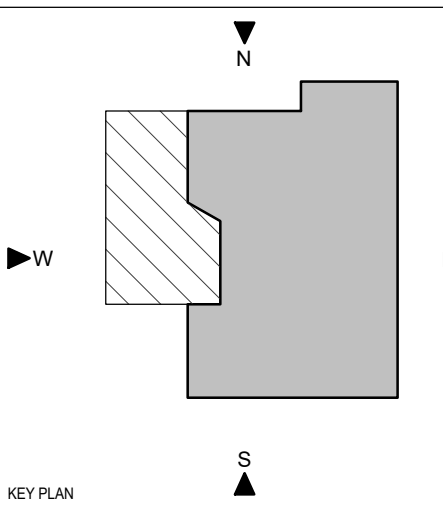
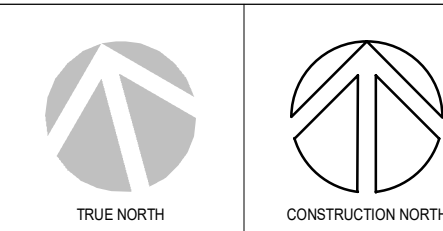
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SHEET LEGEND	
LINE-TYPE / SYMBOL	DESCRIPTION
	6"W x 4"H OVERHEAD WIRE-MESH BASKET CABLE TRAY INSTALLED AT 2900mm A.F.F. - TYPICAL (BY COMMS.) - FOR LAB PERSONNEL USE ONLY.
	6"W x 4"H OVERHEAD WIRE-MESH BASKET CABLE TRAY INSTALLED AT 2150mm A.F.F. - TYPICAL (BY COMMS.) - FOR LAB PERSONNEL USE ONLY.
	12"W x 4"H OVERHEAD LADDER RACK CABLE TRAY INSTALLED AT 2600mm A.F.F. - TYPICAL (BY COMMS.) - FOR LAB PERSONNEL USE ONLY.
	SURFACE MOUNT RACEWAY FOR POWER AND COMMUNICATIONS CABLING - TYPICAL (BY ELECTRICAL)



- NOTES:**
- ALL DATA CABLING SHOWN ARE NEW AND RATED TO CATEGORY 6A PERFORMANCE STANDARDS UNLESS OTHERWISE NOTED. DATA OUTLETS ANNOTATED AS "SEC" & "BAS" SHALL BE ROUTED TO AND TERMINATED IN F&S RACK LOCATED IN PENTHOUSE MECHANICAL ROOM 499.
 - ALL CAT.6A DATA CABLING ON LEVEL 3 IN AREA OF SCOPE SHALL BE ROUTED TO AND TERMINATE IN LAN ROOM 332A IN EXISTING 2-POST RACK AS SHOWN UNLESS OTHERWISE NOTED.
 - ALL WAP DEVICES WITH COMPATIBLE MOUNTING PLATES TO BE SUPPLIED BY CLIENT. WAPS TO BE INSTALLED AND PATCHED BY COMMUNICATIONS CONTRACTOR.
 - REFER TO ARCHITECTURAL/INTERIOR DESIGNER DRAWINGS FOR DEVICE/OUTLET MOUNTING HEIGHTS AND EXACT LOCATIONS.
 - OPEN, HARD, BAFFLE & MESH CEILING DATA CABLES TO BE RUN INSIDE CONDUITS (CONDUIT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR). REFER TO ELECTRICAL DRAWINGS FOR CONDUIT SIZING AND ROUTING.
 - IN MEETING ROOMS AND Huddle ROOMS, PROVIDE COMPATIBLE DEVICE INSERTS AND/OR ADAPTERS FOR TABLES AS REQUIRED. PROVIDE PATCH CORDS OR PIGTAILS TO BE PATCHED TO TABLES. COORDINATE WITH FURNITURE VENDOR AND INTERIOR DESIGNER.
 - COMMUNICATIONS CONTRACTOR TO ENSURE HORIZONTAL DATA CABLING IS NOT ROUTED OVER QIS LAB WIRE-MESH BASKET TRAYS. QIS LAB WIRE-MESH BASKET TRAYS ARE INTENDED FOR LAB PERSONNEL USE ONLY (PATCH CORD ROUTING, EQUIPMENT INTERCONNECTS).
 - EXACT ROUTE OF COMMUNICATIONS ZONE CONDUITS SHALL BE COORDINATED ON SITE. ALL CONDUITS SHALL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
 - COMMUNICATIONS CONTRACTOR TO COORDINATE ACCESS TO LAN ROOM 332A WITH CLIENT-IT TEAM. ENSURE ALL WORK WITHIN LAN ROOM 332A IS COORDINATED WITH AND APPROVED BY CLIENT-IT TEAM PRIOR TO COMMENCEMENT OF WORK.

PROJECT LOGO



No.	DESCRIPTION	DATE
6	ISSUED FOR TENDER	2025-11-27
5	ISSUED FOR 100% CD	2025-11-21
4	ISSUED FOR 90% CD	2025-10-17
3	ISSUED FOR 100% DO R1	2025-09-19
2	ISSUED FOR 100% DO	2025-07-10
1	ISSUED FOR 50% DO	2025-06-15

REVISIONS:

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SEAL

CONSULTANTS:



PROJECT:
University of Toronto CQIQC Suite and QIS Lab

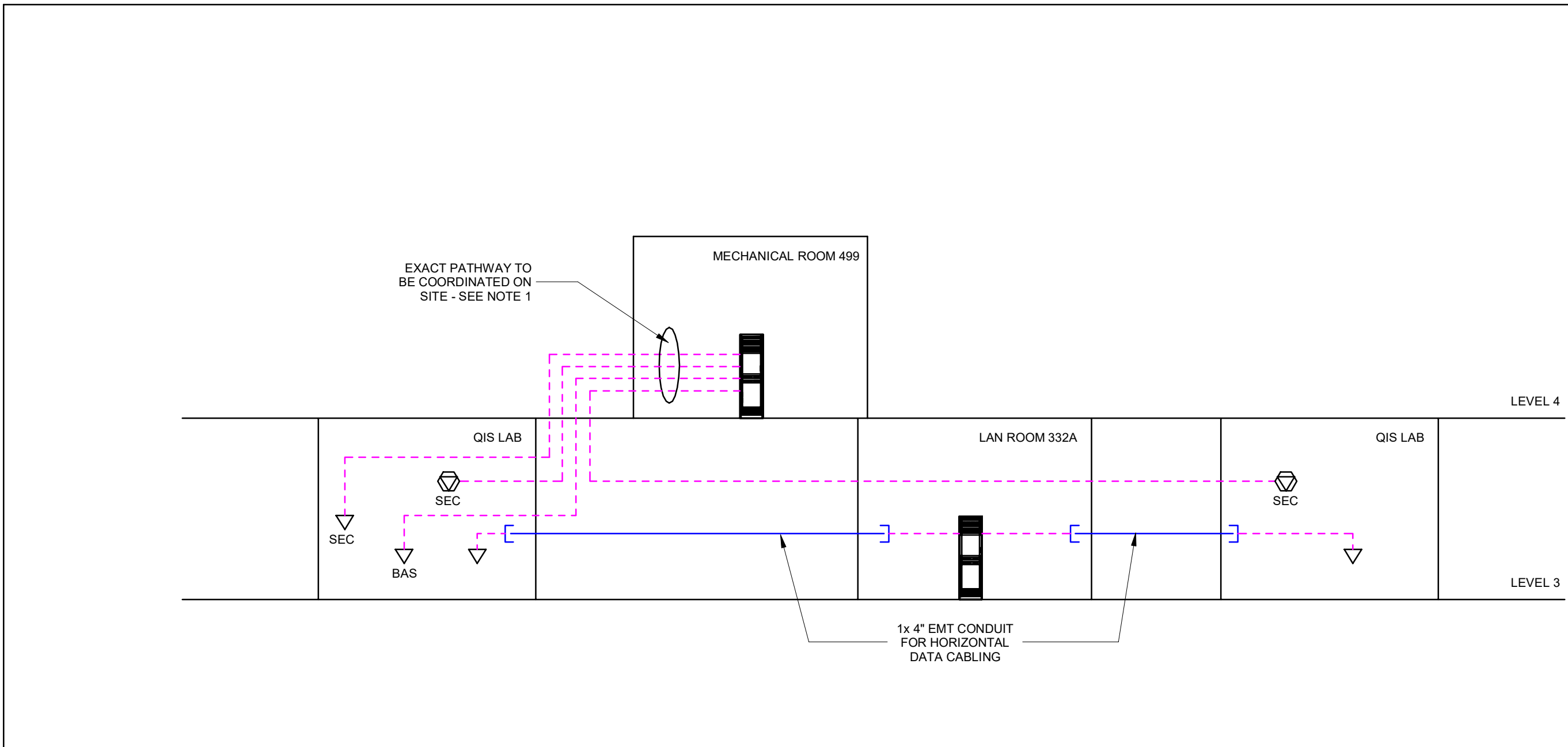
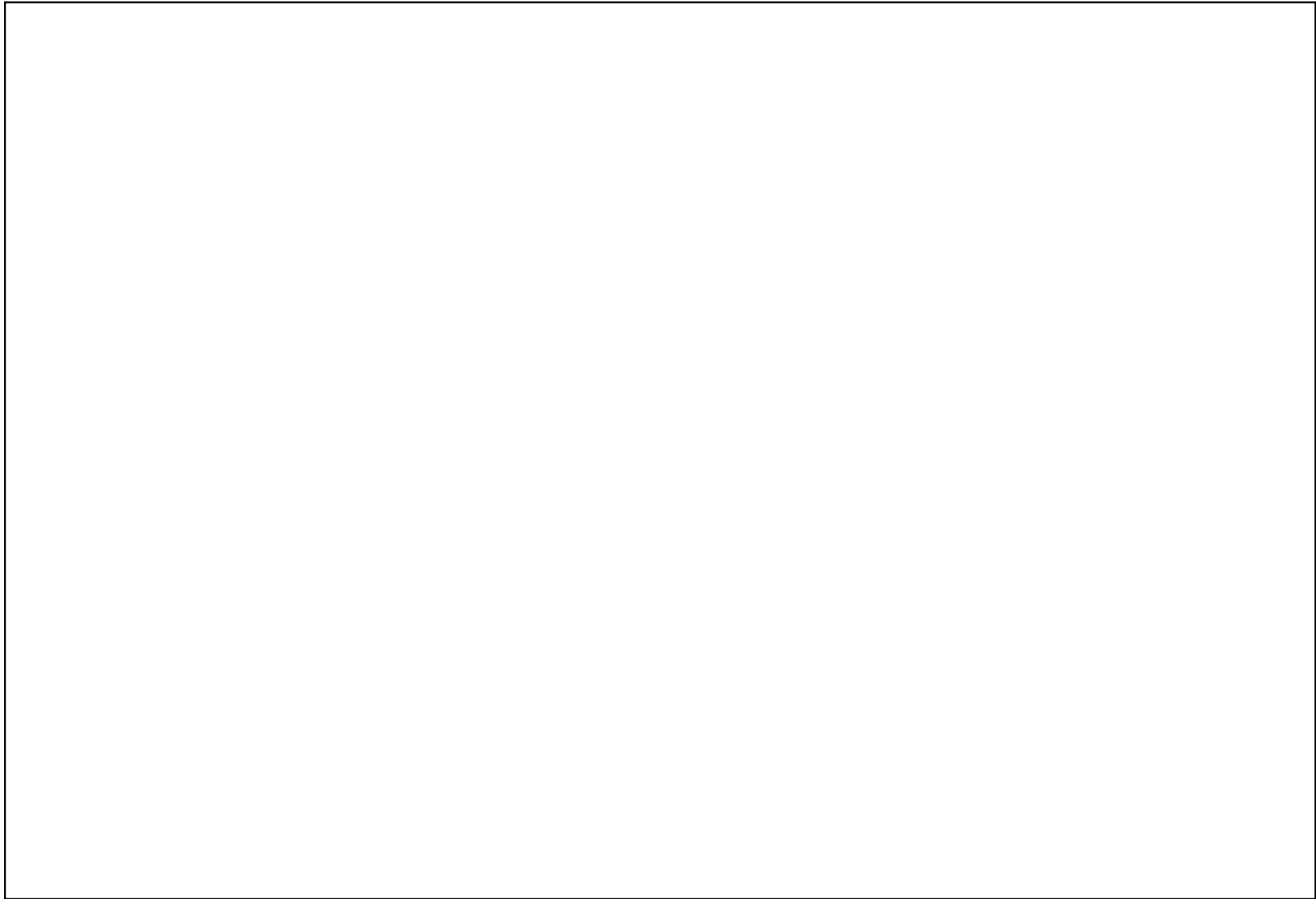
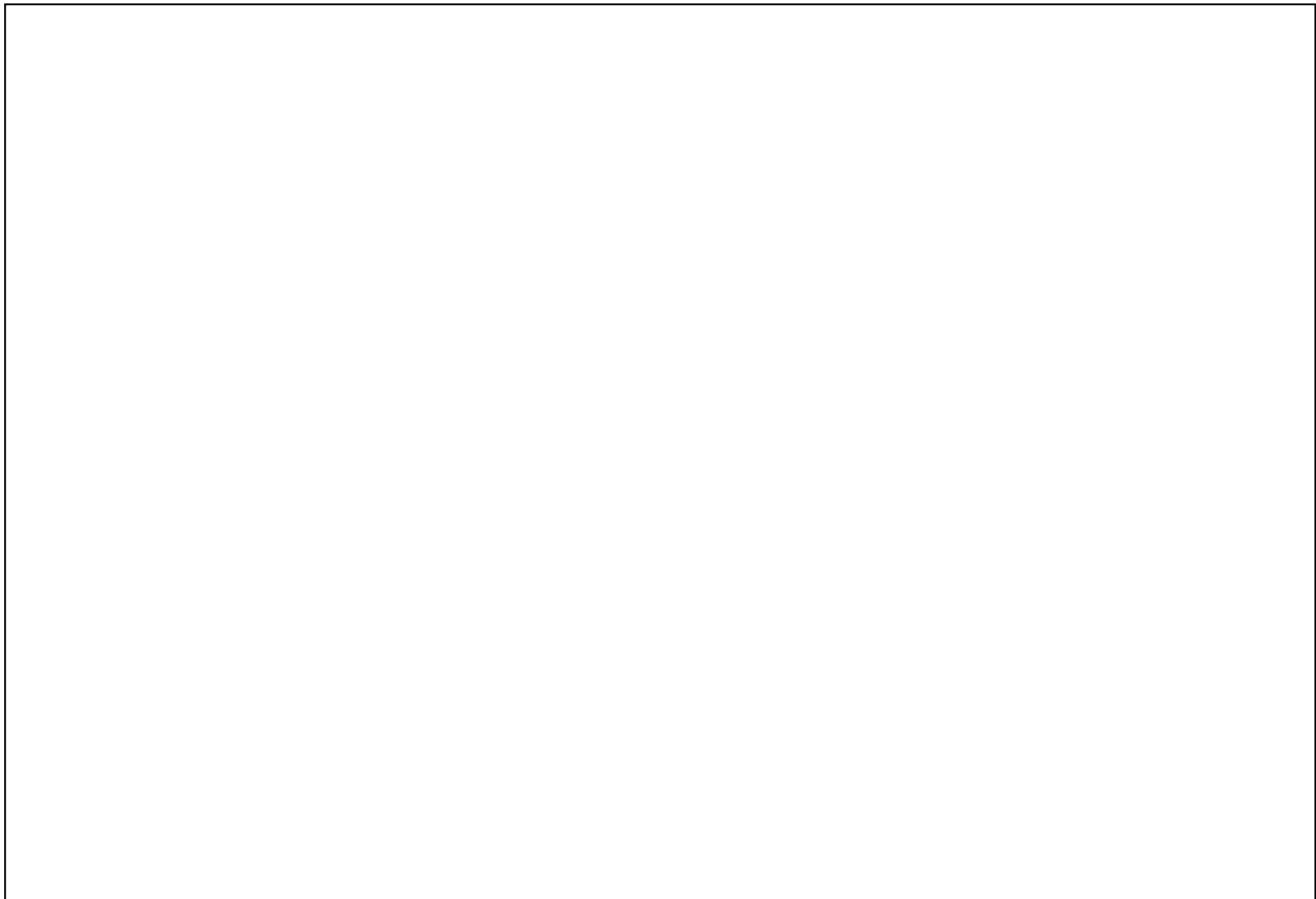
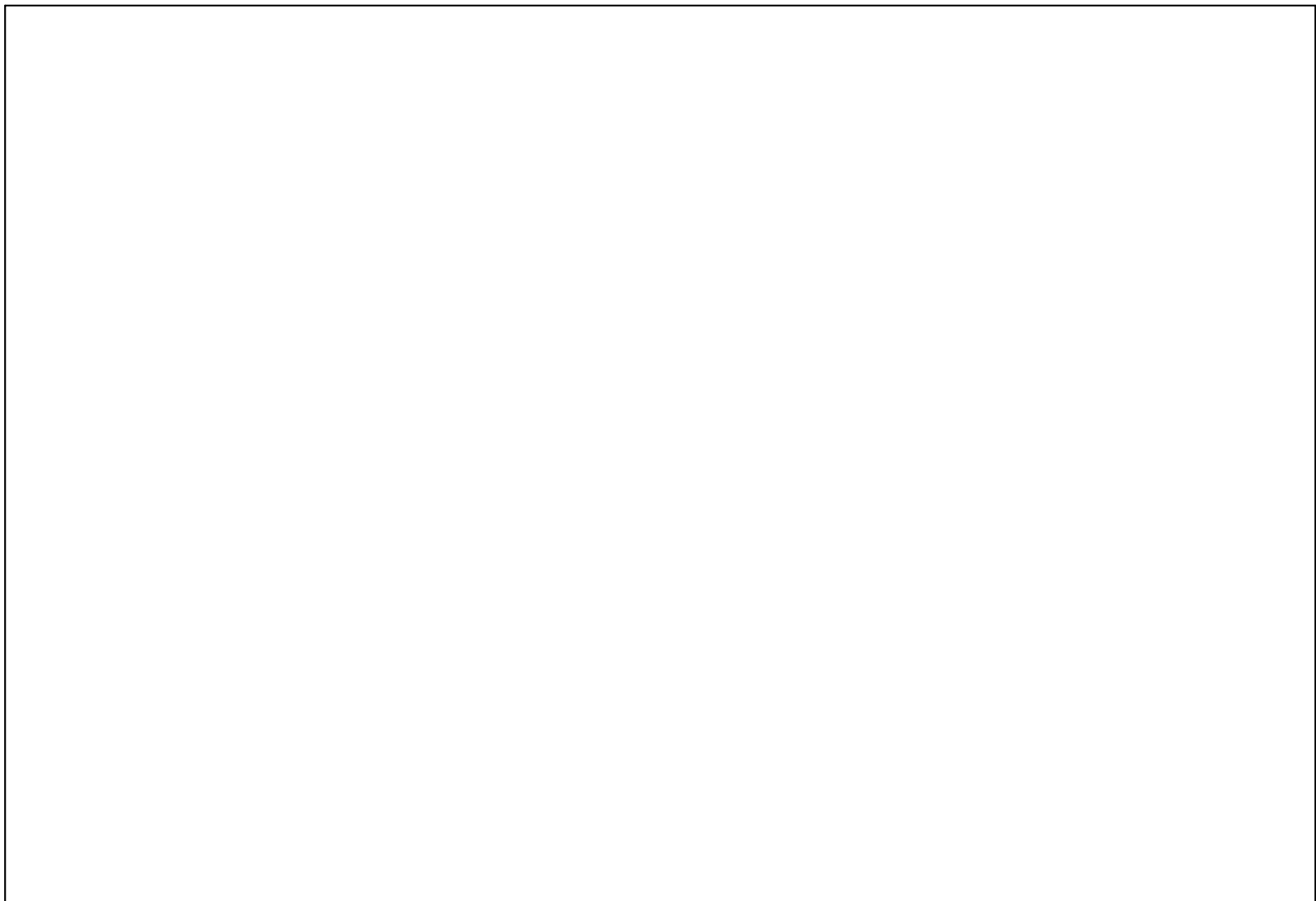
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27 King's College Cir,
Toronto, ON M5S 1A1**

