SERVICE ONTARIO - REDESIGN

IO PROJECT No. 230567-274329

47 SHEPPARD AVENUE EAST NORTH YORK, ONTARIO

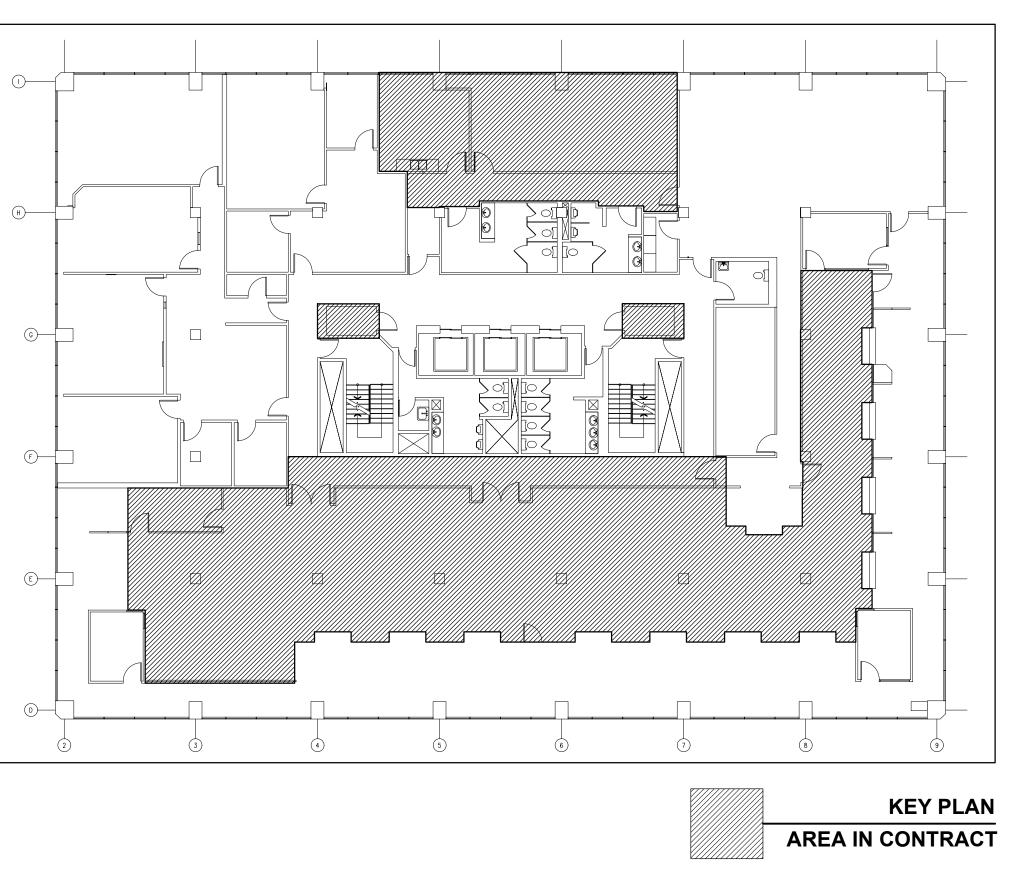
CONTENT

24x36in

RE-ISSUED FOR

ELECTRICAL DRAWINGS

PERMIT/TENDER



DATE

AUGUST 15, 2024

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FILE No.

AE-24077-DRAW-E001-E006-R00

DRAWING LIST								
DRAWING NUMBER	DESCRIPTION	DRAWING SCALE:	PLOTTING SCALE:					
E001	KEYPLAN, DRAWING LIST	N.T.S.	1'-0"=1'-0"					
E002	ELECTRICAL, DATA/VOICE SPECIFICATION	N.T.S.	1'-0"=1'-0"					
E003	PROPOSED LIGHTING LAYOUT, LEGEND & NOTES	3/16"=1'-0"	1'-0"=1'-0"					
E004	PROPOSED POWER LAYOUT, LEGEND, NOTES	3/16"=1'-0"	1'-0"=1'-0"					
E005	DEMOLITION LAYOUT, DEMOLITION SPECIFICATION, LEGEND	3/16"=1'-0"	1'-0"=1'-0"					
E006	PANEL SCHEDULE	N.T.S.	1'-0"=1'-0"					

R00 RP4 RP3 RP2 No	ISSUED FOR PERMIT/TENDER2024-08ISSUED FOR 99% CLIENT REVIEW2024-07RE-ISSUED FOR 33% CLIENT REVIEW2024-07ISSUED FOR 33% CLIENT REVIEW2024-07RevisionsDate	7 <u>-26</u> 7-12
Orientation	N Seal Sea	
all errors	ractor shall check and verify all dimensions and re and omissions to the IO-Owner's/MBS Designee (e) for his/her written direction before proceeding w	as
A	IS Consumers Road, Suite 100 CONSULTING ENGINEERS S15 Consumers Road, Suite 100 Toronto, Ontario, M2J 422 T:416.484.0707 F:416.849.0148 E:algal@algal.ca	
ddi	debortodesigninc. commercial • residential • retail eight selvapiano cresce vaughan ontario L4H0X2 canada v 905 303 6090 www.debortolidesign.com	n t
R	Ontario	' e
Ministry PSIF	Number	

CADD File NAME AE-24077-DRAW-E001-E006-R00

Substantial Performance Date TBD

Drawn by **S.M.**

Designed by **R.P.**

Approved by **M.R.**

of **12**

GENERAL SPECIFICATION

REFERENCE STANDARDS COMPLETE THE INSTALLATION OF THE WORK IN ACCORDANCE WITH LATEST EDITIONS OF THE ONTARIO BUILDING CODE, PROVINCIAL ELECTRICAL SAFETY CODE, C.S.A. STANDARDS, U.L.C., N.F.P.A., AND OTHER CODES, AS REQUIRED. ALL ELECTRICAL WORK SHALL BE PERFORMED IN COMPLIANCE WITH BASE BUILDING STANDARDS AND CLIENT'S REQUIREMENTS.

WORK COVERED UNDER THIS CONTRACT

WORK OF THIS CONTRACT INCLUDES FURNISHING LABOUR, MATERIALS, EQUIPMENT, SERVICES, AND OTHER RELATED EXPENSES TO EXECUTE COMPLETE CONSTRUCTION OF FACILITY SPECIFIED UNDER CONTRACT DOCUMENTS. PROVIDE ALL PRODUCTS AND METHODS SPECIFIED OR SHOWN IN THE CONTRACT DOCUMENTS COMPLETE WITH INCIDENTALS NECESSARY FOR A COMPLETE OPERATING INSTALLATION.

DEFINITIONS

- SUPPLY: MEANS TO ACQUIRE OR PURCHASE, SHIP OR TRANSPORT TO THE SITE, UNLOAD, REMOVE PACKAGING TO PERMIT INSPECTION FOR DAMAGE, RE-PACKAGE, REPLACE DAMAGED ITEMS, AND SAFELY STORE ON-SITE.
- INSTALL: MEANS TO REMOVE FROM SITE STORAGE, MOVE OR TRANSPORT TO INTENDED LOCATION, INSTALL IN POSITION, CONNECT TO UTILITIES, REPAIR SITE CAUSED DAMAGE OR REPLACE, AND MAKE READY FOR USE.
- PROVIDE: MEANS TO SUPPLY AND INSTALL. PERMITS AND FEES
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, LICENSES, INSPECTIONS AND RELATED FEES. SUBMIT TO THE LOCAL ELECTRICAL SAFETY AUTHORITY, 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.

PRODUCTS

- PROVIDE ONLY NEW PRODUCTS. WHERE MANUFACTURER IS NOT SPECIFIED PROVIDE PRODUCTS OF HIGH
- COMMERCIAL STANDARD AND QUALITY CONSISTENT WITH THE STANDARDS OF THESE SPECIFICATIONS. ALL PRODUCTS MUST BEAR THE APPROVAL OF THE CSA OR HAVE SPECIAL APPROVAL OF THE INSPECTION AUTHORITY HAVING JURISDICTION FOR THEIR RESPECTIVE FUNCTIONS AND ENVIRONMENTS. APPROVAL FROM THE LOCAL ELECTRICAL SAFETY AUTHORITY TO BE OBTAINED BY THE CONTRACTOR WHERE THERE IS NO ALTERNATIVE TO SUPPLYING EQUIPMENT WHICH IS NOT C.S.A. CERTIFIED.
- PROVIDE PRODUCTS OF SAME MANUFACTURE FOR LIKE APPLICATIONS UNLESS NOTED OTHERWISE. 4. PRODUCTS SHALL BE DESIGNED AND MANUFACTURED TO APPLICABLE EEMAC AND NEMA SPECIFICATIONS.

CONTRACT DOCUMENTS

- DRAWINGS, SPECIFICATIONS, AND SCHEDULES ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE TO BE BINDING AS IF CALLED FOR BY ALL. REPORT ANY DISCREPANCIES BETWEEN DRAWINGS AND/OR SPECIFICATIONS AND EXISTING CONDITIONS OR DESIGNER'S DRAWINGS PRIOR TO INSTALLATION.
- THE DRAWINGS FOR THE ELECTRICAL 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. DO NOT SCALE OR MEASURE DRAWINGS. OBTAIN INFORMATION REGARDING ACCURATE DIMENSIONS FROM DESIGNER/ARCHITECT'S DRAWINGS.
- COOPERATE AND COORDINATE WITH OTHER TRADES IN LAYING OUT OF WORK SO AS NOT TO CONFLICT WITH THE WORK OF OTHER TRADES. CARRY OUT WORK PROMPTLY AS PER CONSTRUCTION SCHEDULE AND COORDINATE WITH WORK OF OTHER TRADES. MAKE, AT NO ADDITIONAL COST, ANY CHANGES OR ADDITIONS TO MATERIALS AND EQUIPMENT NECESSARY TO ACCOMMODATE STRUCTURAL CONDITIONS (OFFSETS AROUND BEAMS, COLUMN, ETC.)
- VISIT THE SITE PRIOR TO TENDER AND VERIFY ALL CONDITIONS AND DIMENSIONS. ALLOW FOR ANY REROUTING OF EXISTING SERVICES AND EQUIPMENT IN THE TENDER PRICE. FAILURE TO DO SO DOES NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY
- MAKE CHANGES WHERE REQUIRED TO ACCOMMODATE STRUCTURAL CONDITIONS, (BEAMS, COLUMNS CAPS, ETC.). OBTAIN CONSULTANT'S APPROVAL BEFORE PROCEEDING.

SHOP DRAWINGS

SUBMIT ELECTRONIC SHOP DRAWINGS STAMPED BY ELECTRICAL AND GENERAL CONTRACTOR OF ALL SPECIFIED EQUIPMENT FOR REVIEW AND RECORDS TO THE ENGINEER FOR REVIEW.BEFORE COMMENCEMENT OF WORK. ALLOW 5 DAYS FOR CONSULTANT'S REVIEW OF EACH SUBMISSION.

IDENTIFICATION

- IDENTIFY ELECTRICAL EQUIPMENT WITH NAMEPLATES AND LABELS MECHANICALLY ATTACHED TO EQUIPMENT(ALL PANELS, DISCONNECT SWITCHES, SPLITTERS, TERMINAL CABINETS ETC.) TO MATCH BASE BUILDING. NAMEPLATES SHALL IDENTIFY EQUIPMENT NAME, VOLTAGE, PHASE, CURRENT RATING, AND USE.
- PROVIDE TYPEWRITTEN DIRECTORIES FOR NEW AND EXISTING PANELS. CONFIRM EXISTING IDENTIFICATION AND CORRECT WHERE NECESSARY. IDENTIFY WIRING WITH PERMANENT INDELIBLE IDENTIFYING MARKINGS. ON BOTH ENDS OF PHASE CONDUCTORS OF FEEDERS AND BRANCH CIRCUIT WIRING.

COLOUR CODE CONDUITS, BOXES AND METALLIC SHEATHED CABLES. LOCATION OF OUTLETS/EQUIPMENT

- COORDINATE WITH THE DESIGNER/ARCHITECT'S DRAWINGS FOR EXACT LOCATIONS OF ALL OUTLETS. DO NOT INSTALL OUTLETS BACK-TO-BACK IN WALL; ALLOW MINIMUM 150mm HORIZONTAL CLEARANCE BETWEEN BOXES. LOCATION OF OUTLETS SHALL BE GENERALLY SUBJECT TO CHANGE WITHOUT EXTRA COST TO OWNER PROVIDED INFORMATION IS GIVEN PRIOR TO INSTALLATION. NO EXTRA AMOUNT WILL BE PAID FOR OUTLETS RELOCATED REQUIRING EXTRA LABOUR AND MATERIAL UP TO 3000mm (10'-0") FROM ORIGINAL LOCATION. NOR WILL A CREDIT BE EXPECTED WHERE RELOCATION UP TO 3000mm (10'-0") REDUCES MATERIALS AND LABOUR.
- LIGHTING PANELS. SPLITTER TROUGHS. PULL BOXES. AND OTHER BOXES AND CABINETS INDICATED TO BE INSTALLED IN AREAS WITH FINISHED WALLS SHALL BE FLUSH MOUNTED AND FITTED WITH SUITABLE FLUSH TRIM AND DOORS. PANELS, BOXES, SPLITTER TROUGHS AND CABINETS INSTALLED IN PIPE SPACES OR OTHER AREAS WHERE AN EXPOSED TYPE OF WIRING IS SPECIFIED SHALL BE SURFACE MOUNTED.

MOUNTING HEIGHTS

MOUNTING HEIGHT OF EQUIPMENT IS FROM FINISHED FLOOR TO CENTERLINE OF EQUIPMENT UNLESS SPECIFIED OR INDICATED OTHERWISE. IF MOUNTING HEIGHT OF EQUIPMENT IS NOT SPECIFIED OR INDICATED, VERIFY BEFORE PROCEEDING WITH INSTALLATION.

INSTALL ELECTRICAL EQUIPMENT AT FOLLOWING HEIGHTS UNLESS INDICATED OTHERWISE:

- 1. LOCAL SWITCHES: 1200mm A.F.F.
- 2. WALL RECEPTACLES: GENERAL: 300mm A.F.F.
- 3. PANELBOARDS: AS REQUIRED BY CODE OR AS INDICATED.
- 4. PHONE/DATA OUTLETS: 300mm A.F.F.
- 5. FIRE ALARM DEVICES: AS REQUIRED BY CAN/ULC -S524 OR AS INDICATED ON DRAWINGS.
- 6. ALL MANUAL CONTROLS MUST BE LOCATED BETWEEN 900mm MIN. AND 1200mm MAX. ABOVE THE FLOOR WITH A CLEAR FLOOR SPACE OF AT LEAST 750mmx1200mm.
- 7. PUSH BUTTONS FOR AUTOMATIC DOORS SHALL HAVE MINIMUM DIMENSIONS OF 100MM AND SHALL BE LOCATED SUCH THAT THE OPENING DOOR DOES NOT BLOCK THEM.

