COM*check* Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2020 New York City Energy Conservation Code
Project Title: SUBWAY, PENNSTATION, NY
Project Type: Alteration

Construction Site: Owner/Agent: Designer/Contractor:

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-SERVICE AREA (Common Space Types:Food Preparation)	292	0.92	269
2-PROP. WASH AREA (Common Space Types:Storage >=50 - <=1000 sq.ft.): Exempt			
3-SALES AREA (Retail:Sales Area)	380	1.06	403
		Total Allowed Watts =	671

Area Category Exemption Qualifications

Activity Area	# Fixtures Pre-Alt.	# Fixtures Repl./Added	Total # Watts Pre-Alt.	Total # Watts Post-Alt.
PROP. WASH AREA (Common Space Types: Storage >=50 - <=1000 sq.ft., 163 sq.ft.) Exemption: Less than 10% fixture replacement.	6	0	123.000	123.000

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
SERVICE AREA (Common Space Types: Food Preparation, 292 sq.ft.)				
C1.2: Other:	1	12	28	336
C8: Other: Exemption:Advertising/directional signage	1	1	96	Exempt
C9: Other: Exemption:Advertising/directional signage	1	1	96	Exempt
PROP. WASH AREA (Common Space Types: Storage >=50 - <=1000 sq.ft., 163 sq.ft.): Exempt				
SALES AREA (Retail: Sales Area, 380 sq.ft.)				
C1.2: Other:	1	10	28	280
			Total Proposed Watts =	616

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2020 New York City Energy Conservation Code requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2020 New York City Energy Conservation Code

Requirements: 100.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.5.2 [PR36][1]	Electrical meters for tenant spaces in covered buildings. Each covered tenant space in a new building shall be equipped with a separate meter or sub-meter to measure the electrical consumption of such space when let or sublet. See section details and Section 28-311.2 of the Administrative Code. As new covered tenant spaces are created, they shall be equipped with meters or sub-meters as provided in this section	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.10 [PR38][1]	New parking garages and new parking lots powered by the energy services for a building, and with 10 or greater parking spaces, provide either: 1. Panel capacity and conduit for the future installation of minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces; or 2. Minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

ENERGY CONSERVATION CODE OF NEW YORK CITY COMPLIANCE

TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND JUDGEMENT, THESE PLANS AND SPECIFICATION ARE IN COMPLIANCE WITH THE ENERGY CONSERVATION CODE OF THE NEW YORK CITY 2020.

ALL WORK SHALL COMPLY WITH THE 2020 NYC ENERGY CONSERVATION CODE (NYCECC). EXCEPT WHERE EXPLICITLY STATED IN THE CODE, IT IS NOT RETROACTIVE IN EXISTING BUILDINGS. ADDITIONS TO EXISTING BUILDING MUST COMPLY WITH THE NYCECC WITH RESPECT TO NEW CONSTRUCTION. ALTERATIONS MUST COMPLY WITH THE ENERGY CODE WHERE ANY BUILDING SYSTEM OR SUBSYSTEM IS BEING EXCEPT WHERE EXCLUDED BY THE CODE.

NYCBC 110.3.5 ENERGY CODE COMPLIANCE INSPECTIONS

INSPECTIONS SHALL BE MADE TO DETERMINE COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS.

SHEET INDEX

01	EN-001.00	ENERGY ANALYSIS

Project:
ALTERATION TO EXISTING TENANT SPACE AT EXISTING MULTI-STORY BUILDING

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.2 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Daylight spaces that comply with this code.
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, corridor/transition areas, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, janitorial closets, corridors/transition areas, dining areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces, cafeteria dining areas, and fast food dining areas .	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.2, C405.2.2.1, C405.2.2.2 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting within daylight zones in the following spaces: 1. Spaces with a total of more than 100 watts of general lighting within sidelit zones complying with Section C405.2.3.2. General lighting does not include lighting that is required to have specific application control in accordance with Section C405.2.4. 2. Spaces with a total of more than 100 watts of general lighting within toplit zones complying with Section C405.2.3.3. See code section C405.2.3.1 Daylight responsive control function and section	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.4 [EL26][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.4 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.1.1 [EL6][1]	Internally illuminated exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.6 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.7 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.8.2, C405.8.2.1 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.9 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][1]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.3.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

DOB Approval

Drawing Title:
ENERGY ANALYSIS

Drawing Scale: AS NOTED

Drawing No.:
EN-001.00

Sheets in Contract:
1 of 7

Property of NY Engineers

ELECTRICAL SYMBOLS LIST

LIGHTING

	LED LIGHTING FIXTURE AND OUTLET BOX. HALF SHADED FIXTURE OR "EM" INDICATES FIXTURES WITH INTEGRAL BATTERY PACK FOR EMERGENCY SERVICE, U.O.N.
A O 2 a	LUMINAIRE TYPE : INDICATE BY LIPPERCASE LETTER SEE LIGHTING EXTURE SCHEDULE. CIRCUIT NUMBER : INDICATED BY NUMBER SWITCHING INDICATED BY LOWER CASE LETTERS.
EM	DENOTES LUMINAIRE ON EMERGENCY CIRCUIT.
NL	DENOTES FIXTURES DESIGNATED AS NIGHTLIGHT, WIRED TO 24 HOURS UNSWITCHED CIRCUIT.
	CEILING/WALL MOUNTED SELF POWERED EXIT LIGHT FIXTURE WITH DIRECTIONALARROWS AS INDICATED. SHADED AREA DENOTES FACE(S). ISOLITE ELITE SERIES LED EXIT SIGN
	EMERGENCY BATTERY UNIT WITH ATTACHED EMERGENCY FIXTURES AND OUTLET BOX.

SWITCHES AND CONTROLS

$a	20A SWITCH . "a" DENOTES LIGHTING FIXTURE CONTROLLED.
$OS	SWITCH WITH OCCUPANCY SENSOR
PC	WALL MOUNTED PHOTOCELL MOUNTED IN NEMA 3R ENCLOSURE.
OS	CEILING OCCUPANCY SENSOR, NUMBER INDICATES TYPE; SEE OCCUPANCY SENSOR SCHEDULE

WIRING SYSTEMS

3 UP-	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 1#12 Ø, 1#12 N. & 1#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.
3 5 UP-	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 2#12 Ø & 1#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.
3 5 7 UP-	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 3#12 Ø & 1#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.
	CONDUIT TURNING UP, SEE FLOOR PLANS FOR CONDITIONS.
	CONDUIT TUIRNING DOWN, SEE FLOOR PLANS FOR CONDITION.
	CONDUIT AND WIRE TO BUILDING GROUND.
	UNDERGROUND
	EXISTING
	NEW

ELECTRICAL DRAWING LIST

E-001.00	ELECTRICAL LEGENDS AND GENERAL NOTES
E-002.00	ELECTRICAL SPECIFICATIONS SHEET 1 OF 2
E-003.00	ELECTRICAL SPECIFICATIONS SHEET 2 OF 2
E-100.00	ELECTRICAL FLOOR POWER AND LIGHTING PLAN
E-500.00	ELECTRICAL DETAILS SHEET & EQUIPMENT LIST
E-600.00	ELECTRICAL RISER DIAGRAM & PANEL SCHEDULE

CODE COMPLIANCE

ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THESE PROJECT:

A. 2020 NEW YORK CITY ENERGY CODE

B. 2025 NEW YORK CITY ELECTRICAL CODE

C. 2022 NEW YORK CITY BUILDING CODE

POWER AND TELECOMMUNICATION

J	JUNCTION BOX WITH BLANK COVER PLATE, WALL MOUNTE, +18" AFF OR AS NOTED.
J	JUNCTION BOX WITH BLANK COVER PLATE, CEILING MOUNTED..
	DUPLEX CONVENIENCE RECEPTACLE, 20A, 120V +18" AFF OR AS NOTED.
	GFI DUPLEX RECEPTACLE, 20A, 120V +18" AFF OR AS NOTED.
CL	CEILING / FLOOR MOUNTED RECEPTACLE AS INDICATED ON PLAN
	DOUBLE DUPLEX OR QUAD RECEPTACLE - 20A-1P, 125V, NEMA 5-20R.
	TELEPHONE/DATA OUTLET, 4"SQUARE OUTLET BOX WITH SINGLE GANG COLLAR AND BLANK PLATE. PROVIDE 3/4" E.C., U.O.N., UP TO HUNG CEILING AND TERMINATE WITH 90° ELBOW, BUSHING AND DRAG WIRE.
	TELEPHONE OUTLET, WALL-MOUNTED +48" AFF UNO TEL / DATA OUTLET TO BE PROVIDED WITH 1" CONDUIT U.O.N. TO H.C. AND TERMINATED WITH 90 DEGREE REE ELBOW AND BUSHING. TEL / DATA OUTLET PLATE SHALL BE PROVIDED WITH 1 1/4"DIAMETER GROMMETED OPENING.
	DATA OUTLET - (1) PORT UNO, +18" AFF. UNO TEL / DATA OUTLET TO BE PROVIDED WITH 1" CONDUIT U.O.N. TO H.C. AND TERMINATED WITH 90 DEGREE ELBOW AND BUSHING. TEL / DATA OUTLET PLATE SHALL BE PROVIDED WITH 1 1/4" DIAMETER GROMMETED OPENING.
	SIMPLEX RECEPTACLE

ELECTRICAL GENERAL NOTES

A. TENANT IS REQUIRED TO MAKE A FIELD SURVEY OF THE EXISTING ELECTRICAL SERVICE TO ENSURE THAT THE TOTAL CONNECTED LOAD DOES NOT EXCEED THE ELECTRICAL SERVICE. ANY/ ALL MODIFICATIONS OR UPGRADES NEEDED ARE SUBJECT TO LANDLORD'S PRIOR APPROVAL, AND WILL BE COMPLETED BY TENANT/ TENANT'S GC, AT TENANT'S SOLE EXPENSE.

B. EMT (ELECTRIC METALLIC TUBING) SHALL BE USED IN ALL DEMISING WALLS, HOME RUNS, AND BETWEEN J-BOXES AND PULL BOXES. MC CABLE MAY BE USED IN OTHER APPLICATION AS ALLOWED BY THE AUTHORITY HAVING JURISDICTION (AHJ). ALL EXPOSED CONDUIT,RIGID OR MC CABLE, SHALL BE INSTALLED IN TIGHT STRAIGHT LINES, PARALLEL OR IN RIGHT ANGLES TO THE BUILDING STRUCTURE. DO NOT LOOP EXCESS MC CABLE IN CEILING SPACE OR WALL CAVITY.

C. ALL FEEDERS SHALL BE COPPER. TYPE AC AND NM (ROMEX) CABLES ARE NOT ACCEPTABLE.

D. ALL PANELS SHALL BE UL LABELED WITH BOLT ON TYPE CIRCUIT BREAKERS. PANELS SHALL NOT BE RECESSED IN DEMISING AND SHALL BE MOUNTED ON PLYWOOD BACKER PANELS UNLESS RECESSED INTO A FURRED OUT OR INTERIOR WALL.

E. PANEL PHASE LOADS TO BE BALANCED WITHIN 10%.

F. ONLY 45 KVA AND SMALLER TRANSFORMERS MAY BE SUSPENDED FROM BUILDING STRUCTURE. ALL OTHER TRANSFORMERS MUST BE FLOOR SUPPORTED. STRUCTURAL SUPPORT DOCUMENTATION SHALL BE REQUIRED TO MEET AUTHORITIES HAVING JURISDICTION (AHJ).

G. NOTHING IS PERMITTED TO BE ATTACHED TO, SUSPENDED FROM, OR PENETRATE LANDLORD'S STRUCTURE, FLOOR DECK, OR ROOF DECK. YOU MAY ATTACH, NON-DESTRUCTIVELY, TO OR SUSPEND FROM THE TOP CHORD OF THE JOIST OR THE STRUCTURAL STEEL WHICH EXISTS ABOVE THE TENANT SPACE. WHEN ATTACHING TO LANDLORD'S STRUCTURE, DO NOT DRILL, WELD, SCREW, OR SHOOT INTO STRUCTURE. ALTERNATIVE METHODS OF ATTACHMENT ONLY, NOTHING TO DAMAGE LANDLORD'S BASE BUILDING STRUCTURE. TENANT SHALL PROVIDE SIGNED AND SEALED STRUCTURAL DRAWINGS, BY A STRUCTURAL ENGINEER WITH LEGALLY ACTIVE REGISTRATION AS INDICATED BY ALL JURISDICTIONAL REQUIREMENTS, FOR ALL

H. STRUCTURAL MODIFICATIONS FOR LANDLORD RECORDS.

I. 7 DAY, 24 HOUR TIME CLOCK IS REQUIRED TO CONTROL STOREFRONT ENTRY LIGHTS, SHOW WINDOW LIGHTS, SHOW WINDOW RECEPTACLES AND STOREFRONT SIGNAGE. ILLUMINATED STOREFRONT SIGNS MUST REMAIN LIT DURING ALL MALL BUSINESS HOURS.

J. ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.

K. SLAB REQUIREMENTS:

K.A. SLAB ON GRADE: TENANT'S GENERAL CONTRACTOR SHALL ADVISE THE OPERATION TEAM PRIOR TO ANY SLAB MODIFICATIONS OR REMOVAL. TENANT GC SHALL VERIFY THAT WORK SHALL NOT CONFLICT WITH ANY EXISTING STRUCTURAL, UTILITY, OR OTHER UNDER-SLAB CONDITION. (NONDESTRUCTIVE VERIFICATION MAYBE REQUIRED.) ANY DAMAGE OR DOWNTIME CAUSED BY TENANT'S WORK SHALL BE REPAIRED AND REIMBURSED AT TENANT'S EXPENSE.

K.B. ELEVATED SLABS: TENANT'S GENERAL CONTRACTOR SHALL ADVISE THE OPERATIONS TEAM PRIOR TO ANY SLAB MODIFICATION OR REMOVAL. IF ANY ELEVATED SLAB IS TO BE MODIFIED IN ANYWAY (DRILLED, CORED, OR PENETRATED), TENANT SHALL PROVIDE STAMPED AND CERTIFIED DRAWINGS BY LICENSED STRUCTURAL ENGINEERED CERTIFIED IN THE LOCAL JURISDICTION. ALL PENETRATIONS SHALL BE CORE BORED ONLY. SAW CUTTING, JACK HAMMERING, AND TRENCHING IS STRICTLY PROHIBITED. ALL PENETRATIONS SHALL BE SLEEVED, SEALED, FIRE STOPPED, AND WATERPROOFED. THE PENETRATION SLEEVE SHALL EXTEND A MINIMUM OF 4" ON EITHER SIDE OF THE SLAB AND BE LABELED WITH THE REQUIRED NFPA RATING. TENANT GC SHALL VERIFY THAT WORK SHALL NOT CONFLICT WITH ANY EXISTING STRUCTURAL, UTILITY, OR OTHER UNDER-SLAB CONDITION.(NONDESTRUCTIVE VERIFICATION MAYBE REQUIRED.) ANY DAMAGE OR OWNTIME CAUSED BY TENANT'S WORK SHALL BE REPAIRED AND REIMBURSED AT TENANT'S EXPENSE.

ELECTRICAL ABBREVIATIONS

A	AMPERES	EA	EACH
A/C, AC	AIR CONDITIONING UNIT	EC	EMPTY CONDUIT/ ELECTRICAL CONTRACTOR
AF	AMPERE FRAME/AMP FUSE	EF	EXHAUST FAN
AFF	ABOVE FINISHED FLOOR	EM	EMERGENCY
AS	AMP SWITCH	EMT	ELECTRICAL METALLIC TUBING
AIC	AMPS INTERRUPTING CAPACITY	EQUIP	EQUIPMENT
AT	AMP TRIP	ER	EXISTING TO BE RELOCATED
ATS	AUTOMATIC TRANSFER SWITCH	ETR	EXISTING TO REMAIN
AUTO	AUTOMATIC	EWF	ELECTRIFIED WORKSTATION FURNITURE
AWG	AMERICAN WIRE GAUGE	EWH	ELECTRIC WATER HEATER
C	CONDUIT	FA	FIRE ALARM
C/B,CB	CIRCUIT BREAKER	FBO	FURNISHED BY OTHERS, INSTALLED & WIRED BY EC
CKT	CIRCUIT	FDR	FEEDER
CLG	CEILING	FIBO	FURNISHED & INSTALLED BY OTHERS, WIRED BY EC
COMM	COMMUNICATION	FIXT	FIXTURE
CT	CURRENT TRANSFORMER	FL	FLOOR
CU	COPPER	FLUOR	FLUORESCENT
°C	DEGREE CELSIUS	G	GROUND
°F	DEGREE FAHRENHEIT	GFI	GROUND FAULT INTERRUPTER
DIA	DIAMETER	GP	GENERAL PURPOSE
DISC	DISCONNECT	HC	HUNG CEILING
DN	DOWN	HP	HORSEPOWER
DP	DISTRIBUTION PANEL	HWHT	HOW WATER HEATER
DWH	DOMESTIC WATER HEATER	HZ	HERTZ
DWG	DRAWING	IC	INTERRUPTING CAPACITY
JB	JUNCTION BOX	PP	POWER PANEL
KCMIL	ONE THOUSAND CIRCULAR MILS	PVC	POLYVINYL CHLORIDE
KV	KILOVOLT	PWR	POWER
KVA	KILOVOLT-AMPERES	R	REMOVE
KW	KILOWATTS	RE	RELOCATED EXISTING
LP	LIGHTING PANEL	REC	RECEPTACLE
LTG	LIGHTING	RGS	RIGID GALVANIZED STEEL
MAX	MAXIMUM	RR	REMOVE & RELOCATE
MC	MOTOR CONTROLLER	SECT	SECTION
MCB	MAIN CIRCUIT BREAKER	SPDT	SINGLE POLE DOUBLE THROW
MER	MECHANICAL EQUIPMENT ROOM	SPST	SINGLE POLE SINGLE THROW
MIN	MINIMUM	SPEC	SPECIFICATION
MLO	MAIN LUGS ONLY	SW	SWITCH
MTD	MOUNTED	SWBD	SWITCHBOARD
MTS	MANUAL TRANSFER SWITCH	SYM	SYMMETRICAL
N	NEUTRAL	SYS	SYSTEMS
NIC	NOT IN CONTRACT	TEMP	TEMPERATURE
NL	NIGHT LIGHT	TXF	TOILET EXHAUST FAN
NTS	NOT TO SCALE	TYP	TYPICAL
OC	ON CENTER	UON	UNLESS OTHERWISE NOTED
P	POLES	V	VOLT/VOLTAGE
PB	PULLBOX	VA	VOLT AMPERE
W	WATT	WP	WEATHER PROOF
W	WIRE	XFMR	TRANSFORMER
E	EXISTING	IG	ISOLATED GROUND

GENERAL NOTES

(APPLY TO ALL "EXISTING CONDITION" DRAWINGS)

1. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS THAT MAY AFFECT THE WORK. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR FAILURE TO DO SO.
2. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, TEST REPORTS, AND CERTIFICATIONS FOR TEMPORARY AND FINAL CERTIFICATE OF OCCUPANCY.
3. FIRE STOP ALL PENETRATIONS OF FIRE RATED CONSTRUCTION IN A CODE APPROVED MANNER IN ORDER TO MAINTAIN FIRE RATING. ALL PENETRATIONS SHALL BE SLEEVED AND SEALED WATERTIGHT.
4. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10 FT APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
5. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10 FT LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH FISH WIRE.
6. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT. EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
7. CONTRACTOR SHALL PROVIDE A WARRANTY ON ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
8. ALL UNUSED MATERIALS AND DEBRIS SHALL BE LEGALLY REMOVED AND DISPOSED OF AWAY FROM THE PREMISES ON A DAILY BASIS.
9. CONTRACTOR SHALL PATCH, PAINT, AND RESTORE EXISTING SURFACES DAMAGED DURING THE COURSE OF THIS CONSTRUCTION TO PRE-EXISTING CONDITIONS OR BETTER.
10. MINIMUM SIZE OF CONDUIT SHALL BE ¾", AND TYPE SHALL BE ELECTRICAL METALLIC TUBING (EMT), UNLESS OTHERWISE NOTED. PROVIDE NYLON DRAG LINE AND CONDUIT CAP FOR ALL EMPTY CONDUITS.
11. CONNECT CONDUIT TO MOTOR CONDUIT TERMINAL BOXES WITH FLEXIBLE CONDUIT (MINIMUM 18 IN. LENGTH AND 50% SLACK). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.
12. PULL AND JUNCTION BOXES WHERE INDICATED ON THE DRAWINGS, SHALL BE CONSIDERED SHOWN. AT THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL LOCATE THEM AS FIELD CONDITIONS DICTATE. ADDITIONAL PULL AND JUNCTION BOXES NOT SHOWN ON DRAWINGS SHALL BE PROVIDED WHERE REQUIRED BY APPLICABLE CODE PROVISIONS OR WHERE CALLED FOR BY FIELD CONDITIONS. PULL AND JUNCTION BOXES SHALL BE SURFACE TYPE IN UNFINISHED AREAS AND INSTALLED CONCEALED IN FINISHED AREAS, AND ALL COVERS TO PULL & JUNCTION BOXES SHALL BE READILY ACCESSIBLE.
13. SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
14. FOR EXACT LOCATION AND MOUNTING HEIGHT OF LIGHTING FIXTURES AND SWITCH/RECEPTACLE OUTLETS, REFER TO ARCHITECTURAL REFLECTED CEILING AND POWER PLANS.
15. ALL ELECTRICAL ACCESSORIES AND EQUIPMENT INSTALLED OUTSIDE OR EXPOSED TO WEATHER SHALL HAVE NEMA 3R ENCLOSURES AND SHALL BE TIGHTLY GASKETED FOR A COMPLETE RAINTIGHT INSTALLATION. ALL BUILDING EXTERIOR MOUNTED RECEPTACLES SHALL BE GFCI RATED AND MOUNTED IN WEATHERPROOF ENCLOSURE.
16. ALL ACCESS PANEL LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
17. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION AND INSTALLATION OF NEW WORK WITH THE GENERAL CONTRACTOR AND OTHER ASSOCIATED TRADES IN A TIMELY MANNER. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. ALL CONDUITS AND EQUIPMENT TO BE CONCEALED IN FINISHED SPACES UNLESS OTHERWISE NOTED. CONDUITS SHALL BE ENCASED IN THE CONCRETE FLOOR SLAB.
19. ALL EQUIPMENT AND MATERIALS INSTALLED IN PLENUM CEILINGS SHALL BE APPROVED FOR THAT APPLICATION.
20. OUTLET BOXES AND JUNCTION BOXES ON OPPOSITE SIDES OF FIRE-RATED WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES, UNLESS FIRE-RATED BOXES OR PUTTY PADS ARE UTILIZED.
21. COORDINATE ALL FLOOR PENETRATIONS WITH THE STRUCTURAL AND ARCHITECTURAL DRAWINGS. CONFIRM PENETRATION LOCATIONS WITH THE ENGINEER AND OWNER BEFORE INSTALLATION.
22. COORDINATE THE MOUNTING HEIGHT AND LOCATION OF RACEWAYS, COMMUNICATIONS OUTLETS, AND RECEPTACLES WITH THE ARCHITECTURAL CASEWORK DRAWINGS AND DETAILS. COORDINATE LOCATIONS OF LIGHT FIXTURES, SWITCHES, AND RELATED DEVICES WITH THE ARCHITECTURAL DRAWINGS AND DETAILS.
23. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL LUMINARIES AND SWITCHES, AND FOR ALL FINISHED CEILING HEIGHTS.
24. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL ELECTRICAL DEVICES, AND FOR FINAL CEILING AND WALL HEIGHTS AND LAYOUTS.
25. LIGHTING FIXTURES PROVIDED WITH EMERGENCY BATTERY PACKS AND INDICATED WITH SWITCH CONTROL SHALL BE WIRED WITH BATTERY CHARGING/SENSING CIRCUIT WIRED AHEAD OF SWITCH CONTROL.
26. NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT NUMBERS IN PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD.

Property of NYC

DOB Approval

Project:

ALTERATION TO EXISTING TENANT SPACE AT EXISTING MULTI-STORY BUILDING

Drawing Title:

ELECTRICAL LEGENDS AND GENERAL NOTES

Drawing Scale: AS NOTED

Drawing No.: E-001.00

Sheets in Contract: 2 of 7

ELECTRICAL SPECIFICATIONS

1. GENERAL:

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.

B. DRAWING ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATION WITH EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES, IS REQUIRED, MAINTAIN HEADROOM AND SPACE CONDITIONS.

C. BIDDERS, BEFORE SUBMITTING PROPOSALS, SHALL VISIT AND CAREFULLY EXAMINE THE AREA AFFECTED BY THIS WORK TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT, OR MATERIALS, REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.

D. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS FROM DRAWING MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

E. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES AND CHARGES IN MAKING UP THE WORK PROPOSAL.

F. CONNECTIONS TO EXISTING WORK: INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES. AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.

G. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.

H. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

I. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL, UNLESS OTHERWISE NOTED.

J. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF CONDUIT AND EQUIPMENT, PROVIDE EQUIPMENT CURBS AS REQUIRED.

K. ALL EXISTING MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF SPECIFIC EQUIPMENT ND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. REMOVED EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.

L. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK DURING OVERTIME HOURS AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.

M. UNLESS OTHERWISE SPECIFICALLY NOTED OR SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.

N. ALL MATERIAL AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.

O. INSURANCE: PROVIDE IN ACCORDANCE WITH OWNER/BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.

P. THE FINAL ACCEPTANCE SHALL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATED OF INSPECTION AND APPROVAL.

2. GENERAL PROVISIONS FOR ELECTRICAL WORK:

A. DEFINITIONS:

1) "PROVIDE": TO FURNISH, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.

2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.

3) "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE. AND DELIVER COMPLETE WITH RELATED ACCESSORIES.

4) "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.

5) "WIRING": RACEWAY. FITTINGS, WIRE, BOXES, AND RELATED ITEMS.

6) "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES.

7) "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.

8) "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

B. TEMPORARY LIGHT AND POWER: PROVIDE TEMPORARY LIGHT AND POWER SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCTION AREAS FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING OWNER. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.

C. QUALITY ASSURANCE

1) QUALITY OF MATERIALS: ALL EQUIPMENT SHALL BE NEW SPECIFICATION GRADE, FREE FROM DEFECTS AND LISTED BY APPROVED TESTING AGENCY AND BEARING THEIR LABEL MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURER, EXCEPT AS NOTED.

2) GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED AS DEFINED IN PARAGRAPH 2.C.

3) CURRENT CHARACTERISTICS:

a. SERVICE: 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.
b. DISTRIBUTION: 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.

4) HEIGHTS OF OUTLETS:

a. FROM FINISHED FLOOR TO CENTERLINE OF OUTLETS FOR: - RECEPTACLES AND TELEPHONES: 1 FT-6 IN. - WALL SWITCHES: 4 FT-0 IN. - WALL FIXTURES: 7 FT-0 IN. - MOTOR CONTROLLERS: 5 FT-0 IN. - CLOCKS: 7 FT 6 IN.

b. EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN VIOLATION OF CODE, OR AS NOTED OR DIRECTED.

D. PRODUCT DELIVERY, STORAGE AND HANDLING

1) MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.

2) ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS SHALL BE PERMITTED, CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

E. MATERIALS

1) NAMEPLATES: PROVIDE BLACK LAMICOID SHEET WITH 3/4 IN. WHITE LETTERING, FASTENED WITH EPOXY CEMENT FOR EACH DISCONNECT SWITCH, CIRCUIT BREAKER, PANEL, CABINET, TRANSFORMER, ENCLOSURE, MOTOR CONTROLLER AND THE LIKE. NAMEPLATES SHALL DESCRIBE THE NAME AND NUMBER OF EACH COMPONENT.

2) CABLE TAGS: TAG EACH CONDUCTOR PASSING THROUGH SPLICE OR PULLBOX WITH A WHITE LINEN TAG, INDICATING POINT OF ORIGIN AND TERMINATION OF THE CIRCUIT.

3) INSERTS AND SUPPORTS:

a. INSERTS: STEEL, SLOTTED TYPE, FACTORY PAINTED. - SINGLE ROD: SIMILAR TO GRINNELL FIG. 281. - MULTI-ROD: SIMILAR TO FEE AND MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS. - CLIP FORM NAILS FLUSH WITH INSERTS. - MAXIMUM LOADING 75 PERCENT OF RATING.

b. SUPPORTS FROM BUILDING CONSTRUCTION: INSERTS, BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), CANTILEVER BRACKETS OR OTHER MEANS. SUBMIT FOR REVIEW.

c. GROUPED LINES AND SERVICES: TRAPEZE HANGERS OF BOLTED ANGLES OR CHANNELS.

d. WHERE BUILDING CONSTRUCTION IS INADEQUATE: PROVIDE ADDITIONAL FRAMING. SUBMIT FOR REVIEW.

F. PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER IN ORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. COLORS SHALL BE AS SELECTED BY ARCHITECT OR ENGINEER. UTILIZE GALVANIZED IRON PRIMER ON PANEL AND PULL BOXES, AFTER FABRICATION. UTILIZE HOT DIPPED GALVANIZED OR DIPPED IN ZINC BASED PRIMER FOR: OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS, INSERTS AND SUPPORTS. ZINC BASED PRIMER WITH FINISH TO MATCH SURROUNDINGS SHALL BE USED FOR MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS. A FIELD-APPLIED ZINC BASED PRIME COAT SHALL BE UTILIZED FOR STEEL OR IRONWORK.

G. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK SOILED OR DAMAGED; CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.

H. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHT FIXTURES SHALL BE VERIFIED WITH ARCHITECT.

I. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.

3. SCOPE OF WORK:

A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMING WITH APPLICABLE NEW YORK CITY ELECTRICAL CODE WITH THE AMENDMENTS, AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

B. ALL DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLIED OR SPECIFIED HEREIN.

C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER, DATE IS EARLIER, THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDED THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION, WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.

E. CONTRACTOR SHALL PERFORM ALL CONTROLLED INSPECTIONS IN ACCORDANCE WITH 2024 IBC. SECURE ALL REQUIRED PERMITS AND APPROVALS AND TRANSMIT SAME TO OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES.

F. AREAS WITH NO ELECTRICAL WORK SHALL REMAIN AS IS. CONTRACTOR SHALL MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS TO ALL AREAS NOT COVERED BY THIS RENOVATION AND SHALL PROVIDE 48 HOUR NOTICE TO LANDLORD OF ANY PLANNED POWER INTERRUPTIONS OR SIGNAL SYSTEM OUTAGES.

4. SHOP DRAWINGS

A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT, CONTRACTOR SHALL PROVIDE COMPLETE SETS OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, INDICATING CAPACITY, DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

B. INDICATE ON EACH SHOP DRAWINGS SUBMITTED:

1) PROJECT NAME AND LOCATION
2) NAME OF ARCHITECT AND ENGINEER
3) ITEM IDENTIFICATION
4) APPROVAL STAMP OF PRIME CONTRACTOR

C. SUBMISSIONS:

1) SUBMISSIONS 36 IN. X 24 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.

2) SUBMISSIONS LARGER THAN 36 IN. X 24 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPIA TO THE ENGINEER.

D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:

1) SAFETY/DISCONNECT SWITCHES
2) FUSES
3) CIRCUIT BREAKERS
4) PANELBOARDS/LOADCENTER (INCLUDING DIMENSIONS, SCHEDULES, AND CATALOG CUTS).
5) RACEWAYS
6) WIRE AND CABLE
7) WALL SWITCHES
8) INSERTION RECEPTACLES
9) MOMENTARY CONTACT SWITCHES
10) TIME SWITCHES
11) LIGHTING FIXTURES.

E. ASSIST AND PROVIDE ALL NECESSARY INFORMATION, DIAGRAMS, SKETCHES, ETC. TO THE HVAC CONTRACTOR, FOR THE PREPARATION OF COORDINATED SHOP DRAWINGS INDICATING ROUTING OF FEEDERS, CONTROL CONDUITS, RECESSED FIXTURES AND ADJACENT NEARBY PIPING AND DUCTWORK WHERE APPLICABLE, CERTIFIED BY ALL TRADES THAT COORDINATION HAS BEEN ESTABLISHED. SUBMIT FOUR(4) BOOKBOUND OPERATING AND SERVICE MANUALS WHICH SHALL INCLUDE COPIES OF ALL SHOP DRAWING. PROVIDE SHOP DRAWINGS FOR PANELS, FIXTURES, WIRING DEVICES, CONDUIT, CABLE, DISCONNECT SWITCH, RELAYS, CONTRACTORS, AND OTHER SYSTEMS AS DIRECTED BY THE ENGINEER.

5. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS

A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS. CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.

D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.

6. LOW-VOLTAGE DISTRIBUTION EQUIPMENT:

A. PROVIDE COMPLETE EQUIPMENT INCLUDING: SWITCHES, FUSES, CIRCUIT BREAKERS, PANELS AND TRANSFORMERS.

B. ALL EQUIPMENT SHALL CONFORM TO NEMA, ANSI AND IEEE STANDARDS.

C. DISCONNECT SWITCHES SHALL BE FUSED OR NON-FUSED AS NOTED. VOLTAGE SHALL BE AS REQUIRED. SWITCHES SHALL BE HEAVY DUTY, EXCEPT AS NOTED, AND HORSEPOWER RATED FOR MOTOR LOADS. TOGGLE TYPE SWITCHES SHALL BE NONFUSED, LOAD BREAK, HAVING MAXIMUM RATINGS OF 20 AMP AT 600 VOLTS AND 30 AMP AT 240 VOLTS. TWO-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 6809F. THREE-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 7810F. KNIFE-BLADE TYPE SWITCHES SHALL BE LOAD BREAK, QUICK-MAKE- QUICK-BREAK, UL CLASS R UP TO 600 AMP. MAXIMUM RATING EXCEPT AS NOTED SHALL BE 800 AMP. ARC QUENCHERS SHALL BE PROVIDED. SWITCHES SHALL BE SIMILAR TO GENERAL ELECTRIC QMR. ALL SWITCH ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED.

7. FUSES:

A. CIRCUITS 0 TO 600 AMPERES SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMANN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

B. MOTOR CIRCUITS - ALL INDIVIDUAL MOTOR CIRCUITS WITH FULL LOAD AMPERE RATINGS (FLA) OF 480 AMPERES OR LESS SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMANN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

C. ALL FUSES SHALL BE PROVIDED BY SAME MANUFACTURER.

D. PROVIDE 1 SPACE MATCHING FUSE FOR EACH SET OF 3.

E. CIRCUIT BREAKERS: MOLDED CASE BREAKERS SHALL BE THERMAL-MAGNETIC, QUICK-MAKE-QUICK-BREAK, BOLT-ON TYPE, MANUALLY OPERATED WITH INSULATED TRIP-FREE HANDLE. MULTI-POLE TYPE BREAKERS SHALL CONTAIN INTERNAL TRIP BAR. TERMINALS SHALL BE SUITABLE FOR COPPER OR ALUMINUM CABLE. FURNISH AUXILIARY DEVICES WHERE REQUIRED FOR SHUNT-TRIPPING, OPEN AND CLOSE MOTOR OPERATOR AND ALARM INDICATION. ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED. FRAMES, IC AND INTERCHANGEABLE TRIPS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED.

1) 120 VOLTS, 100-AMP FRAME: 10,000 AMPS, 1 POLE.
2) 120/240 VOLTS, 225-AMP FRAME: 22,000 AMPS MINIMUM

8. DISTRIBUTION PANELBOARDS, CIRCUIT BREAKER TYPE:

A. THREE PHASE, 4 OR 5 WIRE, COPPER BUS BARS, WITH 2, 3, OR 4 WIRE BRANCHES, AS NOTED. CAPACITY OF PANEL AND CIRCUITS, AS NOTED BELOW. PANELBOARD TO HAVE GROUND BUS SAME SIZE AS PHASE BUSES.

B. CABINETS: CODE GAUGE GALVANIZED SHEET STEEL PRIMED AND PAINTED WITH TRIM AND DOOR, TYPE AS NOTED, LAP AND RIVET CORNERS OR FORM AS APPROVED.

C. TRIM: ONE PIECE FULL FINISH PRIMED AND PAINTED SHEET STEEL. TRIM SHALL BE MOUNTED WITH A CONTINUOUS PIANO HINGE CONFIGURED IN SUCH A MANNER THAT IT SHALL BE POSSIBLE TO GAIN FULL ACCESS TO CIRCUIT BREAKERS AND WIRING GUTTERS WITHOUT REMOVING THE TRIM. PROVIDE A MULTI-PIN CYLINDER LOCK (YALE, CORBIN OR EQUAL) TO LATCH THE TRIM. KEYS SHALL BE MILLED.

D. HARDWARE: MULTI-PIN, CYLINDER LOCKS WITH MILLED KEYS. ALL PANELS SHALL BE KEYED ALIKE. DOOR OVER 48 " HIGH SHALL BE EQUIPPED WITH A CHROME PLATED VAULT HANDLE, BUILT-IN LOCK AND 3-POINT CATCH FASTENING DOOR AT TOP, BOTTOM AND CENTER.