DRAWING TITLE:
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IT/COMMUNICATIONS PLAN**

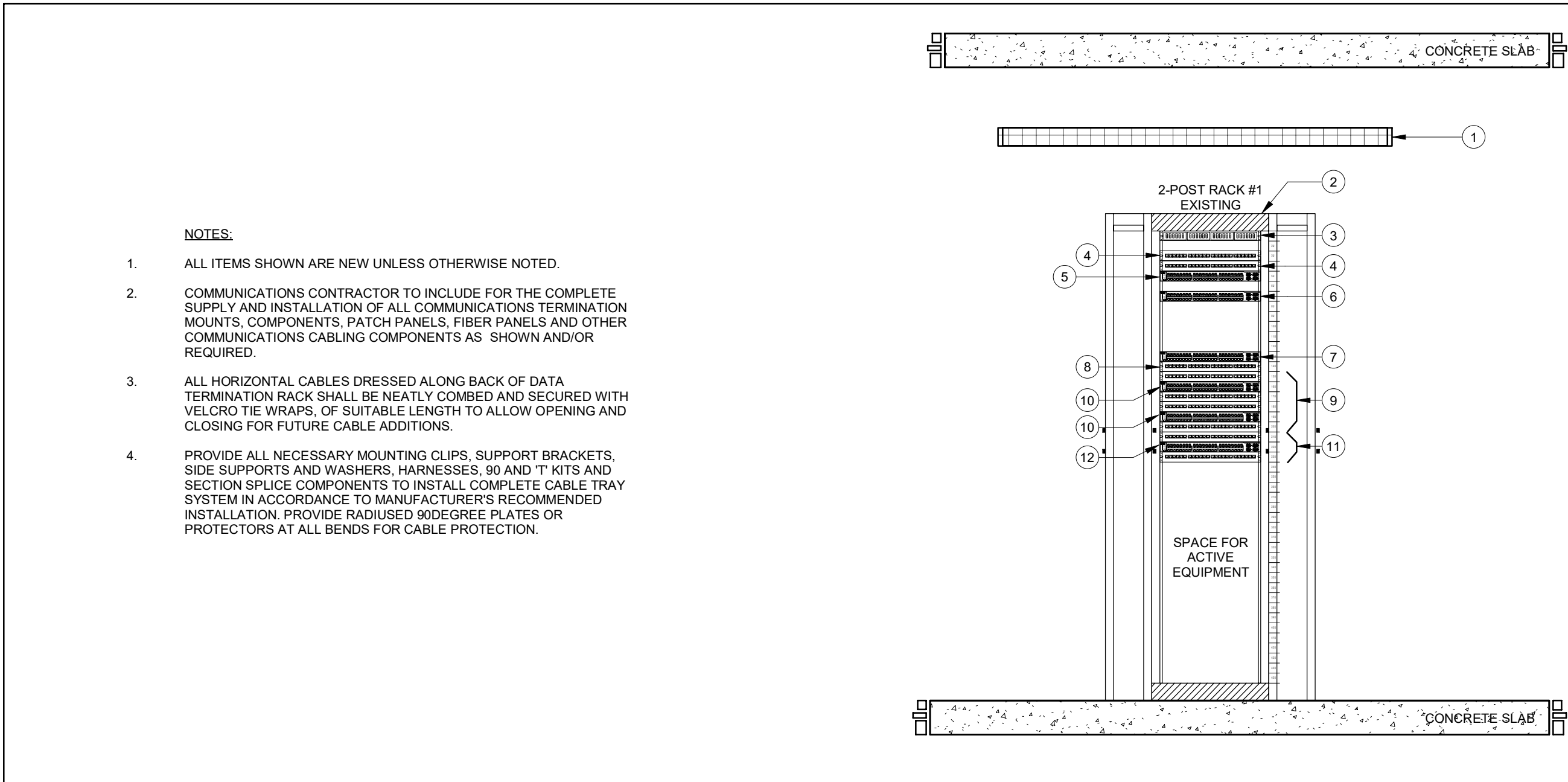
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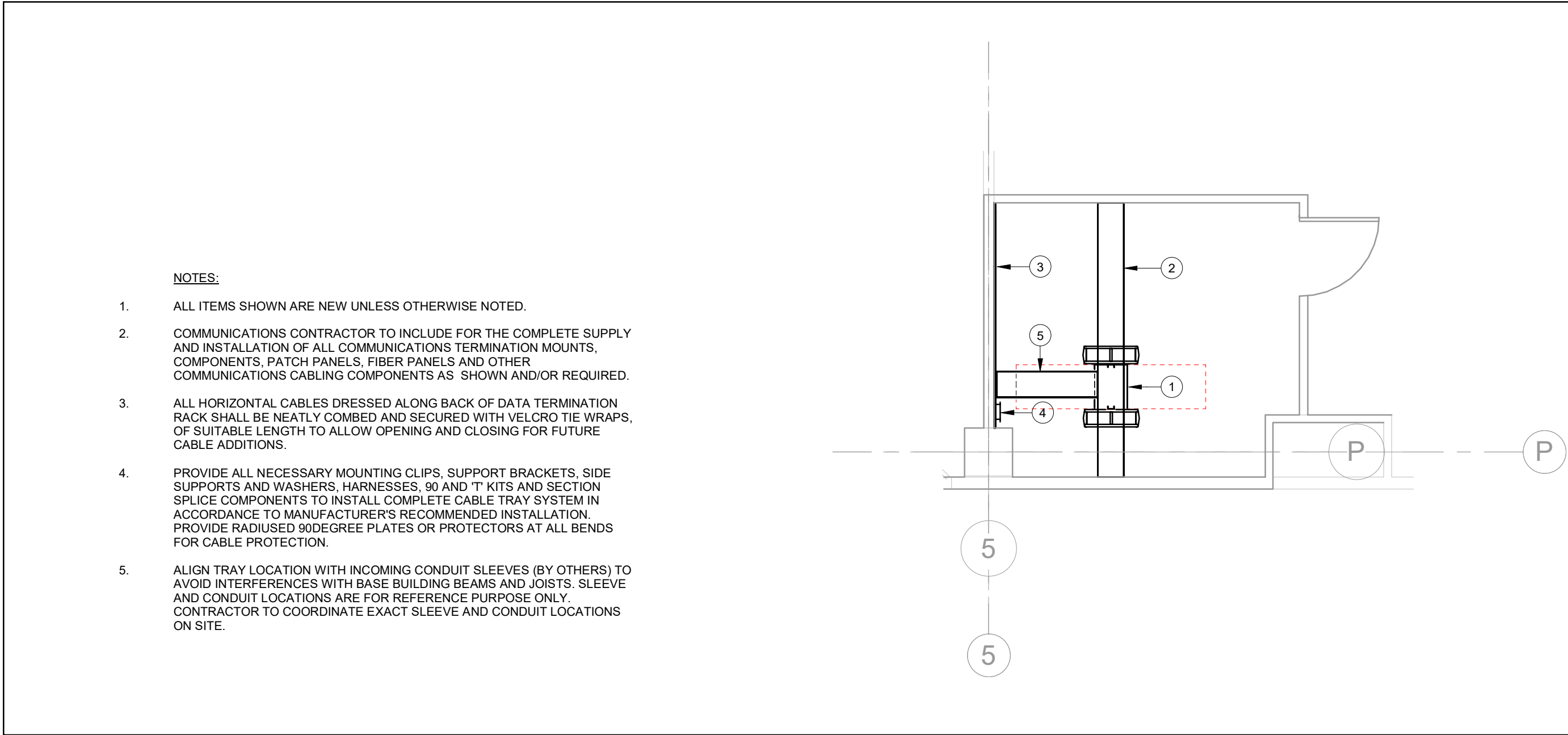
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3 IT/COMMUNICATIONS CABLING AND CONDUIT RISER DIAGRAM
N.T.S.



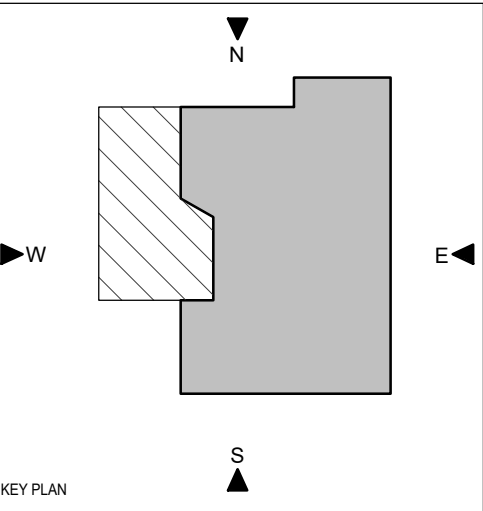
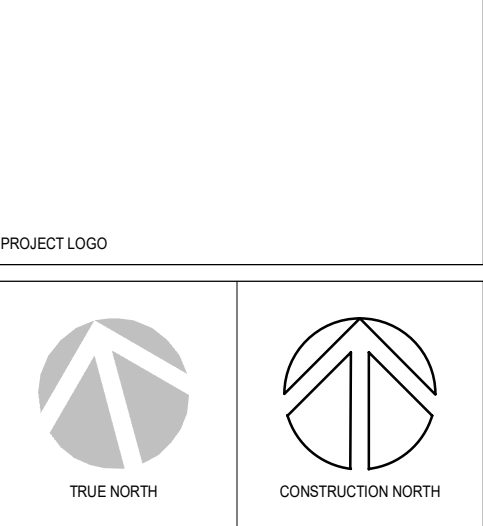
2 LAN ROOM 332A - IT RACK ELEVATION DIAGRAM
N.T.S.



1 LEVEL 3 - EXISTING LAN ROOM 332A - IT LAYOUT
1 : 50

IT RISER LEGEND	
SYMBOL/LINE-TYPE	DESCRIPTION
▽	TYPICAL CAT.6A COMMUNICATIONS OUTLET
▽ BAS	TYPICAL CAT.6A COMMUNICATIONS OUTLET DEDICATED TO MECHANICAL/HVAC EQUIPMENT (EXACT QUANTITIES TO BE COORDINATED IN CD)
◇ SEC	TYPICAL CAT.6A COMMUNICATIONS OUTLET DEDICATED TO SALTO PPE ONLINE DOOR CONTROLLER (TYPICAL OF 3 OUTLETS AS SHOWN ON CORRESPONDING FLOOR PLAN)
---	CAT.6A COMMUNICATIONS CABLING

- NOTES:
- ELECTRICAL CONTRACTOR TO INCLUDE FOR SEPARATE PRICE OF ONE NEW (1) 2" COMMUNICATIONS CONDUIT FROM QIS LAB TO MECHANICAL ROOM 499 TERMINATING AT EXISTING F&S CABINET LOCATION. INCLUDE FOR ALL REQUIRED INSTALLATION COSTS OF CORRESPONDING END-TO-END CONDUIT.



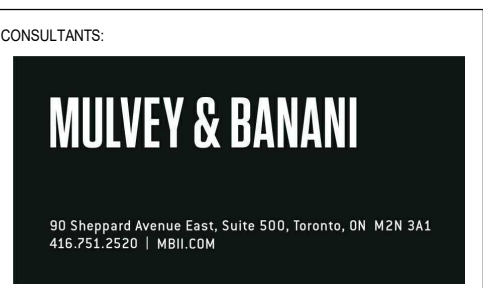
LAN ROOM 332A - EQUIPMENT LIST		
ITEM#	DESCRIPTION	
1	EXISTING WIRE-MESH BASKET CABLE TRAY - TYPICAL	
2	EXISTING 2-POST IT RACK c/w FULL HEIGHT VERTICAL CABLE MANAGERS - TYPICAL	
3	1RU HIGH EXISTING FIBER PATCH PANEL c/w ONE (1) 24-STRAND SINGLEMODE OS2 FIBER CABLE ROUTED TO BUILDING ENTRANCE FACILITY (BEF02)	
4	1RU HIGH EXISTING 24-PORT CAT 6A PATCH PANEL FOR EXISTING CABLE TERMINATIONS FROM ADJACENT WORKSPACE	
5	1RU HIGH EXISTING SWITCH FOR WORKSTATION DATA CABING FROM ADJACENT WORKSPACE - TYPICAL	
6	1RU HIGH EXISTING SWITCH DCA-SW332A - TYPICAL	
7	1RU HIGH EXISTING WIRELESS ACCESS POINT SWITCH - TYPICAL	
8	1RU HIGH EXISTING CAT.6A IT'S PATCH PANEL FOR EXISTING SECURITY/LIFT/FIRE-PROT. SYSTEMS AND WIRELESS ACCESS POINT CABLE TERMINATIONS FROM ADJACENT WORKSPACE.	
9	NEW 1RU HIGH 24-PORT PATCH PANEL FOR QIS LAB DATA CABLE TERMINATIONS - TYPICAL (BY COMMS.)	
10	1RU HIGH NEW NETWORK SWITCHES FOR QIS LAB DATA CABLING - TYPICAL (BY CLIENT)	
11	NEW 1RU HIGH 24-PORT PATCH PANEL FOR CQIQC SUITE DATA CABLE TERMINATIONS - TYPICAL (BY COMMS.)	
12	1RU HIGH NEW NETWORK SWITCH FOR CQIQC SUITE DATA CABLING - TYPICAL (BY CLIENT)	

6	ISSUED FOR TENDER	2025-11-27
5	ISSUED FOR 100% CD	2025-11-21
4	ISSUED FOR 90% CD	2025-09-17
3	ISSUED FOR 100% DO R1	2025-09-19
2	ISSUED FOR 100% DO	2025-07-10
1	ISSUED FOR 50% DO	2025-06-18
No.	DESCRIPTION	DATE

REVISIONS:

DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT / ENGINEER BEFORE PROCEEDING.
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PROJECT:
University of Toronto CQIQC Suite and QIS Lab