INTERRUPTION OF SERVICES

- CO-ORDINATE ALL WORK WITH THE OWNER'S USE OF THE BUILDING. MAINTAIN ALL ELECTRICAL SERVICES TO ALL PARTS OF THE BUILDING WHICH ARE IN USE. PROVIDE TEMPORARY SERVICES AND WIRING AS NECESSARY.
- OBTAIN OWNER'S WRITTEN APPROVAL BEFORE INTERRUPTING ANY SERVICE.
- REQUEST PERMISSION TO INTERRUPT SERVICES IN WRITING NOT LESS THAN TWO (2) WEEKS IN ADVANCE AND STATE TIME(S) AND DURATION(S) OF INTERRUPTIONS.

SITE CONCERNS

- CONTRACTOR TO ENSURE TO MAINTAIN ACCESS TO THE SERVICE/UTILITY ROOMS.
- CONTRACTOR TO MAINTAIN ROUTE USAGE FOR PEDESTRIAN DURING CONSTRUCTION.
- CONTRACTOR TO PROTECT LIFE AND SAFETY SYSTEM AND OTHER BUILDING SYSTEMS AT ALL TIMES. IN CASE OF ANY DAMAGE AND / OR BYPASS SYSTEM, CONTRACTOR TO CONTACT PM AND ENSURE ALTERNATIVE MEASURES ARE IN PLACE AS PER THE SITES FIRE SAFETY PLAN.
- CONTRACTOR TO REVIEW THE DESIGNATED SUBSTANCES SURVEY AND SOIL SAMPLING REPORT INCLUDING ALL REQUIREMENTS FOR ABATEMENT AND DISPOSAL.
- ALTERNATES AND SUBSTITUTIONS DURING PROGRESS OF WORK
- SUBSTITUTE PRODUCTS WILL ONLY BE CONSIDERED WHEN TENDERED PRODUCTS BECOME UNOBTAINABLE. WRITTEN PROOF IS REQUIRED.
- PROVIDE DETAILED SPECIFICATIONS AND SHOP DRAWINGS WITH COMPLETE PERFORMANCE CHARACTERISTICS OF THE PROPOSED ALTERNATE WITH THE SUBMISSION TO THE CONSULTANT. SUBMIT PROOF THAT SUBSTITUTE PRODUCT IS EQUAL TO THAT SPECIFIED.
- ASSUME RESPONSIBILITY AND PAY FOR ANY ADDITIONAL INSTALLATION COST INCURRED BY ALL DIVISIONS RESULTING FROM THE SUBSTITUTION. MAKE REVISIONS TO RECORD DRAWINGS INCORPORATING ALL SUBSTITUTIONS AND CHANGES.
- SUBMIT THE PRICE VARIATION FROM THE TOTAL CONTRACT PRICE FOR EACH SUBSTITUTED PRODUCT. VALUATION OF CHANGES
- CONTRACT CHANGES MUST BE IMPLEMENTED THROUGH A WRITTEN NOTICE FROM CONTRACTOR TO CONSULTANT IDENTIFYING CHANGES TO BOTH CONTRACT VALUE AND TIME. FOR EACH CHANGE SUBMIT A COMPLETE ITEMIZED BREAKDOWN OF LABOR AND MATERIAL. CONTRACT CHANGES MUST OBTAIN WRITTEN APPROVAL FROM CONSULTANT PRIOR TO WORK COMMENCING. FOLLOWING WRITTEN APPROVAL, A FORMAL CHANGE ORDER WILL BE ISSUED BY PM. ONLY THE NET DIFFERENCE BETWEEN AN EXTRA AND A CREDIT WILL BE SUBJECT TO OVERHEAD AND PROFIT
- MARK-UP.
- MATERIAL TO BE VALUED AT CURRENT TRADE PRICES. THE LABOR HOURS SHALL BE BASED ON THE LATEST ISSUE OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA) LABOUR UNITS. THE MATERIAL PRICES SHALL BE BASED ON THE CURRENT NATIONAL PRICES SYSTEM (NPS) CATALOGUE LESS APPLICABLE TRADE DISCOUNTS.

ELECTRICAL SPECIFICATION

COMPLETION OF CONTRACT

- ALL EQUIPMENT MUST BE INSTALLED AS PER MANUFACTURER RECOMMENDATION, CLEANED AND TESTED BEFORE FINAL ACCEPTANCE BY CONSULTANT.
- THE CONTRACTOR MUST CORRECT ALL DEFICIENCIES AS SPECIFIED ON THE DEFICIENCY LIST ISSUED BY CONSULTANT/CLIENT.
- WHERE APPLICABLE, AFTER COMPLETION OF WORK CONTRACTOR TO PROVIDE COPIES OF: ESA INSPECT CERTIFICATE; FIRE ALARM VERIFICATION CERTIFICATE (AS PER STANDARD ULC 537), EMERGENCY LIGHT TEST RESULTS (READINGS OF THE EMERGENCY LIGHTING LEVEL COMPLYING WITH THE ONTARIO BUILDING BATTERY UNIT SYSTEM TEST RESULTS.
- PROVIDE A WRITTEN WARRANTY FOR ONE YEAR COVERING ALL EQUIPMENT, MATERIALS AND WORKMANS THE DATE OF ACCEPTANCE OF THE INSTALLATION BY THE OWNER. INCLUDE IN THE OPERATIONS AND MAINTENANCE MANUAL. ANY DEFECTS OR DEFICIENCIES WHICH ORIGINATE OR BECOME EVIDENT DURING WARRANTY PERIOD MUST BE REPAIRED OR CORRECTED AT NO EXTRA COST TO THE OWNER. ALL WORK TO THE REPLACEMENT OF DEFECTIVE ITEMS, MUST BE CARRIED OUT AFTER NORMAL WORKING HOURS TIME WHICH IS ACCEPTABLE TO THE TENANT. AS-BUILT DRAWINGS
- AT THE COMPLETION OF WORK AND BEFORE FINAL ACCEPTANCE, PROVIDE AS-BUILT DRAWINGS OF THI INSTALLATION ELECTRONIC FILES OR HARD COPIES RED LINE FORMAT. INDICATE THE WORDS "AS-BUILT TITLE BLOCK COLUMN OF THE DRAWINGS AS WELL AS THE ELECTRICAL CONTRACTOR'S NAME AND ADD PREPARE RECORD DRAWINGS SHOWING THE FOLLOWING:
- 1. INVERTS OF ALL SERVICES ENTERING AND LEAVING THE BUILDING AND AT PROPERTY LINES.
- 2. DIMENSIONS OF UNDERGROUND SERVICES IN RELATION TO BUILDING LINES AT KEY POINTS OF E Elevations of underground services in relation to ground floor level of the building
- 4. DIMENSIONED LOCATION OF ALL SERVICES EMBEDDED IN THE STRUCTURE.
- 5. DIMENSIONED LOCATION OF ALL SERVICES LEFT FOR FUTURE WORK. 6. ALL CHANGES TO THE WORK DUE TO CHANGE ORDERS.
- 7. ALL ADDENDUM CHANGES.
- 8. ALL CHANGES TO THE WORK DURING CONSTRUCTION.
- 9. MAIN BRANCH CONDUIT RUNS, JUNCTION BOX LOCATIONS, CONDUIT RUNS FOR ALL FLOOR OUTLI MUST BE REFLECTED ON THE DRAWINGS.
- 10. LOCATION AND DESIGNATION OF ALL ITEMS REQUIRING ACCESS OR SERVICE IN A HIDDEN LOCATI A COPY/PRINT TO CONSULTANT FOR REVIEW. WHEN FOUND ACCEPTABLE, THE CONSULTANT PRE AUTOCAD -AS BUILTS AS PER IO STANDARDS AND SUBMIT TO THE CLIENT.

OPERATION AND MAINTENANCE MANUALS

- AS BUILT DRAWINGS
- _ CERTIFICATE(S) OF ACCEPTANCE FROM AUTHORITIES HAVING JURISDICTION
- VERIFICATION REPORTS AND CERTIFICATE(S) FOR ANY NEW FIRE ALARM COMPONENTS OR TIE-IN ANY BASE BUILDING TIE-INS FOR AFFECTED SYSTEMS
- THE CONSULTANTS REVIEWED SHOP DRAWINGS TECHNICAL DATA, PRODUCT DATA, TECHNICAL DESCRIPTIONS OF ITEMS, AND PARTS LISTS.

MATERIALS AND INSTALLATION

CONDUITS, CONDUIT FASTENINGS AND CONDUIT FITTINGS

- ALL WIRING SHALL BE INSTALLED IN METALLIC RACEWAYS, ELECTRICAL METALLIC TUBING (EMT). ARMOI MULTI-CONDUCTOR FIRE ALARM CABLE (WITH FT-4 RED OUTER JACKET) IS ACCEPTABLE FOR CONDUC DRAWN IN RACEWAYS. WHERE A WET OR CORROSIVE ENVIRONMENT EXISTS, SUBMIT THE LOCATION AND PROPOSED RACEWAY
- USED TO THE CONSULTANT FOR APPROVAL. RACEWAYS ARE TO BE CONCEALED IN THE INTERSTITIAL SPACE BETWEEN THE CEILING AND THE FINISH
- WHERE SUSPENDED T-BAR OR DRYWALL/PLASTURE CEILINGS EXIST. DROPS TO DEVICES MOUNTED ON VERTICAL SURFACES SHALL BE LOCATED CONCEALED WITHIN THE VER ASSEMBLY, EXPOSED RACEWAYS SHALL ONLY BE INSTALLED UPON APPROVAL OF THE CLIENT.
- PROVIDE RIGID CONDUIT WITH THREADED FITTINGS AND WATERTIGHT GASKETS, WITH MOISTURE PROOF WATERTIGHT ARMORED MULTI-CONDUCTOR FIRE ALARM CABLE (WITH FT-4 RED OUTER JACKET) FOR PROOF DEVICES.
- SUPPLY AND INSTALL ADDITIONAL OR SPECIAL FASTENING WHERE, IN THE OPINION OF THE CONSULTAN NECESSARY TO PROVIDE A SAFE AND PERMANENT INSTALLATION.
- EXISTING RACEWAY MAY BE REUSED PROVIDED IT MEETS THE REQUIREMENTS OF THIS SECTION, AS WEI CURRENT REQUIREMENTS OF THE ONTARIO ELECTRICAL SAFETY CODE.
- NO MORE THAN TWO (2) 90 DEG. BENDS SHALL BE INSTALLED BETWEEN ANY TWO ADJACENT PULL SIZE ALL CONDUITS BASED ON RW 90XLPE WIRING ONLY.
- SIZE ALL CONDUITS FOR MAX. 40% FILL. TO INCLUDE DEDICATED INSULATED GROUND WIRE.
- **OUTLET BOXES, PULL AND JUNCTION BOXES**
- SHEET METAL BOXES TO MEET CSA C22.1 NO.18 GALVANIZES STEEL.
- BOXES SHALL BE OF A SIZE AND TYPE REQUIRED BY CSA C22.1 OR THE ONTARIO ELECTRICAL SAFETY BOXES SHALL BE INSTALLED AND MOUNTED AS REQUIRED BY CSA C22.1 OR THE ONTARIO ELECTRICAL
- MOISTURE PROOF BOXES REQUIRED FOR AREAS SUSCEPTIBLE TO MOISTURE. ANY OPENINGS THAT MAY MOISTURE INTO THE BOX ARE REQUIRED TO BE PROTECTED WITH SILICONE AND/OR RUBBER GASKETS.
- NO KNOCKOUTS PERMITTED OTHER THAN REQUIRED FOR RACEWAYS AND FITTINGS. WHERE EXISTING DEVICES ARE REMOVED THE BOX MUST BE REMOVED. IF THE BOX IS NOT REMOVED,
- BLANK COVER PLATES SHALL BE INSTALLED. BLANK COVER PLATE SHALL BE STAINLESS STEEL OR PA REQUIRED AND APPROVED BY CONSULTANT.
- WHERE EXISTING DEVICES ARE REMOVED AND REQUIRED FIRE ALARM WIRING IS MAINTAINED WITHIN THE BLANK COVER PLATE IS TO BE PAINTED RED.
- INSTALL BOXES TO CSA C22.1 OR OESC. INSTALL IN LOCATIONS REQUIRED FOR SPLICES, TAPS, WIRE I EQUIPMENT CONNECTIONS AND COMPLIANCE WITH REGULATORY REQUIREMENTS. ENSURE BOXES AND RA ARE INSTALLED TO CLEAR MECHANICAL, ELECTRICAL, ARCHITECTURAL, OR SIMILAR INSTALLATIONS. THE OWNER AND/OR CONSULTANT RESERVE THE RIGHT TO RELOCATE THE LOCATION OF ANY BOX UP
- PRIOR TO INSTALLATION, WITHOUT INCREASE TO THE CONTRACT PRICE. INSTALL BOXES SQUARE WITH ADJACENT CEILING, FLOOR, OR WALL LINES. KEEP UNUSED KNOCKOUTS
- UNUSED NAILING/SCREW HOLES WILL NOT BE PERMITTED. ORIENT BOXES TO ACCOMMODATE WIRING DEV ORIENTED AS SPECIFIED.
- INACCESSIBLE CEILING AREAS: INSTALL OUTLET AND JUNCTION BOXES NO MORE THAN 150MM FROM C ACCESS PANEL OR FROM REMOVABLE RECESSED LUMINARIES. INSTALL PULL BOXES A MINIMUM 30m BETWEEN TERMINATION POINTS. INSTALL PULL BOXES SUCH THA
- MORE THAN FOUR BENDS ARE LOCATED IN THE RACEWAY BETWEEN PULL BOXES. PROVIDE BLANK COVER PLATES FOR BOXES WITHOUT WIRING DEVICES. DO NOT INSTALL OUTLET BOXES
- BACK IN PARTITIONS. STAGGER TO PREVENT SOUND TRANSFER. STALL FLUSH MOUNTING BOX BACK TO BACK IN WALLS; PROVIDE MINIMUM 450mm SEPARATION, PROV

THREE_WAY SWITCHES: 20A, 120/277V, QUIET TOGGLE, PASS & SEYMOUR CATALOGUE NO. 20AC3, HUBBELL

GENERAL USE RECEPTACLES: CSA C22.2 NO. 42; SINGLE OR DOUBLE AS DESIGNATED BY SYMBOLS, 15A, 125V,

PASS & SEYMOUR CATALOGUE NO. 20AC1, HUBBELL CATALOGUE NO. 1221.

"U"-GROUND, SCREW TERMINALS, SIDE AND BACK WIRING.

CATALOGUE NO. 1223.

