MECHANICAL SYMBOLS LIST

AC-1 / TXF-1	EQUIPMENT SYMBOL
XX / X	RISER SYMBOL
	POINT OF NEW CONNECTION TO EXISTING
	POINT OF DISCONNECTION FROM EXISTING
AIR DEVICES	
	CEILING DIFFUSER SUPPLY
	CEILING DIFFUSER RETURN
	SUPPLY – SIDEWALL
	RETURN – SIDEWALL
DUCT ACCESSORIES	
GD	GRAVITY DAMPER
	FIRE DAMPER W/ ACCESS DOOR
	FIRE SMOKE DAMPER W/ ACCESS DOOR
M	MOTORIZED DAMPER W/ ACCESS DOOR
VD VD	VOLUME DAMPER W/ ACCESS DOOR
	DUCT HEATER W/ ACCESS DOOR
UC	DOOR UNDERCUT
CONTROLS AND SENSORS	
T	THERMOSTAT
S	MANUAL ON/OFF SWITCH
CO	CO DETECTOR
DUCTWORK	
	AIR DUCT W/ 1.5" ACOUSTICAL LINING
	FLEXIBLE DUCT
FC FC	FLEXIBLE CONNECTION
24X12	RECTANGULAR DUCT (WIDTH X DEPTH)
ø12	ROUND DUCT (DIAMETER)
	ROUND DUCT CROSS SECTION
	SUPPLY AIR RECTANGULAR DUCT CROSS SECTION
	RETURN AIR RECTANGULAR DUCT CROSS SECTION

MECHANICAL ABBREVIATIONS

AC	AIR CONDITIONING UNIT
ACCU	AIR COOLED CONDENSER
AFF	ABOVE FINISHED FLOOR
AL	ACOUSTIC LINING
BOD	BOTTOM OF DUCT
BOE	BOTTOM OF EQUIPMENT
CDS	CEILING DIFFUSER SUPPLY
CDR	CEILING DIFFUSER RETURN
CFM	CUBIC FEET OF AIR PER MINUTE
C.O.	CLEAN OUT
COP	COEFFICIENT OF PERFORMANCE
CD	CONDENSATE DRAIN PIPE
DN	DOWN
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
ERV	ENERGY RECOVERY VENTILATOR
EG	EXHAUST GRILLE
EN	ENERGY ANALYSIS
FD/AD	FIRE DAMPER W/ACCESS DOOR
FD	FIRE DAMPER W/FUSIBLE LINK
FSD	FIRE SMOKE DAMPER
GX	GENERAL EXHAUST RISER
GXF	GENERAL EXHAUST FAN
IEER	INTEGRATED ENERGY EFFICIENCY RATIO
MD	MOTORIZED DAMPER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OAI	OUTSIDE AIR INTAKE RISER
OAF	OUTSIDE AIR INTAKE FAN
RAR	RETURN AIR REGISTER
RF	RETURN FAN
REF	REFRIGERANT PIPING
RG	RETURN GRILLE
SAR	SUPPLY AIR REGISTER
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SG	SUPPLY GRILLE
TR	TRANSFER DUCT
TX	TOILET EXHAUST RISER
TXF	TOILET EXHAUST FAN
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
W.M.S.	WIRE MESH SCREEN

NOTE:
THIS IS APPLICATION IS FOR MECHANICAL WORK ONLY.
GENERAL CONSTRUCTION IS FILED SEPERATELY UNDER DOB NOW APPLICATION NO. M01282042–I1
PLUMBING WORK IS FILED SEPERATELY UNDER DOB NOW APPLICATION NO. M01282042–S1

THIS PROPERTY IS A CONTRIBUTING MEMBER OF THE STATE/NATIONAL HISTORIC REGISTRY, THUS IS EXEMPT FROM COMPLIANCE WITH ENERGY CODE REQUIREMENTS.

CONTROLLED INSPECTIONS:

TR1 Special Inspections

YES	NO	INSPECTION	NYC BC 2022
X		MECHANICAL SYSTEMS	BC 1705.21
	X	MECHANICAL DEMOLITION	BC 1705.25.5
	X	HEATING SYSTEMS	BC 1705.31
	X	POST INSTALLED ANCHORS	BC 1705.37
X		FINAL	AC 28-116.2.4.2, BC 110.5

MECHANICAL DRAWING LIST

SCOPE OF WORK

1. AIR COOLED VRF HEAT PUMP CONDENSING UNIT WITH CASSETTE UNIT & HI WALL UNIT TO BE USED FOR HEATING & COOLING REQUIREMENT OF BUILDING.
2. PROVIDE #3 DECENTRALIZED ERV FOR VENTILATION REQUIREMENT.
3. ALL HVAC WORKS SHALL BE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATION.

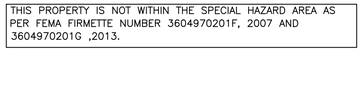
NOTE TO CONTRACTOR

1. THE WORK UNDER CONTRACT INCLUDES ALL LABOR, MATERIALS AND APPLIANCES NECESSARY FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS AS DESCRIBED IN THE SPECIFICATIONS, FLOOR PLAN(S) DESIGN, DETAIL DRAWINGS, NOTES, RFI'S, ETC. FOR THIS PROJECT. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.
2. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS 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.
3. 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 PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

PLOT PLAN:

1268 MADISON AVENUE, NEW YORK, NY 10128

BLOCK : 1502
LOT : 56
ZONE : C1–5
MAP : 50
BUILDING USE : COMMERCIAL & OFFICE BUILDING



THIS PROPERTY IS NOT WITHIN THE SPECIAL HAZARD AREA AS PER FEMA FIRMETTE NUMBER 3604970201F, 2007 AND 3604970201G ,2013.

NYC BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF THE CITY OF NEW YORK BUILDING CODE, EFFECTIVE JULY 1, 2014 AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

1. THE CONTRACTOR SHALL ENGAGE THE THE SERVICES OF A PROFESSIONAL ENGINEER TO PROVIDE THE REQUIRED SPECIAL INSPECTIONS AND TESTS.
2. TESTS WILL BE CONDUCTED UNDER DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS. THE TESTS WILL SHOW COMPLIANCE WITH 2014 BUILDING CODE REQUIREMENTS AS OUTLINES IN SECTION [BC 1704].
3. THE LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS AND CONDUCTING SUCH TESTS WILL FILE DOCUMENTATION AND REPORTS OF TESTS THAT THE SYSTEM COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE LAWS.
4. SPECIAL INSPECTIONS: (TR–1)

   REFER TR–1 TABLE ON THIS SHEET.
5. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION MC 107 AND THE FOLLOWING SECTIONS OF THE 2014 NEW YORK CITY MECHANICAL CODE:

   A. VENTILATION SYSTEM BALANCING MC 403.8
   B. NYC NOISE CONTROL CODE: 24–227
   C. REFRIGERATION SYSTEMS – MC 1108
7. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:

   A. STANDARDS OF HEATING – MC 309.1
   B. NYC NOISE CONTROL CODE: 24–227
   C. DUCT CONSTRUCTION AND INSTALLATION– MC 603
   D. AIR INTAKES, EXHAUSTS AND RELIEFS – MC 401.5
   E. AIR FILTERS – MC 605
   F. SMOKE DETECTORS AND FIRE AND SMOKE DAMPERS – MC 606 & 607 RESPECTIVELY
8. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
9. VENTILATION FOR ALL AREA SHALL COMPLY WITH MC 401.
10. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY MC 403.3
11. ALL FIRE DAMPERS SHALL BE ACCEPTED FOR USE BY THE NEW YORK CITY DEPARTMENT OF BUILDINGS. FIRE DAMPERS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH UL 555, STANDARDS FOR FIRE DAMPERS AND CEILING DAMPERS.
12. COMBINATION FIRE/SMOKE DAMPERS AND SMOKE DAMPERS SHALL BE ACCEPTED FOR USE BY NEW YORK CITY DEPARTMENT OF BUILDINGS AND SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH UL 555S.
13. SMOKE DETECTION SYSTEMS SHALL BE INSTALLED AND SEQUENCED TO FOLLOW CONTROLS OPERATIONS WITH THE REQUIREMENTS OF SECTION MC 606 TO CLOSE DAMPERS AND AUTOMATICALLY STOP THE FAN.
14. FIRE DAMPERS, SMOKE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS AND CEILING DAMPERS LOCATED WITHIN THE AIR DISTRIBUTION AND SMOKE CONTROL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION MC 607.
15. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE–RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
16. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
17. MECHANICAL SYSTEMS SHALL BE COMMISSIONED PER 2020 NYCECC, C408.2.1, C408.2.5.4. FINAL COMMISSIONING REPORT SHALL BE DUE WITHIN 90 DAYS OF RECEIPT OF CERTIFICATE OF OCCUPANCY.
18. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.

GENERAL NOTES

1. CONTRACTOR SHALL SURVEY THE AREA OF THIS WORK BEFORE SUBMITTING A BID AND SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT OF ANY CONDITIONS WHICH WOULD PREVENT THE INSTALLATION OF THE WORK AS SHOWN ON DRAWINGS.
2. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
3. BEFORE PROCEEDING WITH ANY WORK IN OCCUPIED OR USED AREAS, THE CONTRACTOR SHALL APPLY TO OWNER FOR PERMISSION TO ENTER SUCH AREAS. THE CONTRACTOR IS OBLIGED TO PERFORM HIS WORK ONLY AT THE TIMES DESIGNATED BY OWNER. THERE WILL BE NO ADDITIONAL COMPENSATION FOR THE WORK PERFORMED AFTER HOURS OR ON OFF–DAYS WITHOUT PRIOR WRITTEN APPROVAL.
4. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.
5. 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 IN OVERTIME AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.
6. CONTRACTOR SHALL ASCERTAIN THE APPROPRIATE METHOD FOR BRINGING THE UNITS INTO AND THROUGH THE BUILDING TO POSITION UNIT IN LOCATION SHOWN ON THE PLANS. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH RESTRICTIVE SPACES. COORDINATE WITH BUILDING OWNER APPROPRIATE TIMES OF DAY SUCH EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.
7. DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL MAKE ALLOWANCE IN PRICING FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL OF ARCHITECT. COORDINATION WITH THE EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES IS REQUIRED.
8. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL 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 IN MAKING UP THE WORK PROPOSAL.
9. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.
10. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT.
11. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. PROVIDE TEMPORARY DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUTDOWN TIME.
12. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OR SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. INSERTS SHALL BE STEEL, SLOTTED TYPE AND FACTORY PAINTED. SINGLE ROD SHALL BE SIMILAR TO GRINNELL FIG. 281. MULTI–ROD SHALL BE SIMILAR TO FEE & MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS. MAXIMUM LOADING INCLUDING PIPES, DUCTWORK CONTENTS AND COVERING SHALL NOT EXCEED 75% OF RATED INSERT CAPABILITY. WHEN SUPPORTING FROM BUILDING USE BEAM CLAMPS IN APPROVED MANNER.
13. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, LOUVERS, CONDUIT, AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.
14. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL (FIBERGLASS INSULATION IS NOT ACCEPTABLE).
15. WHERE PENETRATIONS THROUGH FIRE RATED WALLS ARE NOT FIRE PROOFED THIS CONTRACTOR SHALL BE RESPONSIBLE TO SEAL SAME TO MAINTAIN THE RATED INTEGRITY.
16. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
17. ACCESS DOORS ARE REQUIRED FOR ALL BUILDING SERVICE VALVES THAT RUN THROUGH THE SPACE, AND ACCESS DOOR SHALL HAVE THE EQUAL RATED CAPACITY (1HR, 2HR, ETC.) AS WALL. COORDINATE ALL LOCATIONS OF ACCESS DOORS WITH THE ARCHITECT.
18. REMOVABLE ACCESS TILE AND/OR ACCESS DOOR ARE REQUIRED IN HUNG CEILINGS, SHAFTS AND WALLS FOR ALL VOLUME AND FIRE DAMPERS, AUTOMATIC DAMPERS AND ALL OTHER MECHANICAL EQUIPMENT AND DEVICES. HVAC CONTRACTOR TO FURNISH ACCESS LOCATION REQUIREMENTS TO