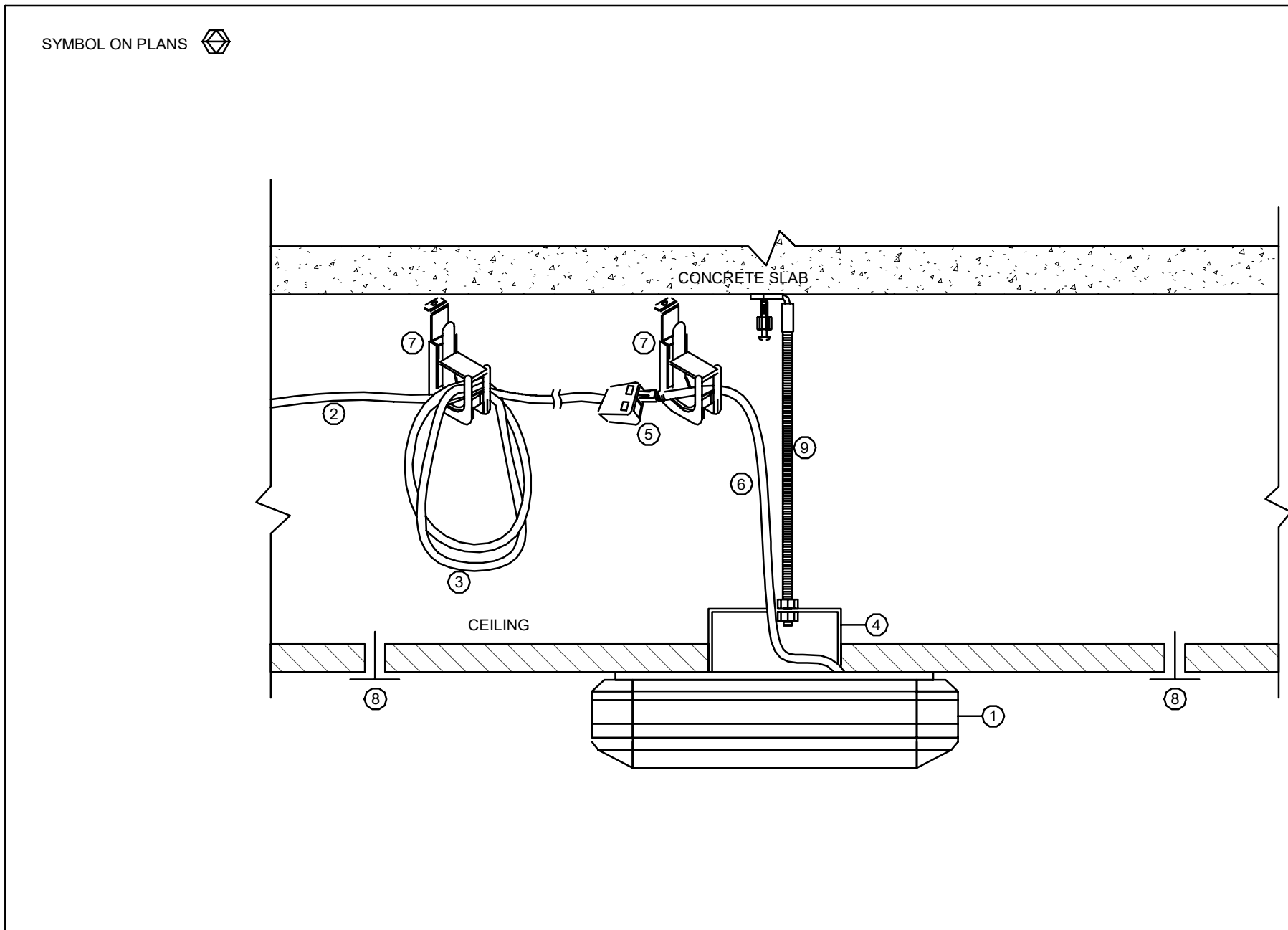
**University of Toronto,
27 King's College Cir,
Toronto, ON M5S 1A1**

DRAWING TITLE:
IT/COMMUNICATIONS LAN ROOM LAYOUT AND RISER DETAILS

SHEET SIZE: ARCH D (810x914) SCALE: As indicated

PROJECT NO.: 251016

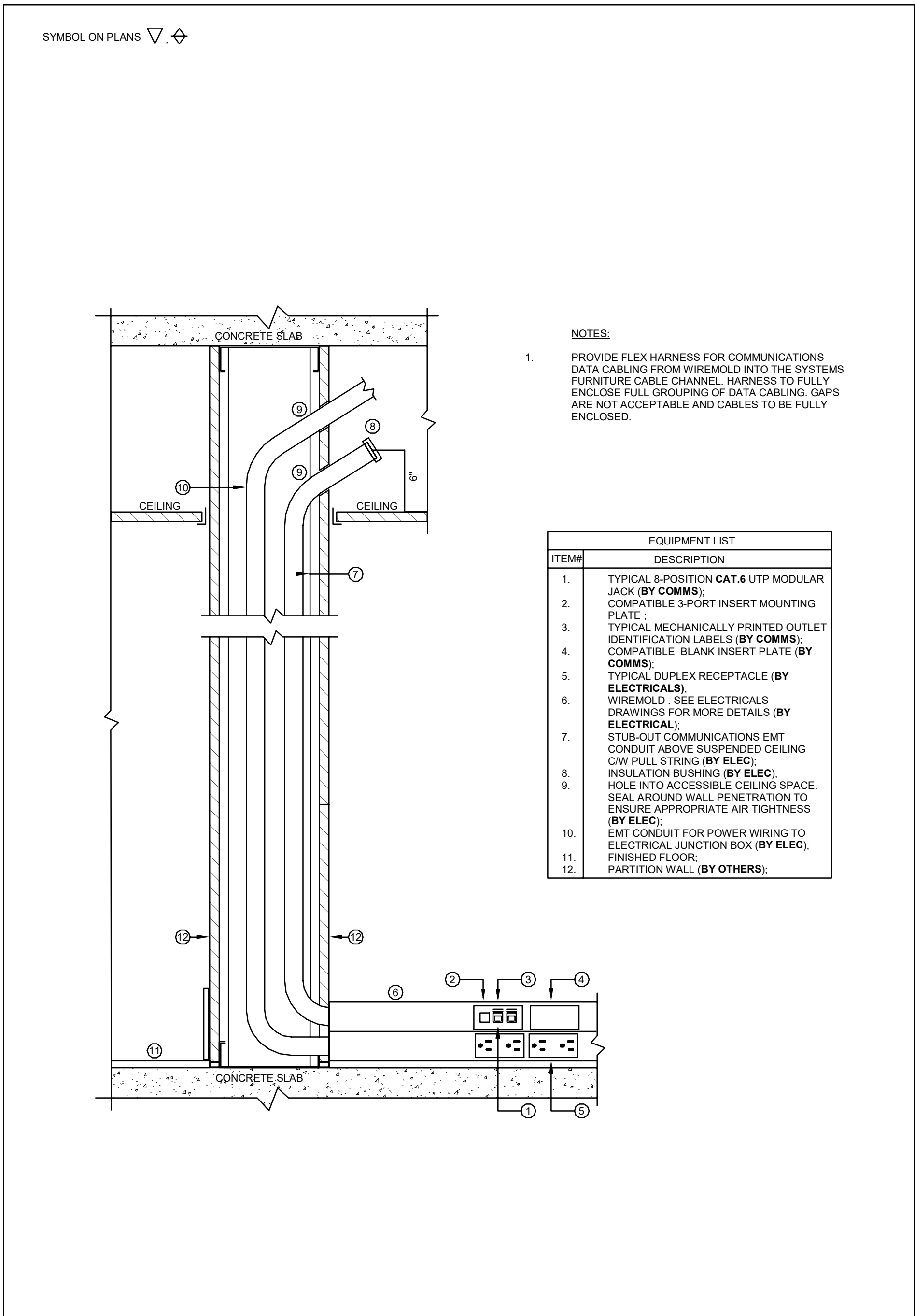
DRAWING NO.: **IT-601**



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	WAP C/W MOUNTING KIT - DEFAULT BRACKET AND CLIP (SUPPLIED BY CLIENT AND INSTALLED BY COMMS);
2.	HORIZONTAL DATA CABLE. SEE SPECIFICATION AND FLOOR PLAN FOR EXACT QUANTITY AND CATEGORY RATINGS (BY COMMS);
3.	TWENTY FEET (20') SLACK CABLE NEATLY COILED AND FASTENED TO UNDER-SLAB (BY COMMS);
4.	SQUARE TWO-GANG ELECTRICAL BACK BOX (BY ELEC);
5.	WHITE DUAL PORT SHALLOW SURFACE MOUNT BOX. CONTRACTOR TO SECURE SURFACE MOUNT BOX TO THE J-HOOK TO PREVENT FROM HAVING IT DROP DOWN (BY COMMS);
6.	TEN FEET (10') PATCH CORD (BY COMMS);
7.	J-HOOK WITH RETAINING CLIP ATTACHED TO CEILING SLAB WITH DIRECT FASTENER. (BY COMMS);
8.	CEILING GRID SUPPORT SYSTEM (BY OTHERS);
9.	ALL THREADED ROD MOUNT WITH ALL NECESSARY HARDWARE (BY ELEC);

- NOTES:
- COMMS CONTRACTOR TO PROVIDE 10 FEET SLACK NEATLY COILED AND FASTENED TO UNDER THE SLAB. INSIDE ACCESSIBLE CEILING CABLES TO BE INDEPENDENTLY SUPPORTED FROM CEILING WITH J-HOOKS (SUPPLIED AND INSTALLED **BY COMMS**).
 - COMMS CONTRACTOR SHALL INSTALL WAP WHICH SHALL BE SUPPLIED **BY CLIENT**. PROVIDE ALL NECESSARY HARDWARE AND MOUNTING KITS TO MOUNT WAP'S. COORDINATE HEIGHT WITH **CLIENT**, **GC** AND OTHER TRADES.
 - THE COMMUNICATIONS CONTRACTOR SHALL:
3.1. RECEIVE WAP FROM **CLIENT** AND UNPACK WAP.
3.2. ATTACH WAP MOUNTING BRACKET AND MOUNT WAP.
 - EACH HORIZONTAL CABLE SHALL BE AFFIXED WITH TURN-TELL LABEL, AT BOTH ENDS, 4" TO 6" MAX FROM THE CONNECTORS.

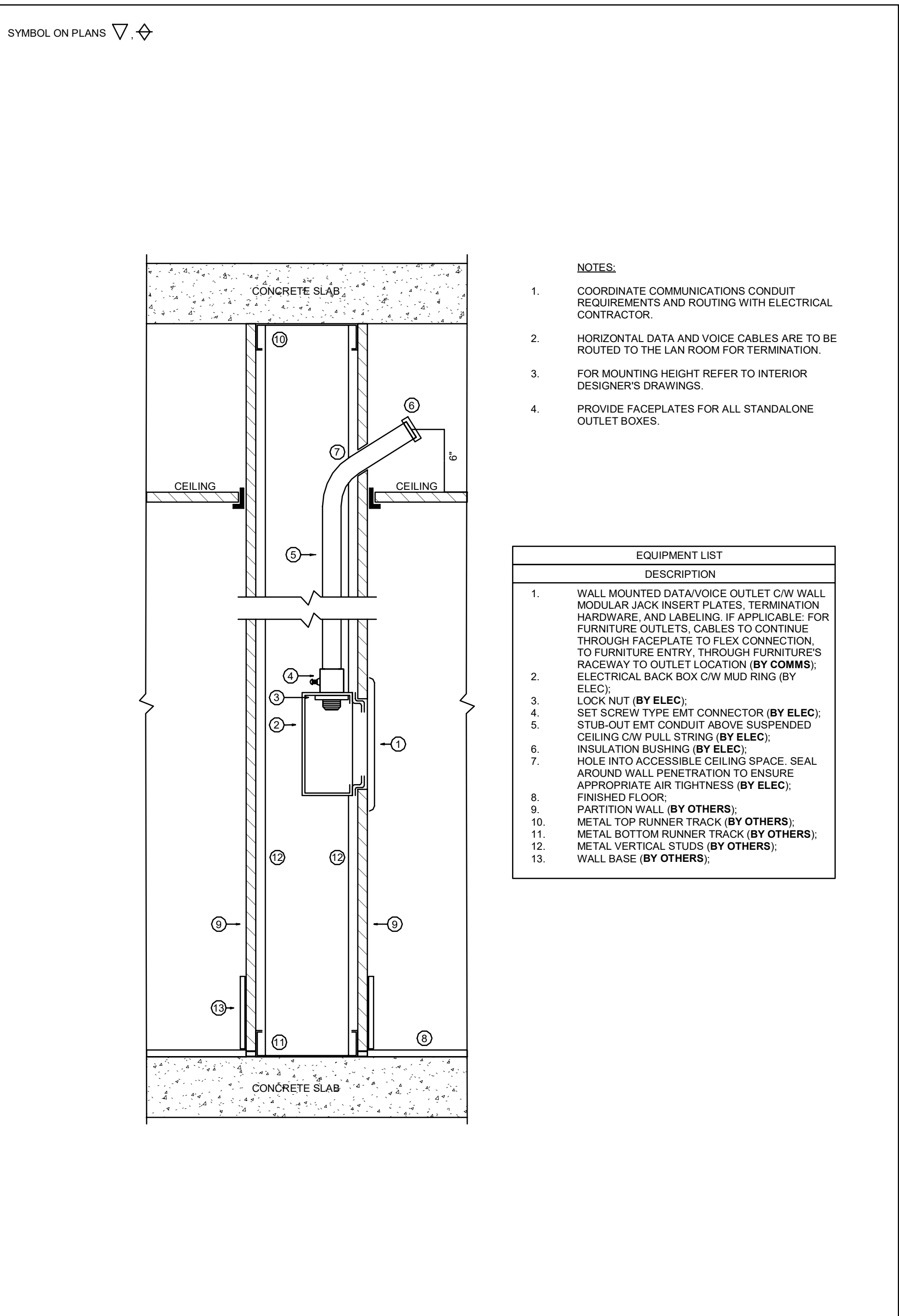
5
IT-602 T-BAR CEILING WAP MOUNTING DETAIL - TYPICAL DETAIL
N.T.S.



- NOTES:
- PROVIDE FLEX HARNESS FOR COMMUNICATIONS DATA CABLING FROM WIREMOLD INTO THE SYSTEMS FURNITURE CABLE CHANNEL. HARNESS TO FULLY ENCLOSE FULL GROUPING OF DATA CABLING. GAPS ARE NOT ACCEPTABLE AND CABLES TO BE FULLY ENCLOSED.

EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	TYPICAL 8-POSITION CAT.6 UTP MODULAR JACK (BY COMMS);
2.	COMPATIBLE 3-PORT INSERT MOUNTING PLATE;
3.	TYPICAL MECHANICALLY PRINTED OUTLET IDENTIFICATION LABELS (BY COMMS);
4.	COMPATIBLE BLANK INSERT PLATE (BY COMMS);
5.	TYPICAL DUPLEX RECEPTACLE (BY ELECTRICALS);
6.	WIREMOLD - SEE ELECTRICALS DRAWINGS FOR MORE DETAILS (BY ELECTRICAL);
7.	STUB-OUT COMMUNICATIONS EMT CONDUIT ABOVE SUSPENDED CEILING C/W FULL STRING (BY ELEC);
8.	INSULATION BUSHING (BY ELEC);
9.	HOLE INTO ACCESSIBLE CEILING SPACE. SEAL AROUND WALL PENETRATION TO ENSURE APPROPRIATE AIR TIGHTNESS (BY ELEC);
10.	EMT CONDUIT FOR POWER WIRING TO ELECTRICAL JUNCTION BOX (BY ELEC);
11.	FINISHED FLOOR;
12.	PARTITION WALL (BY OTHERS);

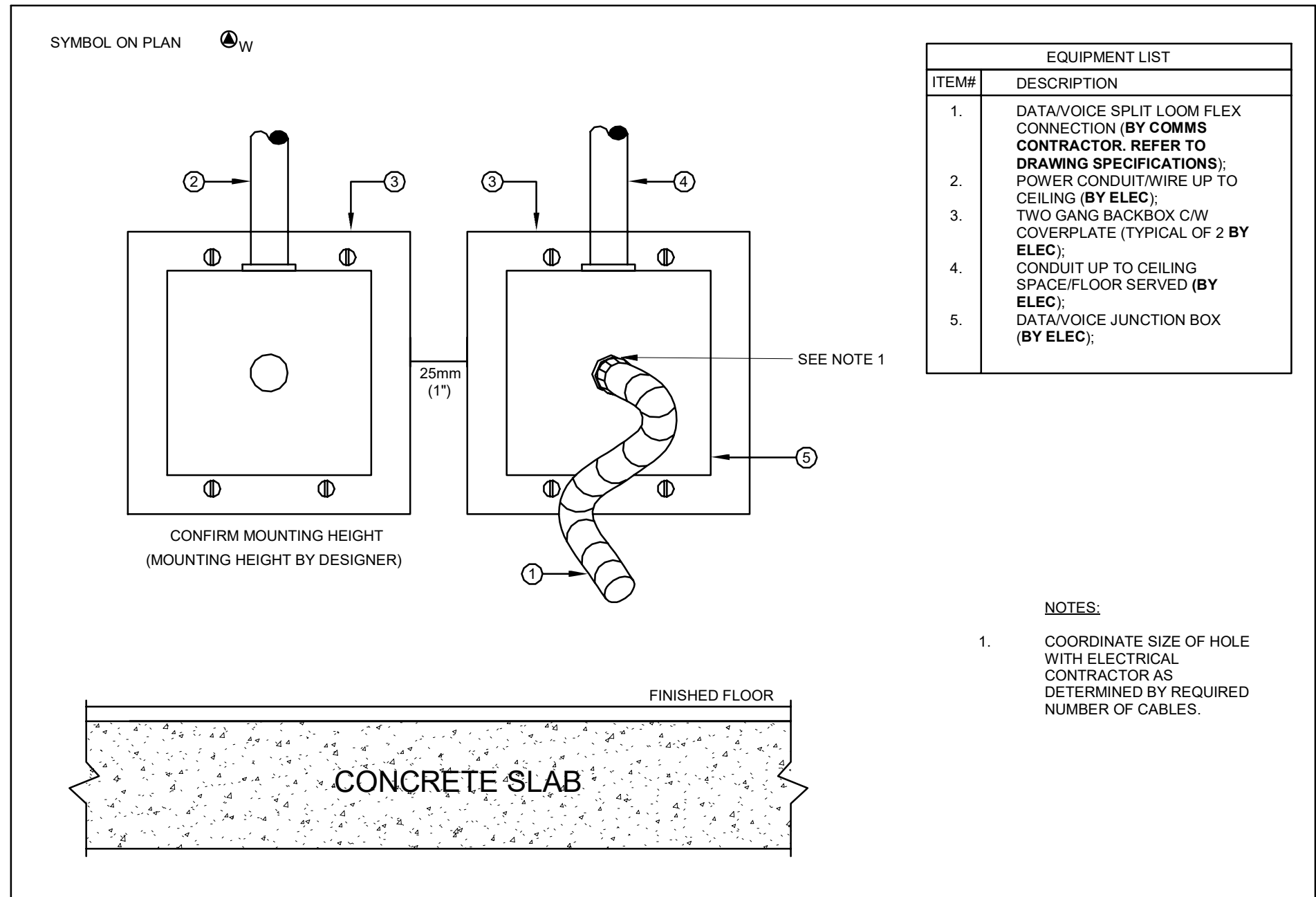
6
IT-602 WIREMOLD-MOUNTED OUTLETS - TYPICAL DETAIL
N.T.S.