COMPLETION OF CONTRACT ALL EQUIPMENT MUST BE INSTALLED AS PER MANUFACTURER RECOMMENDATION, CLEANED AND TESTED	5.	DUPLEX RECEPTACLES: SIDE OR BACK WIRED, RATED 15A, 125V, "U"_GROUND, HUBBELL CATALOGUE NO. 5262, PASS & SEYMOUR CATALOGUE NO. 5262. SPLIT RECEPTACLES, SAME AS DUPLEX RECEPTACLES, EXCEPT WITH	N
BEFORE FINAL ACCEPTANCE BY CONSULTANT. THE CONTRACTOR MUST CORRECT ALL DEFICIENCIES AS SPECIFIED ON THE DEFICIENCY LIST ISSUED BY THE	6.	BREAK-OFF LINKS REMOVED. WEATHERPROOF RECEPTACLES, SAME AS DUPLEX RECEPTACLES, EXCEPT WITH SPRING-LOADED COVER PLATES AND	<u>н</u> 1. Рғ
CONSULTANT/CLIENT. WHERE APPLICABLE, AFTER COMPLETION OF WORK CONTRACTOR TO PROVIDE COPIES OF: ESA INSPECTION		GASKETS, STANDARD DEPTH 57mm (2.25") TO ACCOMMODATE #12 – #4 CORD, FLAME RETARDANT POLYCARBONATE IN GREY FINISH. TAYMAC CATALOGUE NO. 10310 OR APPROVED EQUIVALENT.	I. Pr SH C/
CERTIFICATE; FIRE ALARM VERIFICATION CERTIFICATE (AS PER STANDARD ULC 537), EMERGENCY LIGHTING LEVEL TEST RESULTS (READINGS OF THE EMERGENCY LIGHTING LEVEL COMPLYING WITH THE ONTARIO BUILDING CODE),	7.	PROVIDE HANGERS, INSERTS, SLEEVES AND SUPPORTS AS REQUIRED. DO NOT USE ANY BASE BUILDING SUPPORTS OR EQUIPMENT.	CH P(
BATTERY UNIT SYSTEM TEST RESULTS. PROVIDE A WRITTEN WARRANTY FOR ONE YEAR COVERING ALL EQUIPMENT, MATERIALS AND WORKMANSHIP FROM	1.	PANELBOARDS INSTALL PANELBOARDS AT LOCATION AS INDICATED ON DRAWINGS. PROVIDE RESPECTIVE PANELBOARD IDENTIFICATION IN ACCORDANCE WITH DESIGNATIONS INDICATED ON DRAWINGS. COMPLETE DIRECTORY CARD	SE 1.0
THE DATE OF ACCEPTANCE OF THE INSTALLATION BY THE OWNER. INCLUDE IN THE OPERATIONS AND MAINTENANCE MANUAL. ANY DEFECTS OR DEFICIENCIES WHICH ORIGINATE OR BECOME EVIDENT DURING THE WARRANTY PERIOD MUST BE REPAIRED OR CORRECTED AT NO EXTRA COST TO THE OWNER. ALL WORK RELATED	2	PROVIDED WITH PANELBOARD TO CONFORM WITH CIRCUIT IDENTIFICATION. ALL NEW PANELBOARDS, DISCONNECT SWITCHES, METERS, TRANSFORMERS, ETC., TO BE SAME MANUFACTURER, I.C.	тс 2. Рғ
TO THE REPLACEMENT OF DEFECTIVE ITEMS, MUST BE CARRIED OUT AFTER NORMAL WORKING HOURS AND AT A TIME WHICH IS ACCEPTABLE TO THE TENANT.	3.	RATING AND TYPE AS BASE BUILDING EQUIPMENT UNLESS OTHERWISE NOTED. MOLDED CASE CIRCUIT BREAKERS TO BE BOLT-ON AND SAME MANUFACTURER, RATING AND TYPE AS BASE	Z. Sł El
AS-BUILT DRAWINGS AT THE COMPLETION OF WORK AND BEFORE FINAL ACCEPTANCE, PROVIDE AS-BUILT DRAWINGS OF THE		BUILDING BREAKERS. SERVICE EQUIPMENT	C/ CS
INSTALLATION ELECTRONIC FILES OR HARD COPIES RED LINE FORMAT. INDICATE THE WORDS "AS-BUILT" IN THE TITLE BLOCK COLUMN OF THE DRAWINGS AS WELL AS THE ELECTRICAL CONTRACTOR'S NAME AND ADDRESS.	1. 2.	INSTALL SERVICE EQUIPMENT. CONNECT TO INCOMING SERVICE. CONNECT TO OUTGOING LOAD CIRCUITS. DRY TYPE TRANSFORMERS – PROVIDE DOUBLE LUGS ON TRANSFORMER NEUTRALS FOR CONNECTION OF CABLES.	W I CC
PREPARE RECORD DRAWINGS SHOWING THE FOLLOWING: 1. INVERTS OF ALL SERVICES ENTERING AND LEAVING THE BUILDING AND AT PROPERTY LINES.		USE FLEXIBLE CONDUIT FOR CONNECTIONS TO TRANSFORMER CASE. MAKE CONDUIT CONNECTIONS TO SIDE PANEL OF ENCLOSURE, CEILING MOUNT TRANSFORMERS UP TO 45KVA WITH SUSPENSION RODS AND SPRING ISOLATORS.	3. W
 DIMENSIONS OF UNDERGROUND SERVICES IN RELATION TO BUILDING LINES AT KEY POINTS OF EVERY RUN. ELEVATIONS OF UNDERGROUND SERVICES IN RELATION TO GROUND FLOOR LEVEL OF THE BUILDING. 	3.	TRANSFORMERS 75KVA AND LARGER SHALL BE FLOOR MOUNTED ON VIBRATION ISOLATING PADS SUITABLE FOR ISOLATING THE TRANSFORMER NOISE FROM THE BUILDING STRUCTURE ALL DISTRIBUTION EQUIPMENT INSTALLED IN SPRINKLERED AREAS SHALL BE EQUIPPED WITH SPRINKLER DRIP	4. Al 0 ⁻
 DIMENSIONED LOCATION OF ALL SERVICES EMBEDDED IN THE STRUCTURE. DIMENSIONED LOCATION OF ALL SERVICES LEFT FOR FUTURE WORK. 	0.	SHIELDS. MEGGERING AND BALANCING	5. TH 6. C(
 ALL CHANGES TO THE WORK DUE TO CHANGE ORDERS. ALL ADDENDUM CHANGES. ALL CHANGES TO THE WORK DURING CONSTRUCTION. 	1.	MEGGER ALL POWER CIRCUIT FEEDERS. IF GROUND RESISTANCE ON ANY CIRCUIT IS LESS THAN THAT REQUIRED BY CSA OR OTHER GOVERNING REGULATIONS, SUCH CIRCUITS ARE TO BE CONSIDERED DEFECTIVE AND MUST BE	AN SA
 ALL CHANGES TO THE WORK DURING CONSTRUCTION. MAIN BRANCH CONDUIT RUNS, JUNCTION BOX LOCATIONS, CONDUIT RUNS FOR ALL FLOOR OUTLETS, ETC., MUST BE REFLECTED ON THE DRAWINGS. 	2.	REPLACED. MEASURE PHASE CURRENT TO PANELBOARDS WITH NORMAL LOADS OPERATING AT TIME OF ACCEPTANCE. ADJUST	RE
10. LOCATION AND DESIGNATION OF ALL ITEMS REQUIRING ACCESS OR SERVICE IN A HIDDEN LOCATION. SUBMIT A COPY/PRINT TO CONSULTANT FOR REVIEW. WHEN FOUND ACCEPTABLE, THE CONSULTANT PREPARE THE		BRANCH CIRCUIT CONNECTIONS AS REQUIRED TO OBTAIN BEST BALANCE OF CURRENT BETWEEN PHASES AND SUBMIT A REPORT FOR INSERTION INTO MANUALS.	IN AM Wi
AUTOCAD –AS BUILTS AS PER 10 STANDARDS AND SUBMIT TO THE CLIENT. OPERATION AND MAINTENANCE MANUALS	1.	GROUNDING INSTALL GROUNDING CONNECTIONS TO TYPICAL EQUIPMENT AS TRANSFORMERS, SWITCHGEAR, DUCT SYSTEMS,	AN TH
ASSEMBLE THREE (3) MANUALS, EACH CONTAINING DATA SHEETS, BROCHURES, OPERATING, MAINTENANCE, RECOMMENDED SPARE PARTS, AND LUBRICATING INSTRUCTIONS AND A COMPLETE SET OF REVIEWED SHOP	2.	FRAMES OF MOTORS, MOTOR CONTROL CENTRES, STARTERS, CONTROL PANELS, BUILDING STEEL WORK, GENERATORS, ELEVATORS AND ESCALATORS, DISTRIBUTION PANELS, OUTDOOR LIGHTING. GROUND ALL EQUIPMENT IN ACCORDANCE WITH LATEST EDITION OF THE ELECTRICAL SAFETY CODE. PROVIDE	M
DRAWINGS AND BIND IN HARD COVER. IDENTIFY COVER "OPERATION AND MAINTENANCE MANUAL FOR". MANUALS SHALL BE SEPARATED WITH DIVIDERS IN LOGICAL SECTIONS AND VOLUMES.	3.	SEPARATE GREEN INSULATED GROUND CONDUCTOR IN EVERY CONDUIT TO ALL DEVICES. INSTALL GROUNDING CONNECTIONS FOR TELEPHONE, SOUND, FIRE ALARM, INTERCOMMUNICATION SYSTEMS.	1. PF 2. M(
PRESENT ONE (1) COPY FOR REVIEW BY CONSULTANT. MAKE ALL CORRECTIONS REQUESTED BY THE CONSULTANT AND FORWARD THE CORRECTED REVIEW COPY PLUS A DUPLICATE TO THE OWNER WITH A COPY OF TRANSMITTAL		GENERAL LIGHTING, EXIT LIGHTS, EMERGENCY LIGHTING	MO
TO CONSULTANT FOR HIS RECORDS. INCLUDE THE FOLLOWING INFORMATION IN EACH MANUAL: WRITTEN WARRANTY - 1 YEAR FOR LABOR AND MATERIALS	1.	LOCATE AND INSTALL NEW LIGHTING FIXTURES AS SHOWN ON LIGHTING LAYOUT AND AS INDICATED IN THE LUMINAIRE SCHEDULE. ALL LUMINAIRES TO BE CSA APPROVED. INSTALL ACCESSORIES PROVIDED WITH EACH LUMINAIRE.	DI 3. TH
 AS BUILT DRAWINGS CERTIFICATE(S) OF ACCEPTANCE FROM AUTHORITIES HAVING JURISDICTION 	2.	ALL NEW EXIT LIGHTING SHALL BE GREEN RUNNING MAN TYPE COMPLETE WITH MOUNTING ACCESSORIES. PROVIDE EMERGENCY LIGHTS TO MATCH EXISTING BASE BUILDING TYPE (MANUFACTURER AND MODEL). REFER TO	EN C/
VERIFICATION REPORTS AND CERTIFICATE(S) FOR ANY NEW FIRE ALARM COMPONENTS OR TIE-INS AND ANY BASE BUILDING TIE-INS FOR AFFECTED SYSTEMS THE CONCUMENTATION DEVICEMENT SHOP DEALWARDS TECHNICAL DATA DECOMPONENTS OF TECHNICAL DATA	4.	LIGHTING LAYOUT FOR FIXTURE LOCATIONS AND CONNECTIONS. SUPPORT SURFACE MOUNTED LUMINAIRES ON GRID CEILING DIRECTLY FROM BUILDING STRUCTURE.	D/ VC TH
THE CONSULTANTS REVIEWED SHOP DRAWINGS – TECHNICAL DATA, PRODUCT DATA, TECHNICAL DESCRIPTIONS OF ITEMS, AND PARTS LISTS.	5.	INCLUDE COST IN TENDER PRICE PROVIDE ADDITIONAL SUPPORTS ON ALL NEW LUMINAIRES AND ALL RELOCATED EXISTING LUMINAIRES.	
MATERIALS AND INSTALLATION ALL MATERIALS, WORKMANSHIP AND/OR INSTALLATION PRACTICES AND ACTIVITY SHALL MEET OR EXCEED THE	1.	DETECTION/SIGNAL CONDUITS AND WIRING USE #14 AWG MINIMUM SIZE CONDUCTORS FOR DETECTION AND SIGNAL CIRCUIT CONDUCTORS. INSTALL WIRING IN	1. PF TC
FOLLOWING REFERENCE STANDARDS: CANADIAN ELECTRICAL CODE, ONTARIO BUILDING CODE, NEMA-NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION. CONTRACTOR TO PROVIDE AND INCLUDE AS PART OF THE BID ALL		CONDUIT. ELECTRICAL CONTRACTOR SHALL PROVIDE MINIMUM 3/4" DIA. CONDUIT OF EMT, AND BOXES, INCLUDING PULL STRINGS FOR ALL SECURITY, INTRUSION, PUBLIC ADDRESS, TELEVISION, INTERCOM DEVICES. SECURITY/AV	2. AL
THE MISCELLANEOUS ITEMS, HARDWARE, DEVICES, WIRING, ETC., NOT SPECIFICALLY DESCRIBED, BUT REQUIRED FOR THE OPERATION OF THE SYSTEM. CONDUITS, CONDUIT FASTENINGS AND CONDUIT FITTINGS		CONTRACTOR TO PROVIDE AND TERMINATE WIRING FOR ALL SECURITY SYSTEM DEVICES, AND COORDINATE WITH ELECTRICAL CONTRACTOR ACCORDINGLY.	C/ C/
ALL WIRING SHALL BE INSTALLED IN METALLIC RACEWAYS, ELECTRICAL METALLIC TUBING (EMT). ARMORED	1.	MECHANICAL TRADES WIRING ALL STARTERS AND CONTROL WIRING ARE PROVIDED BY DIVISION 23. ELECTRICAL CONTRACTOR WILL INSTALL ALL STARTERS AND THERMOSTATS SUPPLIED BY MECHANICAL TRADE AND PROVIDE ALL POWER WIRING.	<u>R</u>
MULTI-CONDUCTOR FIRE ALARM CABLE (WITH FT-4 RED OUTER JACKET) IS ACCEPTABLE FOR CONDUCTORS DRAWN IN RACEWAYS. WHERE A WET OR CORROSIVE ENVIRONMENT EXISTS, SUBMIT THE LOCATION AND PROPOSED RACEWAY TO BE	2.	CONFIRM ELECTRICAL REQUIREMENTS AND EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT WITH DIVISION 23 PRIOR TO INSTALLATION. COORDINATE WITH MECHANICAL DRAWINGS, AS REQUIRED.	MI TH CA
USED TO THE CONSULTANT FOR APPROVAL. RACEWAYS ARE TO BE CONCEALED IN THE INTERSTITIAL SPACE BETWEEN THE CEILING AND THE FINISHED CEILING	3.	SUPPLY, INSTALL AND CONNECT ALL REQUIRED DISCONNECT SWITCHES.	
WHERE SUSPENDED T-BAR OR DRYWALL/PLASTURE CEILINGS EXIST. DROPS TO DEVICES MOUNTED ON VERTICAL SURFACES SHALL BE LOCATED CONCEALED WITHIN THE VERTICAL		COMMISSIONING, START-UP AND TESTING COMMISSIONING	