Consultant
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE
49674, MIAMI, FL 33179
PH-914.257.3455
WWW.NY-ENGINEERS.COM

Project
NEUHAUS BELIGAN CHOCOLATE

PERMIT SET	09/19/2025
Issue Description	*Date*

Checked By	NYE
Drawn By	NYE
Scale	AS NOTED

Sheet Title
MECHANICAL GENERAL NOTES, SYMBOLS, LIST & ABBREVIATIONS.

Sheet No.
M-001.00

FILE NAME

GENERAL NOTES

GENERAL CONTRACTOR. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS, AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.

19. 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.

20. UNLESS OTHERWISE SPECIFICALLY 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.

21. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.

22. ALL EQUIPMENT SHALL BE PROVIDED WITH ONE YEAR WARRANTY PARTS AND LABOR AND FIVE YEARS ON COMPRESSORS. WARRANTY PERIOD BEGINS UPON PROJECT ACCEPTANCE

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

24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK WITH ITS COMPLETION AND FINAL ACCEPTANCE AND SHALL REPLACE ANY OF THE SAME WHICH MAY BE DAMAGED, LOST, OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER.

25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FAILURE OF ANY DUCTWORK SYSTEM OR EQUIPMENT TO FUNCTION PROPERLY UPON COMPLETION OF HIS WORK UPON SAID SYSTEM OR EQUIPMENT.

26. SUBMIT SHOP DRAWING OF ALL WORK WHICH MUST BE APPROVED BY THE ARCHITECT AND ENGINEER BEFORE WORK COMMENCES.

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

28. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC., WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION. THE ON-SITE INSPECTION SHALL VERIFY EXISTING DUCTWORK, PIPING (SIZES, CLEARANCES, ETC) AND CONDITIONS.

29. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS THE CONTRACTOR SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.

30. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, BALANCED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.

31. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.

32. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS, THE SPECIFICATIONS OR ANY OTHER CONSTRUCTION DOCUMENT, THE ONE WITH THE MOST STRINGENT REQUIREMENT(S) SHALL APPLY.

DEFINITIONS:

1) "PROVIDE": TO SUPPLY, 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.

SPECIFICATIONS

SECTION 0001 – NOTICE TO BIDDERS

1.1 BIDDERS REPRESENTATIONS

A. THE BIDDER BY MAKING A BID REPRESENTS THAT:

THE BIDDER HAS READ AND UNDERSTANDS THE BIDDING DOCUMENTS, TO THE EXTENT THAT SUCH DOCUMENTATION RELATES TO THE WORK FOR WHICH THE BID IS SUBMITTED, AND FOR OTHER PORTIONS OF THE PROJECT, IF ANY, BEING BID CONCURRENTLY OR PRESENTLY UNDER CONSTRUCTION.

B. THE BID IS MADE IN COMPLIANCE WITH THE BIDDING DOCUMENTS.

C. THE SPECIFICATIONS AND DRAWINGS ARE INTENDED TO SERVE JOINTLY AS A BASIS FOR THE BIDDER TO SUBMIT A CONTRACT PRICE FOR THE MATERIAL AND LABOR.

D. SHOULD CONFLICTS OR DISCREPANCIES OCCUR WITHIN THE BIDDING DOCUMENTS, THE ITEM OR ITEMS IN DISPUTE THAT REPRESENT THE GREATER COST SHALL PREVAIL IN THE FINAL BID.

E. THE BID IS BASED UPON THE MATERIALS, EQUIPMENT AND SYSTEMS REQUIRED BY THE BIDDING DOCUMENTS WITHOUT EXCEPTION.

1.2 EXISTING CONDITIONS AND COORDINATION

A. THE BIDDER HAS VISITED THE SITE, BECOME FAMILIAR WITH LOCAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND HAS CORRELATED THE BIDDER'S PERSONAL OBSERVATIONS WITH THE REQUIREMENTS OF THE PROPOSED BIDDING DOCUMENTS.

B. THE BIDDER SHALL PROPOSE COORDINATION OF WORK SUCH THAT CONFLICTS WITH OTHER TRADES AND SPACE ALLOCATIONS ARE AVOIDED.

1.3 RESPONSIBILITIES

A. THE BIDDER UNDERSTANDS THAT ANY CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE TIMELY COMPLETION AND ACCEPTANCE OF THEIR WORK AND THAT ANY ITEMS DAMAGED, LOST OR STOLEN DURING TIME OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED WITHOUT ANY ADDITIONAL COST TO THE OWNER.

B. THE BIDDER UNDERSTANDS THAT ANY PROPOSED WORK IN OCCUPIED TENANT SPACES SHALL BE PERFORMED DURING TIMES OF NON-TENANT OCCUPANCY OR AS SCHEDULED OR DIRECTED BY THE BUILDING MANAGER.

C. THE BIDDER UNDERSTANDS THAT ANY PROPOSED SHUT-DOWN OF EXISTING SYSTEMS DURING CONSTRUCTION SHALL BE PRE-ARRANGED WITH THE BUILDING MANAGER AND THAT SUCH SHUT-DOWNS ARE TO BE KEPT TO A MINIMUM.

END OF SECTION 0001

SECTION 0101 – QUALITY OF WORK

1.1 WORKMANSHIP

A. ALL WORK SHALL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.

B. ALL DEFECTS WHICH DEVELOP OR ARE DISCOVERED WITHIN THIS PERIOD SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ARCHITECT OR BUILDING MANAGER AT NO ADDITIONAL COST TO THE OWNER.

C. UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL REMOVE FROM THE SITE, ALL TOOLS, DEMOLISHED APPLIANCES AND ANY SURPLUS MATERIAL.

1.2 CODE COMPLIANCE

A. ALL WORK SHALL MEET ALL STATE AND LOCAL CODES HAVING JURISDICTION.

END OF SECTION 0101

SECTION 0102 –REQUIRED DOCUMENTS

1.1 SHOP DRAWINGS

A. A SET OF PRINTS FOR ANY MECHANICAL WORK INCLUDING BUT NOT LIMITED TO, DUCTWORK AND PIPING LAYOUT SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO CONSTRUCTION OR PURCHASE OF MATERIALS.

1.2 SUBMITTALS

A. WITHIN 90 DAYS, EQUIPMENT SUBMITTALS OF ALL PROPOSED MECHANICAL AND ANCILLARY EQUIPMENT INCLUDING ALL ACCESSORIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ALL PERTINENT MODELS, SIZES, ACCESSORIES AND CHOICES SHALL BE CLEARLY CHECKED, PRINTED OR OTHERWISE INDICATED ON THE SUBMITTALS.

1.3 RECORD DRAWINGS

A. WITHIN 90 DAYS, UPON COMPLETION OF THE WORK, A RECORD DRAWING SHALL BE SUBMITTED TO THE OWNER DEPICTING ALL SUBSEQUENT CHANGES, ADDITIONS AND OR CORRECTIONS TO THE CONTRACT DRAWINGS AND OR CONTRACT SCOPE MADE DURING CONSTRUCTION. THIS DRAWING SHALL REPRESENT A COMPLETE RECORD OF THE WORK INSTALLED.

1.4 EQUIPMENT OPERATING INSTRUCTIONS

A. WITHIN 90 DAYS, ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS,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.

THE CONTRACTOR SHALL GIVE THREE COPIES OF THE

INSTRUCTIONS TO THE OWNER AND ONE ELECTRONIC COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BE ORGANIZED IN SECTIONS, WITH ONE SECTION PER SYSTEM. THE COVER OF THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND PHONE NUMBER OF THE PROJECT, ARCHITECT, ENGINEER, MECHANICAL CONTRACTOR AND SUBCONTRACTORS.

END OF SECTION 0102

SECTION 078413–PENETRATION FIRE-STOPPING

1.1 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: AN FM GLOBAL-APPROVED FIRE-STOP CONTRACTOR OR A UL-QUALIFIED FIRE-STOP CONTRACTOR.

B. FIRE-TEST-RESPONSE CHARACTERISTICS: UL, INTERTEK ETL SEMKO OR FM GLOBAL

1.2 PENETRATION FIRESTOPPING

A. PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS: F-RATINGS PER ASTM E 814 OR UL 1479.

B. PENETRATIONS IN HORIZONTAL ASSEMBLIES: F- AND T-RATINGS PER ASTM E 814 OR UL 1479:

C. PENETRATIONS IN SMOKE BARRIERS: L-RATINGS PER UL 1479.

D. W-RATINGS: PER UL 1479.

1.3 INSTALLATION

A. IDENTIFICATION: PREPRINTED METAL OR PLASTIC LABELS.

1.4 FIELD QUALITY CONTROL

A. INSPECTION OF INSTALLED FIRE-STOPPING: BY OWNER-ENGAGED AGENCY ACCORDING TO ASTM E 2174.

1.5 THROUGH-PENETRATION FIRESTOP SYSTEM SCHEDULE

WHERE UL-CLASSIFIED SYSTEMS ARE INDICATED, THEY REFER TO SYSTEM NUMBERS IN UL'S "FIRE RESISTANCE DIRECTORY" UNDER PRODUCT CATEGORY XHEZ.