- NOTES:
- COORDINATE COMMUNICATIONS CONDUIT REQUIREMENTS AND ROUTING WITH ELECTRICAL CONTRACTOR.
 - HORIZONTAL DATA AND VOICE CABLES ARE TO BE ROUTED TO THE LAN ROOM FOR TERMINATION.
 - FOR MOUNTING HEIGHT REFER TO INTERIOR DESIGNER'S DRAWINGS.
 - PROVIDE FACEPLATES FOR ALL STANDALONE OUTLET BOXES.

EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	WALL MOUNTED DATA/VOICE OUTLET C/W WALL MODULAR JACK INSERT PLATES. TERMINATION HARDWARE, AND LABELING, IF APPLICABLE, FOR FURNITURE OUTLETS, CABLES TO CONTINUE THROUGH FACEPLATE TO FLEX CONNECTION, TO FURNITURE ENTRY, THROUGH FURNITURE'S RACEWAY TO OUTLET LOCATION (BY COMMS);
2.	ELECTRICAL BACK BOX C/W MUD RING (BY ELEC);
3.	LOCK NUT (BY ELEC);
4.	SET SCREW TYPE EMT CONNECTOR (BY ELEC);
5.	STUB-OUT EMT CONDUIT ABOVE SUSPENDED CEILING C/W PULL STRING (BY ELEC);
6.	INSULATION BUSHING (BY ELEC);
7.	HOLE INTO ACCESSIBLE CEILING SPACE. SEAL AROUND WALL PENETRATION TO ENSURE APPROPRIATE AIR TIGHTNESS (BY ELEC);
8.	FINISHED FLOOR;
9.	PARTITION WALL (BY OTHERS);
10.	METAL TOP RUNNER TRACK (BY OTHERS);
11.	METAL BOTTOM RUNNER TRACK (BY OTHERS);
12.	METAL VERTICAL STUDS (BY OTHERS);
13.	WALL BASE (BY OTHERS);

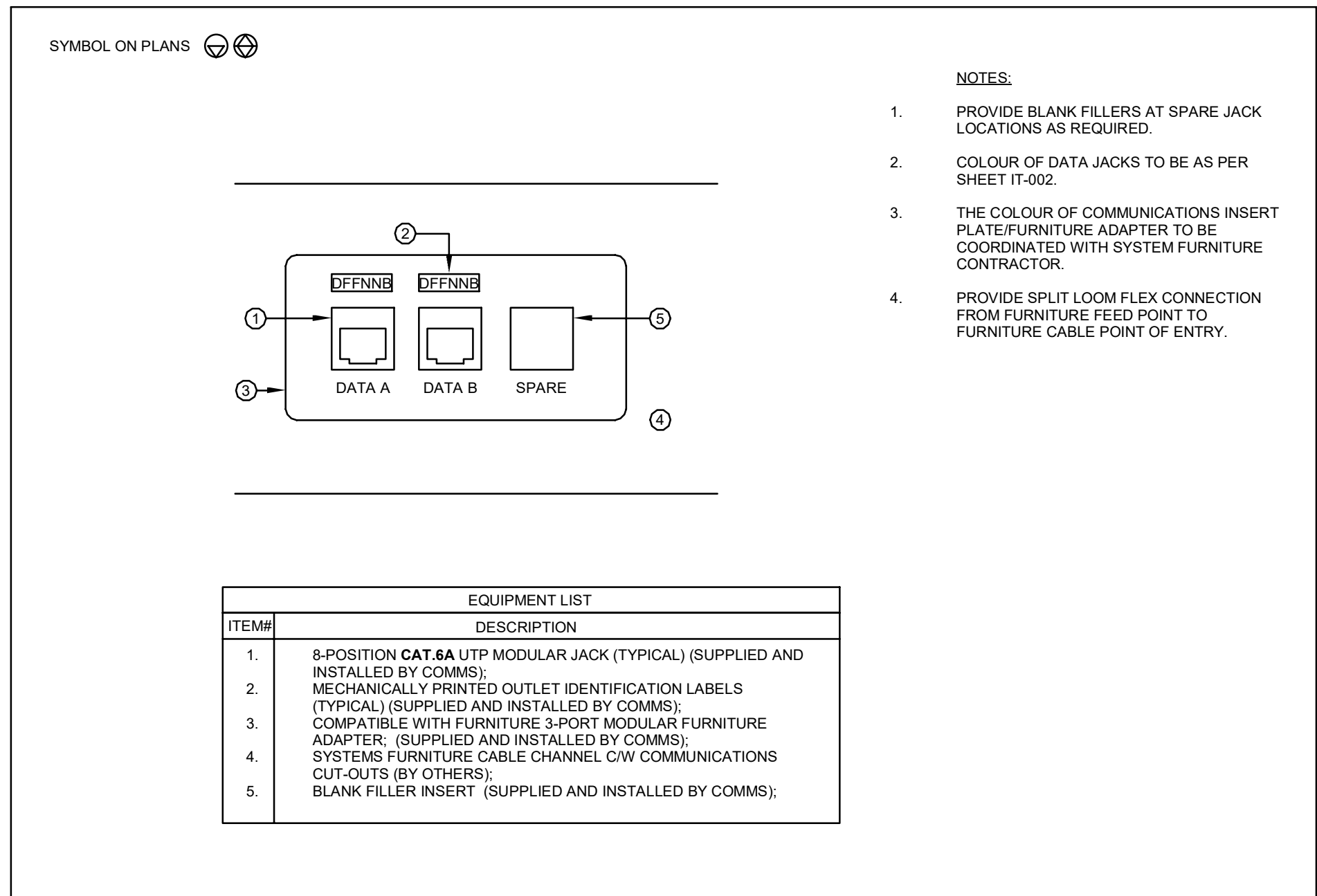
4
IT-602 SECTION OF WALL DATA OUTLET - TYPICAL DETAIL
N.T.S.



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	DATA/VOICE SPLIT LOOM FLEX CONNECTION (BY COMMS CONTRACTOR. REFER TO DRAWING SPECIFICATIONS);
2.	POWER CONDUIT/WIRE UP TO CEILING (BY ELEC);
3.	TWO GANG BACKBOX C/W COVERPLATE (TYPICAL OF 2 BY ELEC);
4.	CONDUIT UP TO CEILING SPACE/FLOOR SERVED (BY ELEC);
5.	DATA/VOICE JUNCTION BOX (BY ELEC);

- NOTES:
- COORDINATE SIZE OF HOLE WITH ELECTRICAL CONTRACTOR AS DETERMINED BY REQUIRED NUMBER OF CABLES.

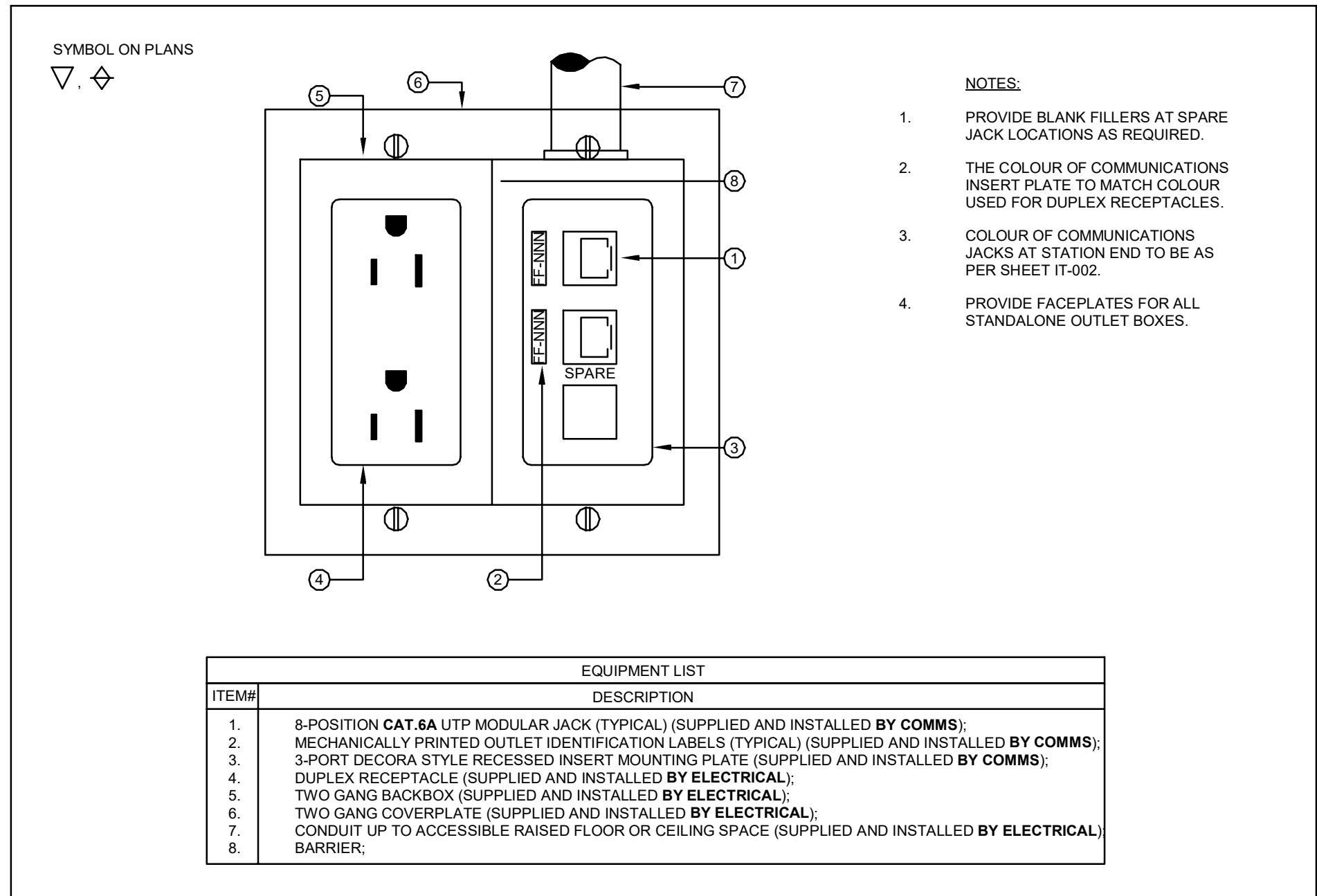
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IT-602 WALL FEED (SYSTEM FURNITURE CONNECTION) - TYPICAL DETAIL
N.T.S.



- NOTES:
- PROVIDE BLANK FILLERS AT SPARE JACK LOCATIONS AS REQUIRED.
 - COLOUR OF DATA JACKS TO BE AS PER SHEET IT-002.
 - THE COLOUR OF COMMUNICATIONS INSERT PLATE/FURNITURE ADAPTER TO BE COORDINATED WITH SYSTEM FURNITURE CONTRACTOR.
 - PROVIDE SPLIT LOOM FLEX CONNECTION FROM FURNITURE FEED POINT TO FURNITURE CABLE POINT OF ENTRY.

EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	8-POSITION CAT.6A UTP MODULAR JACK (TYPICAL) (SUPPLIED AND INSTALLED BY COMMS);
2.	MECHANICALLY PRINTED OUTLET IDENTIFICATION LABELS (TYPICAL) (SUPPLIED AND INSTALLED BY COMMS);
3.	COMPATIBLE WITH FURNITURE 3-PORT MODULAR FURNITURE ADAPTER; (SUPPLIED AND INSTALLED BY COMMS);
4.	SYSTEMS FURNITURE CABLE CHANNEL C/W COMMUNICATIONS CUT-OUTS (BY OTHERS);
5.	BLANK FILLER INSERT (SUPPLIED AND INSTALLED BY COMMS);

2
IT-602 SYSTEM FURNITURE OUTLET - TYPICAL DETAIL
N.T.S.



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	8-POSITION CAT.6A UTP MODULAR JACK (TYPICAL) (SUPPLIED AND INSTALLED BY COMMS);
2.	MECHANICALLY PRINTED OUTLET IDENTIFICATION LABELS (TYPICAL) (SUPPLIED AND INSTALLED BY COMMS);
3.	3-PORT DECORA STYLE RECESSED INSERT MOUNTING PLATE (SUPPLIED AND INSTALLED BY COMMS);
4.	DUPLEX RECEPTACLE (SUPPLIED AND INSTALLED BY ELECTRICAL);
5.	TWO GANG BACKBOX (SUPPLIED AND INSTALLED BY ELECTRICAL);
6.	TWO GANG COVERPLATE (SUPPLIED AND INSTALLED BY ELECTRICAL);
7.	CONDUIT UP TO ACCESSIBLE RAISED FLOOR OR CEILING SPACE (SUPPLIED AND INSTALLED BY ELECTRICAL);
8.	BARRIER;

- NOTES:
- PROVIDE BLANK FILLERS AT SPARE JACK LOCATIONS AS REQUIRED.
 - THE COLOUR OF COMMUNICATIONS INSERT PLATE TO MATCH COLOUR USED FOR DUPLEX RECEPTACLES.
 - COLOUR OF COMMUNICATIONS JACKS AT STATION END TO BE AS PER SHEET IT-002.
 - PROVIDE FACEPLATES FOR ALL STANDALONE OUTLET BOXES.

1
IT-602 COMBO POWER/COMMUNICATION WALL OUTLET - TYPICAL DETAIL
N.T.S.

PROJECT LOGO

TRUE NORTH

CONSTRUCTION NORTH

KEY PLAN

REVISIONS:

3	ISSUED FOR TENDER	2025-11-27
2	ISSUED FOR 100% CD	2025-11-21
1	ISSUED FOR 90% CD	2025-10-17
No.	DESCRIPTION	DATE

DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT / ENGINEER BEFORE PROCEEDING. ONLY FIGURED DIMENSIONS MUST BE USED. THE CONTRACTOR MUST CHECK THE DIMENSIONS ON SITE. THE DRAWING IS PROTECTED BY COPYRIGHT. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS. DO NOT SCALE THE DRAWINGS.