ASSEMBLY. EXPOSED RACEWAYS SHALL ONLY BE INSTALLED UPON APPROVAL OF THE CLIENT. PROVIDE RIGID CONDUIT WITH THREADED FITTINGS AND WATERTIGHT GASKETS, WITH MOISTURE PROOF FITTINGS OR		THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SCHEDULING, COORDINATING, PERFORMING AND DOCUMENTING THE COMMISSIONING PROCESS DETAILED HEREIN, OPERATING EQUIPMENT AND SYSTEMS,	
WATERTIGHT ARMORED MULTI-CONDUCTOR FIRE ALARM CABLE (WITH FT-4 RED OUTER JACKET) FOR MOISTURE PROOF DEVICES.		TROUBLESHOOTING AND MAKING ADJUSTMENTS AS REQUIRED. - SYSTEMS TO BE OPERATED AT FULL CAPACITY UNDER VARIOUS MODES TO DETERMINE IF THEY FUNCTION	<u>c</u>
SUPPLY AND INSTALL ADDITIONAL OR SPECIAL FASTENING WHERE, IN THE OPINION OF THE CONSULTANT, IT IS NECESSARY TO PROVIDE A SAFE AND PERMANENT INSTALLATION.		CORRECTLY AND CONSISTENTLY AT PEAK EFFICIENCY AND FULL CAPACITY. SYSTEMS TO BE INTERACTIVELY WITH EACH OTHER AS INTENDED IN ACCORDANCE WITH CONTRACT DOCUMENTS AND DESIGN CRITERIA. – DURING THESE CHECKS, ADJUSTMENTS TO BE MADE TO ENHANCE PERFORMANCE TO MEET ENVIRONMENTAL	 1. T⊦ C0
EXISTING RACEWAY MAY BE REUSED PROVIDED IT MEETS THE REQUIREMENTS OF THIS SECTION, AS WELL AS CURRENT REQUIREMENTS OF THE ONTARIO ELECTRICAL SAFETY CODE.		 DURING THESE CHECKS, ADJUSTMENTS TO BE MADE TO ENHANCE PERFORMANCE TO MEET ENVIRONMENTAL OR USER REQUIREMENTS. CONTRACTOR TO VERIFY THAT THE INSTALLED EQUIPMENT, SYSTEMS AND INTEGRATED SYSTEMS OPERATE IN 	23 IN
NO MORE THAN TWO (2) – 90 DEG. BENDS SHALL BE INSTALLED BETWEEN ANY TWO ADJACENT PULL BOXES. SIZE ALL CONDUITS BASED ON RW 90XLPE WIRING ONLY.		ACCORDANCE WITH CONTRACT DOCUMENTS AND DESIGN CRITERIA AND INTENT. ENSURE APPROPRIATE DOCUMENTATION IS COMPILED INTO THE BUILDING MANAGEMENT MANUAL. EFFECTIVELY TRAIN OPERATION AND	CC PE
SIZE ALL CONDUITS FOR MAX. 40% FILL. TO INCLUDE DEDICATED INSULATED GROUND WIRE. OUTLET BOXES, PULL AND JUNCTION BOXES		MAINTENANCE STAFF. CONTRACTOR TO ASSUME LIABILITIES AND COSTS FOR INSPECTIONS, INCLUDING DISASSEMBLY AND RE-ASSEMBLY	2. TH P/
SHEET METAL BOXES TO MEET CSA C22.1 NO.18 GALVANIZES STEEL. BOXES SHALL BE OF A SIZE AND TYPE REQUIRED BY CSA C22.1 OR THE ONTARIO ELECTRICAL SAFETY CODE.		AFTER APPROVAL, STARTING, TESTING AND ADJUSTING, INCLUDING SUPPLY OF TESTING EQUIPMENT. CONTRACTOR TO SUBMIT THE COMMISSIONING FORMS: INSTALLATION CHECK LISTS AND PRODUCT INFORMATION /	S ⁻ W
BOXES SHALL BE INSTALLED AND MOUNTED AS REQUIRED BY CSA C22.1 OR THE ONTARIO ELECTRICAL SAFETY CODE.		PERFORMANCE VERIFICATION FORMS FOR REQUIREMENTS AND INSTRUCTIONS FOR USE. TESTING	A ⁻ 3. D/
MOISTURE PROOF BOXES REQUIRED FOR AREAS SUSCEPTIBLE TO MOISTURE. ANY OPENINGS THAT MAY PERMIT MOISTURE INTO THE BOX ARE REQUIRED TO BE PROTECTED WITH SILICONE AND/OR RUBBER GASKETS.		WHEN THE SYSTEM HAS BEEN COMPLETED, THE CONTRACTOR SHALL PERFORM TESTS AND COMPLETE THE ASSOCIATED DATA FORMS. ENSURE THAT ALL DEVICES ARE COMMISSIONED AND OPERABLE.	M/ Cł
NO KNOCKOUTS PERMITTED OTHER THAN REQUIRED FOR RACEWAYS AND FITTINGS. WHERE EXISTING DEVICES ARE REMOVED THE BOX MUST BE REMOVED. IF THE BOX IS NOT REMOVED, FINISHED		THE CONTRACTOR AND MANUFACTURERS SHALL FILL OUT THE TEST FORMS AND DATA SHEETS. THE FORMS MUST BE APPROVED BY THE CONSULTANT BEFORE THEY ARE USED.	<u>T</u> 1. Pf
BLANK COVER PLATES SHALL BE INSTALLED. BLANK COVER PLATE SHALL BE STAINLESS STEEL OR PAINTED, AS REQUIRED AND APPROVED BY CONSULTANT.		THE TESTING FORMS REQUIRED ARE AS FOLLOWS: COMMISSIONING INDEX; EQUIPMENT VERIFICATION FORM; EQUIPMENT TEST FORM; TESTING AND START-UP SCHEDULE.	2. U ⁻
WHERE EXISTING DEVICES ARE REMOVED AND REQUIRED FIRE ALARM WIRING IS MAINTAINED WITHIN THE BOX, BLANK COVER PLATE IS TO BE PAINTED RED.		TESTING TO BE PERFORMED IN ACCORDANCE WITH NETA – INTERNATIONAL ELECTRICAL TESTING ASSOCIATION STANDARDS. CONTRACTOR TO CONFIRM AND MAINTAIN THE PHASE ROTATION OF ALL EXISTING EQUIPMENT.	-
INSTALL BOXES TO CSA C22.1 OR OESC. INSTALL IN LOCATIONS REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS AND COMPLIANCE WITH REGULATORY REQUIREMENTS. ENSURE BOXES AND RACEWAYS ARE INSTALLED TO CLEAR MECHANICAL, ELECTRICAL, ARCHITECTURAL, OR SIMILAR INSTALLATIONS.		START-UP	-
THE OWNER AND/OR CONSULTANT RESERVE THE RIGHT TO RELOCATE THE LOCATION OF ANY BOX UP TO 1.5m PRIOR TO INSTALLATION, WITHOUT INCREASE TO THE CONTRACT PRICE.		 CONTRACTOR TO VERIFY THE FUNCTIONS OF COMPONENTS PRIOR TO SYSTEM ENERGIZING: INSTALLATION CHECK SHEETS SIGNED OFF, MEGGER RESULTS OF FEEDERS AVAILABLE, COMMISSIONING REPORT COMPLETED, POINT TO POINT CHECKS COMPLETED, SEQUENCE OF OPERATION VERIFIED, EQUIPMENT LABELING COMPLETED. 	-
INSTALL BOXES SQUARE WITH ADJACENT CEILING, FLOOR, OR WALL LINES. KEEP UNUSED KNOCKOUTS INSTALLED.		EXECUTION	-
UNUSED NAILING/SCREW HOLES WILL NOT BE PERMITTED. ORIENT BOXES TO ACCOMMODATE WIRING DEVICES ORIENTED AS SPECIFIED.	1.	EXECUTE CUTTING, FITTING, AND PATCHING TO COMPLETE WORK. REMOVE AND REPLACE DEFECTIVE AND NON_CONFORMING WORK. X-RAY SLAB OR WALLS BEFORE CORE DRILLING FLOOR SLAB OR STRUCTURAL WALLS,	B/ -
INACCESSIBLE CEILING AREAS: INSTALL OUTLET AND JUNCTION BOXES NO MORE THAN 150MM FROM CEILING ACCESS PANEL OR FROM REMOVABLE RECESSED LUMINARIES. INSTALL PULL BOXES A MINIMUM 30m BETWEEN TERMINATION POINTS. INSTALL PULL BOXES SUCH THAT NOT	2.	OBTAIN THE CLIENT APPROVAL FOR THE PROPOSED LOCATIONS. PROVIDE OPENINGS IN NON_STRUCTURAL ELEMENTS OF WORK FOR PENETRATIONS OF MECHANICAL AND	IC
MORE THAN FOUR BENDS ARE LOCATED IN THE RACEWAY BETWEEN PULL BOXES. PROVIDE BLANK COVER PLATES FOR BOXES WITHOUT WIRING DEVICES. DO NOT INSTALL OUTLET BOXES BACK TO		ELECTRICAL WORK. WHERE CONDUITS PASS THROUGH FIRE RATED WALLS OR FLOORS, COMPLETELY SEAL VOIDS WITH FIRE STOPPING MATERIAL CSA APPROVED OR ULC LISTED AND MAINTAIN SAME FIRE RATING OF BUILDING ELEMENTS.	1. E/
BACK IN PARTITIONS. STAGGER TO PREVENT SOUND TRANSFER. STALL FLUSH MOUNTING BOX BACK TO BACK IN WALLS; PROVIDE MINIMUM 450mm SEPARATION, PROVIDE MINIMUM	3.	EXECUTE WORK BY METHODS TO AVOID DAMAGE TO OTHER WORK, AND WHICH WILL PROVIDE PROPER SURFACES TO RECEIVE PATCHING AND FINISHING. ANY EXISTING BUILDING SERVICE DAMAGED CAUSED BY	Sł 2. LA
600mm SEPARATION IN ACOUSTIC OR FIRE RATED WALLS. SECURE FLUSH MOUNTING BOX TO INTERIOR WALL AND PARTITION STUDS. ADAPT ALL OUTLET BOXES TO THEIR	4.	CONTRACTOR MUST BE REPAIRED IMMEDIATELY AT NO COST TO THE CLIENT. PROVIDE ALL EXPOSED FERROUS METAL WORK, AND PRODUCTS, EXCEPT CONDUIT, WITH AT LEAST ONE (1)	- -'
RESPECTIVE LOCATIONS AND SUPPORT INDEPENDENTLY OF THE CONDUIT.USE GANG BOX WHERE MORE THAN ONE DEVICE IS MOUNTED TOGETHER. DO NOT USE SECTIONAL BOX.		FACTORY PRIME COAT OR PAINT ONE PRIME COAT ON SITE. CLEAN UP OR WIRE BRUSH ALL EQUIPMENT BEFORE PAINTING.	Wi D- X
USE APPROPRIATE OUTLET BOX IN EXTERIOR LOCATIONS AND WET LOCATIONS. WIRES AND CABLES	5.	BEFORE ENERGIZING ANY SYSTEMS, INSPECT AND CLEAN THE INSIDE OF ALL PANELBOARDS, SWITCHGEAR AND CABINETS TO ENSURE THAT THEY ARE COMPLETELY FREE FROM DUST AND DEBRIS.	NE
WIRING FOR LIGHTING, POWER AND FEEDERS: COPPER CONDUCTORS TYPE "R90", 600V INSULATION, EXCEPT AS OTHERWISE NOTED OR SCHEDULED ON DRAWINGS.	6.	CARRY OUT ALL TESTS SPECIFIED AND TESTS REQUIRED BY AUTHORITIES HAVING JURISDICTION. TEST EQUIPMENT TO THE REQUIREMENTS OF AND, WHERE NECESSARY, IN THE PRESENCE OF THE EQUIPMENT MANUFACTURER.	<u>g</u> 1. re
WRING SMALLER THAN 8.3mm ² (NO. 8) SHALL BE SOLID. CONDUCTORS OF 8.3mm ² (NO. 8) AND LARGER SHALL BE STRANDED.	7.	INSTALL ALL PRODUCTS AND SERVICES IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AND/OR RECOMMENDATIONS.	2. GF
DO NOT USE WIRING SMALLER THAN 3.3mm ² (NO. 12) EXCEPT FOR CONTROL WIRING SPECIFIED UNDER DIVISION 28. SIZE BRANCH CIRCUITS AND FEEDERS FOR MAXIMUM 2% VOLTAGE DROP FROM PANELBOARD TO FARTHEST OUTLET	8.	PROVIDE ALL SUPPORTS, HANGERS AND FASTENERS. SECURE ALL PRODUCTS AND SERVICES SO AS NOT TO IMPOSE UNDUE STRESSES ON THE STRUCTURE AND SYSTEMS.	3. AL E <i>f</i>
IN CIRCUIT AND LARGE ENOUGH TO BE PROTECTED BY FUSE OR BREAKER OF WHICH THEY FORM A PART. FEEDERS, CIRCUIT WIRING AND ANCILLARY ITEMS SHALL BE COLOUR-CODED FOR PHASE IDENTIFICATION.	9.	ALL EXISTING ELECTRICAL EQUIPMENT WHICH IS NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF, OFF SITE. MAKE SAFE ALL CIRCUIT WIRING LEFT FOR FUTURE USE.	SH CC
CABLES FOR OTHER SYSTEMS: OF TYPE SPECIFIED IN RESPECTIVE SECTIONS. NUMBER OF WIRES FOR VARIOUS CONTROL, ALARM AND OTHER SYSTEMS ARE INTENDED TO SHOW GENERAL CONTROL SCHEME. ACTUAL NUMBER OF	10.	REMOVE FROM THE SITE ALL MATERIALS IN RENOVATED AREAS OF THE EXISTING BUILDING WHICH ARE NOT TO REMAIN OR BE REUSED, UNLESS NOTED AS REMAINING THE PROPERTY OF THE OWNER. DISCONNECT AND REMOVE	
WIRES SHALL BE INSTALLED UNDER APPLICABLE SECTIONS (AND THIS SECTION IF SO SPECIFIED HEREIN) IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S DIAGRAMS AND REQUIREMENTS AS REVIEWED BY OWNER'S		ALL EXISTING SERVICES WHICH ARE ABANDONED. DISCONNECT AND REMOVE ALL WIRING MATERIALS AND DEVICES WHICH ARE ABANDONED. REMOVE ALL CONDUIT WORK WHICH IS ABANDONED EXCEPT CUT FLUSH WHERE EMBEDDED	
DESIGNEE. WIRING DEVICES	11.	IN STRUCTURE. PROVIDE DAILY CLEAN UP AND PROPER DISPOSAL OF DEBRIS GENERATED BY DAILY OPERATIONS. ALL CONTRACTOR TOOLS, EXTRA MATERIALS, AND WASTE MATERIALS, SHALL RE REMOVED AND THE SITE AT THE	
WRING DEVICES FOR GENERAL PURPOSE SHALL BE OF STANDARD QUALITY "SPECIFICATION GRADE" MANUFACTURED AND TESTED IN ACCORDANCE WITH CSA AND NEMA STANDARDS. GENERAL USE SWITCHES CSA C22.2 NO.111 FOR CONTROLLING LIGHTING LOADS: 20A, 120/277V, QUIET TOGGLE,	12	CONTRACTOR TOOLS, EXTRA MATERIALS AND WASTE MATERIALS SHALL BE REMOVED AND THE SITE AT THE COMPLETION OF THE WORK.	