FOR THE FOLLOWING SYSTEMS:

METALLIC AND NON-METALLIC PIPES, CONDUIT, OR TUBING, ELECTRICAL CABLES, CABLE TRAYS WITH ELECTRIC CABLES, MISCELLANEOUS ELECTRICAL PENETRANTS, INSULATED PIPES, GROUPINGS OF PENETRANTS, USE ON OR MORE THE FOLLOWING MATERIALS:

a. LATEX SEALANT
b. SILICONE SEALANT
c. INTUMESCENT PUTTY
d. MORTAR
h. SILICONE FOAM
i. PILLOWS/BAGS
j. INTUMESCENT WRAP STRIPS
k. INTUMESCENT COMPOSITE SHEET

1.6 MANUFACTURERS

1. HILTI CONSTRUCTION CHEMICAL, INC
2. TREMCO INC.
3. 3M FIRE PROTECTION PRODUCTS

END OF SECTION 07841

SECTION 230517 – SLEEVES AND SLEEVE SEALS FOR HVAC PIPING

1.1 SLEEVE-SEAL SYSTEMS

C. FIELD-ASSEMBLED, MODULAR SEALING-ELEMENT UNIT FOR FILLING ANNULAR SPACE BETWEEN PIPING AND SLEEVE.

1. SEALING ELEMENTS: EPDM RUBBER OR NBR.
2. PRESSURE PLATES: CARBON STEEL, PLASTIC, STAINLESS STEEL.
3. CONNECTING BOLTS AND NUTS: CARBON STEEL WITH CORROSION-RESISTANT COATING, STAINLESS STEEL.

B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. ADVANCE PRODUCTS & SYSTEMS, INC.
2. CALPICO, INC.
3. METRAFLEX COMPANY (THE).
4. PIPELINE SEAL AND INSULATOR, INC.
5. PROCO PRODUCTS, INC.

1.2 SLEEVE-SEAL FITTINGS

A. MANUFACTURED PLASTIC, SLEEVE-TYPE, PLASTIC OR RUBBER WATER-STOP ASSEMBLY MADE FOR IMBEDDING IN CONCRETE SLAB OR WALL.

1.3 GROUT

A. NON-SHRINK, FACTORY PACKAGED.

1.4 SLEEVE AND SLEEVE-SEAL SCHEDULE

A. USE SLEEVES AND SLEEVE SEALS FOR THE FOLLOWING PIPING-PENETRATION APPLICATIONS:

1. INTERIOR PARTITIONS:
   a. PIPING SMALLER THAN NPS 6 (DN 150): GALVANIZED-STEEL-PIPE SLEEVES, PVC-PIPE SLEEVES.
   b. PIPING NPS 6 (DN 150) AND LARGER: GALVANIZED-STEEL-SHEET SLEEVES.

END OF SECTION 230517

SECTION 230518 – ESCUTCHEONS FOR HVAC PIPING

PART 2 – PRODUCTS

2.1 ESCUTCHEONS

A. ONE-PIECE, CAST-BRASS TYPE: WITH POLISHED, CHROME-PLATED AND ROUGH-BRASS FINISH AND SETSCREW FASTENER.

B. ONE-PIECE, DEEP-PATTERN TYPE: DEEP-DRAWN, BOX-SHAPED BRASS WITH CHROME-PLATED FINISH AND SPRING-CLIP FASTENERS.

C. ONE-PIECE, STAMPED-STEEL TYPE: WITH CHROME-PLATED FINISH AND SPRING-CLIP FASTENERS.

2.2 FLOOR PLATES

A. ONE-PIECE FLOOR PLATES: CAST-IRON FLANGE WITH HOLES FOR FASTENERS.

PART 3 – EXECUTION

3.1 INSTALLATION

A. INSTALL ESCUTCHEONS FOR PIPING PENETRATIONS OF WALLS, CEILINGS, AND FINISHED FLOORS.

B. INSTALL ESCUTCHEONS WITH ID TO CLOSELY FIT AROUND PIPE, TUBE, AND INSULATION OF PIPING AND WITH OD THAT COMPLETELY COVERS OPENING.

1. ESCUTCHEONS FOR NEW PIPING:
   a. PIPING WITH FITTING OR SLEEVE PROTRUDING FROM WALL: ONE-PIECE, DEEP-PATTERN TYPE.
   b. INSULATED PIPING: ONE-PIECE, STAMPED-STEEL TYPE.
   c. BARE PIPING AT WALL AND FLOOR PENETRATIONS IN FINISHED SPACES: ONE-PIECE, CAST-BRASS TYPE WITH POLISHED, CHROME-PLATED FINISH OR STAMPED-STEEL TYPE.
   d. BARE PIPING AT CEILING PENETRATIONS IN FINISHED SPACES: ONE-PIECE, CAST-BRASS TYPE WITH POLISHED, CHROME-PLATED FINISH OR STAMPED-STEEL TYPE.

3.2 FIELD QUALITY CONTROL

A. REPLACE BROKEN AND DAMAGED ESCUTCHEONS AND FLOOR PLATES USING NEW MATERIALS.

END OF SECTION 230518

SECTION 230529 – HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

1.1 PERFORMANCE REQUIREMENTS

A. DELEGATED DESIGN: DESIGN TRAPEZE PIPE HANGERS AND EQUIPMENT SUPPORTS, INCLUDING COMPREHENSIVE ENGINEERING ANALYSIS BY A QUALIFIED PROFESSIONAL ENGINEER, USING PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED.

B. STRUCTURAL PERFORMANCE: HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED ACCORDING TO ASCE/SEI 7.

1. DESIGN SUPPORTS FOR MULTIPLE PIPES CAPABLE OF SUPPORTING COMBINED WEIGHT OF SUPPORTED SYSTEMS, SYSTEM CONTENTS, AND TEST WATER.
2. DESIGN EQUIPMENT SUPPORTS CAPABLE OF SUPPORTING COMBINED OPERATING WEIGHT OF SUPPORTED EQUIPMENT AND CONNECTED SYSTEMS AND COMPONENTS.
3. DESIGN SEISMIC-RESTRAINT HANGERS AND SUPPORTS FOR PIPING AND EQUIPMENT AND OBTAIN APPROVAL FROM AUTHORITIES HAVING JURISDICTION.

1.2 SUBMITTALS

A. SHOP DRAWINGS: SIGNED AND SEALED BY A PROFESSIONAL ENGINEER

1.3 QUALITY ASSURANCE

A. AWS D1.1/D1.1M, "STRUCTURAL WELDING CODE – STEEL."

1.4 COMPONENTS

A. METAL PIPE HANGERS AND SUPPORTS: CARBON OR STAINLESS STEEL

B. TRAPEZE PIPE HANGERS: CARBON OR STAINLESS STEEL

C. FIBERGLASS PIPE HANGERS: –CLEVIS, CENTURY COMPOSITES, COOPER B-LINE

D. METAL FRAMING SYSTEMS: MFMA MANUFACTURER

E. FIBERGLASS STRUT SYSTEMS: COOPER B-LINE

F. THERMAL-HANGER SHIELD INSERTS:

G. FASTENER SYSTEMS: POWDER-ACTUATED FASTENERS OR MECHANICAL-EXPANSION ANCHORS

H. PIPE STANDS: COMPACT, LOW TYPE, SINGLE PIPE, HIGH TYPE, SINGLE PIPE, HIGH TYPE, MULTIPLE PIPES, CURB-MOUNTED TYPE

I. EQUIPMENT SUPPORTS.

END OF SECTION 230529

THERMOSTATIC CONTROLS:

A. GENERAL:

THE SUPPLY OF HEATING AND COOLING ENERGY SHALL BE INDIVIDUALLY CONTROLLED BY THERMOS RESPONDING TO TEMPERATURE WITHIN THE ZONE.

B. DEAD BAND:

WHERE USED TO CONTROL BOTH HEATING AND THERMOSTATIC CONTROLS SHALL BE CAPABLE C TEMPERATURE RANGE OR DEAD BAND OF AT LEAST THE SUPPLY OF HEATING AND COOLING ENERGY SHUT OFF OR REDUCED TO A MINIMUM.

EXCEPTIONS:

THERMOSTATS THAT REQUIRE MANUAL CHANGEOVER AND COOLING MODES.

C. SETBACK CONTROLS:

HEATING SYSTEMS LOCATED IN CLIMATE ZONES EQUIPPED WITH CONTROLS THAT HAVE THE AUTOMATICALLY RESTART AND TEMPORARILY OPERATE REQUIRED TO MAINTAIN ZONE TEMPERATURES AE SETPOINT ADJUSTABLE DOWN TO 55°F OR LOWER, LOCATED IN CLIMATE ZONES 1B, 2B, AND 3B SHA WITH CONTROLS THAT HAVE THE CAPABILITY TO RESTART AND TEMPORARILY OPERATE THE SYSTEM MAINTAIN ZONE TEMPERATURES BELOW A CO ADJUSTABLE UP TO 90°F OR HIGHER OR TO PREV HUMIDITY LEVELS.

D. AUTOMATIC SHUTDOWN:

HVAC SYSTEMS SHALL BE EQUIPPED WITH AT LEA FOLLOWING:CONTROLS THAT CAN START AND STOP UNDER DIFFERENT TIME SCHEDULES FOR SI DAY-TYPES PER WEEK, ARE CAPABLE OF RETAINI AND TIME SETTING DURING LOSS OF POWER FOR LEAST TEN HOURS, AND INCLUDE AN ACCESSIBLE M OR EQUIVALENT FUNCTION, THAT ALLOWS TEMPORAR THE SYSTEM FOR UP TO TWO HOURS.

EXCEPTION:

RESIDENTIAL OCCUPANCIES MAY USE CONTROLS AND STOP THE SYSTEM UNDER TWO DIFFERENT PER WEEK.

E. SETPOINT OVERLAP RESTRICTION:

WHERE HEATING AND COOLING TO A ZONE ARE SEPARATE ZONE THERMOSTATIC CONTROLS LOCA ZONE, MEANS (SUCH AS LIMIT SWITCHES, MECHAN FOR DDC SYSTEMS, SOFTWARE PROGRAMMING) SHA TO PREVENT THE HEATING SETPOINT FROM EXCEED SETPOINT MINUS ANY APPLICABLE PROPORTIONAL BA

F. HEAT PUMP SUPPLEMENTARY HEAT :

HEAT PUMPS HAVING SUPPLEMENTARY ELECTRIC H SHALL HAVE CONTROLS THAT, EXCEPT DURING DE SUPPLEMENTARY HEAT OPERATION WHERE THE H PROVIDE THE HEATING LOAD.

SECTION 230593 – TESTING, ADJUSTING, ANI FOR HVAC

1.1 SUMMARY

A. TESTING, ADJUSTING, AND BALANCING FOR THE FOLLOW

1. AIR SYSTEMS: CONSTANT-VOLUME.
2. HYDRONIC SYSTEMS: CONSTANT-FLOW
3. HEAT EXCHANGERS.
4. CONDENSING UNITS.
5. BOILERS.

1.2 QUALITY ASSURANCE

A. THE CONTRACTOR SHALL PROCURE THE SERVICES ADJUSTING AND BALANCING (TAB) SPECIALIST WHO HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS SHALL HAVE THE FOLLOWING QUALIFICATIONS: AABC, CERTIFIED.