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SEAL

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MULVEY & BANANI
90 Sheppard Avenue East, Suite 500, Toronto, ON M2N 3A1
416.724.9520 | mbl.com

PROJECT:

University of Toronto CQIQC Suite and QIS Lab

University of Toronto, 27 King's College Cir, Toronto, ON M5S 1A1

DRAWING TITLE:

IT/COMMUNICATIONS DETAILS 1/3

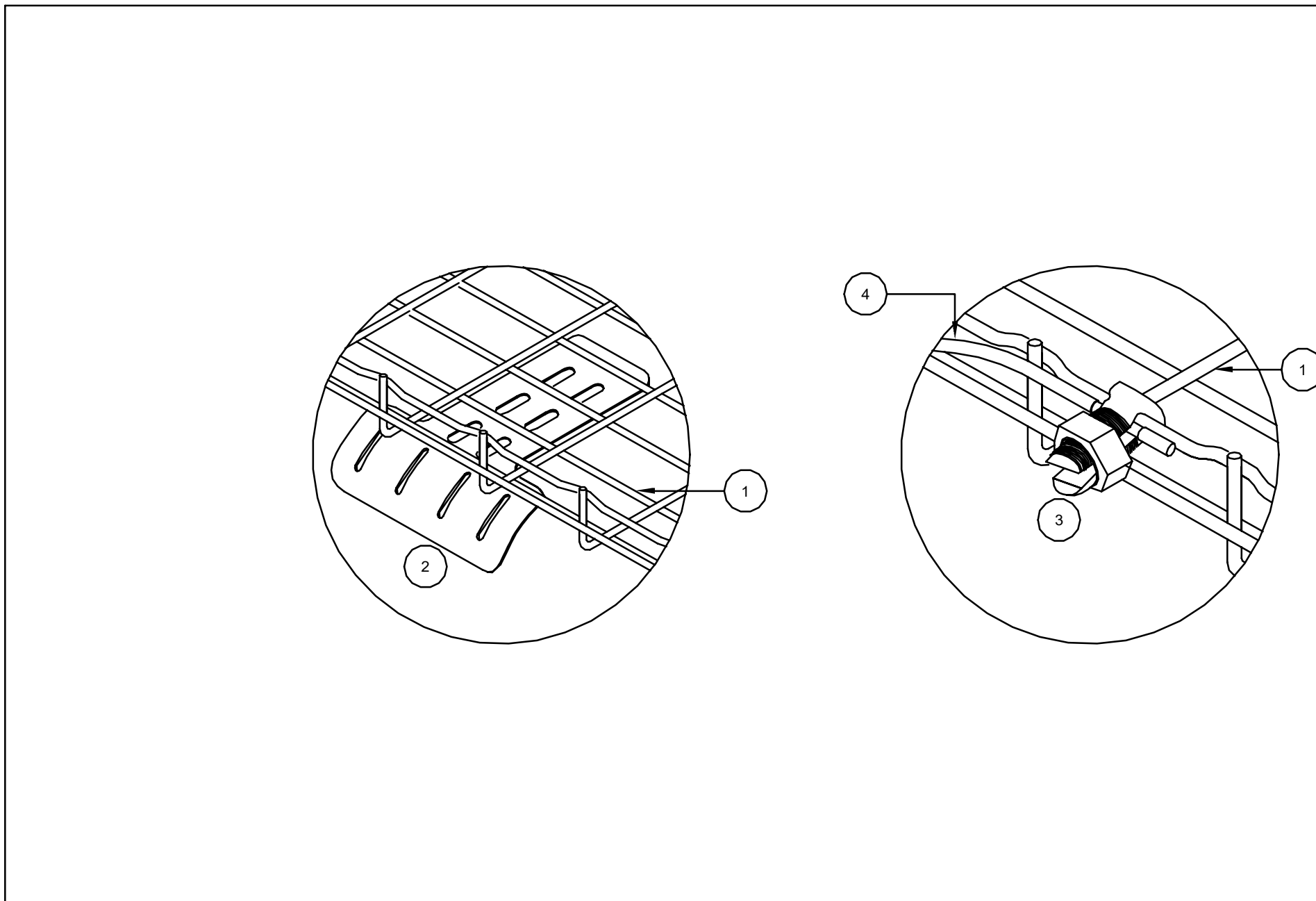
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PROJECT NO: 251016

DRAWING NO.:

IT-602

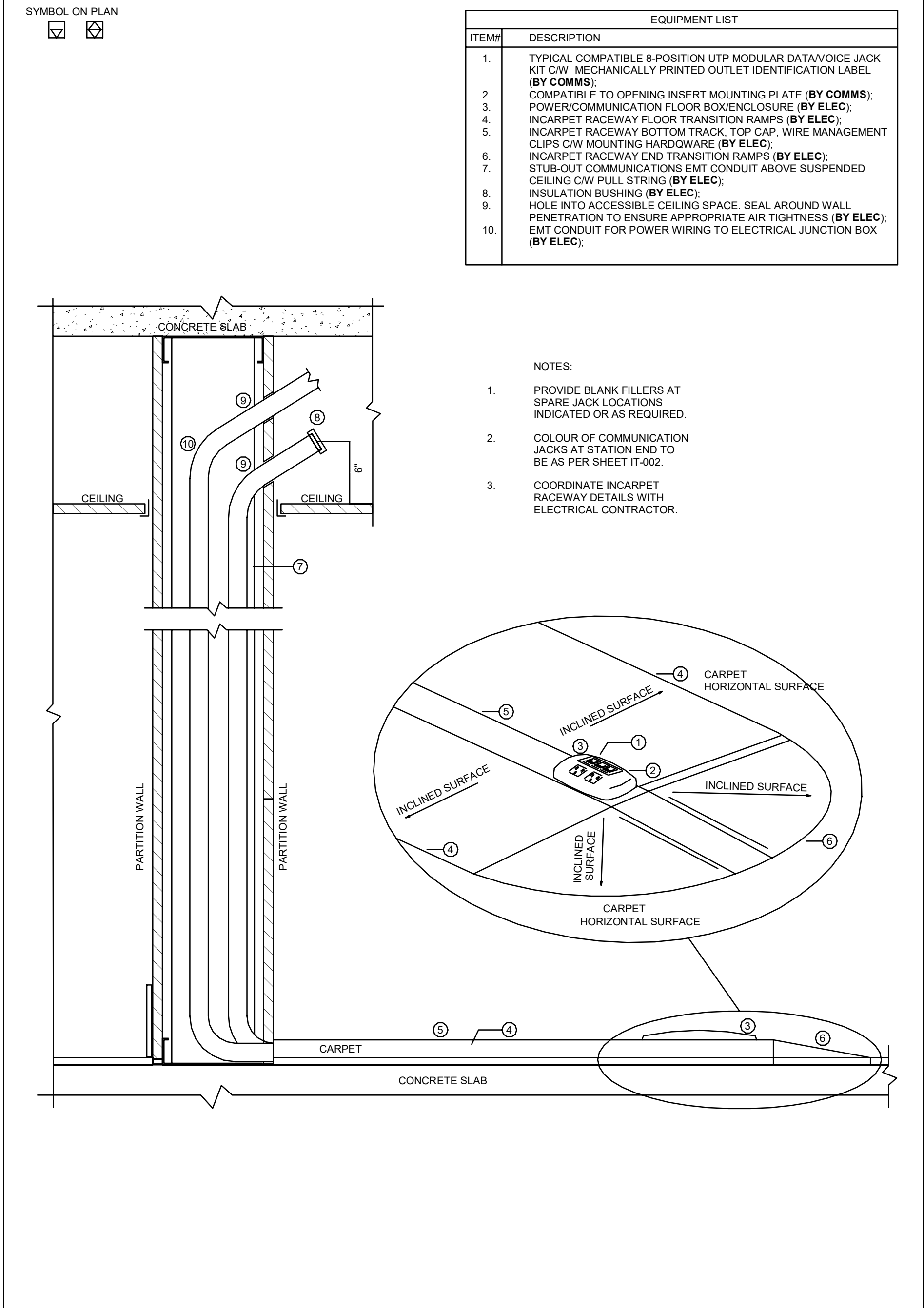
DATE: 2025-12-27 04:20 PM



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	WIRE BASKET CABLE TRAY (BY COMMS);
2.	DROP OUT FITTING TO KEEP CABLE RADIUS SECURE AT DROP POINT C/W RETENTION TABS TO SECURE POSITIONING AND ALL NECESSARY HARDWARE COMPATIBLE WITH TRAY (BY COMMS);
3.	GROUND BOLT TO ATTACHE GROUND WIRE TO EACH TRAY SECTION WHEN SEPARATE GROUND WIRE IS REQUIRED C/W ALL NECESSARY HARDWARE COMPATIBLE WITH TRAY (BY COMMS);
4.	COPPER STRANDED #6AWG GROUND WIRE WITH GREEN INSULATED JACKET (BY COMMS);

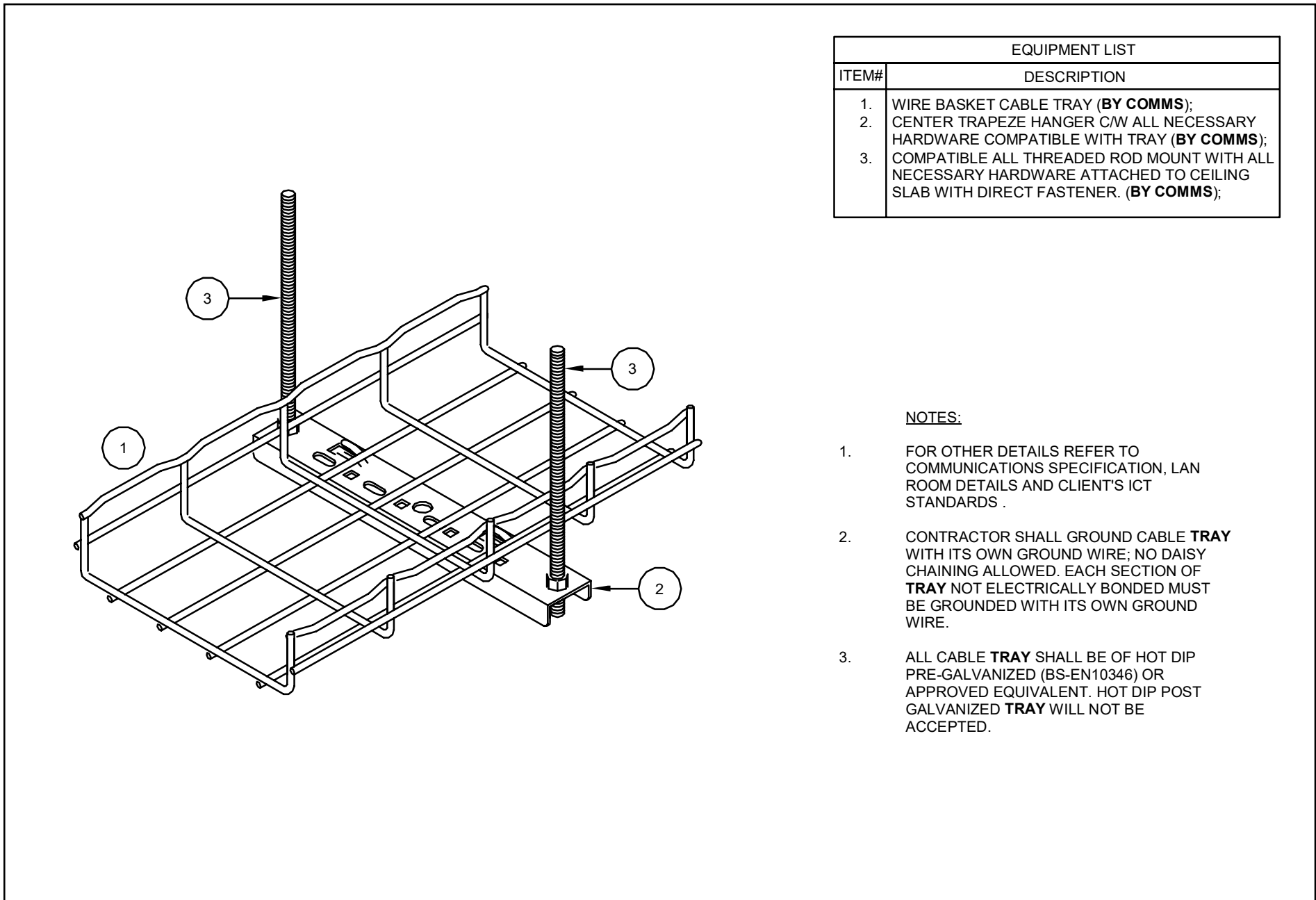
- NOTES:
- FOR OTHER DETAILS REFER TO COMMUNICATIONS SPECIFICATION, LAN ROOM DETAILS AND CLIENT'S ICT STANDARDS.
 - CONTRACTOR SHALL GROUND CABLE **TRAY** WITH ITS OWN GROUND WIRE: NO DAISY CHAINING ALLOWED. EACH SECTION OF **TRAY** NOT ELECTRICALLY BONDED MUST BE GROUNDED WITH ITS OWN GROUND WIRE.
 - ALL CABLE TRAY SHALL BE OF HOT DIP PRE-GALVANIZED (BS-EN10346) OR APPROVED EQUIVALENT. HOT DIP POST GALVANIZED **TRAY** WILL NOT BE ACCEPTED.
 - RUN AN APPROPRIATELY SIZED GROUND WIRE ALONGSIDE THE TRAY AND ATTACH IT TO EACH TRAY SECTION AND ON BOTH SIDES OF A CUT IN THE TRAY.
 - PROVIDE DROP OUT FITTINGS AT EACH CABLE EXIT LOCATION WHERE CABLE RADIUS IS STRESSED.

4 IT-603 CABLE TRAY DROP OUT FITTING AND GROUNDING - TYPICAL DETAILS N.T.S.



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	TYPICAL COMPATIBLE 8-POSITION UTP MODULAR DATA/VOICE JACK KIT C/W MECHANICALLY PRINTED OUTLET IDENTIFICATION LABEL (BY COMMS);
2.	COMPATIBLE TO OPENING INSERT MOUNTING PLATE (BY COMMS);
3.	POWER/COMMUNICATION FLOOR BOX/ENCLOSURE (BY ELEC);
4.	INCARPET RACEWAY FLOOR TRANSITION RAMPS (BY ELEC);
5.	INCARPET RACEWAY BOTTOM TRACK, TOP CAP, WIRE MANAGEMENT CLIPS C/W MOUNTING HARDWARE (BY ELEC);
6.	INCARPET RACEWAY END TRANSITION RAMPS (BY ELEC);
7.	STUB-OUT COMMUNICATIONS EMT CONDUIT ABOVE SUSPENDED CEILING C/W PULL STRING (BY ELEC);
8.	INSULATION BUSHING (BY ELEC);
9.	HOLE INTO ACCESSIBLE CEILING SPACE. SEAL AROUND WALL PENETRATION TO ENSURE APPROPRIATE AIR TIGHTNESS (BY ELEC);
10.	EMT CONDUIT FOR POWER WIRING TO ELECTRICAL JUNCTION BOX (BY ELEC);

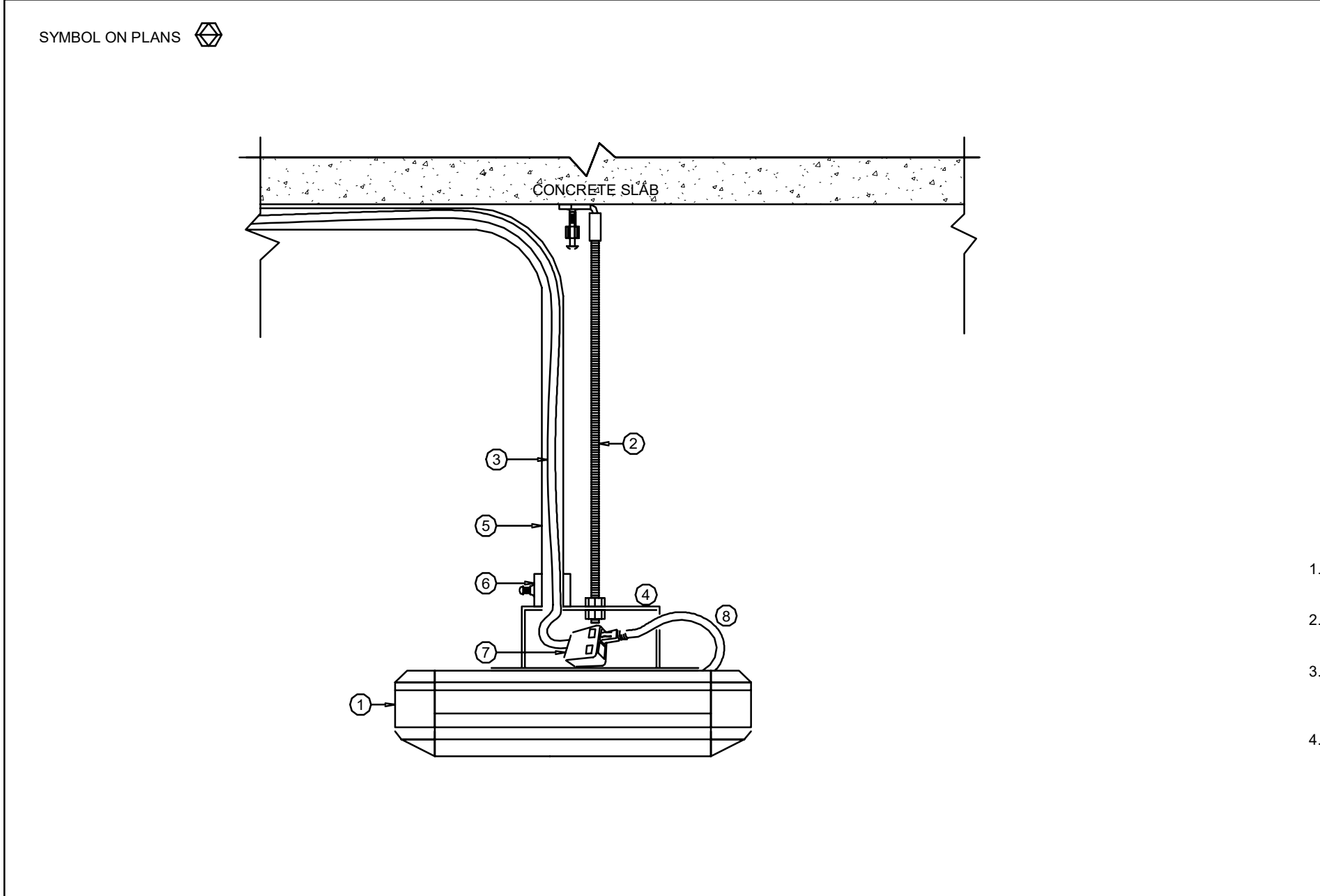
- NOTES:
- PROVIDE BLANK FILLERS AT SPARE JACK LOCATIONS INDICATED OR AS REQUIRED.
 - COLOUR OF COMMUNICATION JACKS AT STATION END TO BE AS PER SHEET IT-002.
 - COORDINATE INCARPET RACEWAY DETAILS WITH ELECTRICAL CONTRACTOR.