E. HINGES: CONCEALED, CONTINUOUS PIANO HINGE AS DESCRIBED ABOVE.

F. DIRECTORY HOLDER: MEAL FRAME WITH NONBREAKABLE TRANSPARENT COVER AND DIRECTORY CARD. ENTRIES TO BE TYPEWRITTEN BY ELECTRICAL CONTRACTOR. PROVIDE AN ENGRAVED LAMINATED NAMEPLATE ADJACENT TO EACH BRANCH BREAKER. MOUNT WITH SELF TAPPING MACHINE SCREWS.

G. FURNISH MULTI-CABLE LUGS WHERE REQUIRED. DOUBLE LUGGING NOT PERMITTED. SECURE LUGS TO BUS BY STUD BOLTS.

F. MINIMUM GUTTER SPACES: PANELS WITH 225 AMPERE MAINS, 5-¾" MINIMUM, 400 AMPERES AND OVER, MINIMUM GUTTERS 8 " . FOR PANELS WITH THROUGH FEEDERS, INCREASE GUTTER WIDTH BY 2 " MINIMUM AND PROVIDE A SHEET STEEL BARRIER BETWEEN THE PANEL GUTTER AND THE THROUGH FEEDER PORTION OF THE BACK BOX. BRANCH CIRCUIT BREAKERS SHALL BE MECHANICALLY INTERLOCKED WHEN SHOWN ON DRAWINGS.

G. THREE PHASE, 3 OR 4 WIRE WITH COPPER BUS BARS. ALL THROUGH BUS SHALL BE INSULATED.

H. NEMA CLASS 1 CONSTRUCTION TO ACCOMMODATE FUSIBLE, INDIVIDUALLY ENCLOSED SWITCHES, FRONT REMOVABLE, SWITCH AND DOOR INTERLOCKS. COVERS TO BE PAD-LOCKABLE.

I. ALL BRANCH SWITCHES SHALL HAVE INDIVIDUAL ENGRAVED LAMICOID NAMEPLATES (BLACK WITH WHITE CORE).

J. DISTRIBUTION PANELBOARD CONSTRUCTION MINIMUM SHORT CIRCUIT RATING 25,000 AMPERES, REMS SYMMETRICAL FOR ALL 120/208V APPLICATIONS. APPLICATIONS.

8. DISCONNECTS

1) DISCONNECT SWITCHES SHALL CONFORM TO NEMA AND UL STANDARDS, AND SHALL BE HORSEPOWER RATED.

2) SWITCHING MECHANISM SHALL BE QUICK-MAKE, QUICK-BREAK, SINGLE THROW WITH EXTERNAL OPERATING HANDLE MECHANICALLY INTERLOCKED WITH ENCLOSURE COVER TO PROVIDE ACCESS TO INTERIOR WHEN DISCONNECT IS IN OFF POSITION ONLY. PROVIDE MEANS TO LOCK OPERATING HANDLE IN THE OPEN AND CLOSED POSITION DESIGNATE ON THE ENCLOSURE THE OPEN AND CLOSED POSITION OF THE OPERATING HANDLE.

3) SWITCHES SHALL BE OF THE DOUBLE STATIONARY CONTACT TYPE.

4) SWITCHES SHALL BE EQUIPPED WITH REJECTION TYPE FUSE HOLDERS, FUSIBLE AS SHOWN ON THE DRAWINGS; PROVIDE COMPLETE WITH FUSES AS SCHEDULED.

G. INSTALLATION

1) DISTRIBUTION PANELBOARD SHALL BE MOUNTED TO STRUCTURAL STEEL CHANNEL (KINDORF) WHICH SHALL BE BOLTED TO THE WALL USING EXPANSION ANCHORS FOR LARGE PANELS.

H. IDENTIFICATION

1) PROVIDE NAMEPLATE AT EACH SWITCH IDENTIFYING THE LOAD SERVED.

2) NAMEPLATES SHALL BE MOUNTED ON THE FRONT COVER SECURED WITH SELF-TAPPING SCREWS OR NUTS AND BOLTS. NAMEPLATES SHALL BE LAMINATED PHENOLIC, BLACK WITH A MINIMUM OF ¼ " HIGH WHITE LETTERING.

I. MATERIALS

1) RACEWAYS:

a. RIGID STEEL CONDUIT: FULL-WEIGHT PIPE, GALVANIZED, THREADED.

b. ELECTROMETALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADLESS.

c. FLEXIBLE STEEL CONDUIT: CONTINUOUS SINGLE STRIP, GALVANIZED.

d. WIREWAYS: WIRE SHALL BE AS NOTED, MINIMUM NO. 16 GAUGE STEEL WITH GROUND CONTINUITY. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.

e. SURFACE METAL RACEWAY: SIZE AS NOTED. BASE 0.04 IN., COVER 0.25 IN. MATERIAL SHALL BE STEEL. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.

2) FITTINGS AND ACCESSORIES:

a. RIGID STEEL: NONSPLIT, THREADED, STEEL OR MALLEABLE IRON. ZINC DIE CAST NOT PERMITTED.

b. ELECTROMETALLIC TUBING: COMPRESSION TYPE. GALVANIZED IGID STEEL ELBOWS, 2 IN. OR LARGER.

c. FLEXIBLE METALLIC CONDUIT: ANGLE WEDGE TYPE WITH INSULATED THROAT.

d. BUSHINGS: METALLIC INSULATED TYPE.

Property of NYC

DOB Approval

Project:
ALTERATION TO EXISTING TENANT SPACE AT EXISTING MULTI-STORY BUILDING

Drawing Title:
ELECTRICAL SPECIFICATION SHEET 1 OF 2

Drawing Scale: AS NOTED

Drawing No.:
E-002.00

Sheets In Contract:
3 of 7

ELECTRICAL SPECIFICATIONS (CONT.)

3) BOXES:

a. OUTLET BOXES: EXCEPT AS OTHERWISE REQUIRED BY CONSTRUCTION, DEVICES OR WIRING, BOXES SHALL BE STAMPED STEEL, 4 IN. SQUARE OR OCTAGON FOR FIXTURES. BOXES ABOVE CEILING SHALL BE 1-1/2 IN. DEEP. BOXES IN CEILING OR SLAB SHALL BE 3 IN. DEEP. BOXES IN WALL FOR FIXTURES SHALL BE 2-3/4 IN. DEEP. BOXES IN WALL FOR RECEPTACLES AND SWITCHES SHALL BE 1-1/2 IN. DEEP. FURNISH WITH RAISED COVERS AND FIXTURE STUDS WHERE REQUIRED. WITHOUT FIXTURE OR DEVICE: FURNISH BLANK COVER. OFFSET BACK-TO-BACK OUTLETS WITH MINIMUM 6 IN. SEPARATION.

b. JUNCTION AND PULL BOXES: GALVANIZED SHEET STEEL WITH SCREW-ON COVERS, EXCEPT AS NOTED. FURNISH WITH INSULATED SUPPORTS FOR CABLES. LOCATIONS SHALL BE AS NOTED OR REQUIRED AND ACCESSIBLE. PROVIDE BARRIERS IN NEW AND RENOVATED BOXES BETWEEN 120/208 VOLT AND 265/460 VOLT WIRING AND BETWEEN EMERGENCY AND NORMAL WIRING. FLOOR BOXES SHALL BE SUITABLE FOR CONDUIT AND DEVICES NOTED. RAISED OUTLETS SHALL BE HUBBELL #B2414 SERIES WITH ABOVE FLOOR FITTING. TELEPHONE: BUSHED HOLE. POWER: DUPLEX RECEPTACLE OR OTHER AS NOTED. INCREASE SIZE TO SUIT AS NECESSARY. FLUSH OUTLETS SHALL BE HUBBELL #B2414 SERIES WITH FLUSH FLOOR FITTING FOR TELEPHONE AND FLUSH DUAL FLAP COVER WITH DUPLEX RECEPTACLE FOR POWER AS NOTED. INCREASE SIZE TO SUIT AS NECESSARY.

N. PROVIDE RACEWAYS ONLY AS HEREIN SPECIFIED, EXCEPT AS NOTED. RACEWAYS SHALL BE RUN CONCEALED, EXCEPT AS NOTED. PROVIDE RACEWAY SUPPORT UTILIZING CEILING TRAPEZE, STRAP HANGERS, OR WALL BRACKETS. PROVIDE U-BOLTS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND CONNECTED TO ACCEPTABLE SUPPORTS. PROVIDE RISER CLAMPS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND RESTING ON SLAB. FOR THROUGH-THE-FLOOR SYSTEMS, UTILIZE AN ASSEMBLY SIMILAR TO HUBBELL FIRE RATED POKE-THROUGH-FLOOR BOX SYSTEM. FOR ABOVE FLOOR FITTINGS TELEPHONE SHALL BE BUSHED HOLE AND POWER SHALL BE DUPLEX RECEPTACLE OR OTHER AS NOTED. PROVIDE SEPARATION BARRIER BETWEEN POWER AND TELEPHONE COMPARTMENTS. PROVIDE JUNCTION BOX ON UNDERSIDE OF FLOOR. PACK FITTING TO RESTORE FIRE RATING OF FLOOR. SECURE ALL RACEWAYS TO SUPPORTS WITH PIPE STRAPS OR U-BOLTS. SPACING OF SUPPORTS SHALL BE A MINIMUM OF 10 FT ON CENTER FOR METALLIC RACEWAY AND AS REQUIRED FOR NONMETALLIC RACEWAY. SPACING SHALL BE 5 FT ON CENTER FOR WIREWAYS AND PER CODE AND AS NOTED FOR OTHERS. MOUNT SUPPORTS TO STRUCTURE: MASONRY WITH TOGGLE BOLTS ON HOLLOW MASONRY, EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK, MACHINE SCREWS ON METAL, BEAM CLAMPS ON FRAMEWORK, WOOD SCREWS ON WOOD, AND PAN THROUGH STRAPS IN METAL DECK. NAILS, RAWL PLUGS OR WOOD PLUGS SHALL NOT BE PERMITTED. WHERE REQUIRED BY STRUCTURE, FURNISH THROUGH BOLTS AND FISHPLATES. EXPOSED RACEWAYS SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. PROVIDE CLEARANCE WITH WATER, STEAM OR OTHER PIPING (MINIMUM 3 IN. SEPARATION FROM STEAM AND HOT WATER PIPES, EXCEPT 1 IN. FROM PIPE COVER AT CROSSINGS AND 18 IN. FOR PARALLEL RUNS). FOR HUNG CEILING OUTLETS, RUN IN HUNG CEILING AND CONNECT TO CEILING SUPPORT CHANNELS. IN MASONRY AND POURED CONCRETE, RUN VERTICALLY ONLY. MAINTAIN GROUNDING CONTINUITY OF INTERRUPTED METALLIC RACEWAYS WITH GROUND CONDUCTOR, AND IN FLEXIBLE CONDUIT FOR FEEDERS AND MOTOR TERMINAL CONNECTIONS. EMPTY RACEWAYS OVER 10 FT LONG: PROVIDE FISH OR PULL WIRE, GALVANIZED OR NYLON ROPE. RIGID STEEL CONDUIT SHALL BE PERMITTED FOR FEEDERS AND BRANCH CIRCUITS. PAINT MALE THREADS OF FIELD-THREADED CONDUIT WITH GRAPHITE-BASE PIPE COMPOUND AND BUTT CONDUIT ENDS. TOUCH UP MARRED SURFACES AND FIELD-CUT THREADS, CRC-COLD GALVANIZED. EMT SHALL BE PERMITTED FOR BRANCH CIRCUITS ONLY, IN DRY LOCATIONS, DRY WALLS, HUNG CEILINGS, HOLLOW BLOCK WALLS AND FURRED SPACES. EMT SHALL NOT BE PERMITTED IN RAISED FLOORS. FLEXIBLE STEEL CONDUIT SHALL BE UTILIZED FOR SHORT CONNECTIONS WHERE RIGID CONDUIT IS IMPRACTICAL, FROM OUTLET BOX TO RECESSED LIGHTING FIXTURE; PROVIDE MINIMUM 4 FT AND MAXIMUM 6 FT LENGTHS. FOR FINAL CONNECTION TO MOTOR TERMINAL BOX, TRANSFORMER AND OTHER VIBRATING EQUIPMENT: PROVIDE WITH POLYVINYL SHEATHING AND GROUND CONDUCTOR. MINIMUM LENGTH: 18 IN. WITH SLACK. CONNECT GROUND CONDUCTOR TO ENCLOSURE OR RACEWAY AT EACH END. FOR EXPANSION JOINT CROSSINGS, CROSS AT RIGHT ANGLES AND ANCHOR ENDS. CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING. ALL COUPLINGS SHALL BE COMPRESSION TYPE. NO SET SCREW FITTINGS. EXPANSION FITTINGS SHALL BE INSTALLED AT RIGHT ANGLES WITH CLIP JOINT CENTERED IN EXPANSION JOINT. PROVIDE A LENGTH OF RUN IN ACCORDANCE MANUFACTURER'S RECOMMENDATIONS. PRESET FITTINGS SHALL ALLOW FOR TEMPERATURE VARIATION. RACEWAYS PASSING THROUGH FIRE-RATED CONSTRUCTION: SEAL OPENING WITH FIRE SEALANT.