1.3 EXECUTION

A. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUR NEW AIR AND HYDRONIC SYSTEMS AS LISTED ABOVE SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATI DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW

B. THE REPORT SHALL INDICATE A SCHEMATIC DIAG LOCATIONS OF ALL EQUIPMENT TESTED AND MEASUREM

C. PRIOR TO FINAL INSPECTION OF THE WORK, THE TAB BALANCE ALL SYSTEMS AS INDICATED ABOVE TO THE F THE DESIGN.

D. THE CONTRACTOR SHALL HAVE FURNISH AND INSTALL BALANCING EQUIPMENT, PRESSURE TAPS, GAUGE EQUIPMENT AS REQUIRED FOR A PROPERLY BALANCE ADDITIONAL COST TO THE OWNER. SUCH ADDITIONAL E ADHERE IN STRICT ACCORDANCE WITH THE RESPEC MANUFACTURER'S RECOMMENDATIONS.

E. THE CONTRACTOR SHALL HAVE THE TESTING AND BALA COORDINATE ALL WORK OF THIS S3ECTION WITH MANAGER. BALANCING WORK SHALL NOT CONFLICT W SO AS TO MAINTAIN COMPLETION WITHIN THE SPECIFIE

F. ALL INSTRUMENTS USED FOR TAB SHALL BE MAIN WORKING CONDITION AND ACCURATELY CALIBRATED.

G. TOLERANCES: PLUS OR MINUS 5 PERCENT OF DESIGN

H. INSPECTIONS: RANDOM CHECKS BY OWNER OR ARCH FINAL TESTING, ADJUSTING, AND BALANCING REPORT.

I. ADDITIONAL TESTS: RANDOM TESTS WITHIN 90 DAYS TAB TO VERIFY BALANCE CONDITIONS AND SEASONAL T

END OF SECTION 230593

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Project
NEUHAUS BELIGAN CHOCOLATE

Issue Description	*Date*
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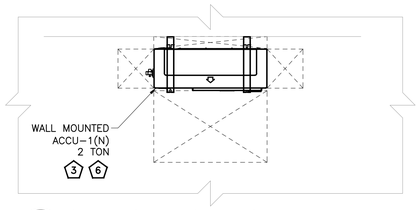
Sheet Title
MECHANICAL SPECIFICATIONS

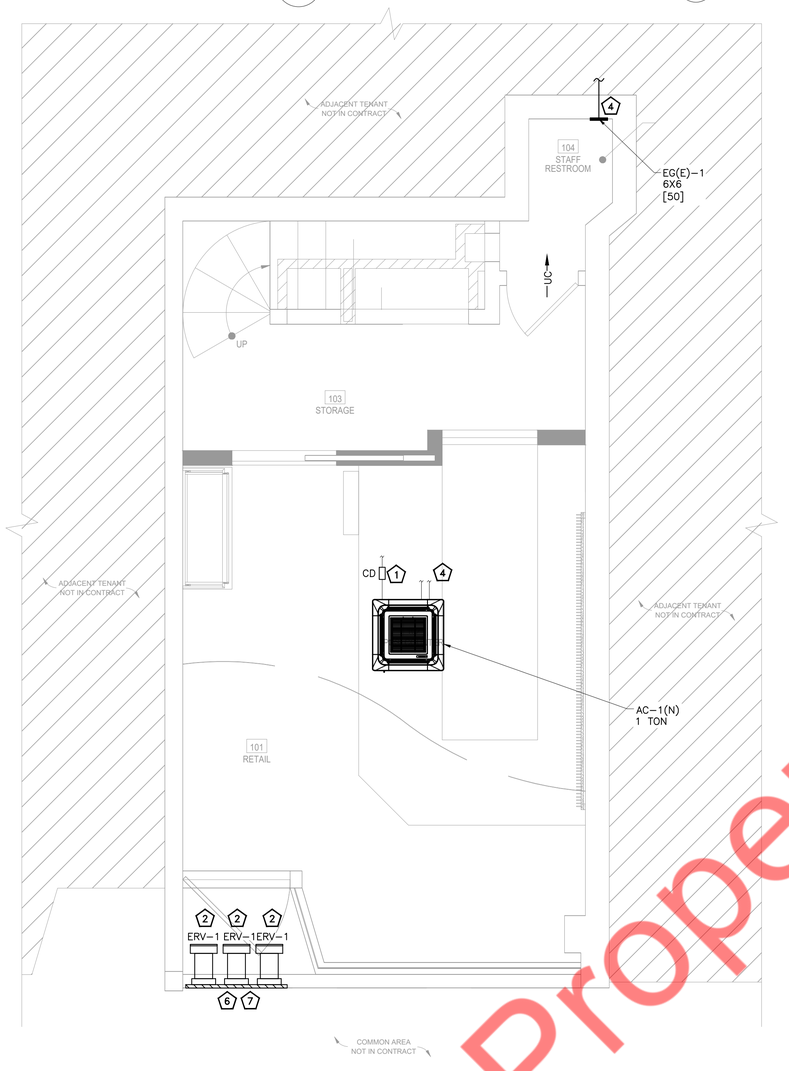
Sheet No.
M-002.00

FILE NAME



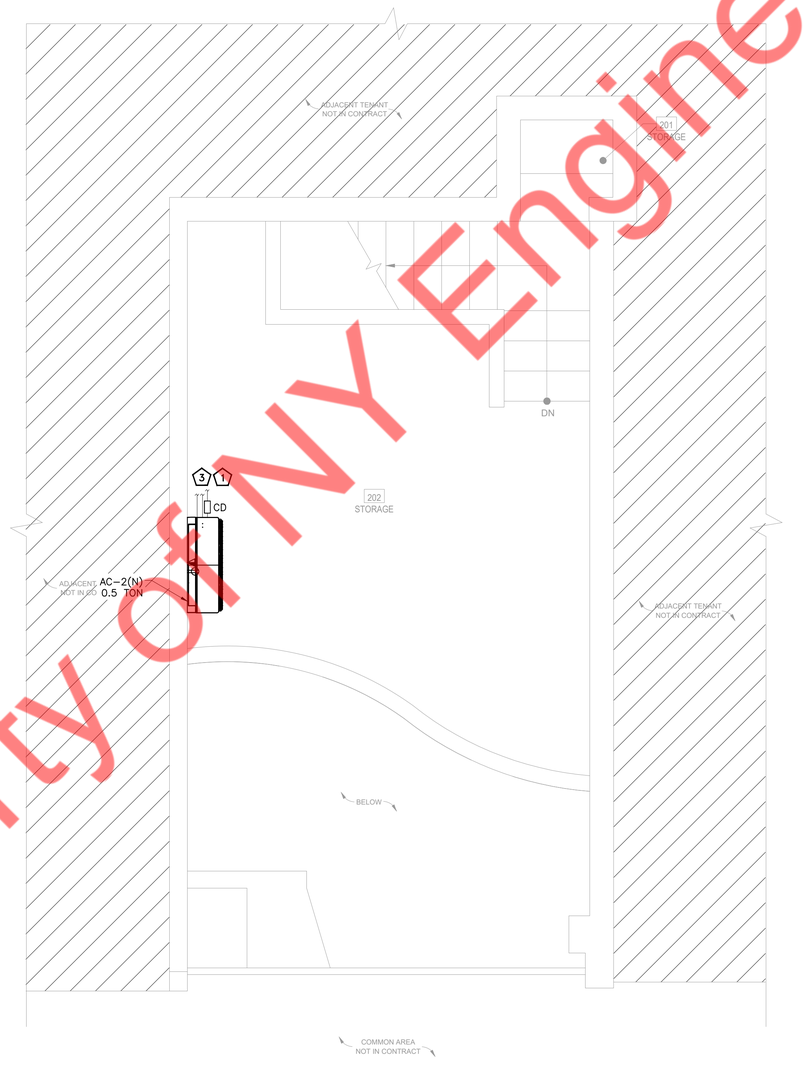
3 SETBACK MECHANICAL PART PLAN

SCALE: 1/2" = 1'-0"



1 GROUND FLOOR MECHANICAL PLAN

SCALE: 1/2" = 1'-0"



2 SECOND FLOOR MECHANICAL PLAN

SCALE: 1/2" = 1'-0"

KEY NOTES:

1. 1" CD WITH CONDENSATE DRAIN PUMP TO THE NEAREST FLOOR SINK OR HAND SINK OR LAVATORY WITH AIR GAP FITTING. COORINDATE W/PLUMBING CONTRACTOR.
2. INSTALL THE DECENTRALIZED ERV AS SHOWN ON THE PLAN, FOLLOWING THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL COORDINATE IN THE FIELD FOR ERV DUCT TERMINATION AT THE EXISTING PENETRATION AND SEAL ANY REMAINING PORTION OF THE EXISTING OPENING. ERV WALL CAP AND SEALING MATERIAL SHALL BLEND IN WITH STORESIDE COLOR/FINISH.
3. CONNECT THE REFRIGERANT PIPING TO THE CONDENSER UNIT LOCATED IN THE SECOND-FLOOR SETBACK AREA. THE CONTRACTOR SHALL COORDINATE WITH THE LANDLORD, OWNER, AND ARCHITECT TO DETERMINE THE ROUTING OF THE REFRIGERANT PIPING TO THE CONDENSER UNIT
4. EXISTING EXHAUST SYSTEM TO REMAIN.CONTRACTOR COORDINATE IN FIELD AND REPLACE THE GRILLE IF FOUND IN BAD CONDITION. CLEAN THE EXISTING TOILET EXHAUST DUCTWORK AND MAKE IT LOOK LIKE A NEW.
5. IINSTALL REFRIGERANT PIPING BETWEEN THE OUTDOOR AND INDOOR UNITS AS PER THE MANUFACTURER'S RECOMMENDATIONS. INSULATE ALL REFRIGERANT PIPES IN ACCORDANCE WITH ENERGY CODE REQUIREMENTS. EXTERIOR PIPING SHALL BE PROPERLY SUPPORTED AND ROUTED WITHIN A GALVANIZED (GI) TRAY OR PROTECTIVE BOXING.
6. CONTRACTOR SHALL DEMOLISH AND REMOVE EXISTING WINDOW A/C UNIT, FAN, AND LOUVER PRIOR TO START OF WORK. SEAL OPENING TIGHTLY TO PREVENT ANY AIR MOVEMENT. COORDINATE IN FIELD BASED ON EXISTING CONDITIONS.
7. CONTRACTOR SHALL PROVIDE AND INSTALL RIMLESS EXTERIOR LOUVER WITH HORIZONTAL BLADES FOR ERV AIR TERMINATION AS PER MANUFACTURER'S GUIDELINES. FINISH TO MATCH SURROUNDING STOREFRONT BULKHEAD. LOUVER SHALL BE MOUNTED FLUSH WITH ADJACENT MATERIAL WITH MINIMUM PROJECTION FEASIBLE. SEAL ANY UNUSED PORTION OF LOUVER TIGHTLY TO PREVENT AIR LEAKAGE.