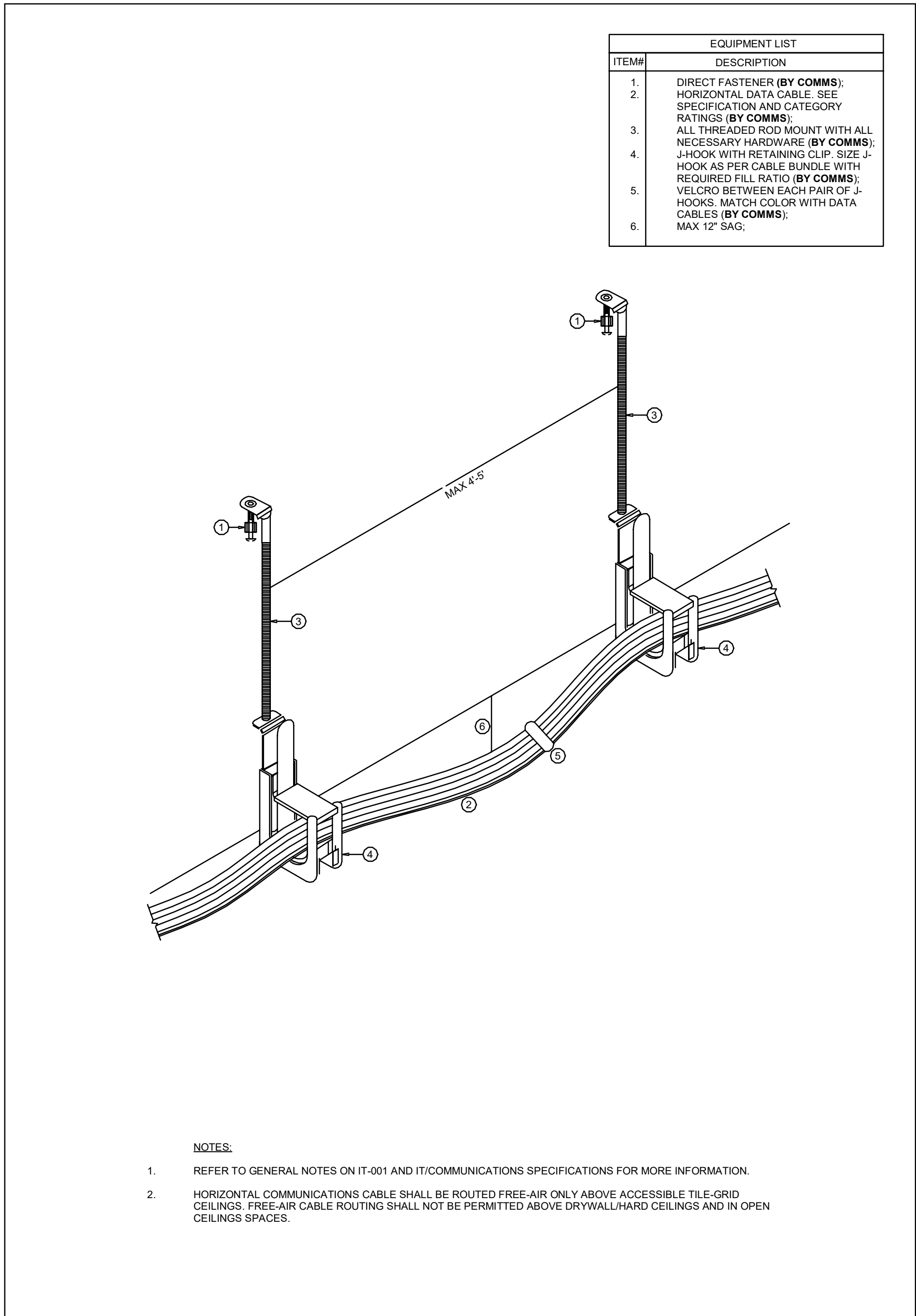
EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	WIRE BASKET CABLE TRAY (BY COMMS);
2.	CENTER TRAPEZE HANGER C/W ALL NECESSARY HARDWARE COMPATIBLE WITH TRAY (BY COMMS);
3.	COMPATIBLE ALL THREADED ROD MOUNT WITH ALL NECESSARY HARDWARE ATTACHED TO CEILING SLAB WITH DIRECT FASTENER. (BY COMMS);

- NOTES:
- FOR OTHER DETAILS REFER TO COMMUNICATIONS SPECIFICATION, LAN ROOM DETAILS AND CLIENT'S ICT STANDARDS.
 - CONTRACTOR SHALL GROUND CABLE **TRAY** WITH ITS OWN GROUND WIRE: NO DAISY CHAINING ALLOWED. EACH SECTION OF **TRAY** NOT ELECTRICALLY BONDED MUST BE GROUNDED WITH ITS OWN GROUND WIRE.
 - ALL CABLE **TRAY** SHALL BE OF HOT DIP PRE-GALVANIZED (BS-EN10346) OR APPROVED EQUIVALENT. HOT DIP POST GALVANIZED **TRAY** WILL NOT BE ACCEPTED.

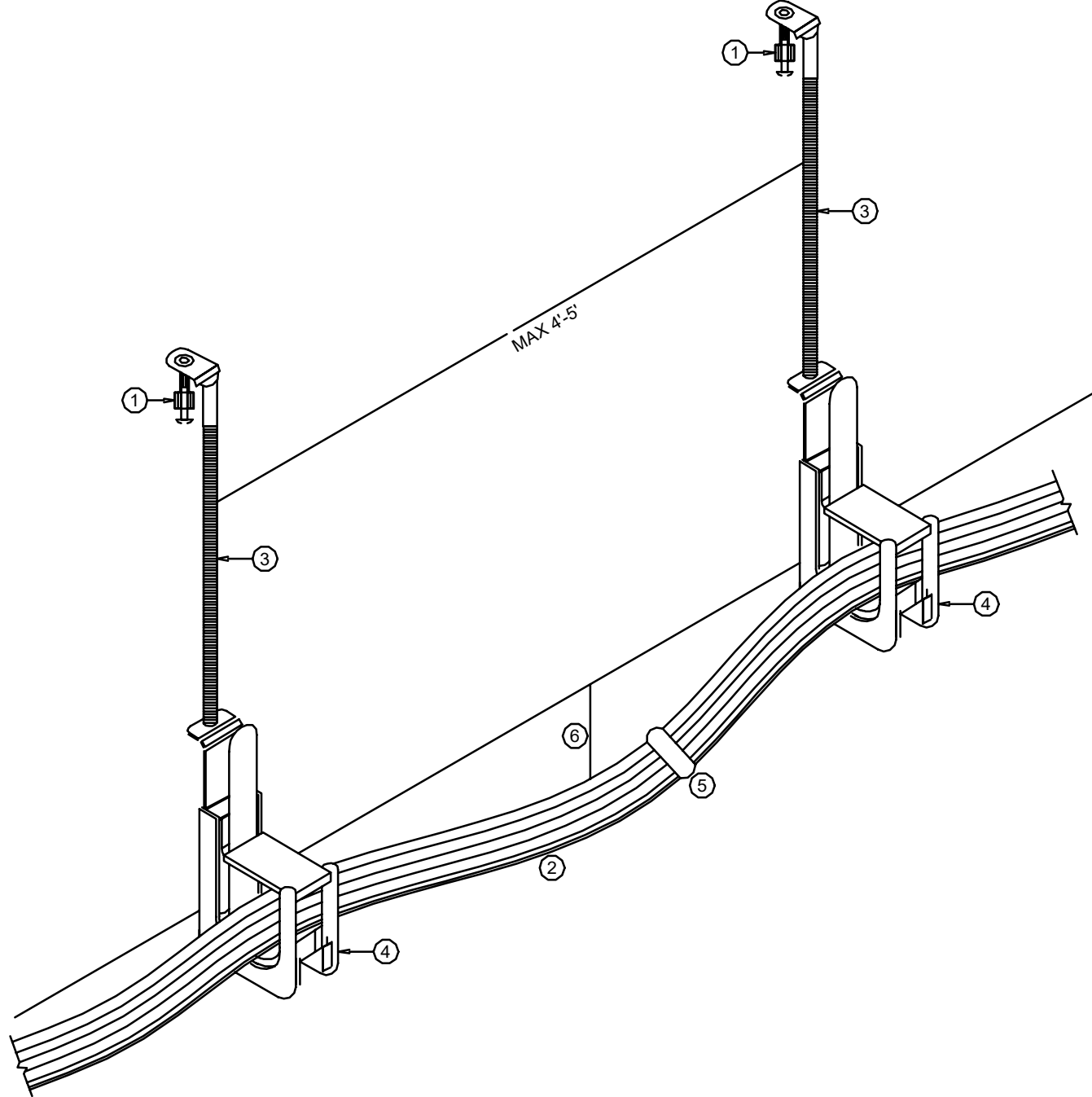
3 IT-603 CABLE TRAY CEILING SUPPORT - TYPICAL DETAIL N.T.S.



1 IT-603 OPEN CEILING WAP WITH CONDUIT MOUNTING - TYPICAL DETAIL N.T.S.



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	DIRECT FASTENER (BY COMMS);
2.	HORIZONTAL DATA CABLE. SEE SPECIFICATION AND CATEGORY RATINGS (BY COMMS);
3.	ALL THREADED ROD MOUNT WITH ALL NECESSARY HARDWARE (BY COMMS);
4.	J-HOOK WITH RETAINING CLIP. SIZE J-HOOK AS PER CABLE BUNDLE WITH REQUIRED FILL RATIO (BY COMMS);
5.	VELCRO BETWEEN EACH PAIR OF J-HOOKS. MATCH COLOR WITH DATA CABLES (BY COMMS);
6.	MAX 12" SAG;



- NOTES:
- REFER TO GENERAL NOTES ON IT-001 AND IT-COMMUNICATIONS SPECIFICATIONS FOR MORE INFORMATION.
 - HORIZONTAL COMMUNICATIONS CABLE SHALL BE ROUTED FREE-AIR ONLY ABOVE ACCESSIBLE TILE-GRID CEILINGS. FREE-AIR CABLE ROUTING SHALL NOT BE PERMITTED ABOVE DRYWALL/HARD CEILINGS AND IN OPEN CEILINGS SPACES.

2 IT-603 J-HOOK - TYPICAL DETAIL N.T.S.

EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	WAP C/W MOUNTING KIT - DEFAULT BRACKET AND CLIP (SUPPLIED BY CLIENT AND INSTALLED BY COMMS);
2.	ALL THREADED ROD MOUNT WITH ALL NECESSARY HARDWARE (BY ELEC);
3.	HORIZONTAL DATA CABLE. SEE SPECIFICATION AND FLOOR PLAN FOR EXACT QUANTITY AND CATEGORY RATINGS. (BY COMMS);
4.	SQUARE TWO-GANG ELECTRICAL BACK BOX (BY ELEC);
5.	3/4" EMT CONDUIT TO THE NEAREST ACCESSIBLE CEILING C/W PULL STRING (BY ELEC);
6.	SET SCREW TYPE EMT CONNECTOR C/W LOCK NUT (BY ELEC);
7.	WHITE DUAL PORT SHALLOW SURFACE MOUNT BOX SIZED TO FIT ELECTRICAL BACK BOX (BY COMMS);
8.	TWELVE (12) INCH PATCH CORD. PULL PATCH CORD THROUGH KNOCK-OUT IN THE ELECTRICAL BACK BOX (BY COMMS);

- NOTES:
- COMMS CONTRACTOR TO PROVIDE 10 FEET SLACK NEATLY COILED AND FASTENED TO UNDER THE SLAB. INSIDE ACCESSIBLE CEILING CABLES TO BE INDEPENDENTLY SUPPORTED FROM CEILING WITH J-HOOKS (SUPPLIED AND INSTALLED BY COMMS).
 - COMMS CONTRACTOR SHALL INSTALL WAP WHICH SHALL BE SUPPLIED BY CLIENT. PROVIDE ALL NECESSARY HARDWARE TO MOUNT WAP'S. COORDINATE HEIGHT WITH CLIENT, GC AND OTHER TRADES.
 - THE COMMUNICATIONS CONTRACTOR SHALL:
3.1 RECEIVE WAP FROM CLIENT AND UNPACK WAP.
3.2 ATTACH WAP MOUNTING BRACKET AND MOUNT WAP.
 - EACH HORIZONTAL CABLE SHALL BE AFFIXED WITH TURN-TELL LABEL, AT BOTH ENDS, 4" TO 6" MAX FROM THE CONNECTORS.

5 IT-603 INCARPET RACEWAY - TYPICAL DETAIL N.T.S.

PROJECT LOGO

TRUE NORTH

CONSTRUCTION NORTH

KEY PLAN

3 ISSUED FOR TENDER 2025-11-27

2 ISSUED FOR 100% CD 2025-11-21

1 ISSUED FOR 90% CD 2025-10-17

No.	DESCRIPTION	DATE
1	ISSUED FOR 90% CD	2025-10-17

REVISIONS:

DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT / ENGINEER BEFORE PROCEEDING.

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SEAL

CONSULTANTS:

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416.724.9520 | info@mulvey.com

PROJECT:

University of Toronto CQIQC Suite and QIS Lab

**University of Toronto,
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Toronto, ON M5S 1A1**

DRAWING TITLE:

**IT/COMMUNICATIONS
DETAILS 2/3**

SHEET SIZE:	ARCH D (810x914)	SCALE:	1:1
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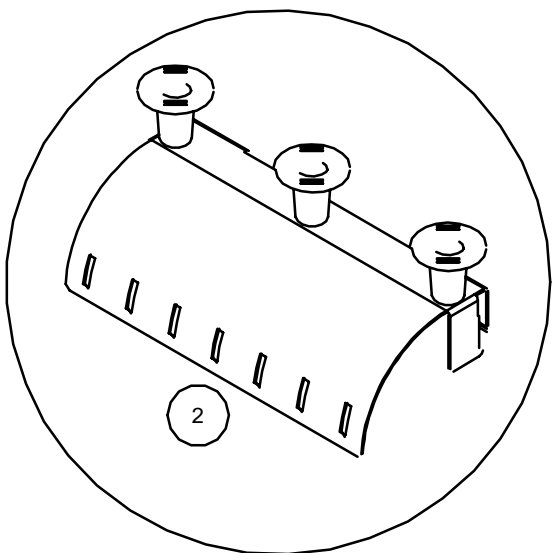
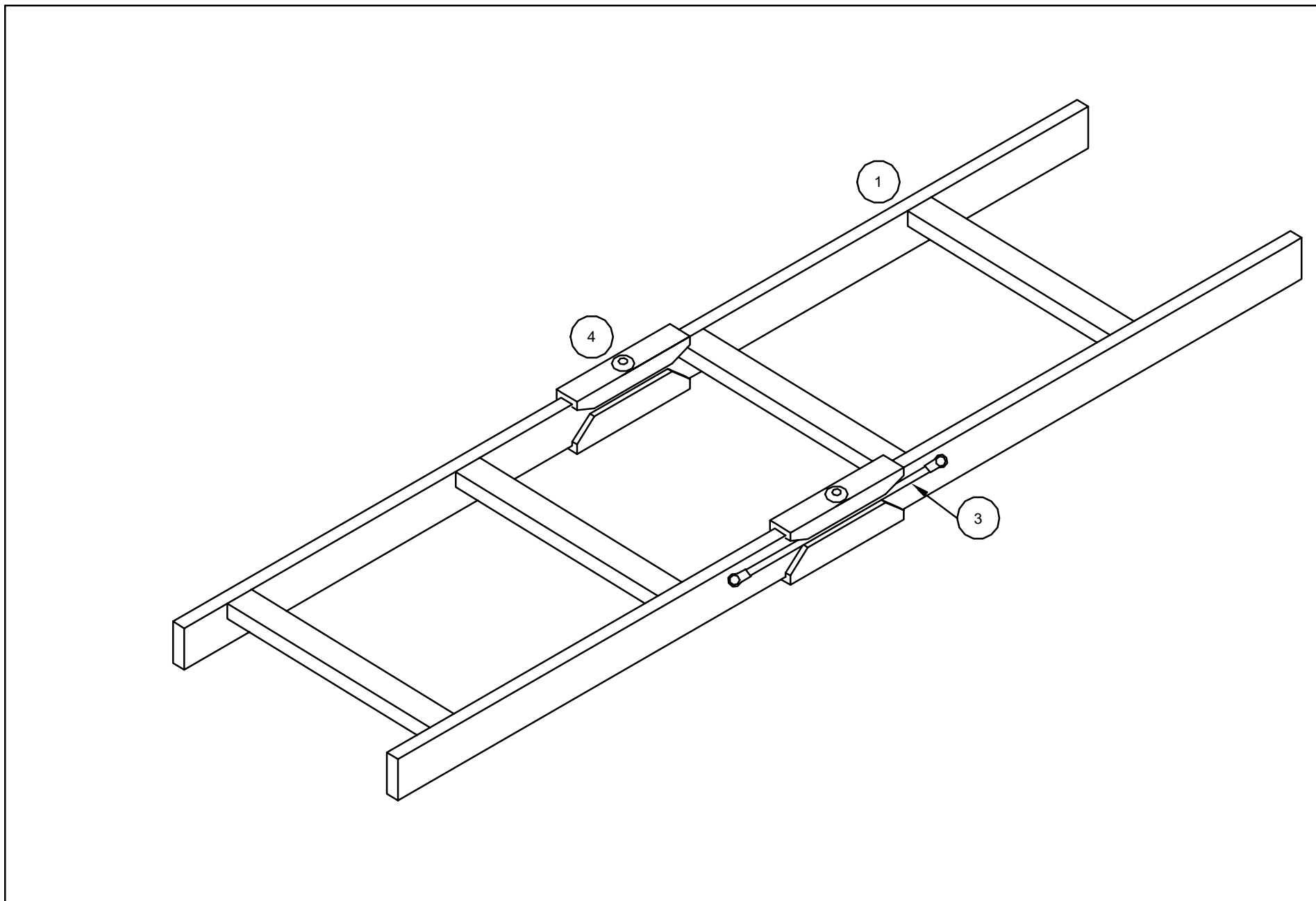
PROJECT NO:

251016

DRAWING NO.:

IT-603

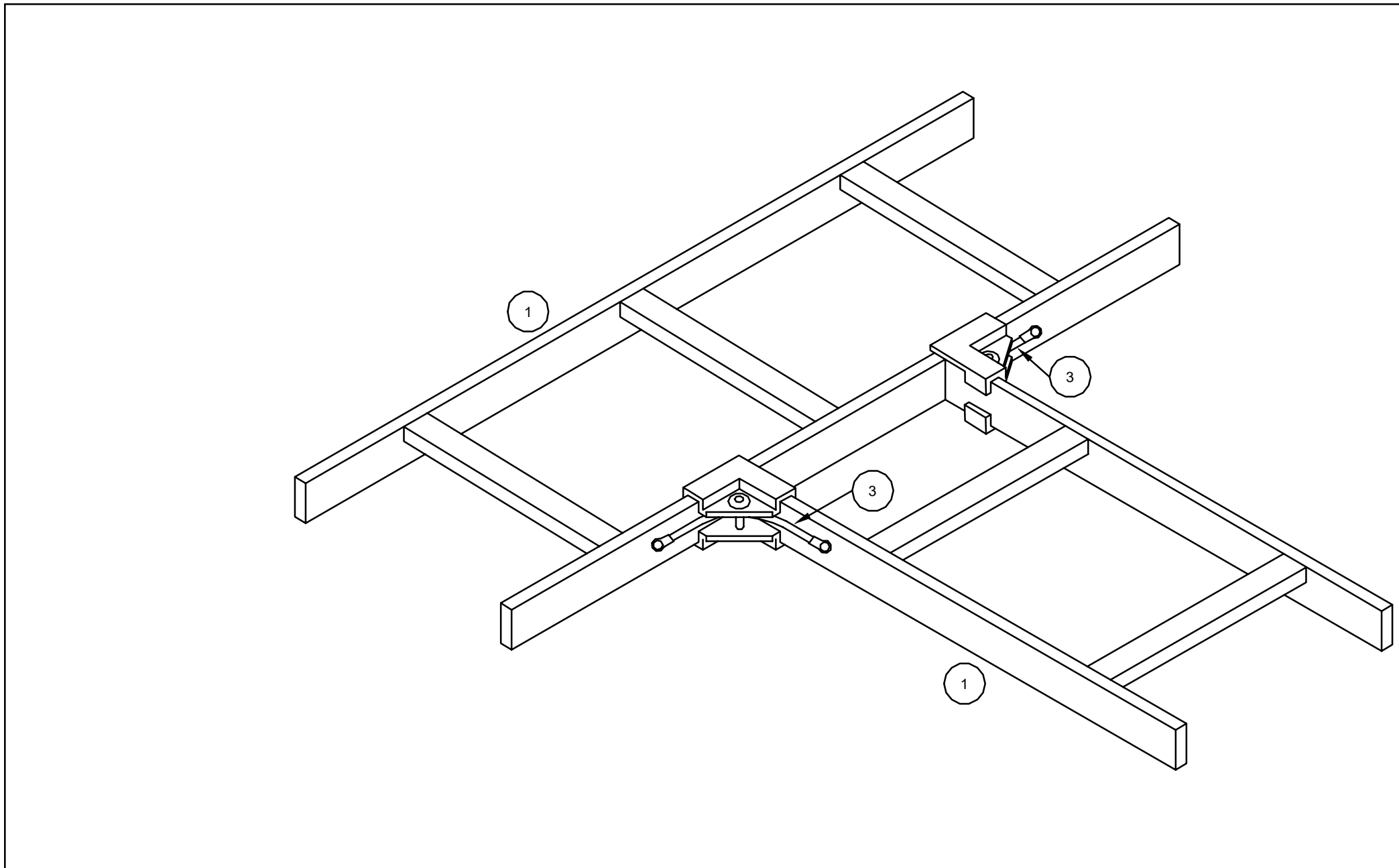
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EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	CABLE LADDER (BY COMMS);
2.	DROP OUT FITTING TO KEEP CABLE RADIUS SECURE AT DROP POINT C/W ALL NECESSARY HARDWARE COMPATIBLE WITH CABLE LADDER (BY COMMS);
3.	COPPER STRANDED #6AWG GROUND WIRE WITH GREEN INSULATED JACKET (BY COMMS);
4.	BUTT SPLICE KIT C/W ALL NECESSARY HARDWARE COMPATIBLE WITH CABLE LADDER (BY COMMS);

- NOTES:
- FOR OTHER DETAILS REFER TO COMMUNICATIONS SPECIFICATION, LAN ROOM DETAILS AND CLIENT'S ICT STANDARDS .
 - CONTRACTOR SHALL GROUND CABLE **LADDERS** WITH ITS OWN GROUND WIRE; NO DAISY CHAINING ALLOWED. EACH SECTION OF **LADDER** NOT ELECTRICALLY BONDED MUST BE GROUNDED WITH ITS OWN GROUND WIRE.
 - ALL CABLE **LADDERS** SHALL BE OF HOT DIP PRE-GALVANIZED (BS-EN10346) OR APPROVED EQUIVALENT. HOT DIP POST GALVANIZED LADDERS WILL NOT BE ACCEPTED.
 - RUN AN APPROPRIATELY SIZED GROUND WIRE ALONGSIDE THE CABLE **LADDER** AND ATTACH IT TO EACH CABLE **LADDER** SECTION AND ON BOTH SIDES OF A CUT IN THE CABLE **LADDER**.
 - PROVIDE DROP OUT FITTINGS AT EACH CABLE EXIT LOCATION WHERE CABLE RADIUS IS STRESSED.

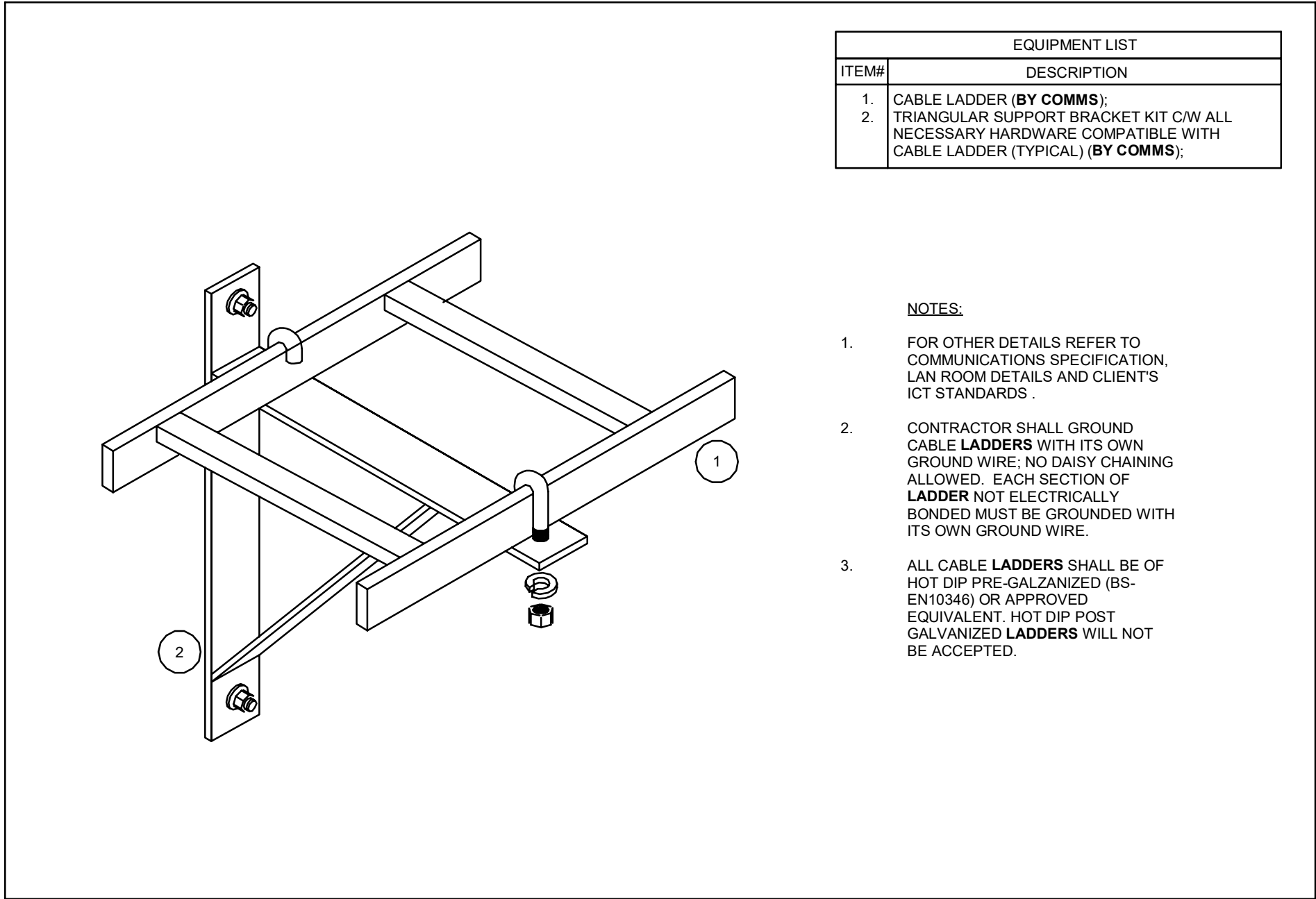
7
IT-604 CABLE LADDER BUTT-SPLICE KIT - TYPICAL DETAIL
N.T.S.



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	CABLE LADDER (BY COMMS);
2.	JUNCTION SPLICE KIT C/W ALL NECESSARY HARDWARE COMPATIBLE WITH CABLE LADDER (TYPICAL) (BY COMMS);
3.	COPPER STRANDED #6AWG GROUND WIRE WITH GREEN INSULATED JACKET (BY COMMS);

- NOTES:
- FOR OTHER DETAILS REFER TO COMMUNICATIONS SPECIFICATION, LAN ROOM DETAILS AND CLIENT'S ICT STANDARDS .
 - CONTRACTOR SHALL GROUND CABLE **LADDERS** WITH ITS OWN GROUND WIRE; NO DAISY CHAINING ALLOWED. EACH SECTION OF **LADDER** NOT ELECTRICALLY BONDED MUST BE GROUNDED WITH ITS OWN GROUND WIRE.
 - ALL CABLE **LADDERS** SHALL BE OF HOT DIP PRE-GALVANIZED (BS-EN10346) OR APPROVED EQUIVALENT. HOT DIP POST GALVANIZED **LADDERS** WILL NOT BE ACCEPTED.

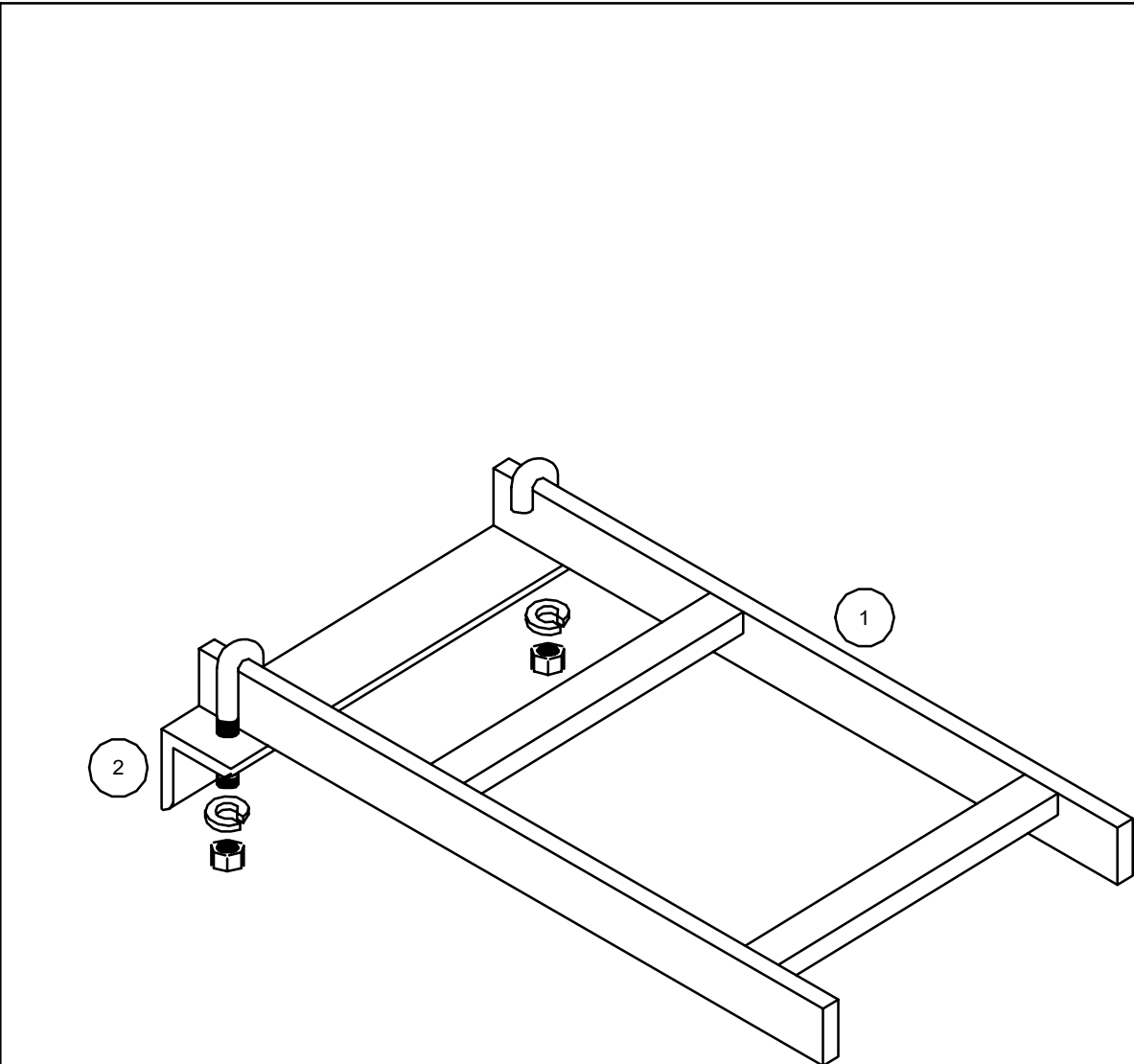
6
IT-604 CABLE LADDER JUNCTION-SPLICE KIT - TYPICAL DETAIL
N.T.S.



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	CABLE LADDER (BY COMMS);
2.	TRIANGULAR SUPPORT BRACKET KIT C/W ALL NECESSARY HARDWARE COMPATIBLE WITH CABLE LADDER (TYPICAL) (BY COMMS);

- NOTES:
- FOR OTHER DETAILS REFER TO COMMUNICATIONS SPECIFICATION, LAN ROOM DETAILS AND CLIENT'S ICT STANDARDS.
 - CONTRACTOR SHALL GROUND CABLE **LADDERS** WITH ITS OWN GROUND WIRE; NO DAISY CHAINING ALLOWED. EACH SECTION OF **LADDER** NOT ELECTRICALLY BONDED MUST BE GROUNDED WITH ITS OWN GROUND WIRE.
 - ALL CABLE **LADDERS** SHALL BE OF HOT DIP PRE-GALVANIZED (BS-EN10346) OR APPROVED EQUIVALENT. HOT DIP POST GALVANIZED **LADDERS** WILL NOT BE ACCEPTED.