O. PROVIDE CABLE SUPPORTS IN ACCORDANCE WITH NEW YORK CITY ELECTRIC CODE ARTICLE 300.19. CABLE SUPPORTS SHALL UTILIZE A ONE-PIECE PLUG WITH POZI-GRIP WEDGING PLUG AS MANUFACTURED BY OZ-GEDNEY. TYPE SF SHALL BE USED FOR ARMORED CABLE. INSTALL CABLE SUPPORTS AT THE TOP OF A VERTICAL RISE AND PROVIDE INTERMEDIATE ADDITIONAL SUPPORTS AS REQUIRED TO LIMIT SUPPORTED CONDUCTOR LENGTHS TO NOT GREATER THAN THOSE SPECIFIED IN TABLE 300.19(A).

P. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. OUTLET BOXES SHALL BE SET SQUARE AND TRUE WITH BUILDING FINISH. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRON OR GROUT IN WITH MASONRY. VERIFY OUTLET LOCATIONS IN FINISHED SPACES WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISHES. PROVIDE BARRIERS BETWEEN SWITCHES CONNECTED TO DIFFERENT PHASES FOR VOLTAGES EXCEEDING 150 VOLTS TO GROUND.

Q. PANEL, JUNCTION AND PULL BOXES SHALL BE LOCATED CLEAR OF OTHER TRADES. CONCEAL JUNCTION AND PULL BOXES IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. BOXES SHALL BE ACCESSIBLE. SUPPORT BOXES FROM BUILDING STRUCTURE,

INDEPENDENT OF CONDUIT. PROVIDE FLOOR-TO-CEILING CHANNELS FOR MOUNTING ON DRYWALL AND LIGHTWEIGHT CONSTRUCTION. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILINGS SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURE. SECURE TO BLACK IRON SUPPORT. MOTOR TERMINAL BOXES: COORDINATE WITH MOTOR BRANCH CIRCUIT CONDUIT AND WIRING; ADD BOX VOLUME WHERE REQUIRED.

A. FIRE SEALANTS: PROVIDE FOR RACEWAYS AND WIRE PASSING THROUGH FLOOR SLOTS, SLEEVES OR OPENINGS IN FIRE-PARTITIONS ROOMS.

B. PERFORM CONTINUITY TESTS OF RESISTANCE OF FEEDER CONDUITS FROM SERVICE TO POINT OF FINAL DISTRIBUTION USING 1 CONDUCTOR RETURN. MAXIMUM RESISTANCE SHALL BE 25 OHMS.

1. WIRE AND CABLE:

C. PROVIDE WIRE AND CABLE COMPLETE WITH ACCESSORIES. SIZE REFERENCE SHALL BE AWG EXCEPT AS NOTED.

D. CONDUCTORS SHALL BE COPPER, ASTM STANDARD SOLID (NO. 10 AND SMALLER) OR STRANDED (NO. 8 AND LARGER). GENERAL USE CABLING SHALL BE NO. 12 MINIMUM. AT 120 VOLTS AND OVER 100 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM. AT 265 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM.

E. CONTROL AND ALARM CABLING, EXCEPT AS NOTED, SHALL BE NO. 14 MINIMUM. AT 120 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 12 MINIMUM. OTHER VOLTAGES AND PHASES: ADJUST CABLE SIZING AS REQUIRED TO MAINTAIN VOLTAGE DROP. INCREASE RACEWAY SIZES FOR LARGER WIRE AS REQUIRED.

F. INSULATION SHALL BE RUBBER AND THERMOPLASTIC MEETING ASTM AND IPCEA STANDARDS. TYPE THW OR THWN SHALL BE UTILIZED FOR FEEDERS AND BRANCH CIRCUITS EXCEPT AS NOTED. TYPE SFF-2 SHALL BE UTILIZED FOR BRANCH CIRCUITS LOCATED IN WIRING CHANNELS OF CONTINUOUS FLUORESCENT FIXTURES AND IN AMBIENT TEMPERATURES OVER 90 DEG C. FOR UNGROUNDED ISOLATED BRANCH CIRCUITS PROVIDE CROSS-LINKED POLYETHYLENE INSULATION (TYPE XHHW).

G. METAL-CLAD CABLE, NFPA 70 ARTICLE 330 TYPE MC:

1) INTERLOCKED FLEXIBLE GALVANIZED STEEL ARMOR SHEATH, CONFORMING TO UL REQUIREMENTS FOR TYPE MC METAL CLAD CABLE.
2) INSULATED COPPER CONDUCTORS, SUITABLE FOR 600 VOLTS, RATED 90°C, ONE OF THE TYPES LISTED IN NFPA 70 TABLE 310.13(A) OR OF A TYPE IDENTIFIED FOR USE IN TYPE MC CABLE.
3) INTERNAL FULL SIZE COPPER GROUND CONDUCTOR WITH GREEN INSULATION.
4) ACCEPTABLE COMPANIES: AFC CABLE SYSTEMS INC., SOUTHWIRE, GENERAL CABLE.
5) CONNECTORS FOR MC CABLE: AFC FITTING INC.'S AFC SERIES, ARLINGTON INDUSTRIES INC.'S SADDLE GRIP, OR THOMAS & BETTS CO.'S TITE-BITE WITH ANTI-SHORT BUSHINGS

COLOR CODING SHALL BE AS FOLLOWS:
120/208 VOLT SYSTEM:
BLACK FOR A PHASE
RED FOR B PHASE
BLUE FOR C PHASE

NEUTRAL WIRE SHALL UTILIZE WHITE OUTER COVERING THROUGHOUT. EQUIPMENT GROUND WIRE SHALL UTILIZE GREEN OUTER COVERING THROUGHOUT. WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION TO OVERLAP CONDUCTORS WITH 6 IN. OF COLOR TAPING IN ACCESSIBLE LOCATIONS.

PROVIDE FLAMEPROOF LINEN OR FIBER TAGS IN ACCESSIBLE LOCATIONS. FOR FEEDERS INDICATE FEEDER NUMBER, SIZE, PHASE AND POINTS OF ORIGIN AND TERMINATIONS. FOR CONTROL AND ALARM WIRING INDICATE TYPE (CONTROL OR ALARM), SIZE OF WIRE, AND POINTS OF ORIGIN AND TERMINATIONS.

H. TERMINATIONS, SPLICES AND TAPS UNDER 600 VOLTS: COPPER CONDUCTORS NO. 10 AND SMALLER SHALL UTILIZE COMPRESSION-TYPE OF TWIST-ON SPRING-LOADED CONNECTORS AND CLEAR NYLON-INSULATED COVERING. COPPER CONDUCTORS NO. 8 AND LARGER SHALL UTILIZE MECHANICAL BOLTED PRESSURE OR HYDRAULIC COMPRESSION TYPE USING MANUFACTURER'S RECOMMENDED TOOLING. CABLE LUGS AND CONNECTORS SHALL UTILIZE COMPRESSION TYPE OF SAME METAL AS CONDUCTOR. PROVIDE TO MATCH CABLE, WITH MARKING INDICATING SIZE AND TYPE. COPPER LUG CONNECTIONS TO BUS BARS: USE ANTISEIZE COMPOUND ON TANG.

I. NOT MORE THAN 3 LIGHTING OR CONVENIENCE OUTLET CIRCUITS SHALL BE INSTALLED IN ONE CONDUIT UNLESS OTHERWISE INDICATED. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F. PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF 120/208 AND 265/460 VOLT SYSTEMS, EXCEPT 460 VOLT MOTOR BRANCH CIRCUIT WIRING AND RELATED 120 VOLT CONTROL WIRING. THERMOPLASTIC WIRES SHALL NOT BE INSTALLED IN COMPUTER AREA RAISED FLOORS.

J. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS.

K. PERFORM CONTINUITY AND INSULATION TESTS. MEGGER TEST 100 PERCENT OF FEEDERS, 10 PERCENT OF BRANCH CIRCUITS AND ALL MOTOR BRANCH CIRCUITS OVER 25 HP. PERFORM TESTS PRIOR TO CONNECTING EQUIPMENT AND IN PRESENCE OF AUTHORIZED REPRESENTATIVES. SUBMIT WRITTEN REPORT OF RESULTS. CORRECT OR REPLACE CABLE TESTING BELOW MANUFACTURER'S STANDARDS.

2. WIRING DEVICES:

L. WIRING DEVICES SHALL BE SPECIFICATION GRADE UNLESS OTHERWISE SPECIFIED. ALL DEVICES SHALL BE FLUSH MOUNTED, UNLESS OTHERWISE NOTED. PROVIDE COMPLETE MATERIAL AND ACCESSORIES AS NOTED.

M. LOCAL WALL SWITCHES SHALL BE ROCKER TYPE, QUIET OPERATING, RATED 20 AMP, 120/277 VOLT, AC. SIMILAR TO LEVITON DECORA SERIES A5621 (SINGLE POLE), A5623 (3-WAY) AND A5624 (4-WAY).

N. STRAIGHT BLADE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE DUPLEX CONVENIENCE 125 VOLTS, 2 POLE, 3 WIRE, U GROUND SLOT, DECORA SERIES BY LEVITON. GROUNDED, EXCEPT AS NOTED. 1)SINGLE GANG, RECESSED, DUPLEX RECEPTACLE: TAMPER RESISTANT, 2-POLE, 3-WIRE GROUNDING, 15A, 125V, NEMA 5-20R; LEVITON 689 SERIES (COLOR AS SPECIFIED BY ARCHITECT)

O. USB CHARGER/ DUPLEX TAMPER-RESISTANT RECEPTACLE: TAMPER RESISTANT,

D. INSERTION RECEPTACLES SHALL BE HOSPITAL GRADE DUPLEX CONVENIENCE 125 VOLTS, 2 POLE, 3 WIRE, U GROUND SLOT. GROUNDED, EXCEPT AS NOTED.

12. LIGHTING FIXTURES:

A. FIXTURES TO BE AS SPECIFIED BY ARCHITECT AND SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED AND EQUIPPED WITH ALL NECESSARY SOCKETS, BALLASTS, SUPPORTING HARDWARE AND ACCESSORIES. REFER TO DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS.

B. FIXTURE CATALOG NUMBERS USED TO ILLUSTRATE EQUIPMENT TYPE DO NOT NECESSARILY DENOTE REQUIRED MOUNTING EQUIPMENT OR ACCESSORIES. PROVIDE ACCESSORIES TO SUIT.

C. BALLAST: CLASS P, HIGH POWER FACTOR, LOWEST AVAILABLE NEMA RATED NOISE LEVEL, ET1 AND CBM APPROVED. ENERGY SAVING TYPE. TRIGGER START FOR 24-INCH LAMPS AND RAPID START FOR 48-INCH. TWO LAMP BALLASTS; NO THREE LAMP BALLASTS. BALLASTS SHALL BE ADVANCE MAGNETEK, UNIVERSAL OR EQUAL.

D. LED DRIVERS SHALL BE ELECTRONIC TYPE, LABELED AS COMPLIANT WITH RADIO FREQUENCY INTERFERENCE (RFI) REQUIREMENTS OF FCC TITLE 47, PART 15 AND COMPLY WITH NEMA SSL 1 "ELECTRONIC DRIVERS FOR LED DEVICES, ARRAYS OR SYSTEMS". LED DRIVERS SHALL HAVE A SOUND RATING OF "A", HAVE A MINIMUM EFFICIENCY OF 85% AND BE RATED FOR A THD OF LESS THAN 20% AT ALL INPUT VOLTAGES.