RELOCATION, ADDITIONS AND CONNECTIONS TO EXISTING ELECTRICAL WORK INDICATED ON DRAWINGS SHALL BE

ELECTRICALLY OPERATED EQUIPMENT, SUPPLY AND INSTALL ALL NECESSARY WIRING AND CONNECT UP COMPLETE

TO EQUIPMENT AS REQUIRED FOR PROPER OPERATION. ALL SUCH EXISTING EQUIPMENT TO BE RECONNECTED AND

EXECUTED AS REQUIRED FOR PROPER COMPLETION OF WORK. WHERE CONNECTIONS ARE MADE TO EXISTING

RE_USED, SHALL BE PUT IN SATISFACTORY OPERATING CONDITION.

MATERIALS AND INSTALLATION DRIZONTAL CABLING

- DVIDE AND INSTALL ALL HORIZONTAL DATA CABLING AS INDICATED. HORIZONTAL DATA CABLES PREFFERD) MULTI-MODE FIBRE OPTIC WHICH SHALL BE TIGHT-BUFFERED, DUAL-WINDOW, ALL BE 4-PAIR, UTP, 23 AWG, CMR/CMP, FT6/FT4 FIRE RATED, CERTIFIED TO EIA/TIA GRADED-INDEX OPTICAL FIBRE WITH A NOMINAL 50UM CORE/CLADDING DIAMETER. TEGORY 6A SPECIFICATIONS, AND BLUE IN COLOUR. THE FULL END TO END 100 METER THE MULTI-MODE FIBRE CABLE SHALL MEET REQUIREMENTS FOR FDDI AND IBM CHANNEL ANNEL THAT INCLUDES A WORST CASE OF FOUR TERMINATIONS (INCLUDING CONSOLIDATION EXTENDER WITH MINIMUM PERFORMANCE PARAMETERS AS DETAILED IN THE FOLLOWING TABLE: INT AND CROSS CONNECT) MUST MEET ALL OF THE CRITERIA (AS A MINIMUM) AS DEFINED IN PARAMETER CTION 1.6. THE CHANNEL PERFORMANCE SPECIFICATIONS ALL OF THE PARAMETERS IN SECTION 850NM 1300NM MAXIMUM INDIVIDUAL ATTENUATION (DB/KM) MUST BE TESTED (AND PUBLISHED) UP TO AND INCLUDING 500 MHZ AND WARRANTABLE UP TYPICAL ATTENUATION (@23°C) 2.9 0.9 AND INCLUDING 500MHZ FOR A MINIMUM PERIOD OF 20 YEARS. MINIMUM BANDWIDTH – 3DB OPTICAL (MHZ–KM) 1500 500
- OVIDE AND INSTALL ALL HORIZONTAL VOICE CABLING AS INDICATED. HORIZONTAL VOICE CABLES ALL FIBRE CABLE SHALL BE ENCLOSED IN FIBRE DUCT OR CONDUIT TO THE POINT OF TERMINATION ALL BE 4-PAIR UNSHIELDED TWISTED PAIR, CSA FT6/CMP PLENUM FIRE RATED, CERTIFIED TO FOR MAXIMUM MECHANICAL AND ENVIRONMENTAL PROTECTION. ALL SUCH FIBRE PATHWAYS SHALL /TIA CATEGORY 6A SPECIFICATIONS, AND WHITE IN COLOUR. ALL FUTURE REFERENCE TO 'VOICE | BE SIZED LARGE ENOUGH SO THAT ALL INTERNAL CABLING IS ROUTED FREELY INSIDE WITH NO BLE' SHALL REFER TO THE REQUIREMENTS AS STATED IN THIS SECTION. THE CABLE MUST BE CONTINUOUS CONTACT WITH THE ENVELOPING PATHWAY. (ALL FIBRE PATHWAYS SHALL MEET ALL A CERTIFIED AND STAMPED ACCORDINGLY. ALL CATEGORY 6 UTP VOICE CABLE SHALL HAVE A RELEVANT BUILDING CODES.) HITE OUTER JACKET. OTHER COLORS MAY BE ACCEPTABLE IF APPROVED IN WRITING BY THE LEAVE A MINIMUM OF 7 FEET OF SLACK FIBRE CABLING AT THE TERMINATION CABINET ENDS. NSULTANT. MULTI-MODE FIBRE CABLE SHALL BE ORANGE IN COLOUR. FIBRE CABLES SHALL BE AS HEN INSTALLED IN CONDUIT, FT4 TYPE CABLES CAN BE USED.
- . CABLES PULLED AND TERMINATED FOR SERVERS ARE TO BE TREATED EXACTLY THE SAME AS HER HORIZONTAL VOICE AND DATA CABLES.
- E INSTALLATION SHALL COMPLY WITH GOITS STANDARDS.
- DES, PERMITS AND INSPECTIONS: FIBRE CABINET TO ACCOMMODATE UP TO 12 CONNECTORS AND MINIMUM OF FOUR SEPARATE Y STRUCTURAL CABLING INSTALLATION MUST COMPLY WITH THE ONTARIO HYDRO ELECTRICAL TIGHT BUFFERED CABLES. FETY CODE, ALL LOCAL, PROVINCIAL AND FEDERAL LAWS, WHERE APPLICABLE, AND WITH SPOOLS FOR STORING PATCH CORD SLACK AND MECHANISM TO CONTROL BEND RADII WITHIN QUIREMENTS OF THE CANADIAN STANDARDS ASSOCIATION (CSA). THE CABLING CONTRACTOR IS CABINET, HINGED FRONT OR SHELF PROVIDING EASY ACCESSIBILITY TO CONNECTORS AND SPLICES. SPONSIBLE FOR MAKING ANY CHANGES OR ALTERATIONS REQUIRED BY THE AUTHORIZED FIBRE OPTIC PANEL WITH ST CONNECTOR PANEL MODULES FULLY LOADED WITH ST SIMPLEX FIBRE PECTOR OF THE AUTHORITY HAVING JURISDICTION. THE CABLING CONTRACTOR MUST OBTAIN OPTIC ADAPTERS. D PAY FOR PERMITS AND INSPECTION REQUIRED FOR WORK PERMITTED. ALL CONNECTORS SHALL COMPLY TO ANSI. ALL ST CONNECTORS SHALL MEET THE FOLLOWING ERE MATERIALS ARE SPECIFIED WHICH REQUIRE SPECIAL INSPECTION AND APPROVAL OF CSA 🛛 🗄 ID/OR LOCAL AUTHORITIES, OBTAIN SUCH APPROVAL FOR THE PARTICULAR INSTALLATION WITH SPECIFICATIONS: E CO-OPERATION AT THE MATERIAL SUPPLIER.
- DDULAR JACKS AND ADAPTORS
- OVIDE AND INSTALL ALL MODULAR JACKS AS INDICATED.
- DULAR JACK CURRENT RATING: 1.5 AMPERES MAXIMUM

DULAR JACK DURABILITY: 750 MATING CYCLES DULAR JACK CONTACT PRESSURE: 100 GRAMS, MINIMUM PER CONTACT LECTRIC VOLTAGE STRENGTH: 1000V RMS AT 60HZ.

- E UTP MODULES MUST BE MATCHED APPROPRIATELY WITH THE VOICE AND DATA CABLES TO SURE THAT END TO END VENDOR WARRANTIES WILL BE APPLICABLE. ALL UTP DATA AND VOICE BLES SHALL BE TERMINATED WITH THE JACK COLORS AS DESCRIEBED BELOW: TA MODULE COLOR - BLUE DICE MODULE COLOR - WHITE
- E COLOR OF THE UTP MODULES MAY BE CHANGED AT THE DISCRETION OF THE CONSULTANT.
- RMINATION VOICE MODULES, RACKS AND PATCH PANELS(N/A) DVIDE VOICE TERMINATION BLOCKS WHERE SHOWN ON DRAWINGS. VOICE TERMINATION PANELS BE MOUNTED ON DEDICATED RACK.
- , UTP VOICE AND DATA MODULES SHALL BE 8–PIN RJ45'S CONFORMING TO THE ENHANCED [3 TEGORY 6A STANDARD. THE JACKS MUST ACCEPT EITHER RJ 45 OR RJ11 MALE PLUGS WITHOUT JSING ANY DAMAGE OR DEGRADATION TO THE CONNECTORS.

SER CABLING - VOICE(N/A)

LTI-PAIR CATEGORY 3 BACKBONE CABLE FOR VOICE APPLICATIONS.

- E MULTI-PAIR VOICE BACKBONE CABLE SHALL BE CATEGORY 3, RISER GRADE CABLE. THE BLE MUST HAVE THE FOLLOWING ATTRIBUTES:
- #24 AWG SOLID COPPER CONDUCTORS FORMED INTO 25-PAIR BUNDLE GROUPS. SHEATH MUST BE CMP/CMR RISER RATED (FT6/FT4) AND BE MADE OF AN ALUYN (ALPAST), IT MUST HAVE A LONGITUDINALLY APPLIED, TRANSVERSALLY CORRUGATED
- ALUMINUM SHIELD THST IS BONDED TO AN OUTER JACKET OF PVC. THE CABLE MUST MEET OR EXCEED REQUIREMENTS OF EIA/TIA-568-A FOR (CATEGORY 3). THE CABLE MUST BE CSA CERTIFIED AND STAMPED ACCORDINGLY.

ROSS-CONNECTION CABLES AND WIRE

- E UTP DATA PATCH CORD FOR CONNECTING A DATA PATCH PANEL JACK TO ITS RRESPONDING EQUIPMENT JACK SHALL BE OF UNSHIELDED TWISTED PAIR CORDAGE WITH EIGHT /24 AWG THERMOPLASTIC PLATED. STRANDED COPPER CONDUCTORS FORMED INTO FOUR IVIDUALLY TWISTED PAIRS WITH TIGHT TWISTING FOR HIGH SPEED OPERATIONS. THE UTP LINE IRD FOR CONNECTING THE STATION OUTLET JACK TO THE STATION EQUIPMENT (TYPICALLY A RSONAL COMPUTER) IS TO BE OF EQUIVALENT CONSTRUCTION.
- E PATCH CORDS ARE TO BE CMR RATED FT4 AND STAMPED ACCORDINGLY. THE UTP TCH/LINE CORD SHALL BE WIRED EIA-A TO EIA-A WITH A ONE-TO-ONE CORRESPONDENCE RAIGHT-THROUGH AND TERMINATED ON BOTH ENDS ON 8-POSITION MODULAR LONG PLUGS TH MINIMUM OF 50 MICRO—INCH GOLD PLATING. THE UTP PATCH CORDS SHALL BE C/W LABELS BOTH ENDS.
- TA PATCH CORDS AND DATA LINE CORDS SHALL BE SUPPLIED AND OF THE SAME NUFACTURER AS THE HORIZONTAL CABLES AND SHALL MEET OR EXCEED THE PERFORMANCE ARACTERISTICS OF THE HORIZONTAL DATA CABLE.

ESTING

- OVIDE TEST REPORTS FOR BOTH DATA AND VOICE CABLING.
- P CAT 6A TESTING SHALL INCLUDE:
- ATTENUATION
- -NEAR END CROSSTALK (NEXT)
- SPL AND CHARACTERISTIC
- POWER SUM (PS-NEXT) RETURN LOSS (RL)
- EQUAL LEVEL FAR END CROSSTALK (ELFEXT)
- POWER SUM ELFEXT (PS-ELFEXT)
- INSERTION LOSS (IL)
- PROPAGATION DELAY (PD)
- _ANCE TESTS:
- LONGITUDINAL CONVERSION LOSS (LCL) LONGITUDINAL CONVERSION TRANSMISSION (LCTL)

ENTIFICATION LABELS

- CH HORIZONTAL CABLE AND PATCH CORD SHALL BE AFFIXED WITH MECHANICALLY PRINTED BELLING TABS OR TYPED LETTER SELF—ADHESIVE MYLAR AT BOTH ENDS. (THE LETTERING] HALL NOT BE EXPOSED.)
- BELING SCHEME:
- DATA CABLES: DX-1 TO 100
- /OICE CABLES: VX-1 TO 100 IERE LETTERS AND NUMBERS DENOTE:
- DATA CABLE, V-VOICE CABLE
- DENOTES FLOOR NUMBER XT NUMBER DENOTES CABLE NUMBER

ROUNDING

- FER TO ELECTRICAL DRAWINGS FOR GROUNDING DETAILS.
- OUND WIRE SHALL BE STRANDED #6 AWG COPPER WIRE, GREEN INSULATED JACKET.
- . RACKS AND CABINETS MUST BE GROUNDED. PROVIDE AND INSTALL ONE GROUND WIRE FROM ACH RACK OR CABINET TO THE NEAREST APPROVED ELECTRICAL GROUND. MINIMUM WIRE SIZE ALL BE #6 AWG FOR TELECOMMUNICATIONS ROOMS AND #1/0 FOR MAIN BUILDING MUNICATION ROOM.

DATA/VOICE SPECIFICATION

RISER CABLING - FIBRE OPTICS (N/A)

MULTI-MODE FIBER OPTIC CABLE SHALL CONSIST OF MINIMUM 12 STRANDS (24 STRANDS

MANUFACTURED BY: NORDX/CDT OR BY OCC.