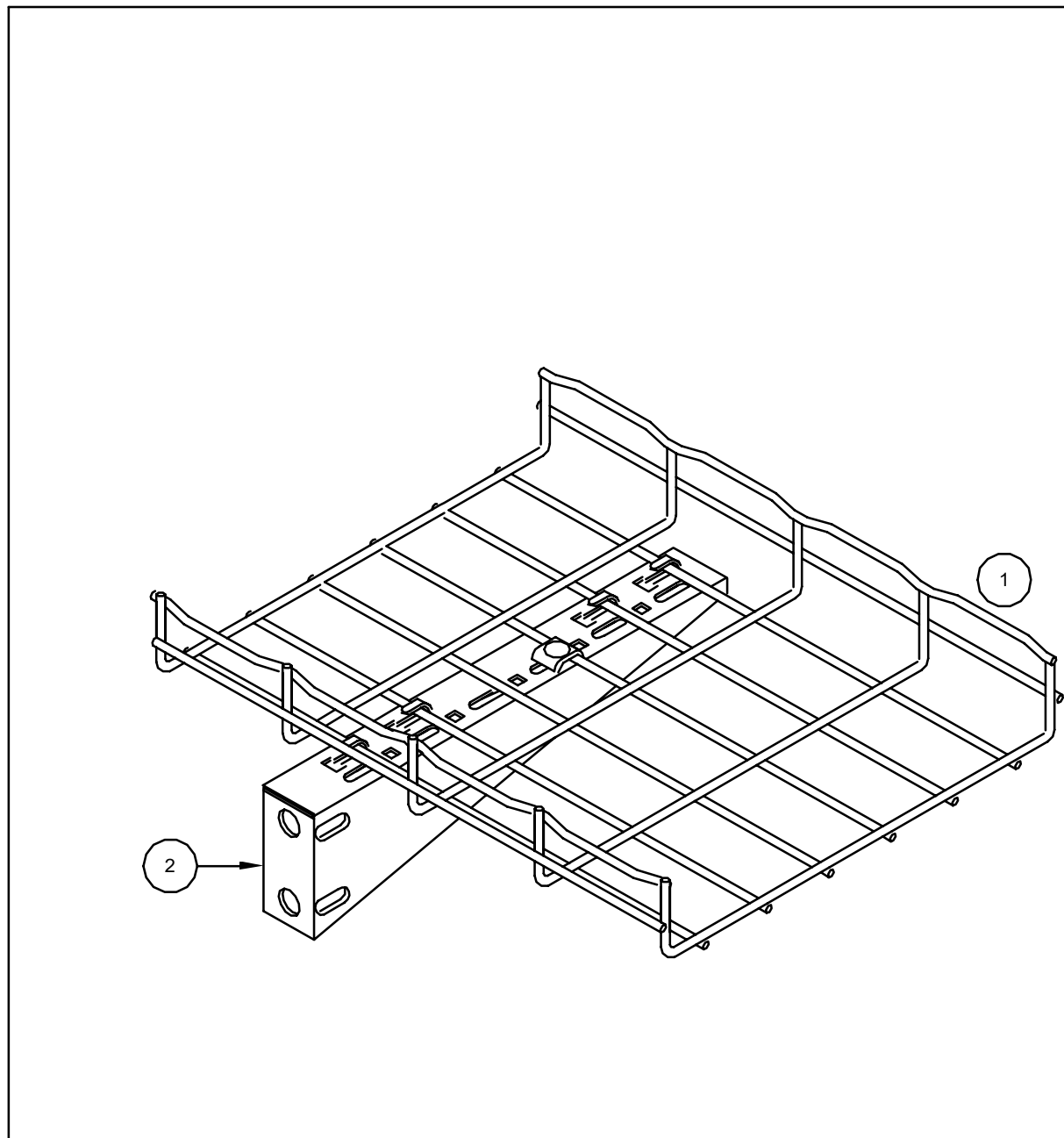
5
IT-604 CABLE LADDER TRIANGULAR SUPPORT BRACKET - TYPICAL DETAIL
N.T.S.



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	CABLE LADDER (BY COMMS);
2.	WALL ANGLE SUPPORT KIT C/W ALL NECESSARY HARDWARE COMPATIBLE WITH CABLE LADDER (TYPICAL) (BY COMMS);

- NOTES:
- FOR OTHER DETAILS REFER TO COMMUNICATIONS SPECIFICATION, LAN ROOM DETAILS AND CLIENT'S ICT STANDARDS.
 - CONTRACTOR SHALL GROUND CABLE **LADDERS** WITH ITS OWN GROUND WIRE; NO DAISY CHAINING ALLOWED. EACH SECTION OF **LADDER** NOT ELECTRICALLY BONDED MUST BE GROUNDED WITH ITS OWN GROUND WIRE.
 - ALL CABLE **LADDERS** SHALL BE OF HOT DIP PRE-GALVANIZED (BS-EN10346) OR APPROVED EQUIVALENT. HOT DIP POST GALVANIZED **LADDERS** WILL NOT BE ACCEPTED.

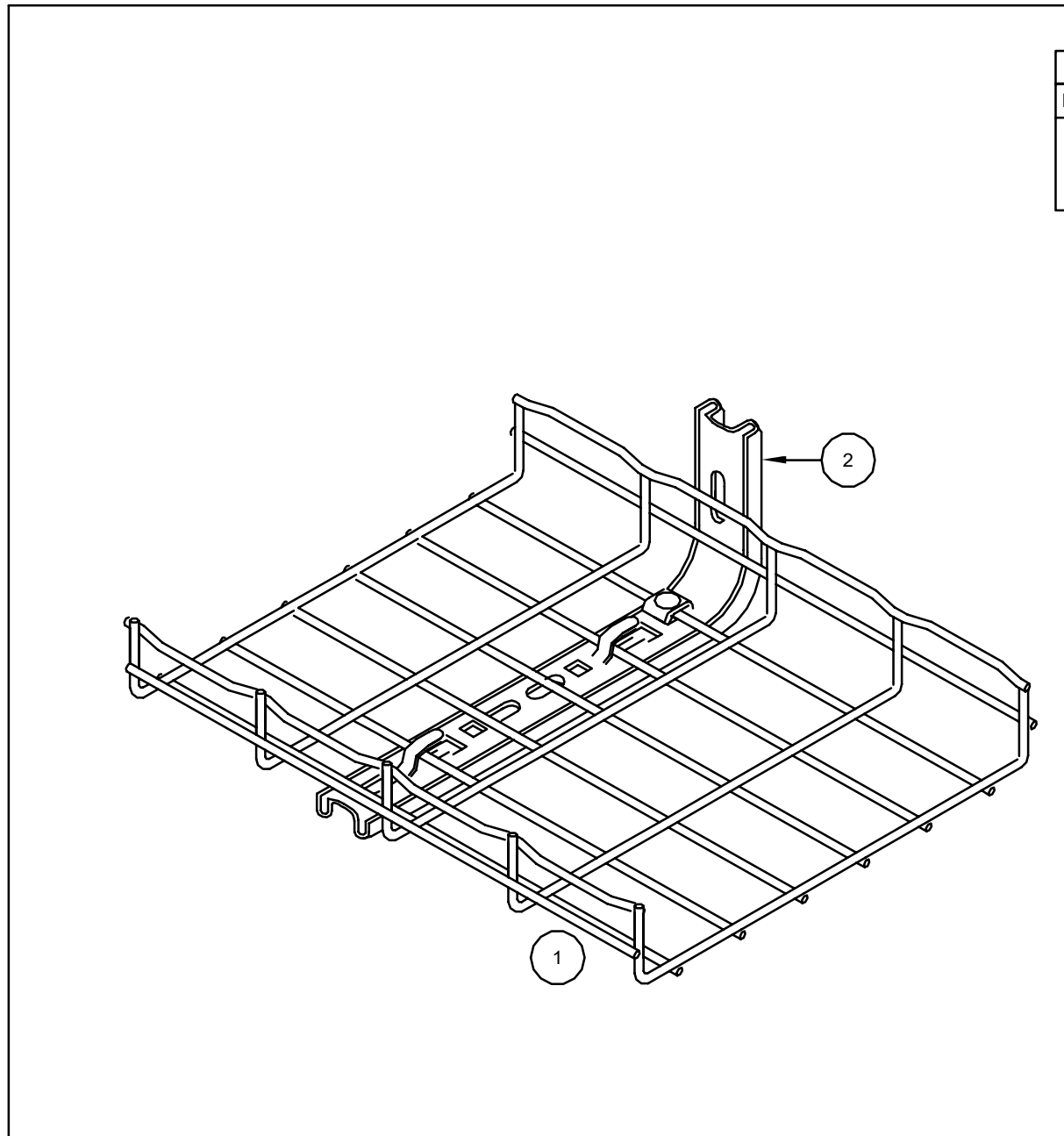
4
IT-604 CABLE LADDER WALL ANGLE SUPPORT - TYPICAL DETAILS
N.T.S.



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	WIRE BASKET CABLE TRAY (BY COMMS);
2.	SHELF BRACKET C/W ALL NECESSARY HARDWARE COMPATIBLE WITH TRAY (BY COMMS);

- NOTES:
- FOR OTHER DETAILS REFER TO COMMUNICATIONS SPECIFICATION, LAN ROOM DETAILS AND CLIENT'S ICT STANDARDS .
 - CONTRACTOR SHALL GROUND CABLE TRAY WITH ITS OWN GROUND WIRE; NO DAISY CHAINING ALLOWED. EACH SECTION OF TRAY NOT ELECTRICALLY BONDED MUST BE GROUNDED WITH ITS OWN GROUND WIRE.
 - ALL CABLE TRAY SHALL BE OF HOT DIP PRE-GALVANIZED (BS-EN10346) OR APPROVED EQUIVALENT. HOT DIP POST GALVANIZED TRAY WILL NOT BE ACCEPTED.

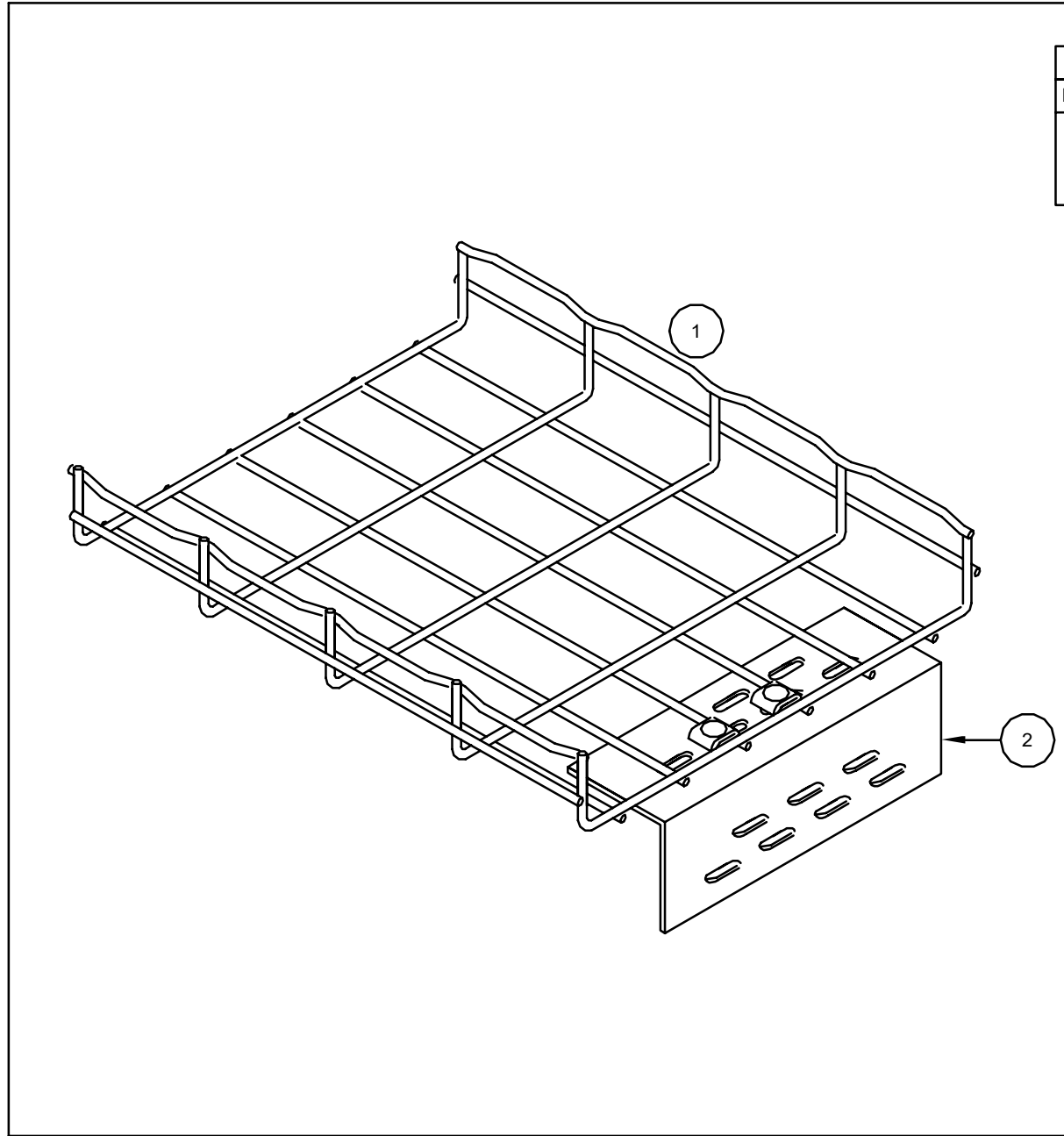
3
IT-604 CABLE TRAY SHELF-BRACKET WALL SUPPORT- TYPICAL DETAIL
N.T.S.



EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	WIRE BASKET CABLE TRAY (BY COMMS);
2.	L-BRACKET C/W ALL NECESSARY HARDWARE COMPATIBLE WITH TRAY (BY COMMS);

- NOTES:
- FOR OTHER DETAILS REFER TO COMMUNICATIONS SPECIFICATION, LAN ROOM DETAILS AND CLIENT'S ICT STANDARDS .
 - CONTRACTOR SHALL GROUND CABLE TRAY WITH ITS OWN GROUND WIRE; NO DAISY CHAINING ALLOWED. EACH SECTION OF TRAY NOT ELECTRICALLY BONDED MUST BE GROUNDED WITH ITS OWN GROUND WIRE.
 - ALL CABLE TRAY SHALL BE OF HOT DIP PRE-GALVANIZED (BS-EN10346) OR APPROVED EQUIVALENT. HOT DIP POST GALVANIZED TRAY WILL NOT BE ACCEPTED.

2
IT-604 CABLE TRAY WALL SUPPORT WITH L-BRACKET - TYPICAL DETAIL
N.T.S.

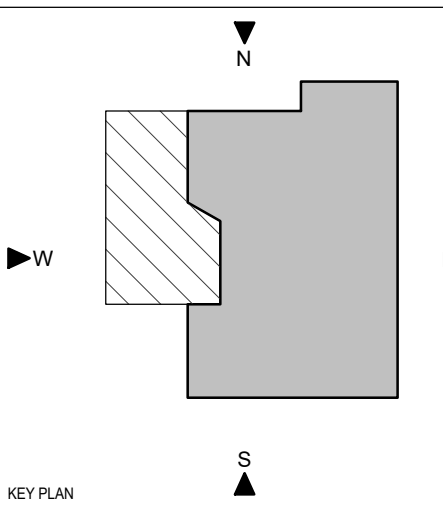
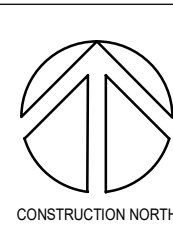


EQUIPMENT LIST	
ITEM#	DESCRIPTION
1.	WIRE BASKET CABLE TRAY (BY COMMS);
2.	WALL TERMINATION KIT C/W ALL NECESSARY HARDWARE COMPATIBLE WITH TRAY (BY COMMS);

- NOTES:
- FOR OTHER DETAILS REFER TO COMMUNICATIONS SPECIFICATION, LAN ROOM DETAILS AND CLIENT'S ICT STANDARDS .
 - CONTRACTOR SHALL GROUND CABLE TRAY WITH ITS OWN GROUND WIRE; NO DAISY CHAINING ALLOWED. EACH SECTION OF TRAY NOT ELECTRICALLY BONDED MUST BE GROUNDED WITH ITS OWN GROUND WIRE.
 - ALL CABLE TRAY SHALL BE OF HOT DIP PRE-GALVANIZED (BS-EN10346) OR APPROVED EQUIVALENT. HOT DIP POST GALVANIZED TRAY WILL NOT BE ACCEPTED.

1
IT-604 CABLE TRAY WALL WALL MOUNT KIT - TYPICAL DETAIL
N.T.S.

PROJECT LOGO



KEY PLAN

3	ISSUED FOR TENDER	2025-11-27
2	ISSUED FOR 100% CD	2025-11-21
1	ISSUED FOR 60% CD	2025-10-17
No.	DESCRIPTION	DATE

REVISIONS:

DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT / ENGINEER BEFORE PROCEEDING.
ONLY FIGURED DIMENSIONS MUST BE USED.
THE CONTRACTOR MUST CHECK THE DIMENSIONS ON SITE.
THE DRAWING IS PROTECTED BY COPYRIGHT.
ALL DIMENSIONS ARE SHOWN IN MILLIMETERS.
DO NOT SCALE THE DRAWINGS.

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SEAL

CONSULTANTS:



PROJECT:
University of Toronto CQIC Suite and QIS Lab

**University of Toronto,
27 King's College Cir,
Toronto, ON M5S 1A1**

DRAWING TITLE:
**IT/COMMUNICATIONS
DETAILS 3/3**

SHEET SIZE: ARCH D (810x914) SCALE: 1:1

PROJECT NO: **251016**

DRAWING NO.: **IT-604**

DATE: 2025-10-17
DRAWN BY: 102634-109 QIS Lab and CQIC Suite
PLOT DATE: 2025-10-27 09:43:10 PM