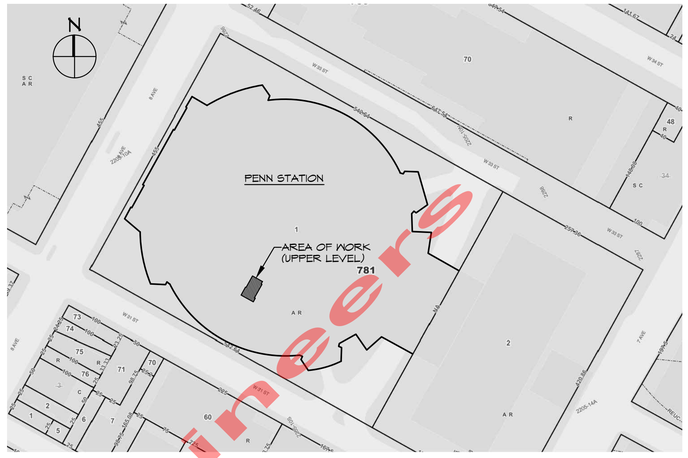
E. DIMMABLE LED DRIVERS SHALL BE CAPABLE OF DIMMING WITHOUT LED STROBING OR FLICKER ACROSS THEIR FULL DIMMING RANGE. PROVIDE TYPE OF LED DRIVER AS PER LIGHTING FIXTURE SCHEDULE, DIMMABLE LED DRIVERS SHALL BE 0-10V WHERE NOT INDICATED.

F. CONTINUOUS ROW, TWO LAMP STRIP FIXTURES SHALL BE STAGGERED TYPE.

G. FLUORESCENT LIGHTING FIXTURES, INCLUDING GENERAL CONSTRUCTION, LAMPS AND BALLASTS SHALL CONFORM TO THE ENERGY EFFICIENCY REQUIREMENTS OF CONSOLIDATED EDISON CO. AND QUALITY FOR A UTILITY REBATE TO OWNER UNDER CON EDISON'S ENLIGHTENED ENERGY LIGHTING REBATE PROGRAM. CONTRACTOR SHALL COORDINATE REBATE PROGRAM WITH CON EDISON AND ARRANGE FOR CON EDISON TO PERFORM A SURVEY TO INVENTORY ALL EXISTING FIXTURES PRIOR TO DEMOLITION.

H. EXIT SIGNS SHALL BE PRECISION DIE-CAST ALUMINUM HOUSING WITH LASER-FORMED ACRYLIC LEGEND. EXIT SIGNS SHALL COMPLY WITH UL 924 AND BE MEA APPROVED FOR USE IN HALTOM CITY, TEXAS . AC POWERED WITH PREMIUM LONG-LIFE NICKEL CADMIUM BATTERY WITH STANDARD UL LISTED 3-HOUR RUN TIME. PROVIDE WITH INTEGRAL AUTOMATIC CHARGER IN A SELF CONTAINED POWER PACK. LED INDICATOR WITH PUSH TO TEST SWITCH.

PLOT PLAN



Property of NY Engineers

DOB Approval

Project:
ALTERATION TO EXISTING TENANT SPACE AT EXISTING MULTI-STORY BUILDING

Drawing Title:
ELECTRICAL SPECIFICATION SHEET 2 OF 2

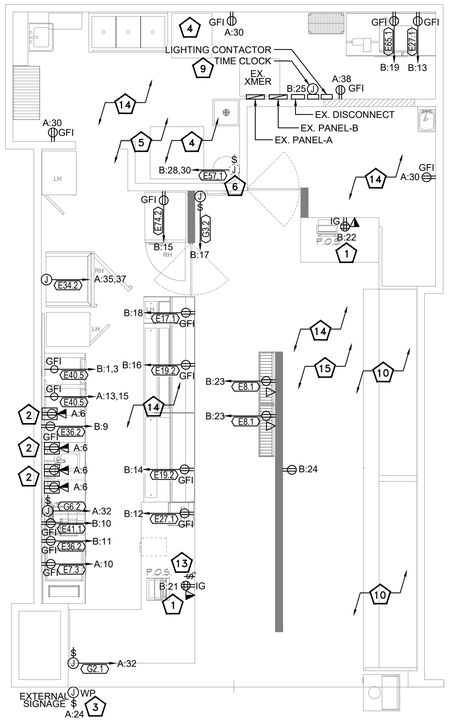
Drawing Scale: AS NOTED

Drawing No.:
E-003.00

Sheets in Contract:
4 of 7

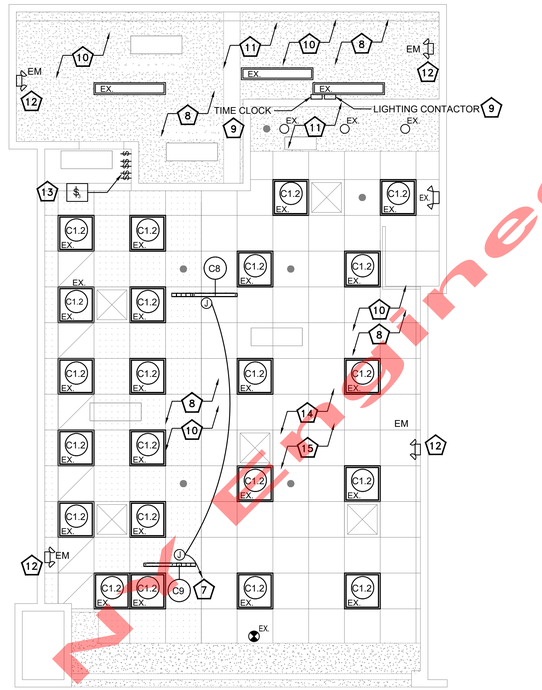
Project:

ALTERATION TO EXISTING TENANT SPACE AT EXISTING MULTI-STORY BUILDING



1 ELECTRICAL FLOOR POWER PLAN

SCALE: 1/4" = 1'-0"



2 ELECTRICAL FLOOR LIGHTING PLAN

SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. ALL BRANCH CIRCUITS INDICATED ON THIS PLAN SHALL BE CIRCUITED TO THERE RESPECTIVE PANELS, CIRCUIT NUMBER INDICATED, U.O.N.
2. REFER TO DWG. E001 FOR ELECTRICAL GENERAL NOTES, SYMBOL LIST & ABBREVIATIONS.
3. REFER TO DWG. E002 & E003 FOR ADDITIONAL ELECTRICAL SPECIFICATIONS.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT FOR EXACT HEIGHT OF OUTLETS.
5. CONTRACTOR TO VERIFY SCOPE OF WORK WITH OWNER. PRIOR TO BID.
6. PROVIDE GFI RECEPTACLE WITHIN 25FT OF THE SERVICE EQUIPMENT.
7. E.C TO TRACE THE EXISTING RECEPTACLE AND THEIR CIRCUIT. E.C TO CHECK OPERABLE CONDITION ON SITE AND REPLACE IF FOUND INOPERABLE.
8. REFER TO SHEET E601 FOR MORE INFORMATION ON ELECTRICAL SWITCHGEARS.
9. CONTRACTOR IS ADVISED THAT ADJUSTMENTS TO EMERGENCY AND EXIT LIGHT FIXTURE LOCATIONS/QUANTITIES MAY BE REQUIRED BY AHJ UPON FINAL INSPECTION.
10. ALL NIGHT LIGHT, EMERGENCY AND EXIT LIGHT FIXTURES SHALL BE CONNECTED AHEAD OF SWITCHED LIGHTING CIRCUIT.
11. UNLESS OTHERWISE NOTED, LIGHT SWITCHES SHALL BE GANGED TOGETHER UNDER A COMMON FACEPLATE.
12. REFER TO ARCHITECTURAL SHEET A100.00 AND A101.00 FOR EQUIPMENT SCHEDULE AND LIGHTING FIXTURE SCHEDULE.
13. PROVIDE JUNCTION BOX FOR SPEAKERS AND SECURITY CAMERAS. COORDINATE POWER REQUIREMENT AND LOCATION WITH LV VENDOR/ARCHITECT/OWNER. TYP. THROUGHOUT UNLESS OTHERWISE NOTED.
14. PROVIDE JUNCTION BOX OR CEILING OUTLET AS REQUIRED FOR SPEAKERS/AUDIO SYSTEM. COORDINATE POWER REQUIREMENT AND LOCATION WITH MANUFACTURER/ARCHITECT/OWNER. TERMINATE SPEAKER WIRES AT VOLUME CONTROLS.

KEY NOTES (#)

1. QUAD RECEPTACLE AND DATA INSTALLED WITHIN MILLWORK IN LOCATION AS SHOWN ON FLOOR PLAN. ROUTE FROM ADJACENT FULL HEIGHT WALL AND WITHIN CABINETRY.
2. PROVIDE DUPLEX RECEPTACLE AND DATA AT FOR DISPLAY EQUIPMENT AT 6'-3" AFF. E.C. TO COORDINATE WITH ARCHITECT/MANUFACTURER FOR MOUNTING HEIGHT AND ELECTRICAL SPECIFICATIONS PRIOR TO BID/INSTALLATION.
3. EXTERIOR SIGN(S), PROVIDE NEMA-3R, SWITCH AND FINAL CONNECTIONS VIA CIRCUITS SHOWN. VERIFY EXACT QUANTITY AND LOCATION OF SIGNAGE WITH FRANCHISEE PRIOR TO ROUGH-IN. REUSE EXISTING CIRCUIT (OPERABLE CONDITION VERIFICATION).
4. EXISTING (EX) MECHANICAL UNITS TO REMAIN. E.C. TO VERIFY THE AVAILABILITY AND OPERABLE CONDITION OF THE EXISTING ELECTRICAL CIRCUIT AND CONTROLS IN THE FIELD. E.C. SHALL RESHUFFLE THE BREAKERS TO MATCH THE EXISTING SITE CONDITIONS.
5. E.C. SHALL COORDINATE WITH THE MANUFACTURER FOR THE EXACT SPECIFICATION AND ELECTRICAL CONNECTION REQUIREMENT OF THE EQUIPMENTS PRIOR TO BID/INSTALLATION. PROVIDE CIRCUIT AND CONTROL AS REQUIRED.
6. EXISTING WATER HEATER TO REMAIN. EC SHALL FIELD VERY THE LOCATION AND OPERABLE CONDITION OF THE ASSOCIATED BREAKER AND POINT OF CONNECTION PRIOR TO BID. REPLACE IF FOUND INOPERABLE.BASE BID ACCORDINGLY.
7. E.C. TO CONNECT NEW LIGHTING FIXTURES TO EXISTING LIGHTING CIRCUITS AND CONTROLS AS REQUIRED. FIELD VERIFY EXISTING CIRCUIT CAPACITY AND MODIFY WIRING AND SWITCHING TO ENSURE PROPER OPERATION OF COMBINED LIGHTING. IF FOUND ANY DISCREPANCIES REPORT TO ENGINEER ON RECORD PRIOR TO INSTALLATION/BID.
8. EXISTING LIGHT FIXTURES, CIRCUITRY AND BREAKERS TO REMAIN. E.C. TO VERIFY OPERATION, CIRCUITRY, AND SWITCHING IN FIELD. IF FOUND INOPERABLE REPLACE WITH NEW. EC TO ENSURE THE EXISTING LIGHTING AND CONTROL IS COMPLIANT WITH THE LATEST ENERGY CODE. IF NOT PROVIDE TIMECLOCK CONTROL TO ALL THE LIGHTINGS. IF FOUND ANY DISCREPANCIES REPORT TO ENGINEER ON RECORD PRIOR TO BID/INSTALLATION.
9. EXISTING LIGHTING TIME CLOCK AND CONTACTORS TO REMAIN. E.C. TO FIELD VERIFY LOCATION AND OPERABLE CONDITION. IF NOT PRESENT OR INOPERABLE, PROVIDE NEW TIME CLOCK, OVERRIDE SWITCH AND LIGHTING CONTACTORS AND REROUTE LIGHTING CONTROL THROUGH THE NEW TIME CLOCK. BASE BID ACCORDINGLY.
10. E.C. TO TRACE THE CIRCUITS FOR EXISTING EQUIPMENTS/LIGHTING/RECEPTACLES AND RESHUFFLE THE BREAKERS TO MATCH THE EXISTING SITE CONDITIONS.
11. E.C. TO ENSURE LIGHTING ABOVE ELECTRICAL SWITCHGEAR IS NOT CONTROLLED BY AUTOMATIC MEANS ONLY. PROVIDE MANUAL SWITCH ACCESSIBLE IN THE VICINITY OF THE EQUIPMENT.
12. WIRE ALL EMERGENCY AND EXIT AHEAD OF SWITCHING FOR CONTINUOUS OPERATIONS. CONNECT TO ADJACENT LIGHTING CIRCUIT.
13. E.C. TO COORDINATE WITH ARCHITECTURAL DRAWINGS/ARCHITECT FOR FINAL LOCATION, QUANTITY, ELECTRICAL SPECIFICATIONS AND MOUNTING HEIGHT OF NEW SWITCHES PRIOR TO BID/INSTALLATION. PROVIDE A 3 WAY CONTROL FOR THE NEWLY ADDED LIGHTS.
14. PROVIDE ALL BRANCH CIRCUIT AND FEEDER POWER CONDUCTORS AS COPPER, 600V, LISTED LOW SMOKE ZERO HALOGEN (LSZH), XHHW-2 INSULATED, IN COMPLIANCE WITH NFPA 130 REQUIREMENTS FOR TRANSIT FACILITIES.
15. RSC SHALL BE USED FOR EXPOSED SERVICE AND FEEDER CONDUIT INSTALLATIONS, AND OTHER LOCATIONS REQUIRING MECHANICAL PROTECTION (EXPOSED LOCATIONS). EMT SHALL BE PERMITTED FOR CONCEALED OR PROTECTED INTERIOR BRANCH CIRCUIT CONDUIT INSTALLATIONS.