FIBRE OPTIC EQUIPMENT (N/A)

- FIBRE OPTIC RISER PANEL TO BE RACK MOUNTABLE FIBRE OPTIC DISTRIBUTION CENTRE/PANEL.
- -ATTENUATION: <= 0.75DB PER MATED ST OR SC CONNECTOR PAIR @23°C ± 5°C
- -RETURN LOSS: <= 20DB @ 23°C ± 5°C
- -TOTAL OPTICAL ATTENUATION: <= 1.5DB THROUGH THE CROSS-CONNECT FROM ANY TERMINATED OPTICAL FIBRE TO ANY OTHER TERMINATED OPTICAL FIBRE. -DURABILITY: <= 500 MATING CYCLES PER ANSI/EIA/TIA-455-21 @23°C ± 5°C -CONNECTOR OPTICAL AXIAL PULL STRENGTH: 2.2N @ 0*
- 2.2N @ 90°
- WITH A MAXIMUM 0.5DB INCREASE IN ATTENUATION. -MAXIMUM INSERTION LOSS: 0.6DB

GENERAL NOTES

-FERRULE MATERIAL: CERAMIC

- ALL UTP CATEGORY CAT 6 CABLING MUST BE INSTALLED IN ACCORDANCE TO EIA/TIA CATEGORY 6 INSTALLATION REQUIREMENTS.
- ALL CABLES SHALL BE NEATLY BUNDLED AND TIE-WRAPPED. VOICE AND DATA CABLES SHALL BE SEPARATED INTO TWO (2) DISTINCT BUNDLES AND ROUTED THROUGH THE SAME CONDUIT. SECURE BUNDLES TO AVAILABLE VERTICAL AND HORIZONTAL SUPPORTS AND NEATLY FASTEN TO PATCH
- ROUTE ALL CABLES TO MAINTAIN MINIMUM SEPARATIONS FROM SOURCES OF LIGHTING, POWER CABLES, HVAC AND OTHER ELECTRICAL EQUIPMENT. PROVIDE ADDITIONAL MATERIALS IN ORDER TO MEET THE MINIMUM SEPARATION REQUIREMENTS.
- ALL DATA AND VOICE CABLES ARE TO BE PULLED IN CONTINUOUS RUNS. NO CABLE SPLICES ARE ALLOWED.
- ALL CABLING MUST BE ROUTED TO MINIMIZE CROSS-OVERS AND CONGESTION.
- EXERCISE CAUTION WHEN PULLING CABLES TO ENSURE THAT THE MANUFACTURER'S MAXIMUM
- PULL-FORCE AND MINIMUM BEND RADII SPECIFICATIONS ARE ADHERED TO. ALL CABLING SHALL BE NEATLY DRESSED AND COMBED ALONG BACK OF BACKBOARD AND AT ALL
- TERMINATION LOCATIONS. PROVIDE CABLE SUPPORTS, HARNESSES AND SLEEVES AS REQUIRED. ALL FREE RUNNING CABLES SHALL BE SECURELY FASTENED TO APPROPRIATE CABLE SUPPORTS AND HARNESSES WITH A MAXIMAL INTERSUPPORT CABLE SAG OF 150MM. ALL CABLES SHALL BE COMPLETELY SUPPORTED BY THE HARNESSES SO THAT NO WEIGHT IS TRANSFERRED TO ANY OTHER EXISTING FIXTURE OR
- CEILING SPACE STRUCTURE. CABLE SUPPORTS SHALL BE CADDY CABLECAT OR EQUIVALENT. WHEN TERMINATING THE CABLE AT MODULAR JACKS AND TERMINATION PANELS, THE LENGTH OF UNJACKETED CONDUCTORS SHALL NOT EXCEED 1"(25 MM). THE AMOUNT OF UNTWISTING OF CABLE CONDUCTORS MUST NOT BE GREATER THAN 1/2" (13 MM) AFTER TERMINATION.
- EACH CABLE AND TERMINATION JACK SHALL BE LABELLED WITH MECHANICALLY PRINTED IDENTIFICATION LABEL. CABLE LABELS TO BE SELF-LAMINATING VINYL CONSTRUCTION WITH WHITE MARK-ON COLOUR AND CLEAR OVERLAPS. CABLE LABEL SHALL BE A MINIMUM OF 2"(50MM) WIDE AND OF SUFFICIENT LENGTH TO PERMIT CLEAR OVERLAP TO BE WRAPPED COMPLETELY AROUND CABLE AT LEAST ONE AND A HALF TIMES.
- THE CONTRACTOR SHALL INDICATE THE EXACT ROUTING OF ALL COMMUNICATIONS CABLES ON A RECORD DRAWING SET. THIS DRAWING MUST SHOW THE EXACT ROUTING THROUGH CONDUIT OR PATHWAY STRUCTURE.
- COORDINATE THE INSTALLATION OF ALL COMMUNICATION OUTLETS WITH ELECTRICAL AND INTERIOR DESIGN DRAWINGS.

NOTES

- ELECTRICAL CONTRACTOR SHALL PROVIDE EMPTY CONDUIT C/W STRING, JUNCTION BOXES AND ALL NECESSARY ACCESSORIES TO FACILITATE THE PROPER INSTALLATION OF VOICE/DATA CABLING. CONTRACTOR TO VERIFY ALL DATA CABLES AND PROVIDE CERTIFICATION REPORT.
- CABLE TROUGHS SHALL BE COMPLETE WITH ALL ACCESSORIES AND FITTINGS AS PER CSA
- CABLE TRAYS FOR POWER SYSTEMS AND DATA/COMMUNICATIONS SHALL BE MADE OF STEEL, VENTILATED TYPE, CLASS C1, WITHOUT COVER, SIZED AS INDICATED UNLESS OTHERWISE INDICATED
- SUPPLY ALL BENDS, ELBOWS, END PLATES, DROP OUTS, TEES, WYES AND EXPANSION JOINTS FOR
- REMOVE ALL SHARP EDGES TO PREVENT CABLE DAMAGE OR INJURY TO PERSONNEL.

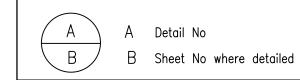


ROO | ISSUED FOR PERMIT/TENDER 2024-08-15 2024-07-26 RP4 | ISSUED FOR 99% CLIENT REVIEW RP3 | RE-ISSUED FOR 33% CLIENT REVIEW 2024-07-12 RP2 | ISSUED FOR 33% CLIENT REVIEW 2024-07-05 Revisions Date entation

The Contractor shall check and verify all dimensions and report all errors and omissions to the IO-Owner's/MBS Designee (as applicable) for his/her written direction before proceeding with the Work.

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024-08-15





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SERVICE ONTARIO - REDESIGN

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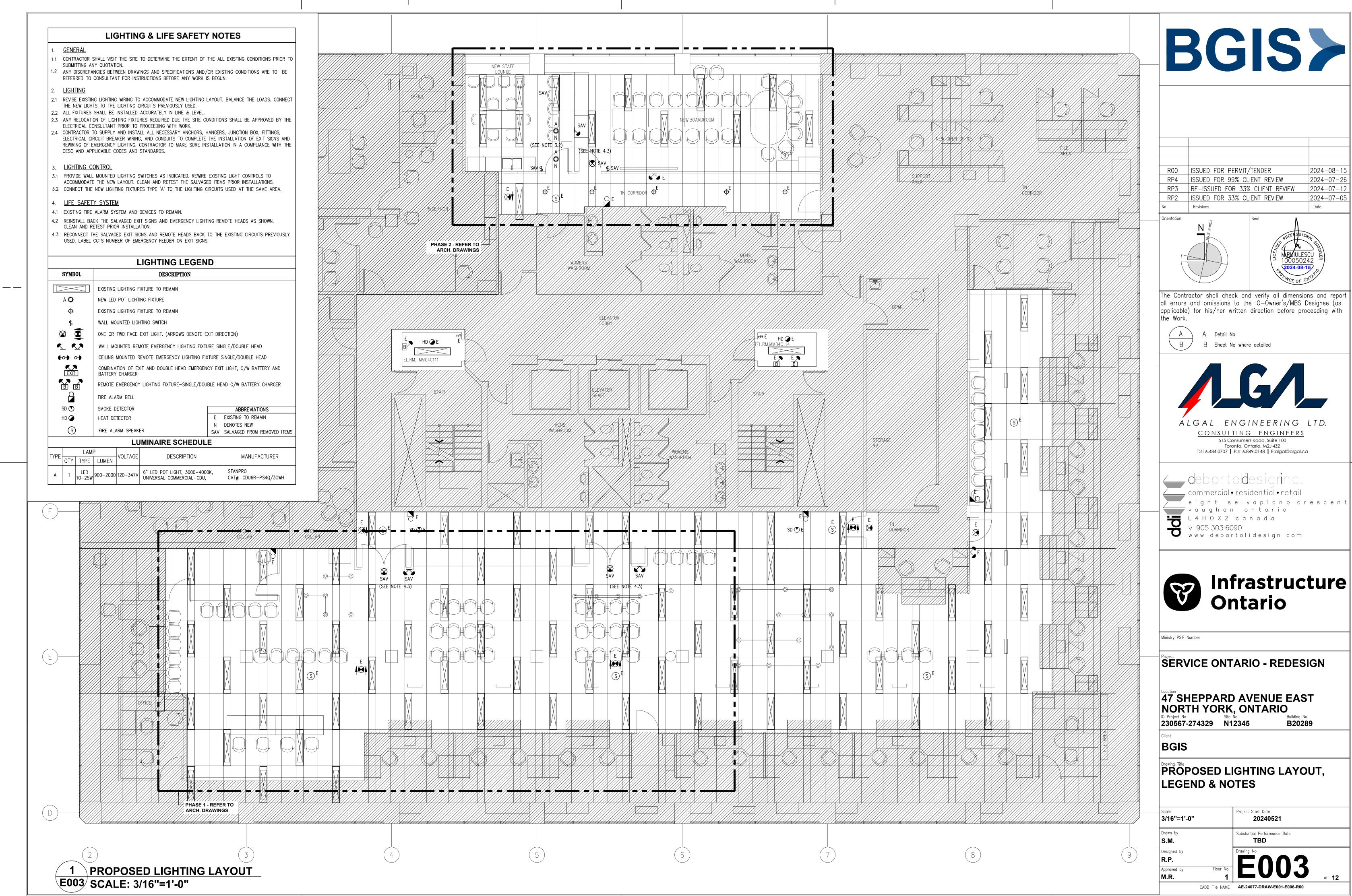
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ELECTRICAL, DATA/VOICE SPECIFICATION

	CADD File NAME	AE-24077-DRAW-E001-E006-R00	
M.R.	0		f 12
Approved by	Floor No		
R.P.			
Designed by		Drawing No	
D		Durwin n. No.	
S.M.		TBD	
Drawn by		Substantial Performance Date	
Drawn by		Chatalist Bartanana Data	
N.T.S.		20240521	
Scale		Project Start Date	

C22.2-126 AND MANUFACTURED TO EMAC F5.1. ON DATA/COMMS CONSULTANT DRAWINGS.

- SUPPORTS SHALL BE ROD AND CHANNEL OF A SIZE TO SUIT TOTAL LOAD.
- A COMPLETE SYSTEM AS REQUIRED. GROUND CABLE TRAYS AS REQUIRED BY CODE.



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24x36in

0	ISSUED FOR PERMIT	/TENDER	2024-08-15
4	ISSUED FOR 99% CL	IENT REVIEW	2024-07-26
4 3 2	RE-ISSUED FOR 33%	2024-07-12	
2	ISSUED FOR 33% CL	2024-07-05	
	Revisions	Date	
tion	North Market	Seal	

Scale 3/16"=1'-0"	Project Start Date 20240521
Drawn by	Substantial Performance Date
S.M.	TBD
Designed by	Drawing No
R.P.	E003
Approved by Floor No	
M.R. 1	of 12
	AE-24077-DRAW-E001-E006-R00

POWER/DATA/VOICE NOTES

<u>GENERAL NOTES</u>

- THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE ALL DRAWINGS CAREFULLY TO DETERMINE THE EXTENT OF THE WORK IN THE EXISTING BUILDING. EXAMINE THE SITE AND DETERMINE AND INCLUDE IN THE TOTAL PRICE OF THE TOTAL COST OF LABOUR AND MATERIAL FOR ALL ITEMS AS SPECIFIED OR INDICATED ON THE DRAWINGS. 1.2 NO ALLOWANCE WILL BE MADE FOR OBVIOUS CONSIDERATIONS WHICH MAY HAVE BEEN OVERLOOKED.
- 1.3 THE WHOLE OF THE WORK SHALL BE CARRIED OUT AND PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE LANDLORD. ANY UNSATISFACTORY WORK SHALL BE REPLACED BY THIS DIVISION WITHOUT EXTRA COST TO THE OWNER. 1.4 IN CASE EXTRA WORK OF ANY KIND IS REQUIRED, OBTAIN WRITTEN INSTRUCTIONS FROM THE CONSULTANT BEFORE PROCEEDING. PAYMENTS WILL BE MADE AT A FAIR AND REASONABLE
- RATE ONLY FOR AUTHORIZED EXTRAS. IN THE CASE OF OMISSIONS, THE SAME PROCEDURE SHALL APPLY AND A DECREASE MADE. 1.5 WIRING, CONDUIT AND EQUIPMENT REQUIRED TO MAINTAIN SERVICE IN OTHER PARTS OF THE BUILDING SHALL BE TEMPORARILY SUPPORTED, REROUTED, SERVICED OR RELOCATED AS
- REQUIRED. OBSOLETE CONDUITS AND CABLES SHALL BE DISCONNECTED FROM THEIR SOURCE OF SUPPLY, CUT BACK AS FAR AS POSSIBLE, AND SHALL BE REMOVED. 1.6 WORK PERFORMED SHALL BE IN CONFORMITY WITH ALL LAWS, BYLAWS, OR REGULATIONS OF THE MUNICIPAL, PROVINCIAL OR OTHER AUTHORITIES HAVING JURISDICTION. NOTHING CONTAINED
- IN THESE DRAWINGS SHALL BE CONSTRUED AS TO BE IN CONFLICT WITH ANY SUCH LAWS. 1.7 THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DISRUPTION TO THE EXISTING SERVICES. THE EXISTING BUILDING MUST BE KEPT IN OPERATION AT ALL TIMES. ARRANGE
- WORK IN SUCH A MANNER THAT INTERRUPTIONS IN SERVICES OCCUR ONLY AT SCHEDULED TIMES. UNAVOIDABLE INTERRUPTION SHALL BE SCHEDULED WITH THE LANDLORD AT LEAST 48 HOURS IN ADVANCE. OVERTIME WORK THAT MAY BE REQUIRED TO TIE-IN SERVICES AT NIGHT OR ON WEEKENDS SHALL BE INCLUDED IN THE TENDER AMOUNT. 1.8 CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED. NO WORK WHICH IS CONDITIONAL ON SUCH PERMITS SHALL BE UNDERTAKEN UNTIL NECESSARY CONDITIONS ARE
- MET. 1.9 ANY DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS AND/OR EXISTING CONDITIONS ARE TO BE REFERRED TO THE CONSULTANT FOR INSTRUCTIONS BEFORE ANY WORK IS BEGUN.
- 1.10 CONTRACTOR SHALL ENSURE THAT AREAS NOT INCLUDED IN THIS CONTRACT ARE ADEQUATELY PROTECTED FROM DUST, DEBRIS, OR ANY OTHER DAMAGE RESULTING FROM WORK PERFORMED, AND THAT ANY CLEANING OR REPAIR REQUIRED IS PERFORMED WITHOUT COST TO OWNER.
- 1.11 CONTRACTOR SHALL ENSURE THAT ALL REFUSE IS REMOVED ON A DAILY BASIS AND THAT JOB SITE IS MAINTAINED IN AN ORDERLY AND SAFE CONDITION.
- 1.12 CONTRACTOR SHALL COORDINATE ACCESS TO SITE AND DELIVERY AND REMOVAL OF GOODS WITH LANDLORD.
- 1.1.3 ALL WORK SHALL BE SCHEDULED AND COORDINATED TO AVOID ANY CONFLICTS WITH OTHER TRADES DURING OR AFTER CONSTRUCTION.
- 1.14 PROVIDE TEMPORARY ELECTRICAL POWER FOR THE WORK OF THIS TRADE AND OTHER TRADES AS REQUIRED BY GENERAL CONTRACTOR OR OWNER.