MECHANICAL GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH ALL LOCAL AND STATE CODES AND AUTHORITIES HAVING JURISDICTION.
2. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND ARRANGE ALL REQUIRED INSPECTIONS.
3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS AND TRADES.
4. THESE DRAWINGS, AS PREPARED, ARE DIAGRAMMATIC BUT SHALL BE FOLLOWED AS CLOSELY AS CONSTRUCTION OF THE PROJECT AND THE WORK OF THE TRADES WILL PERMIT. EQUIPMENT LOCATIONS INDICATED ARE APPROXIMATE. COORDINATE EXACT LOCATIONS AND REQUIRED CLEARANCES WITH EQUIPMENT SUPPLIER AND ALL TRADES PRIOR TO INSTALLATION.
5. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL THE EQUIPMENT INDICATED WITHIN THE MECHANICAL DRAWINGS UNLESS OTHERWISE NOTED. ALL EQUIPMENT SHALL BE UL LISTED. VERIFY LOCATION AND DIMENSIONS IN THE FIELD PRIOR TO FABRICATION AND / OR INSTALLATION.
6. THE ENTIRE INSTALLATION SHALL BE GUARANTEED FREE OF DEFECTS AND CONTRACTOR SHALL REPAIR AND / OR REPLACE ANY DEFECTIVE MATERIALS OR EQUIPMENT AT NO COST TO THE OWNER FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY ARCHITECT OR ENGINEER.
7. ALL WORK SHALL BE SUBJECT TO THE ACCEPTANCE AND APPROVAL OF THE ARCHITECT AND OWNER. THE ARCHITECT SHALL BE NOTIFIED OF ANY AND ALL DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. FAILURE OF PROPER NOTIFICATION DOES NOT RELIEVE THE CONTRACTOR. tHE CONTRACTOR SHALL CORRECT ANY AND ALL WORK ARISING FROM SUCH FAILURE TO COORDINATE DISCREPANCIES TO THE SATISFACTION OF THE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER.
8. THE CONTRACTOR SHALL, UPON COMPLETION OF PROJECT, PERFORM A COMPLETE TEST AND BALANCE OF ALL EQUIPMENT. PROVIDE A WRITTEN REPORT TO THE ARCHITECT. ALL CAPACITIES MUST BE SET TO WITHIN ±10% OF AMOUNTS INDICATED ON THE FLOOR PLAN AND SCHEDULES.
9. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF TRUSSES AND MODIFY DUCTWORK ACCORDINGLY.
10. PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/ BARRIERS. COORDINATE WITH ARCHITECTURAL DRAWING FOR FIRE RATING OF THE WALLS.

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Issue Description	Date
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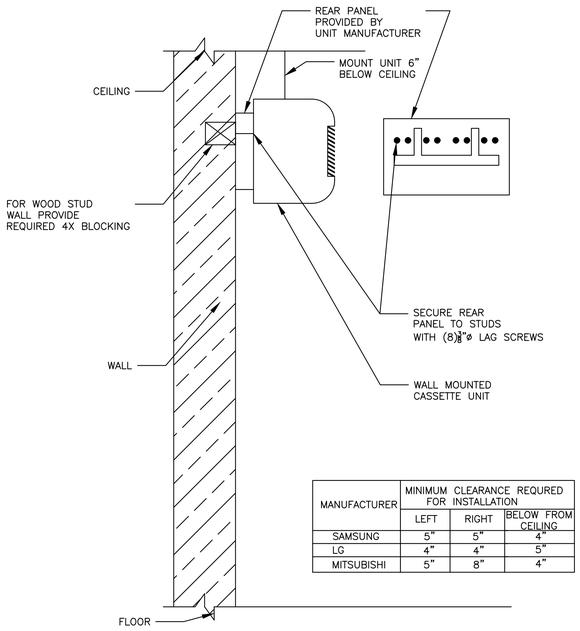
Sheet Title
GROUND FLOOR, SECOND FLOOR AND SETBACK BACK MECHANICAL FLOOR PLAN

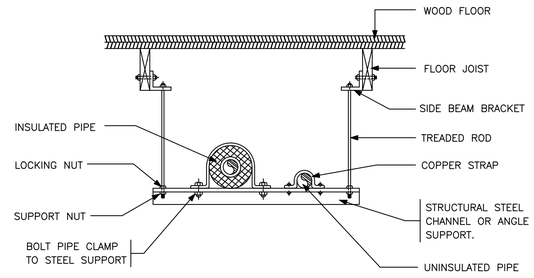
Sheet No.
M-100.00

FILE NAME



MANUFACTURER	MINIMUM CLEARANCE REQURED FOR INSTALLATION		
	LEFT	RIGHT	BELOW FROM CEILING
SAMSUNG	5"	5"	4"
LG	4"	4"	5"
MITSUBISHI	5"	8"	4"

1 M-500 WALL MOUNTED UNIT DETAIL N.T.S



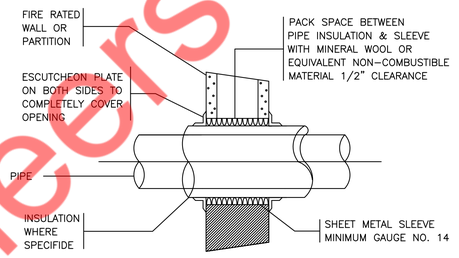
TYPICAL TRAPEZE HANGER SUPPORT

PIPE HANGER ROD AND SPACING SCHEDULE

NOMINAL PIPE OR TUBE SIZE – INCHES	5/8	3/4	7/8	1	1 1/2	2	2 1/2	–	–	–	–	–
HANGER ROD SIZES INCHES	3/8	3/8	3/8	3/8	3/8	3/8	3/8	–	–	–	–	–
MAX. SPACING BETWEEN PIPE SUPPORTS – FEET	–	6	–	7	9	10	11	–	–	–	–	–
MAX. SPACING BETWEEN CU. TUBE SUPPORTS–FT.	6	6	6	6	8	9	10	–	–	–	–	–

NOTES : TRAPEZE HANGER SPACING SHALL BE BASED ON SPACING OF SMALLEST PIPE ON TRAPEZE. TRAPEZE SHALL BE DESIGNED WITH A FACTOR OF SAFETY OF 5 FOR CENTER OF SPAN CONCENTRATED LOAD.

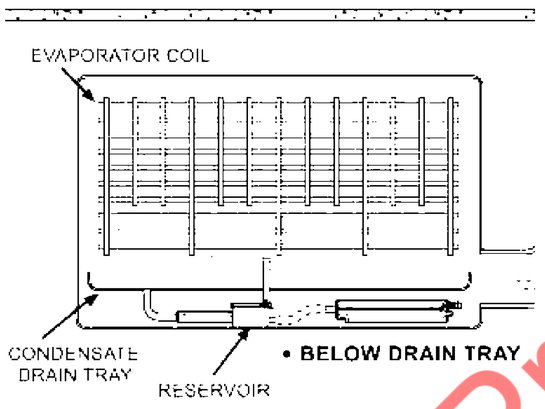
2 M-500 METHOD OF HANGING REFRIGERANT PIPING N.T.S



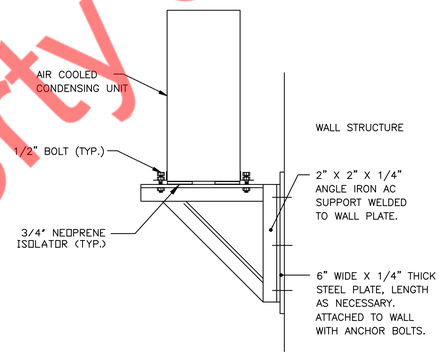
NOTE:

1.) THE INSTALLATION OF FIRE STOPPING MATERIALS SHALL BE SUBJECT TO CONTROLLED INSPECTION IN ACCORDANCE WITH C26–106.3.

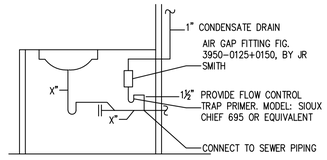
3 M-500 PIPE SLEEVE THRU RATED WALL N.T.S



4 M-500 CONDENSATE PUMP INSIDE CASING DETAIL N.T.S



5 M-500 AIR COOLED CONDENSING UNIT SUPPORT DETAIL N.T.S



NOTE:
LOCATE AIR GAP FITTING AND PIPING WITHIN SINK/LAVATORY ENCLOSURE.

6 M-500 AIR GAP FITTING DETAIL N.T.S

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Sheet Title
MECHANICAL DETAILS SHEET (1 OF 5)

Sheet No.
M-500.00

NEW CONDENSING UNIT ACCU-1 TO BE INSTALLED ABOVE EXISTING CONDENSING UNIT IN DOUBLE STACK CONFIGURATION

1 / M-501 AIR COOLED CONDENSING UNIT INSTALLATION
N.T.S

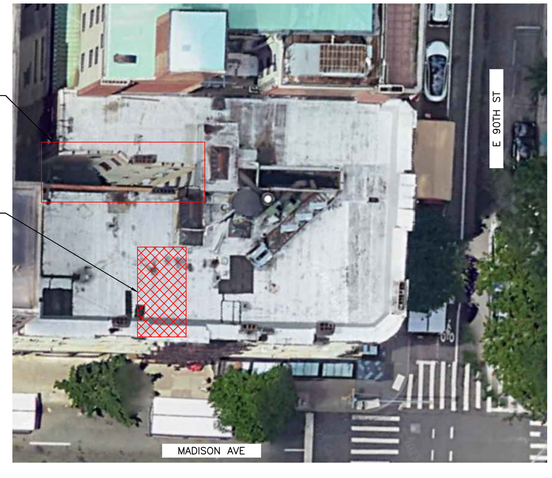
NEW LOUVER FOR ERV-1(3) FINISH TO MATCH SURROUNDING STOREFRONT BULKHEAD

CONTRACTOR SHALL DEMOLISH AND REMOVE EXISTING WINDOW A/C UNIT AND LOUVER. SEAL AND PACK OPENING. FINISH TO MATCH SURROUNDING STOREFRONT BULKHEAD.

2 / M-501 ERV LOUVER INSTALLATION
N.T.S

SET BACK AREA

SCOPE OF WORK



3 / M-501 MAP VIEW OF THE SPACE
N.T.S

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Sheet Title
MECHANICAL DETAILS SHEET(2 OF 5)

Sheet No.
M-501.00

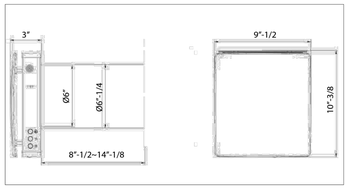
FILE NAME

Specifications

MAIN TECHNICAL PARAMETERS

- The ventilator is designed for indoor applications with an ambient temperature ranging from -20°C (-4°F) to +50°C (+122°F), and a relative humidity below 80%.
- The ventilator is classified as a class II electric appliance.
- The Ingress Protection (IP) rating is IPX4.
- The ventilator design is subject to continuous improvement, so some models may differ slightly from the models described in this manual.