DOB Approval

Property of NY Engineers

Drawing Title:

ELECTRICAL FLOOR POWER AND LIGHTING PLAN

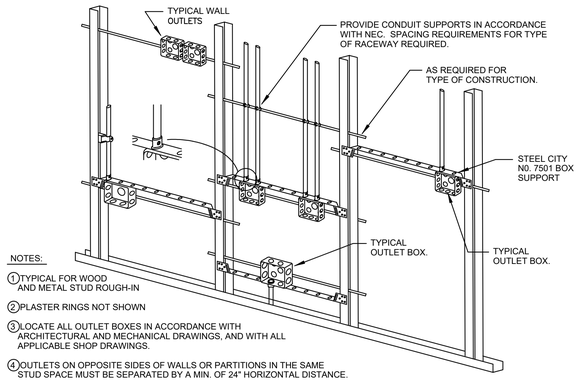
Drawing Scale: AS NOTED

Drawing No.:

E-100.00

Sheets in Contract:

5 of 7



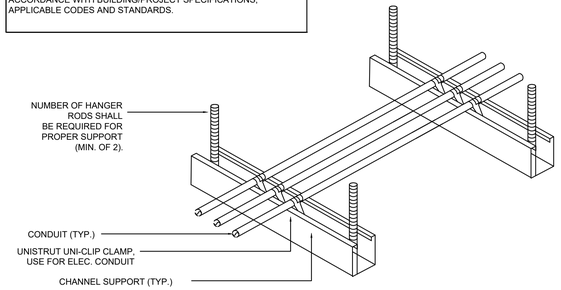
NOTES:

1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN
2. PLASTER RINGS NOT SHOWN
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MIN. OF 24" HORIZONTAL DISTANCE.

1 / E500 DETAIL TYPICAL ROUGH-IN REQUIREMENTS

N.T.S

NOTE:
THIS INFORMATION MAY NOT CONTAIN ALL DETAILS REQUIRED FOR CONSTRUCTION. APPROPRIATE MODIFICATION MAY BE REQUIRED TO ENSURE SUITABILITY OF THESE DRAWINGS FOR THE SPECIFIC APPLICATION. IT IS THE USER'S RESPONSIBILITY TO ENSURE INSTALLATION OF THE EQUIPMENT/SYSTEM IS IN ACCORDANCE WITH BUILDING/PROJECT SPECIFICATIONS, APPLICABLE CODES AND STANDARDS.



NOTES:

1. ALL CONDUIT MAY BE COMBINED ON SAME SUPPORT CHANNEL WHERE PRACTICAL.
2. SUPPORT CHANNEL LENGTH SHALL NOT BE DETERMINED UNTIL ALL PIPING, CONDUIT, ETC. TO BE SUPPORTED IS COORDINATED.
3. SUPPORT CHANNEL SPACING SHALL BE NO MORE THAN 10'-0".
4. UNISTRUT AND CONDUIT INSTALLATION MAY BE REVERSED.

2 / E500 CONDUIT SUPPORT DETAIL

N.T.S

Equipment Schedule

#	Model	Manufacturer	Count	Description	ELECTRICAL SPECS (VERIFY WITH VENDOR)	NEMA RATING (VERIFY WITH THE VENDOR/ MANUFACTURER)
E7.3	DISPLAY REFRIGERATOR	TRUE	1	COUNTER TOP MODEL. DEDICATED 115V, 15 AMP DUPLEX OUTLET (NEMA 5-15R) WITHIN 6 FEET.	115V/15A/1PH	NEMA5-20R
E8.1	QUEUE LINE CHIP DISPLAY	BISH DISPLAY	2	QUEUE LINE CHIP DISPLAY ON CASTERS. 3 WIRE SHELVES.	115V/15A/1PH	-
E15.2	35" END WALL	DUKE MFG. CO.	1	35" LONG END WALL. 36" HIGH 4 1/2" WIDE. BEIGEWOOD LAMINATE (7850-60) FINISH WITH STAINLESS STEEL CAP.	-	-
E17.1	18" HOT FOOD UNIT	DUKE MFG. CO.	1	18" HOT FOOD UNIT. 500 WATT 115 VOLT HEATING ELEMENT WITH THERMOSTAT	500VA/115V/1P	NEMA5-20R
E19.2	60" COLD PAN	DUKE MFG. CO.	2	60" COLD PAN. INSTALLED BY G.C. ULS APPROVED. ELECTRICAL CONNECTIONS AND WIRING TO LOCAL AND STATE CODE REQUIREMENTS AS DETERMINED BY G.C. OR ELECTRICIAN.	530VA/115V/1P	NEMA5-20R
E25.5	DECOR PANEL	DUKE MFG. CO.	1	LAMINATE DECOR PANEL. 11'-6" TOTAL LENGTH.	-	-
E27.1	COOKIE DISPLAY CASE	NEMCO	1	4 TIER FULLY ENCLOSED COOKIE DISPLAY CASE. GLASS AND POLYCARBONATE CONSTRUCTION.	120V/20A/1PH	NEMA5-20R
E28.1	P.O.S. SHROUD	DUKE MFG. CO.	1	SMALL FORMAT PAINTED METAL SHROUD. FOR USE ON POS SHELF.	-	-
E29.1	SAFE	FIREKING SECURITY GROUP	1	QUICK DROP. INSTALLED BY G.C. IN SERVICE AREA	-	-
E30.3	35" SWING GATE	DUKE MFG. CO.	2	30" HIGH X 35" WIDE SWING GATE. BEIGEWOOD LAMINATE (7850-60) FINISH. INSTALLED BY G.C.	-	-
E31.1	COMBINATION BREAD CABINET (LH)	LOCKWOOD	1	INTEGRATED OPEN AIR COOLING RACK ABOVE WITH ENCLOSED CABINET BELOW. INSTALLED BY G.C.	-	-
E32.1	COMPANION BREAD CABINET (LH)	LOCKWOOD	1	FULLY ENCLOSED S.S CABINET WITH GLASS DOORS. INSTALLED BY G.C.	-	-
E34.2	BREAD OVEN (RH)	DUKE MFG. CO.	1	DEDICATED CIRCUT REQUIRED. DIRECT WIRED. INSTALLED BY G.C. 1/4" WATERLINE IS REQUIRED.	6.6KVA/208V/1P	-
E36.2	60" REFRIGERATED BACK COUNTER	DUKE MFG. CO.	3	BACK COUNTER WITH UNDER-COUNTER REFRIGERATOR. STAINLESS STEEL FINISH. INSTALLED BY G.C.	120V/4.4A/1PH	NEMA5-20R
E37.5	48" BACK COUNTER SINK	DUKE MFG. CO.	1	BACK COUNTER WITH RIGHT HAND SINK. STAINLESS STEEL FINISH. INSTALLED BY G.C.	-	-
E40.5	RAPID COOK OVEN	MERRYCHEF	2	MERRYCHEF CONNEX 16 MICROWAVE/ CONVECTION OVEN. SEE MANUFACTURER FOR FURTHER SPECIFICATIONS.	6KVA/208VA/1P	NEMA6-30R/P
E41.1	MEAT SLICER	BIZERBA	1	GSP HD I-90 AUTOMATIC SLICER. 120v / 60Hz / 1-PH, 2.6 A. INSTALLED BY G.C.	120V/2.6A/1PH	NEMA5-20R
E44.1	24" COUNTERTOP CHIP RACK	FRITO-LAY	1	24" COUNTERTOP CHIP RACK.	-	-
E53.1	3 COMP SINK	DUKE MFG. CO.	1	3 COMPARTMENT 0 DRAINBOARDS. INSTALLED BY G.C. ULS APPROVED.	-	-
E55.1	HAND SINK	DUKE MFG. CO./LOCAL	1	WALL MOUNTED HAND SINK. SUBJECT TO HEALTH CODE APPROVAL	-	-
E56.1	MOP SINK	LOCALLY SOURCED	1	FLOOR LEVEL SINK. ACQUIRED LOCALLY, INSTALLED BY G.C.	-	-
E57.1	ELECTRIC HOT WATER HEATER	LOCALLY SOURCED	1	40 GALLON. ACQUIRE LOCALLY, INSTALLED BY G.C.	-	-
E63.1	VEGETABLE SLICER	NEMCO	1	NEMCO "EASY-SLICER". MANUAL SLICER MOUNTED ON STAINLESS STEEL TABLE TOP. NSF APPROVED.	-	-
E65.1	MICROWAVE	MENUMASTER/SHARP	1	5-20R OUTLET REQUIRED. 1200 WATT. 120V/60HZ/1PH 20 AMP CIRCUIT. DEDICATED CIRCUIT REQUIRED	120V/10A/1PH	NEMA5-20R
E68.1	SMART WALL SYSTEM	INTER METRO	1	SWPS-36K3, SMARTWALL G3 PREP SINK UNIT. ACCESSORIES AVAIALBLE	-	-
E69.1	CLEANING PRODUCT RACK	SSDC	1	DISPENSING STATION FOR CLEANING PRODUCTS.	-	-
E74.2	REACH-IN FREEZER	ATOSA	1	RIGHT HINGED, 1 DOOR REACH-IN FREEZER SELF EVAPORATING, DIRECT WIRED, NSF APPROVED. INSTALLED BY G.C.	120V/20A/1PH	NEMA5-20R
E77.1	STORAGE UNITS	INTER METRO	1	14" X 24" SUPER ERECTA BRITE	-	-
E86	PAPER TOWEL & SOAP DISPENSER	QUICK SUPPLY	1	PAPER TOWEL & SOAP DISPENSER. FOLLOW LOCAL HEALTH CODE GUIDELINES FOR APPROPRIATE PLACEMENT.	-	-

Property of NY Engineers

DOB Approval

Project:
ALTERATION TO EXISTING TENANT SPACE AT EXISTING MULTI-STORY BUILDING

Drawing Title:
ELECTRICAL DETAILS SHEET & EQUIPMENT LIST

Drawing Scale: AS NOTED

Drawing No.:
E-500.00

Sheets in Contract:
6 of 7

PANEL:	A	(EXISTING) ②								MOUNTING:	SURFACE
208Y/120	VOLTS	PHASE	3	BUS	225			DEMAND LOAD (in kVA)	57.60		PANEL LOCATION:	PROP. WASH AREA
200	MCB	WIRE	4					DEMAND CURRENT (in Amps)	160.07		FED FROM:	TRANSFORMER