<u>POWER/DATA/VOICE</u>

- VERIFY EXACT POWER REQUIREMENTS OF MECHANICAL EQUIPMENT BEFORE ROUGHING. REFER TO MECHANICAL SHOP DRAWINGS FOR MANUFACTURERS ELECTRICAL DATA AND INSTALLATION REQUIREMENTS. ADVISE CONSULTANT OF ANY DISCREPANCIES.
- 2.2 VERIFY ON SITE FOR EXISTING MECHANICAL EQUIPMENT WIRING AND PROTECTION CONDITION. PROVIDE NEW WIRING AND FUSES/CB'S FOR NEW EQUIPMENT.
- 2.3 PROVIDE A SEPARATE NEUTRAL AND A SEPARATE GROUND WIRE FOR EACH ISOLATED GROUND CIRCUIT.
- 2.4 PROVIDE SEPARATE NEUTRAL WIRE FOR EACH DEDICATED CIRCUIT.
- 2.5 TO PREVENT SOUND TRANSFER, STAGGER OUTLETS AN EITHER SIDE OF A PARTITION, DO NOT LOCATE BACK TO BACK.
- 2.6 ALL NEW EQUIPMENT TO BE LABELED. PROVIDE PANEL DIRECTORIES FOR NEW PANELS. 2.7 ENSURE THAT ALL OUTLETS ARE ACTIVE UPON COMPLETION OF THE PROJECT.
- 2.8 ALL NEW OUTLETS TO BE INSTALLED AT HEIGHT TO MATCH EXISTING. OUTLETS TO BE GANGED WHEREVER POSSIBLE WITH A MINIMUM SPACING BETWEEN COVERPLATES.
- 2.9 TERMINATE ALL NEW DATA CABLES TO THE EXISTING DATA RACK. COORDINATE WITH BASE BUILDING IT CONTRACTORS
- 2.10 ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE ANY WORK IS BEGUN.
- 2.11 CONTRACTOR IS REQUIRED TO PROVIDE CONDUIT AND PULL STRINGS FOR ALL VOICE AND DATA OUTLETS AS INDICATED ON THE PLAN.
- 2.12 ELECTRICAL TRADE IS TO ENSURE THAT ELECTRICAL CONNECTIONS FOR OFFICES AND ANY EQUIPMENT MEET ALL EQUIPMENT SPECIFICATIONS.
- 2.13 THE GENERAL CONTRACTOR IS RESPONSIBLE FOR MAKING GOOD ANY SURFACES OR FINISHES DAMAGED AS A RESULT OF ALTERATIONS.
- 2.14 CONTRACTOR TO CLEAN AND RETEST ALL SALVAGED ITEMS (RECEPTACLES) PRIOR INSTALLATION. IF REQUIRED REPLACE WITH THE NEW ONE TO MATCH EXISTING.
- 2.15 CONTRACTOR TO REINSTALL AT THE NEW LOCATION THE SALVAGED POWER POLE CONNECTION TO THE EXISTING WICKETS SYSTEM FURNITURE C/W WHIP COMPOSED OF POWER/DATA/VOICE AND RECONNECT ALL WICKET OUTLETS BACK TO THE CIRCUITS PREVIOUSLY USED. EXTEND THE WIRING/CONDUITS, AS REQUIRED.
- 2.16 CONTRACTOR TO PROVIDE AND INSTALL NEW POWER POLE C/W POWER/DATA WHIP FROM THE CEILING TO THE NEW SELF-SERVE STATIONS, AS INDICATED. REUSE THE EXISTING DATA/POWER CABLES FROM THE REMOVED WICKETS (EXTEND EXISTING POWER/DATA CABLES AND CONDUITS WHERE NEEDED, TO ACCOMMODATE PROPOSED LAYOUT) RETEST AND LABEL ACCORDINGLY. COORDINATE WITH THE BASE BUILDING 'IT' CONTRACTOR ON THE 'IT' REQUIREMENTS FOR THE NEW SELF-SERVE STATIONS. INCLUDE FOR THE NEW WIRING/CONDUITS, AS REQUIRED. 2.17 CONTRACTOR TO PROVIDE POWER SUPPLY 120V FOR THE NEW HOT WATER TANK HWT (REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND SPEC.) FROM THE NEAREST AVAILABLE
- ELECTRICAL PANEL. SUPPLY AND INSTALL NEW CIRCUIT BREAKER 15A/1P AND ALL WIRING/CONDUITS, DISCONNECT, AS REQUIRED 2.18 CONTRACTOR TO PROVIDE NEW AUTOMATIC DOUBLE DOORS OPERATORS (C/W HOLD-OPEN SWITCHES) C/W WAVE SENSOR SWITCHES ON BOTH SIDES OF THE WALL. PROVIDE POWER SUPPLY

	FROM EXISTING ELECTRICAL PANEL C/W NEW CIRCUIT BREAKER	AND ALL REQUIRED WIRING/CONDUITS,	, AS INDICATED. DOORS LOCK TO MATCH EXISTING E	BASE BUILDING 'LOCKSMITH'.
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	ELECTRICAL ROOM (MM04C111) LEGEND
No.	DESCRIPTION
$\langle \rangle$	EXISTING UPPER POWER SYSTEM SURGE PROTECTION DEVICE (CUTLER HAMMER) TO REMAIN
$\langle \hat{2} \rangle$	EXISTING ELECTRICAL PANEL 'RP-4F' 225A, 120/208V, 3¢, 4W, 84 CCTS. TO REMAIN
\$	EXISTING ELECTRICAL PANEL 'ERP-4D' 100A, 120/208V, 3¢, 4W, 240A, 20 CCTS. TO REMAIN
4	EXISTING TRANSFORMER 'POLYGON' 600/208V, 3 ϕ , 4W, Δ /Y, 30kVA TO REMAIN
\$	EXISTING EMERGENCY PANEL, 100A, 347/600V, 3¢, 4W, 16 CCTS. TO REMAIN
6	EXISTING TRANSFORMER 'MARCUS' 600/208V, 3 ϕ , 4W, Δ /Y, 30kVA TO REMAIN
\Diamond	EXISTING ELECTRICAL PANEL 'RP-4B' 225A, 120/208V, 3φ, 4W, 42 CCTS. TO REMAIN
\otimes	EXISTING ELECTRICAL PANEL 'RP-4B1' 225A, 120/208V, 3φ, 4W, 30 CCTS. TO REMAIN
٩	EXISTING DISCONNECT SWITCH 60A, 600V (CUTLER HAMMER) TO REMAIN
	EXISTING LIGHTING ELECTRICAL PANEL 'LP-4A' 225A, 347/600V, 3¢, 4W, 22 CCTS. C/W LIGHTING SWITCH TO REMAIN
	EXISTING LIGHTING CONTROL PANEL 'SPI' LCS-2
	EXISTING DISCONNECT SWITCH 30A TO REMAIN
\$	EXISTING TRANSFORMER #1, 600/208V, 54kVA, 3¢, 4W FED FROM RP-RA-1, 3, 5, (REX MANUFACTURING) TO REMAIN
	POWER LEGEND

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LECTRICAL PANEL 'RP-4B' 225A, 12	20/208V, 3¢, 4W, 42 CCTS. TO REMAIN	
LECTRICAL PANEL 'RP-4B1' 225A, 1	20/208V, 3ø, 4W, 30 CCTS. TO REMAIN	
ISCONNECT SWITCH 60A, 600V (CUT	LER HAMMER) TO REMAIN	
IGHTING ELECTRICAL PANEL 'LP-4A' WITCH TO REMAIN	225A, 347/600V, 3¢, 4W, 22 CCTS. C/W	
IGHTING CONTROL PANEL 'SPI' LCS-	2	
ISCONNECT SWITCH 30A TO REMAIN		
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POWER LEG	GEND	
DESC	RIPTION	
WALL MOUNTED DUPLEX RECEP	PTACLE	
WALL MOUNTED QUADRUPLEX F	RECEPTACLE	
WALL MOUNTED GROUND FAUL	T INTERRUPTER RECEPTACLE	
WALL MOUNTED DATA OUTLET		
WALL MOUNTED COMBINATION	DATA/VOICE OUTLET	
FURNITURE INTEGRATED OUTLE	TS C/W QUAD POWER/2 DATA	
	SYSTEM FURNITURE COMPOSED OF P. NUMBER OF CIRCUITS AS INDICATED	PHASE 1 - REFER TO ARCH. DRAWINGS
PRE-WIRED POWERED SYSTEM	FURNITURE C/W WIRES MANAGERS	
AUTOMATIC DOUBLE DOOR OPE	RATOR (C/W HOLD OPEN SWITCH)	
WAVE SWITCH SENSOR FOR AUTOMATIC DOOR OPERATOR	ABBREVIATIONS	
DOOR BELL HORN	E EXISTING TO REMAIN N DENOTES NEW	1 PROPOSED POWER LAYOUT
HOT WATER TANK	SAV SALVAGED FROM REMOVED ITEMS	E004 SCALE: 3/16"=1'-0"