Ventilator Overall Dimensions (in.)



Specifications

TECHNICAL SPECIFICATIONS

Description	Unit	Value
Voltage	V	100~240
Frequency	Hz	50/60
Input Power	W	9.7/10.7/11.5
Current	A	0.14/0.15/0.16
RPM (rated)	-	1000/1550/1800
RPM (max)	-	2200
Airflow (L/M/H) in supply/exhaust mode (with F7 filter)*	m^3/h	20/40/50
Airflow (L/M/H) in regeneration mode (with F7 filter)*	m^3/h	10/20/25
Airflow in supply/exhaust mode (with F7 filter)*	CFM	11.8/23.5/29.4
Airflow in regenerator mode (with F7 filter)*	CFM	5.9/11.8/15
Max airflow (under fan boost mode)	m^3/h	60
Max airflow (under fan boost mode)	CFM	35
Sound Pressure Level	dB(A)	32.7
Heat Recovery Efficiency	%	up to 97
Ingress Protection Rating	-	IPX4
Air Duct Diameter	mm (in.)	158 (6"-1/4)
SEC	-	Class A
Mounting Type	-	Wall Mounting
Net Weight	kg (lb)	4.2 (9.25)

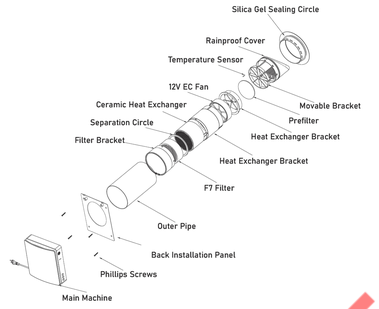
***Note:** The airflow in supply/exhaust mode without an F7 filter is about 34/56/70 m^3/h or 20/33/41.2 CFM, and the relative parameters will be adjusted accordingly.

DESIGN AND OPERATION

- The ventilator consists of a telescopic air duct with adjustable length regulated by the position of the inner air duct inside the outer air duct, the ventilation unit, and the ventilation hood.
- F7 filter+prefilter and the ceramic energy regenerator are located inside the inner duct. The filters are designed to purify supply air and prevent foreign objects from ingressing into the regenerator and the fan.
- The ceramic energy regenerator extracts energy from exhaust air to warm up or cool down supply air.
- The regenerator is equipped with a pull cord inside to facilitate its withdrawal from the ventilator. The regenerator is installed on an insulated material which is also used as a sealant.
- The ventilator is able to be installed from the inner side of the wall.

Specifications

INSTALLATION DRAWING



Overview

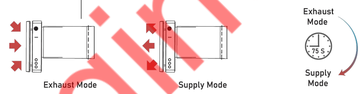
OPERATION MODES

Ventilation Mode - The ventilator runs in exhaust or supply mode at a set speed. When synchronous operation of two connected ventilators occurs, one runs in the supply mode and the other in exhaust mode.

Regeneration Mode - The ventilator runs in two cycles of 75 seconds each, to provide heat and moisture regeneration.

Interval 1 - The warm polluted air is extracted from the room and goes through the ceramic regenerator, which gradually absorbs heat and moisture. After 75 seconds the ventilator switches to air supply mode.

Interval 2 - The fresh and cold outdoor air goes through the heat regenerator and absorbs the accumulated moisture and heat after 75 seconds, and when the energy regenerator gets cold, the ventilator switches to the exhaust mode.



CAUTION!

INSTALLATION AND SETUP

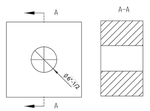
Read The User's Manual Before Installing The Ventilator

To prevent room dust deposition and accumulation, the ventilator must not be installed in places where the air duct may be blocked by any blinds, curtains, drapes, etc. Window curtains might obstruct normal airflow in the room, making ventilator operation inefficient.

Installation

VENTILATOR INSTALLATION

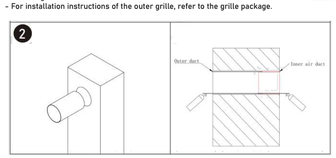
1. Drill a 160~170 mm (6"-1/4~6"-3/4) round hole in the wall. The hole size is shown below.



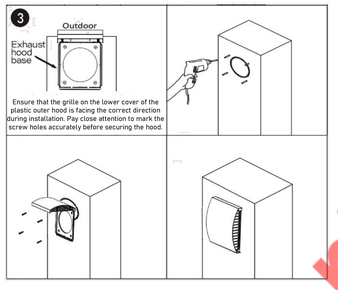
2. Insert the PVC pipe into the hole. Adjust the pipe so it fits flush with both the interior and exterior sides of the wall.

   Use PU foam to fill the gap between the PVC pipe and the wall on both the indoor and outdoor sides to ensure an airtight seal.

   Important Notes:
   - The duct consists of two outer ducts and can be adjusted to accommodate wall thicknesses of up to 19"-5/8.
   - If the wall thickness is less than 14"-5/8, the duct can be cut to size according to the wall thickness.
   - For installation instructions of the outer grille, refer to the grille package.



Installation



Ensure that the grille on the lower cover of the plastic outer hood is facing the correct direction during installation. Pay close attention to mark the screw holes accurately before securing the hood.

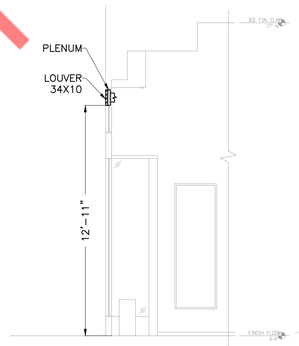
3. Insert the PVC pipe into the wall.

   Adjust the pipe to fit snugly against the wall. Use PU foam to fill the gap between the PVC pipe and the wall, both inside and outside the building.

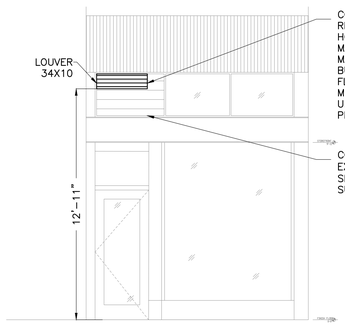
   Open the hood cover and align the bottom of the hood base with the circular opening of the pipe.

   On the outside of the wall, mark the positions for the four screw holes on the base of the exhaust hood.

   Drill the holes, then secure the bottom of the plastic hood using appropriate hardware.



1 / M-502 ERV UNIT DETAILES
N.T.S



2 / M-502 LOUVER ELEVATION DETAILES
1/4"=1'

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Project
NEUHAUS BELIGAN CHOCOLATE

Issue Description	Date
PERMIT SET	09/19/2025

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Sheet Title
MECHANICAL DETAILS SHEET (3 OF 5)

Sheet No.
M-502.00

FILE NAME

Job Name/Location _____ Tag No.: _____

Date: _____ For: ☐ File ☐ Resubmit ☐ Approval ☐ Other _____

PO No.: _____

Architect: _____ GC: _____

Engr: _____ Mech: _____

Rep: _____
(Company) (Project Manager)

ZRUN024GSS0
R32 Multi V™ S with LGRED® Outdoor Unit
2.0 Ton Heat Pump

Performance:

Cooling Mode:

Rated Capacity (Btu/h)	24,000
Power Input (kW, Non-Ducted)	1.62

Heating Mode:

Rated Capacity (Btu/h)	27,000
Power Input (kW, Non-Ducted)	1.98

Rated Capacity is based on the following conditions:

Cooling: Indoor: 80°F DB / 67°F WB; Outdoor: 95°F DB

Heating: Indoor: 70°F DB; Outdoor: 47°F DB / 43°F WB

Electrical:

Power Supply (V/Hz/Ø)	208-230V / 60 / 1
MOP (A)	30
MCA (A)	26.4
Rated Amps (A)	
Compressor (A)	20.5
Fan (A) x Qty.	0.7 x 1

Piping:

Refrigerant Charge (lbs.)	3.3
Liquid Line (in., O.D.)	Ø3/8 Braze
Vapor Line (in., O.D.)	Ø5/8 Braze
Total Pipe Length (ft.)	984
Maximum Elevation between ODU and IDU (ft.)	164 - ODU Higher than IDU; 131 - ODU Lower than IDU
Maximum Elevation between IDU and IDU (ft.)	49

Standard Features:
- Night Quiet Operation
- Fault Detection and Diagnosis
- Drain Pan Heater Built in

Optional Accessories:
☐ Low Ambient Baffle Kit ZLABGP04A (1 required)

Operating Range:

Cooling (°F DB)[1]	23 - 122
Heating (°F WB)	-13 to +61

Unit Data:

Refrigerant Type	R32
Refrigerant Control	EEV
Max. Number of Indoor Units[2]	4
Sound Pressure[3] dB(A) (Cooling / Heating)	50 / 52
Net Unit Weight (lbs.)	148
Shipping Weight (lbs.)	167
Communication Cable[4] (No x AWG)	2 x 18
Heat Exchanger Coating	Black Coated Fin™

Compressor:

Type	Hermetically Sealed Scroll
Quantity	1
Oil / Type	PVE / FW68L

Fan:

Type	Propeller
Quantity	1
Motor / Drive	Brushless Digitally Controlled/Direct
Air Flow Rate (CFM)	2,119

Notes:
1. Installation of an optional Low Ambient Wind Baffle Kit will allow operation down to -9.9°F in cooling mode.
2. The combination ratio must be between 50 – 130%.
3. Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3745.
4. Communication cable between ODU, IDU(s), and Central Controller must be a minimum of 2-conductor, 18 AWG, twisted, stranded, and shielded. Ensure the communication cable shield is properly grounded to the ODU chassis only. ⓘDO NOT ground the communication cable at any other point. Wiring must comply with all applicable local and national codes.
5. Data is rated 0 ft. above sea level, with 25 ft. of refrigerant line per indoor unit and a 0 ft. level difference between outdoor and indoor units. All capacities are net with a combination ratio between 95-105%.
6. Power wiring cable size must comply with the applicable local and national codes.
7. The voltage tolerance is ± 10%.

Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR® criteria. Ask your contractor for details or visit www.energystar.gov. (ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.)