NOTE: L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, O : OTHER/MISC. (TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	100/2P	PANEL B (E)	O	7.83	S.A.E	11.15			S.A.E	3.32	H	EXISTING BREAKER	30/2P	2
3			O	7.83			11.15			3.32	H			4
5	30/1P	SPARE			S.A.E			1.92	2#12 + 1#12G, 3/4"C	1.92	R	TV DISPLAY	20/1P	6
7						0.00						EXISTING BREAKER	20/1P	8
9	30/3P	SPARE			S.A.E		1.44		2#12 + 1#12G, 3/4"C	1.44	E	DISPLAY REFRIGERATOR (E7.3)	15/1P*	10
11								0.00				SPARE	20/1P	12
13	30/2P*	RAPID COOK OVEN(E40.5)	E	3.00	2#10 + 1#10G, 3/4"C	6.32			S.A.E	3.32	H	EXISTING BREAKER	20/2P	14
15			E	3.00			6.32			3.32	H			16
17		SPACE						0.00						18
19						0.00						SPARE	20/3P	20
21	30/3P	SPARE			S.A.E		0.00							22
23								1.20	2#12 + 1#12G, 3/4"C	1.20	L	EXTERNAL SIGNAGE	20/1P	24
25						1.90			S.A.E	1.90	L	EXISTING LIGHTING	20/1P	26
27	30/3P	SPARE			S.A.E		1.90		S.A.E	1.90	L	EXISTING LIGHTING	20/1P	28
29								0.54	2#12 + 1#12G, 3/4"C	0.54	R	GENERAL RECEPTACLE #2	20/1P	30
31	30/2P	EXISTING BREAKER ① (TYP.)	H	2.28	S.A.E	3.48			2#12 + 1#12G, 3/4"C	1.20	L	G2.1 48" NEON FOOTLONG SIGN (G2.1)	20/1P	32
33			H	2.28			2.28					SPARE	20/1P	34
35	40/2P	BREAD OVEN (RH)(E34.2)	E	3.32	2#8 + 1#10G, 3/4"C			3.32				SPARE	20/1P	36
37			E	3.32		3.50			2#12 + 1#12G, 3/4"C	0.18	R	SERVICE RECEPTACLE	20/1P	38
39	30/2P	EXISTING BREAKER	H	2.28	S.A.E		2.28					SPARE	20/1P	40
41			H	2.28				2.28				SPARE	20/1P	42
						26.35	25.37	9.26						

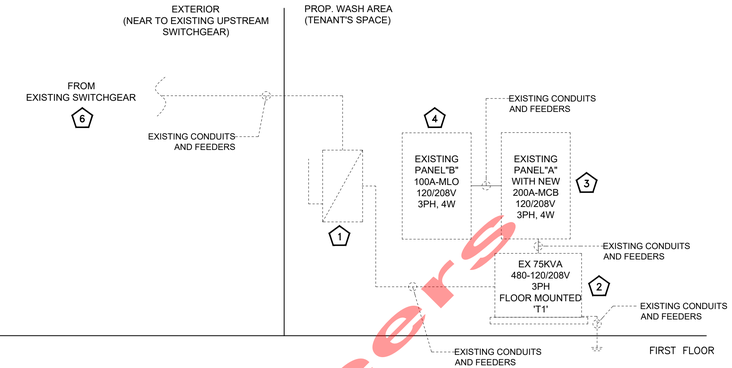
LOAD CLASSIFICATION		CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)	PANEL TOTAL LOAD		
TOTAL LIGHTING	L	6.20	125%	7.75			
TOTAL RECEPTACLE	R	2.64	100%	2.64	TOTAL CONNECTED LOAD	60.98	KVA
TOTAL HVAC	H	22.40	100%	22.40	TOTAL DEMAND LOAD	57.60	KVA
TOTAL MOTOR	M	0.00	100%	0.00	TOTAL CONNECTED CURRENT	169.45	AMP
TOTAL EQUIPMENTS	E	14.08	65%	9.15	TOTAL DEMAND CURRENT	160.07	AMP
TOTAL OTHER	O	15.66	100%	15.66			

PANEL:	B	(EXISTING) ②			-				MOUNTING:	SURFACE
208/120	VOLTS		1	PHASE	-	-	DEMAND LOAD (in kVA)	15.66	PANEL LOCATION:	PROP.WASH AREA
100	AMPS	MLO - MAIN LUG ONLY	3	WIRE	-	-	DEMAND CURRENT (in Amps)	75.27	FED FROM:	PANEL-A

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	WIRE SIZES	PER PHASE (KVA) A	B	WIRE SIZES	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	30/2P	RAPID COOK OVEN(E40.5)	E	3.00	S.A.E	3.00		S.A.E			SPARE	20/2P	2
3			E	3.00			3.00		0.00	0			4
5	20/2P	SPARE			S.A.E	0.00		S.A.E			SPARE	20/2P	6
7			0				0.00		0.00	0			8
9	20/1P	60" REFRIGERATED BACK COUNTER(36.2)	R	0.53	2#12 + 1#12G, 3/4"C	0.89		2#12 + 1#12G, 3/4"C	0.36	E	MEAT SLICER (E41.1)	20/1P	10
11	20/1P	60" REFRIGERATED BACK COUNTER(36.2)	R	0.53	2#12 + 1#12G, 3/4"C		0.71	2#12 + 1#12G, 3/4"C	0.18	E	COOKIE DISPLAY CASE (27.1)	20/1P	12
13	20/1P	60" REFRIGERATED BACK COUNTER(36.2)	R	0.53	2#12 + 1#12G, 3/4"C	1.06		2#12 + 1#12G, 3/4"C	0.53	E	60" COLD PAN (E19.2)	20/1P	14
15	20/1P	REACH-IN FREEZER (E74.2)	E	1.03	2#12 + 1#12G, 3/4"C		1.56	2#12 + 1#12G, 3/4"C	0.53	E	60" COLD PAN (E19.2)	20/1P	16
17	20/1P	6" ILLUMINATED CHOICE MARK SIGN (G3.2)	L	0.50	2#12 + 1#12G, 3/4"C	1.00		2#12 + 1#12G, 3/4"C	0.50	E	18" HOT FOOD UNIT (E17.1)	20/1P	18
19	20/1P	MICROWAVE (E65.1)	E	1.80	2#12 + 1#12G, 3/4"C		1.80				SPARE	20/1P	20
21	20/1P	P.O.S #1	R	1.00	2#12 + 1#12G, 3/4"C	1.50		2#12 + 1#12G, 3/4"C	0.50	R	P.O.S #2	20/1P	22
23	20/1P	QUEUE LINE CHIP DISPLAY (E8.1)	E	1.50	2#12 + 1#12G, 3/4"C		2.04	2#12 + 1#12G, 3/4"C	0.54	R	GENERAL RECEPTACLE #1	20/1P	24
25	20/1P	TIME CLOCK	O	0.50	2#12 + 1#12G, 3/4"C	1.00		2#12 + 1#12G, 3/4"C	0.50	L	EAT FRESH LOCAL - STACKED MEDIUM (G6.2)	20/1P	26
27	30/2P	SPARE					1.69	S.A.E	1.69	E	EXISTING WATER HEATER	20/2P	28
29						1.69			1.69	E			30
						10.14	10.80						

LOAD CLASSIFICATION		CONNECTED LOAD (KVA)			D.F.%	DEMAND LOAD (KVA)		PANEL TOTAL LOAD		
LIGHTING	L	1.00			125%	1.25				
RECEPTACLE	R	3.63			100%	3.63		TOTAL CONNECTED LOAD	20.94	KVA
EQUIPMENT	E	15.81			65%	10.28		TOTAL DEMAND LOAD	15.66	KVA
OTHER	O	0.50			100%	0.50		TOTAL CONNECTED CURRENT	100.67	AMP
HVAC	H	0.00			100%	0.00		TOTAL DEMAND CURRENT	75.27	AMP
COINCIDENT	N	0.00			0%	0.00				
LARGEST MOTOR	M	0.00			125%	0.00				
LINKED CELL	X	0.00			100%	0.00		# = 1st10kVA@100% rest @50%		

ELECTRICAL RISER DIAGRAM



ELECTRICAL RISER DIAGRAM GENERAL NOTES:

1. E.C. SHALL VERIFY FAULT CURRENT AVAILABLE WITH LANDLORD AND CALCULATE EXACT A.I.C. RATING REQUIRED PRIORITIZED. VERIFY THE AIC RATING OF THE EQUIPMENT ON FIELD AND SELECT/ALTER THE RATING OF THE ELECTRICAL EQUIPMENT AS REQUIRED OR INFORM THE ELECTRICAL DESIGNER IN CASE OF DISCREPANCY.
2. E.C. SHALL VERIFY EXACT SCOPE OF WORK WITH THE OWNER/LANDLORD, PRIOR TO BID.
3. THE COMBINED VOLTAGE DROP OF THE FEEDER AND BRANCH CIRCUIT SHALL NOT EXCEED 5% PER CODE.
4. E.C. SHALL VERIFY THAT THE PART OF RISER MARKED AS EXISTING MATCHES WITH THE SITE CONDITION.
5. ANY ADDITION/ALTERATION TO THE EXISTING SYSTEM SHALL NOT BE DONE WITHOUT WRITTEN CONSENT OF THE LANDLORD/OWNER.
6. IF FOUND ANY DEFICIENCIES IN THE DRAWING REPORT RO EOR PRIOR TO BID/INSTALLATION.

RISER DIAGRAM SYMBOLS

EXISTING

ELECTRICAL RISER DIAGRAM KEY NOTES: (#)

1. EXISTING 100A, 480V, 3PH DISCONNECT SWITCH. E.C. SHALL FIELD VERIFY THE LOCATION AND OPERABLE CONDITION. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
2. EXISTING 75KVA, 480-120/208V, 3PH TRANSFORMER. E.C. SHALL FIELD VERIFY THE LOCATION AND OPERABLE CONDITION. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY. IF FOUND ANY DISCREPANCIES WITH THE DRAWING REPORT TO EOR PRIOR TO BID/INSTALLATION.
3. CONVERT EXISTING 225A MLO, 120/208V, 3PH PANEL-"A" TO 200A MCB, 120/208V, 3PH PANEL BY PROVIDING AND INSTALLING A 200A MAIN CIRCUIT BREAKER WITH SUITABLE INTERRUPTING RATING. PERFORM REQUIRED MODIFICATIONS IN ACCORDANCE WITH NEC AND MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND UPDATE PANEL SCHEDULE ACCORDINGLY. BASE BID ACCORDINGLY.
4. EXISTING 100A MLO, 120/208V, 3PH PANEL-"B", E.C. SHALL FIELD VERIFY THE LOCATION AND OPERABLE CONDITION. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
5. EC TO VERIFY OPERABLE CONDITION AND TRACE THE LOCATION OF THE EXISTING PROJECT ASSOCIATED SWITCHGEAR OUTSIDE THE PROJECT SPACE. IF FOUND ANY DISCREPANCIES REPORT TO EOR PRIOR TO INSTALLATION/BID.

PANEL SCHEDULE GENREAL NOTES

1. ELECTRICAL CONTRACTOR TO VERIFY THE EXACT PANEL SIZES AND INCOMING FEEDER SIZE PRIOR TO BID/INSTALLATION.
2. ELECTRICAL CONTRACTOR TO COORDINATE WITH THE MANUFACTURER OF EQUIPMENT FOR THE WIRE SIZE & RATING OF MOCP BEFORE THE COMMENCEMENT OF WORK.
3. ELECTRICAL CONTRACTOR TO COORDINATE EXACT LOCATION AND ELECTRICAL REQUIREMENT OF PLUMBING/MECHANICAL EQUIPMENTS WITH RESPECTIVE SYSTEM CONTRACTOR/OWNER/ARCHITECT.
4. E.C SHALL VERIFY THE EXACT CIRCUIT, CIRCUIT NUMBER IN FIELD & ADJUST / MODIFY CIRCUITING AS REQUIRED.
5. E.C TO INFORM TO EOR IF FOUND ANY DISCREPANCIES PRIOR TO BID/INSTALLATION.
6. "*" STANDS FOR NEW BREAKER.
7. "TYP." STANDS FOR TYPICAL.

PANEL SCHEDULE KEY NOTES (#)

1. EXISTING LOADS AND BREAKERS SHALL REMAIN. EC SHALL REARRANGE/RESHUFFLE BREAKERS AS REQUIRED TO MAINTAIN EXISTING CONDITIONS. WHERE NEW LOADS ARE CONNECTED TO EXISTING BREAKERS, EC SHALL PROVIDE NEW DEDICATED BREAKERS AS REQUIRED. BASE BID SHALL INCLUDE ALL ASSOCIATED WORK.
2. EC SHALL FIELD VERIFY EXISTING SERVICE CAPACITY INCLUDING EXISTING HVAC LOADS. IF EXISTING SERVICE IS FOUND INADEQUATE TO SUPPORT NEW LOADS, NOTIFY ENGINEER PRIOR TO PROCEEDING. CURRENT PANEL SCHEDULES SHOW THE LOAD FOR NEW EQUIPMENTS ONLY.

LOAD CLASSIFICATION	
LIGHTING	L
RECEPTACLE	R
HVAC	H
MOTOR	M
EQUIPMENTS	E
OTHER	O

DOB Approval

Project:

ALTERATION TO EXISTING TENANT SPACE AT EXISTING MULTI-STORY BUILDING

Drawing Title:

ELECTRICAL RISER DIAGRAM & PANEL SCHEDULE

Drawing Scale: AS NOTED

Drawing No.:

E-600.00

Sheets in Contract:

7 of 7

Property of NY Engineers