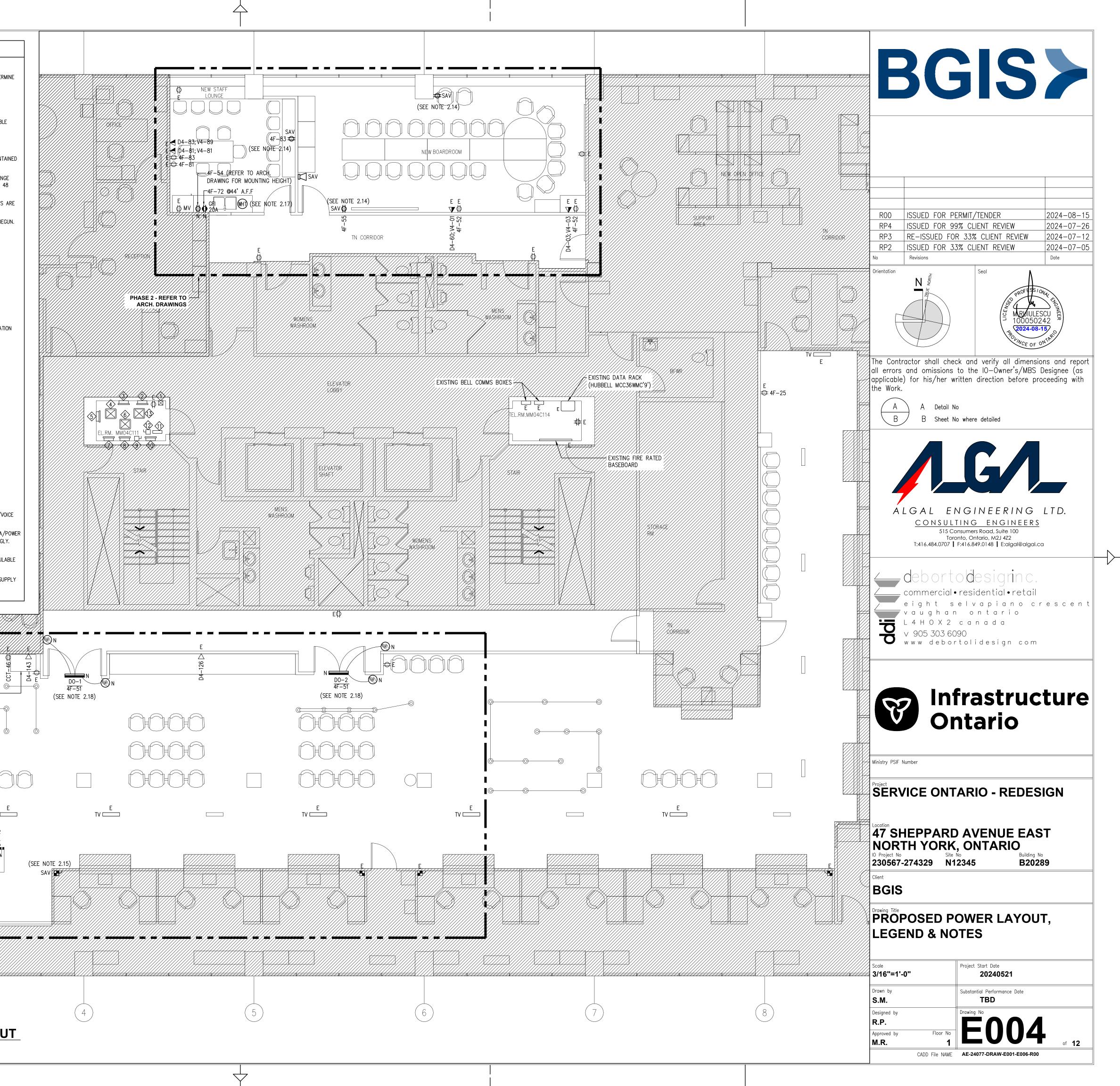
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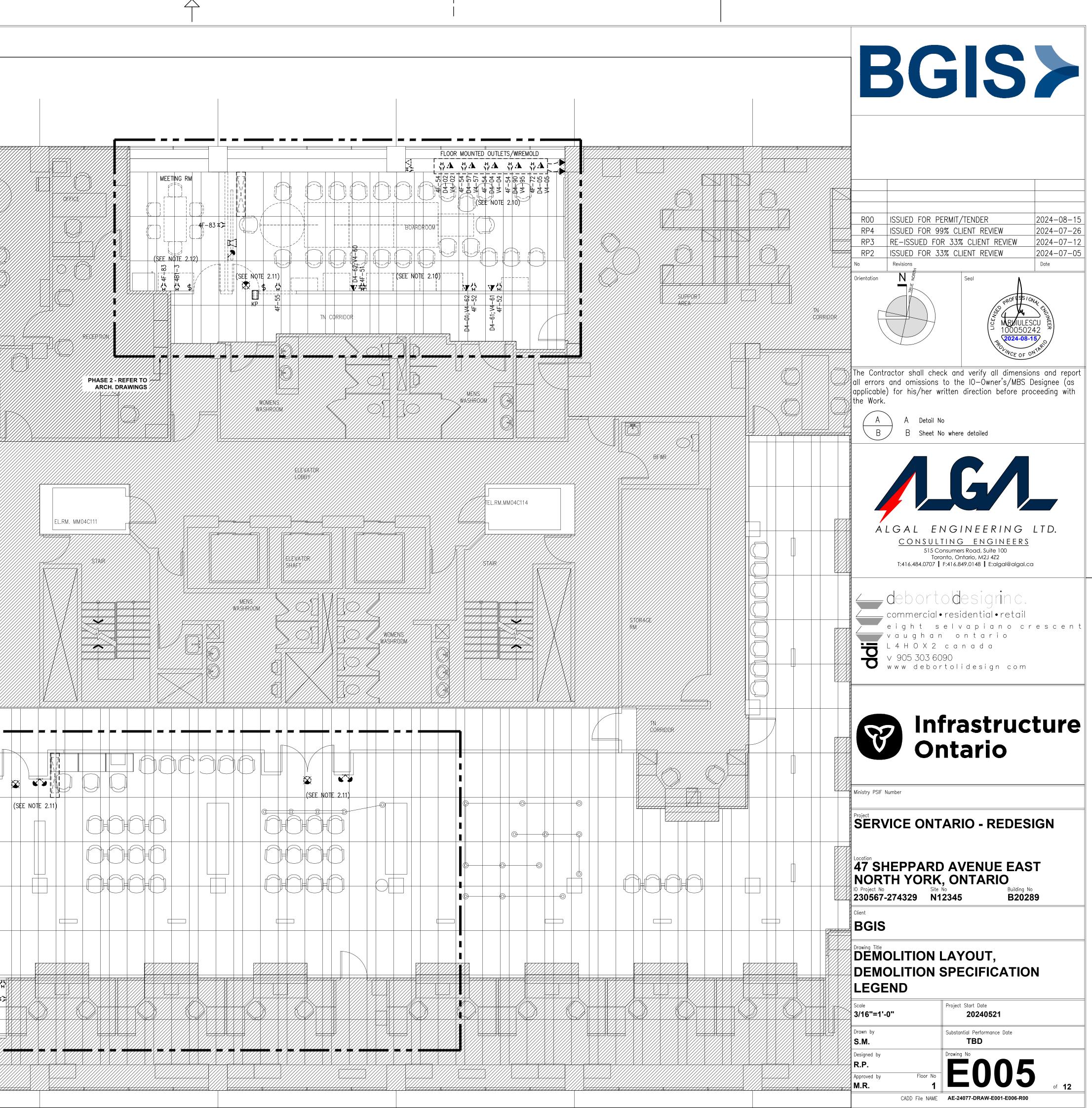
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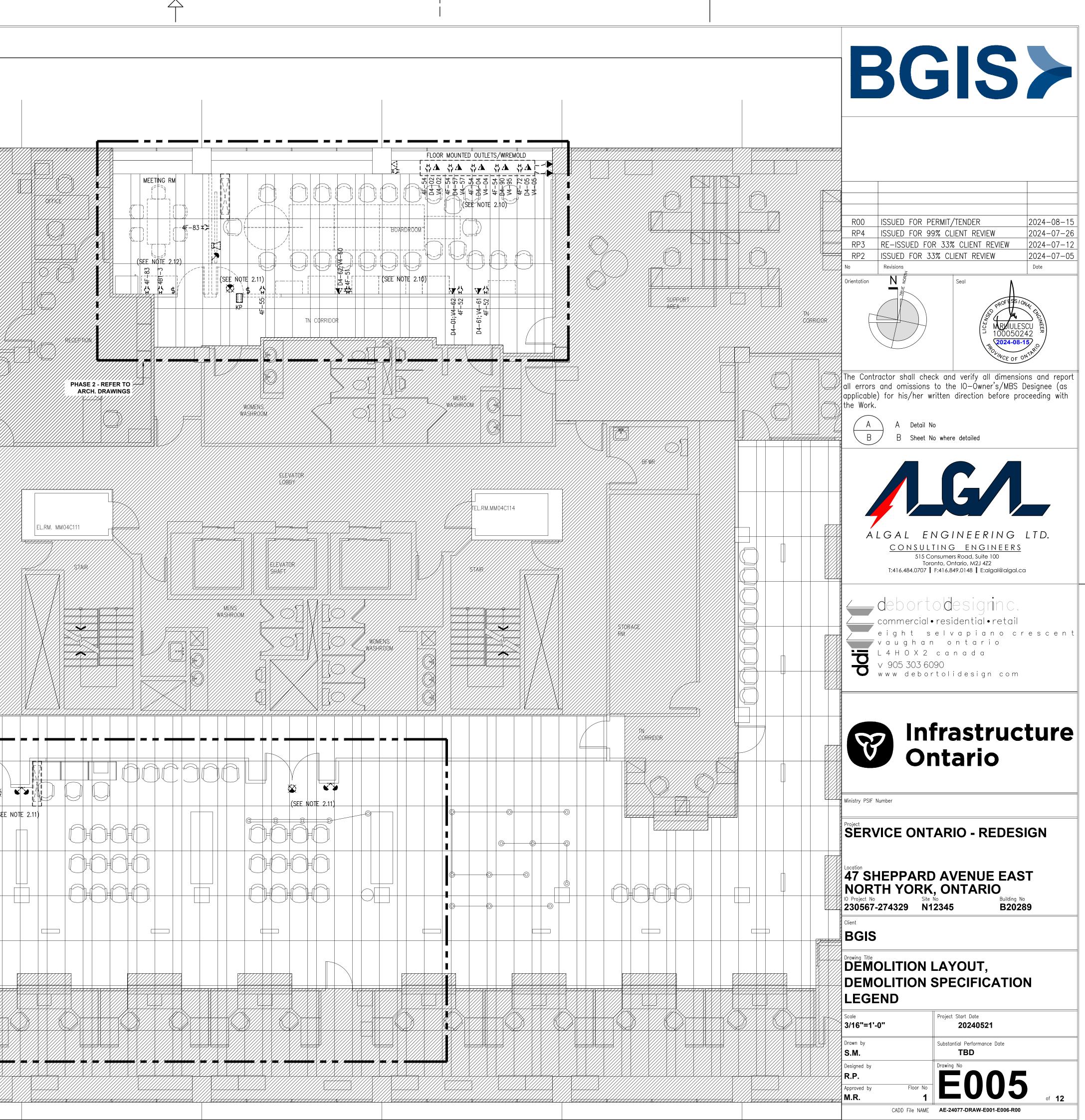
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CONTRACT ARE ADEQUATELY PROTECTED FROM IRFORMED, AND THAT ANY CLEANING OR REPAIR DAILY BASIS AND THAT ANY CLEANING OR REPAIR DAILY BASIS AND THAT ANY CLEANING OR TRADE AND OTHER TRADES AS REQUIRED BY ARE DAMAGED DUE TO THIS WORK AT NO EXTRA ISE NOTED, SHALL BECOME THE PROPERTY OF COMPLETION OF THE WORK. TO RESPECTIVE PANEL AND MAKE SAFE. BACK TO PANELS. IY SUFFACES OR FINISHES DAMAGED AS A UNCTION BOX AND MAKE SAFE FOR FUTURE USE STARTING ANY DEMOLITION WORK, TO RESPECTIVE PANEL AND MAKE SAFE. BACK TO PANELS. IY SUFFACES OR FINISHES DAMAGED AS A UNCTION BOX AND MAKE SAFE FOR FUTURE USE STARTING ANY DEMOLITION WORK TO DETERMINE PTACLES TO BE DEMOLISHED. TRACE POWER WRK AS SPARE BREAKERS FOR FUTURE USE. STARTING ANY DEMOLITION WORK TO DETERMINE PTACLES TO BE DEMOLISHED. TRACE POWER INF AS SPARE BREAKERS FOR FUTURE USE. STARTING ANY DEMOLITION WORK TO DETERMINE PTACLES TO BE DEMOLISHED. TRACE POWER INF AS SPARE BREAKERS FOR FUTURE USE. STARTING ANY DEMOLITION WORK TO DETERMINE PTACLES TO BE DEMOLISHED. TRACE POWER ING POWER OUTLES. THE POWER CIRCUTIS TO BE WER RECEPTACLES AT THE NEW LOCATIONS. REFER IS TO BE UPDATED ACCORDINGLY.				
	 ↓ ↓	AND REINSTALLED POLE CONNECTION TO THE EXISTING WICKE POWER/DATA/VOICE C/W WHIP, TO BE REI EXISTING LIGHTING FIXTURE TO BE REMOVE EXISTING DOOR LOCK WITH KEYPAD TO BE	CEPTACLE TO BE REMOVED CEPTACLE TO BE REMOVED O REINSTALLED TO BE REMOVED AND REINSTALLED O BE REMOVED AND REINSTALLED TING FIXTURE SINGLE/DOUBLE HEADS TO BE REMOVED TTS SYSTEM FURNITURE COMPOSED OF MOVED AND REINSTALLED D AND REINSTALLED					
		E						
		LITION LAYOUT : 3/16"=1'-0"	PHASE 1 - RE ARCH. DRAW					





PA 120V/ RECEPT. WATER FURNITU FURNITU FURN. F FURN. F FURN. F FURN. F FURN. F RECEPT. IG RECE RECEPT. FURNITU GFI REC FURNITU EAST SI FURNITU FURNITU GEN. PL WATER FURN. F FURN. F PRINTER AUTOMA WIREMOI FURNITU IG RECE IG RECE IG RECE RECEPT IG RECE RECEPT IG RECE RECEPT IG RECE RECEPT

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24x36in

ANEL `RP-4F'	MAINS:							225 AMPS		LOCATION:	
V/208V, 3¢, 4W MOUNTING:					SURFACE		4TH FLOOR ELECTRICAL ROOM				
DESCRIPTION	LOAD kW	BKR SIZE		CIF	RCUI	TS		BKR SIZE	LOAD kW	DESCRIPTION	
PTACLE PUBLIC AREA DOOR ENTRANCE		15A	1	╉		+	2	15A		RECEPT. RM-B425-423, INTERV. RM., MGR.	
R COOLER S/W AREA, B424 AREA		15A	3	┢╋	╉	+	4	15A		IG RECEPT. RM-B425-423, INTERV. RM. MGR.	
ITURE FEED B424		15A	5	┢╋	╋	╉	6	15A		FURN. FEED CUSTOMER SERV. COUNTER B421	
ITURE FEED B424		15A	7	┢		+	8	15A		FURN. FEED CUSTOMER SERV. COUNTER B421	
. FEED CUSTOMER SERV. COUNTER B421		15A	9	╋	╉	+	10	15A		FURN. FEED CUSTOMER SERV. COUNTER B421	
. FEED CUSTOMER SERV. COUNTER B421		15A	11	┢╋	+	╉	12	15A		FURN. FEED CUSTOMER SERV. COUNTER B421	
. FEED CUSTOMER SERV. COUNTER B421		15A	13	┢	+	+	14	15A		FURN. FEED CUSTOMER SERV. COUNTER B421	
. FEED CUSTOMER SERV. COUNTER B421		15A	15	┢╋	╉	+	16	15A		GEN. PURP. RECEPT. EAST SIDE	
. FEED CUSTOMER SERV. COUNTER B421		15A	17	┢╋	+	╉	18	15A		FURN. FEED - GREETING STATION, B419	
PTACLE, SERV. MGR B420		15A	19	┢	+	+	20	15A		FURN. FEED - GREETING STATION, B419	
CEPTACLE, SERV. MGR B420		15A	21	┢╋	╉	+	22	15A		RECEPTACLE SERV. MGR CCTB-B-42	
PTACLE, CCTV SERV. MGR B420		15A	23	┢╋	+	╉	24	15A		RECEPT. INTERVIEV RM. B-415	
ITURE FEED – WALL B416		15A	25	┢	+	+	26	15A		IG RECEPT. INTERVIEV RM. B-415	
ECEPTACLE BARRIER FREE WASHROOM		15A	27	┢╋	╉	+	28	15A		FURN. FEED EAST SIDE B416-410	
ITURE FEED – EAST SIDE, B416		15A	29	┢	╋	╉	30	15A		FURN. FEED EAST SIDE B416-410	
ITURE FEED – EAST SIDE, B416		15A	31	┢	+	+	32	15A		FURN. FEED EAST SIDE B416-410	
SIDE WIREMOLD		20A	33	┢	╉	+	- 34	15A		FURN. FEED EAST SIDE B416-410	
SIDE WIREMOLD		15A	35		+	╉	- 36	15A		FURN. FEED N/E CORNER B410	
ITURE FEED – N/E CORNER, B410		15A	37	┢	+	+	- 38	15A		FURN. FEED N/E CORNER B410	
ITURE FEED – N/E CORNER, B410		15A	39		╉	+	40	15A		FURN. FEED N/E AREA B408-410	
PURP. RECEPT. NORTH CENTRAL AREA		15A	41		+	╉	42	15A		FURN. FEED N/E AREA B408-410	
R COOLER – B408–410		15A	43	┢	+	+	44	15A		TV'S	
. FEED NORTH CENTR. AREA B408-406		15A	45		╉	+	46	15A		RECEPTACLE	
. FEED NORTH CENTR. AREA B408-406		15A	47	┢	+	╉	48	15A		RECEPT. PROVIDER SERVICE BRANCH, B407	
TER RECEPTION		15A	49		╉	+	50	15A		GENERAL USE RECEPT. – EXHAUST FAN	
MATIC DOOR OPERATOR DO-1 & DO-2		15A	51		+	╉	52	15A		IG RECEPT. BOARDROOM	
NOLD EAST SIDE		20A	53	┢	+	+	54	15A		STAFF LOUNGE MICROWAVE	*
ITURE FEED TRAINING AREA IG		15A	55		╉	+	- 56	15A		RECEPT. – S/E AREA 8–419	
ITURE FEED TRAINING AREA		15A	57			╉	- 58	15A		FURNITURE FEED	
CCEPTACLE - TRAINING RESOURCE B405		15A	59	┢		+	60	15A		FURNITURE FEED	
ICEPTACLE – B413		15A	61		╉	+	62	15A		IG RECEPTACLE L.T. STORAGE WORK RM.	
CEPTACLE – B412		15A	63		+	╉	64	15A		IG RECEPTACLE L.T. STORAGE WORK B414	
PTACLE – B412		15A	65	┢	+	+	66	15A			
-SERVE STATIONS		15A	67		╉	+	68	/2P		A/C CUSTOMER SERVICE CORNER	
ERY PACKS		15A	69		+	╉	70	15A		GFI RECEPT. WASHROOMS	
FAN, BARRIER FREE, GREETING STATION		15A	71		_	+	72	20A		GFI RECEPTACLE 20A STAFF LOUNGE	*
CEPTACLE OFFICES 402, 403, 404		15A	73		╉	+	74	15A		SPARE	
PTACLE OFFICES 402, 403, 404		15A	75		_	╉	76	15A		SPARE	
CEPTACLE WKST W40 ST., W405B		15A	77	╟╋		╀	- 78	15A		SELF-SERVE STATIONS	*
PTACLE WKST W405A, W405B		15A	79	╟╋	╉	╀	80	30A/			
CEPTACLE RM 406, WKST W407A, W407B		15A	81	╟╋		╉	82			CLIPPER POWER SYSTEMS	
PT. RM. 406, W407A, W407B, LOUNGE		15A	83	┢		+	84	/3P			
TOTAL										TOTAL	
		_			_		_	_			

– provide New Circuit breaker as indicated and update panel schedule accordingly

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Substantial Performance Date TBD Drawing No Floor No 1

CADD File NAME AE-24077-DRAW-E001-E006-R00

Designed by **R.P.** Approved by **M.R.**

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