LGRED®

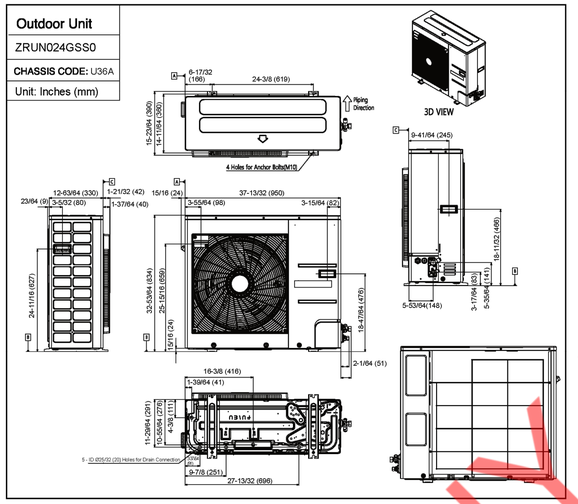
Unitary Small HP AHRI Standard 210/240 — Certification applies only when the complete system is listed with AHRI.

Job Name/Location: _____

ZRUN024GSS0
R32 Multi V™ S with LGRED® Outdoor Unit
2.0 Ton Heat Pump

Tag No.: _____
Date: _____
PO No.: _____

Outdoor Unit
ZRUN024GSS0
CHASSIS CODE: U36A
Unit: Inches (mm)



Job Name/Location: _____

ZRUN024GSS0
R32 Multi V™ S with LGRED® Outdoor Unit
2.0 Ton Heat Pump

Tag No.: _____
Date: _____
PO No.: _____

AHRI Data:

Indoor Unit Type	Cooling Capacity (95°F)	EER2 (95°F)	SEER2	Heating Capacity (47°F)	COP (47°F)	Heating Capacity (17°F)	COP (17°F)	HSPF2	Maximum Heating Capacity (5°F)	COP (5°F)
Non-Ducted Indoor Units	24,000	14.80	20.05	27,000	4.00	17,000	2.60	10.20	27,000	2.16
Ducted Indoor Units	24,000	14.80	18.15	27,000	4.00	18,000	2.60	10.20	27,000	2.00

1 / M-503 AIR COOLED CONDENSING UNIT DETAILS
N.T.S

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Project
NEUHAUS BELIGAN CHOCOLATE

Issue Description	Date
PERMIT SET	09/19/2025

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Scale	AS NOTED

Sheet Title
MECHANICAL DETAILS SHEET (4 OF 5)

Sheet No.
M-503.00

FILE NAME

GREENHECK

ESD-435
Stationary Louver, Drainable Blade
Extruded Aluminum

Standard Construction

Frame	Heavy gauge extruded 6063-T5 aluminum, 4 in. (102 mm) x 0.081 in. (2 mm) nominal wall thickness
Blades	Drainable design, heavy gauge extruded 6063-T5 aluminum, 0.081 in. (2 mm) nominal wall thickness, positioned 37.5º on approximately 3-1/4 in. (83 mm) centers
Louver Depth	4 in. (102 mm)
Construction	Mechanically fastened
Finish	Mill
Minimum Size	12 in. W x 9 in. H (305 mm W x 229 mm H)
Maximum Single Section Size	120 in. W x 120 in. H (3048 mm W x 3048 mm H) Limited to 70 sq. ft. (6.5 sq. m)
Wind Load	25 PSF (1.2 kPa)

Performance Ratings

Greenheck Fan Corporation certifies that the ESD-435 louvers shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Water Penetration and Air Performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.

Performance of 48 in. x 48 in. (1219 mm x 1219 mm) Louver

Free Area		
	Area	8.92 sq. ft. (0.829 sq. m)
	Percent	55.8%
Performance at Beginning Point of Water Penetration		
	Free Area Velocity	989 fpm (5.024 m/s)
	Max Intake Volume	8,822 cfm (4.163 m³/s)
Performance at 6,000 CFM (2.832 m³/s) Intake		
	Pressure Drop	0.073 in. wg (0.018 kPa)

Options and Accessories

- Bird Screen
- Blank Off Panels
- Extended Sill
- Filter Rack/Filter
- Flange Frame
- Glazing Frame
- Hinged Frame
- Insect Screen
- Mounting Angles
- Security Bars
- Variety of Architectural Finishes
- Welded Construction
- 0.125 in. (3 mm) Nominal Frame and/or Blade Thickness

Document Links

ESD-435 Specification
ESD-435 Environmental Product Declaration
Louver Finishes & Colors
Louver Product Selection Guide
Louver Products Catalog
Louver Warranty Statement

Standard Details

ESD-435 Standard Details

Structural reinforcing members may be required to adequately support and install multiple louver sections within a large opening. Structural reinforcing members along with any associated installation hardware is not provided by Greenheck unless indicated otherwise by Greenheck. Options and accessories including, but not limited to, screens, filter racks, louver doors, and blank off panels are not subject to structural analysis unless indicated otherwise by Greenheck.

STANDARD COLORS

Greenheck offers 27 standard colors available in AAMA 2605 compliant coatings (70% Kynar PVDF/ 100% Fluoropolymer FEVE), AAMA 2604 compliant coatings (50% Kynar/Acroflur) or AAMA 2603 compliant coatings (Baked Enamel).

Bone White	GF102	Ivory	031	Ascot White	GF120
Dover White	AL202	Cambridge White	GF110	Herring Bone	GF107
Sandstone	GF112	Pueblo Tan	GF116	Rawhide	AL215
Smoke	GF104	Sierra Tan	GF118	Lindie Bronze	AL218
Hampton Brown	GF105	Spartan Bronze	GF113	Classic Bronze	GF108
Statuary Bronze	AL221	Dove Gray	AL213	Stone Gray	GF103
Charcoal	AL214	Flat Black	044	Gloss Black	045
Coronado Red	GF121	Terra Cotta	AL217	Hartford Green	AL208
Capri Blue	GF106	Aegean Blue	AL204	Patina Green	GF114

1 M-504 LOUVER DETAILS
N.T.S

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Sheet Title
MECHANICAL DETAILS SHEET (5 OF 5)

Sheet No.
M-503.00

FILE NAME

AC-IDU	AIR CONDITIONER SCHEDULES (INDOOR VRF)																MAKE: LG	
UNIT TAG	LOCATION	AREA SERVED	TYPE	CAP. (TON)	COOLING MBH	HEATING MBH	TOTAL CFM (MAX.)	MAX. ESP. (IN. WG)	MAX. SOUND PRESS.(DBA)	ELECTRICAL DATA		CHASIS SIZE	DIMENTIONS (HXWXD) (IN.)		PIPE SIZE			WEIGHT (LBS.)	MODEL NO.
										PH/VOLT/HZ	AMPS	(IN. X IN.)	UNIT	GRILLE	LIQ.	SUCTION	DRAIN (ID)		
AC-1(N)	GROUND FLOOR	SEE PLAN	FOUR-WAY CEILING CASSETTE	1.0	12.3	13.6	687	-	42	1/208-230/60	1.7	24x24	9X23X23	1X24X24	3/8"	5/8"	1"	59.5	ZRNU123TAAA
AC-2(N)	SECOND FLOOR	SEE PLAN	HI WALL SPLIT	0.5	5.5	6.1	240	-	30	1/208-230/60	0.25	-	12X32X6	-	1/4"	3/8"	1"	19.6	ZRNU053SJSA
NOTES																			
1) SUPPLY AIR CFM BASED ON HIGH SPEED.																			
2)REFRIGERANT R-32 SHALL BE PROVIDED.																			
3) PROVIDE MOUNTING BRACKETS AND ALL ASSOCIATED ACCESSORIES.																			
4)ALL REFRIGERANT PIPING TO BE SIZED PER MANUFACTURERS RECOMMENDATIONS.																			
5)PROVIDE FILTER ON ALL RETURNS TO UNIT.																			
6) INDOOR UNIT ACCESS PANEL FIELD-PROVIDED.																			
7) CONTRACTOR SHALL PROVIDE A LONG LINE SET FOR REFRIGERANT PIPING IN THE EVENT THAT TOTAL REFRIGERANT LENGTH EXCEEDS THE MANUFACTURER'S STANDARD RECOMMENDED LENGTH.																			

VRF OUTDOOR CONDENSING UNITS																MAKE: LG
UNIT TAG	LOCATION	INDOOR UNITS SERVED	CAP.TR	COOLING MBH	HEATING MBH	COMPRESSOR TYPE	UNIT DIMENSIONS IN.(HXWXD)	WEIGHT (LBS)	PIPING DIMENSION		ELECTRICAL			SOUND LEVEL (Dba)	(DUCTED/NON-DUCTED)			MODEL NO.
									LIQUID-HI PRESSURE	GAS LOW-PRESSURE	(V/Hz/Ph)	MCA	MOCP		EER	CO	HSPF	
ACCU-1	SEE PLAN	AC-1(N) & AC-2(N)	2	24	27	HSS DC SCROLL	32"X37"X15"	148	3/8"	5/8"	208-230/60/1	26.4	30	52	14.8	4.0	10.2	ZRUN024GSS0
NOTES: OUTDOOR UNITS VRF																		
1. UNIT SHALL HAVE TEN YEAR EXTENDED WARRANTY FOR COMPRESSORS/PARTS.																		
2. PROVIDE LOW AMBIENT CONTROL FOR CONDENSING UNIT OPERATION DOWN TO -13°F.																		
3. PROVIDE COMPRESSOR CYCLE PROTECTOR.																		
4. PROVIDE STEEL RAIL AND VIBRATION ISOLATION FOR CONDENSER UNIT MOUNTING.																		
5. CONTRACTOR SHALL PROVIDE A LONG LINE SET FOR REFRIGERANT PIPING IN THE EVENT THAT TOTAL REFRIGERANT LENGTH EXCEED THE MANUFACTURER'S STANDARD RECOMMENDED LENGTH.																		
6. AIR CONDITIONER UNIT SHALL NOT PRODUCE NOISE LEVELS IN EXCESS OF 42 dB FOR A SINGLE AIR CIRCULATING DEVICE AND 45 DECIBELS FOR THE CUMULATIVE NOISE LEVEL OF MULTIPLE AIR CIRCULATING DEVICES AS MEASURED 3 FEET FROM THE NOISE SOURCE AT AN OPEN DOOR OR WINDOW OF A NEARBY RESIDENCE.																		

ENERGY RECOVERY VENTILATORS											
UNIT TAG	LOCATION	QTY	AIR FLOW IN VENTILATION MODE	RPM	REGENERATION EFFICIENCY	APPROPRIATE WEIGHT	ELECTRICAL DATA			MODEL NO.	MAKE
			CFM		%	LBS	(V/Hz/Ph)	POWER CONSUMPTION (W)	CURRENT CONSUMPTION (A)		
ERV-1	SEE PLAN	3	30	1800	97	9.25	208/60/1	11.50	0.16	ERV050AHRMCO2L	PIONEER
REMARKS:											
1. SUPPLY :MERV 13 & RETURN FILTER: MERV8											
2. INSTALL AS PER MANUFACTURESRS RECOMMANDATION											

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Project
NEUHAUS BELIGAN CHOCOLATE

Issue Description	Date
PERMIT SET	09/19/2025

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Sheet Title
MECHANICAL SCHEDULE

Sheet No.
M-600.00

FILE NAME

COMcheck Software Version 4.1.5.5

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2020 New York City Energy Conservation Code
Project Title: NEUHAUS BELIGAN CHOCOLATE
Project Type: New Construction

Construction Site:
1268 MADISON AVE
NEW YORK, NY 10128

Owner/Agent:
NEUHAUS INC.
120 FAIRCHILD AVE.
PLAINVIEW
11803

Designer/Contractor:
Michael Tobias
NY ENGINEERS
382 NE 191ST
SUITE 49674
Miami, FL 33179
212-575-5300

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Enhanced Interior Lighting Controls, 1.0 credit

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Retail:Sales Area	158	1.06	167
2-Common Space Types:Restrooms	10	0.75	8
3-Common Space Types:Storage	259	0.43	111
4-MEZZANINE (Common Space Types:Storage >=50 - <=1000 sq.ft.)	131	0.43	56
		Total Allowed Watts =	343

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Retail:Sales Area				
Track lighting 1: C: TRACK LIGHT: Wattage based on current limiting device capacity Exemption:Retail display window	0	0	480	Exempt
Track lighting 2: C: TRACK LIGHT: Wattage based on 11.5 feet of track Exemption:Lighting sales or education	0	0	92	Exempt
Track lighting 3: C: TRACK LIGHT: Wattage based on total luminaires Exemption:Lighting sales or education	0	0	100	Exempt
Track lighting 4: C: TRACK LIGHT: Wattage based on total luminaires Exemption:Lighting sales or education	0	0	100	Exempt
LED 1: B: Other: Exemption:Lighting sales or education	1	3	90	Exempt
2-Common Space Types:Restrooms				
LED: A: DOWNLIGHT: Other:	1	1	18	18
3-Common Space Types:Storage				
LED: A: DOWNLIGHT: Other:	1	5	18	90
4-MEZZANINE (Common Space Types:Storage >=50 - <=1000 sq.ft.)				
LED: A: DOWNLIGHT: Other:	1	5	18	90

Total Proposed Watts = 198

Interior Lighting PASSES: Design 42% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design 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 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

MICHAEL TOBIAS — Name - Title
Signature
07/17/2025 — Date

EN DRAWING LIST	
EN-501.00	ENERGY ANALYSIS

PROFESSIONAL STATEMENT:

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, ALL WORK UNDER THIS APPLICATION IS IN COMPLIANCE WITH THE 2020 NEW YORK CITY ENERGY CONSERVATION CODE, APPENDIX CA (MODIFIED 90.1-2016).

SYSTEM COMMISSIONING PURSUANT TO SECTION C408.3 2020 NEW YORK CITY ENERGY CONSERVATION CODE, APPENDIX CA (MODIFIED 90.1-2016)
SYSTEMS REQUIRING COMMISSIONING
1- OCCUPANCY SENSOR CONTROLS.
2- PHOTOCELL CONTROL FOR EXTERIOR SIGNAGE.

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NEUHAUS BELIGAN CHOCOLATE

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Sheet Title
ENERGY ANALYSIS

Sheet No.
EN-501.00

FILE NAME

ELECTRICAL SYMBOLS LIST

LIGHTING

	FLUORESCENT 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.
	RECESSED
	SAME AS ABOVE, EXCEPT WALLWASHER.
	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 SPST TOGGLE SWITCH U.O.N. "a" DENOTES LIGHTING FIXTURE CONTROLLED.
$a D	WALL BOX INCANDESCENT DIMMER SWITCH, LUTHRON MAESTRO SERIES. "a" DENOTES LIGHTING FIXTURE CONTROLLED.
$a OS	WALL MOUNTED OCCUPANCY SENSOR SWITCH, WATTSTOPPER CS-50PIR SERIES.
PC	WALL MOUNTED PHOTOCELL MOUNTED IN NEMA 3R ENCLOSURE.
RD	REMOTE DRIVER. AS RECOMMENDED BY MANUFACTURER
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, 2#12 N. & 2#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, 3#12 N. & 3#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.
	CONDUIT AND WIRE TO BUILDING GROUND.
	EXISTING
	NEW

POWER AND TELECOMMUNICATION

J	JUNCTION BOX WITH BLANK COVER PLATE, FLUSH IN FLOOR/ CEILING AS NOTED.
J	JUNCTION BOX WITH BLANK COVER PLATE, WALL MOUNTE, +18" AFF OR AS NOTED.
	DUPLEX CONVENIENCE RECEPTACLE, +18" AFF OR AS NOTED. IG AS NOTED.
	DUPLEX CONVENIENCE RECEPTACLE, +18" AFF OR AS NOTED.
	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.

MOTORS AND CONTROLS

	NON FUSED DISCONNECT SWITCH AMPERAGE, AND NUMBER OF POLES AS NOTED.
A	30A/240V NON FUSED DISCONNECT SWITCH
S	MANUAL MOTOR SWITCH
M S	AC INDOOR UNIT MOTOR AS NOTED WITH LIQUID TIGHT FLEXIBLE CONNECTION WITH JUNCTION BOX AND MOTOR SWITCH.

ANNOTATION

+24"	INDICATES MOUNTING HEIGHT, CENTER LINE TO FINISHED FLOOR.
X	KEYED NOTE REFERENCE
1 E/2-1	DETAIL REFERENCE: DETAIL NUMBER INDICATED ON TOP; DRAWING NUMBER INDICATED ON BOTTOM

POWER DISTRIBUTION

	DISTRIBUTION PANELBOARD, 120/240V-SURFACE OR FLUSH MOUNTED.

ELECTRICAL DRAWING LIST

E-001.00	ELECTRICAL SYMBOL LIST, ABBREVIATIONS & GENERAL NOTES
E-002.00	ELECTRICAL SPECIFICATIONS SHEET 1 OF 3
E-003.00	ELECTRICAL SPECIFICATIONS SHEET 2 OF 3
E-004.00	ELECTRICAL SPECIFICATIONS SHEET 3 OF 3
E-101.00	ELECTRICAL LIGHTING PLAN
E-201.00	ELECTRICAL POWER PLAN
E-401.00	ELECTRICAL DETAILS SHEET (1 OF 2)
E-402.00	ELECTRICAL DETAILS SHEET (2 OF 2)
E-501.00	ELECTRICAL RISER DIAGRAM AND PANEL SCHEDULE

LIGHTING FIXTURE SCHEDULE

Fixture TAG	Discription	Manufacturer	Model Number	Wattage	REMARKS
A	ROUND DOWNLIGHTS	ESSENZA	EZ-NC-A17-T-18-120-0-10V	18W	
AE	ROUND DOWNLIGHTS WITH EMERGENCY BATTERY BACKUP	ESSENZA	EZ-NC-A17-T-18-120-0-10V-EM	18W	
B	PENDENT LIGHT	AKARI LANTERNS	SKU-58	90W	
C	TRACK LIGHT	BASOLIGHTING	RLINS-SPOT2.0-BLBL-T2765-C90-48V-010V-TW-12D-1000LM-10W	100W	WATTAGES ARE CONSIDER WITH 100W REMOTE DRIVER
EM	WALL MOUNTED EMERGENCY BUG EYED LIGHT	TBD	TBD	TBD	
EX	EXIT LIGHT	BARRON LIGTHING GROUP	S900C-R-R-AG-G2[3]	NA	

YES	NO	S.NO	TR8 - PROGRESS INSPECTIONS LIST	TABLE REFERANCE IN 1 RCNY§5000-01(H) (2)
			ELECTRICAL	
X		1	METERING	IIC1
	X	2	LIGHTING IN DWELLING UNITS	IIC2
X		3	INTERIOR LIGHTING POWER	IIC3
	X	4	EXTERIOR LIGHTING POWER	IIC4
X		5	LIGHTING CONTROLS	IIC5
X		6	ELECTRIC MOTORS AND ELEVATORS	IIC6
X		7	MAINTENANCE INFORMATION	IID1, IID1

GENERAL NOTES

(APPLY TO ALL "E" DRAWINGS)

1. ALL WORK SHALL COMPLY WITH THE CURRENT NYC ELECTRICAL CODE, 2008 NEC WITH NYC AMENDMENTS, LOCAL JURISDICTION REQUIREMENTS, AND ALL APPLICABLE CODES AND REGULATIONS.

CONTRACTOR MUST VISIT THE SITE TO VERIFY EXISTING CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR FAILURE TO DO SO.

CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, TESTS, AND CERTIFICATIONS FOR TEMPORARY AND FINAL CERTIFICATES OF OCCUPANCY.

FIRESTOP ALL PENETRATIONS IN RATED CONSTRUCTION USING CODE-APPROVED METHODS. PENETRATIONS MUST BE SLEEVED AND WATERTIGHT.

SECURE SUPPORTS TO STRUCTURE USING APPROVED HARDWARE. NAILS AND WOOD PLUGS ARE NOT ALLOWED. CONDUITS: SUPPORT EVERY 10 FT HORIZONTALLY, AND AT EACH FLOOR LEVEL VERTICALLY. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE.

LEAVE SLACK IN WIRING FOR FINAL CONNECTIONS. PROVIDE FISH WIRE IN RACEWAYS OVER 10 FT WITHOUT WIRING.

CONFIRM OUTLET AND SWITCH LOCATIONS USING ARCHITECTURAL FINISH DRAWINGS. ACCOUNT FOR SITE CONDITIONS; CORRECT MISPLACEMENTS AT NO COST TO OWNER.

PROVIDE A ONE-YEAR WARRANTY ON ALL WORK, MATERIALS, AND EQUIPMENT FROM FINAL ACCEPTANCE.

LEGALLY DISPOSE OF UNUSED MATERIALS AND DEBRIS DAILY.

PATCH, PAINT, AND RESTORE ALL AFFECTED AREAS TO ORIGINAL OR BETTER CONDITION.

MINIMUM CONDUIT SIZE IS 3/4" EMT UNLESS NOTED. PROVIDE NYLON DRAG LINE AND CONDUIT CAP FOR EMPTY CONDUITS.

CONNECT MOTORS WITH MINIMUM 18" FLEXIBLE CONDUIT, 50% SLACK. DO NOT ATTACH TO MOTOR FOUNDATIONS.

PULL/JUNCTION BOXES SHOWN ARE APPROXIMATE. FIELD LOCATE AS NEEDED. PROVIDE ADDITIONAL BOXES PER CODE OR CONDITIONS. USE SURFACE TYPE IN UNFINISHED AREAS, CONCEALED IN FINISHED. ALL MUST BE ACCESSIBLE.

SUPPORT ALL BOXES INDEPENDENTLY FROM RACEWAYS.

REFER TO ARCHITECTURAL RCP AND POWER PLANS FOR FIXTURE AND DEVICE HEIGHTS/LOCATIONS.

OUTDOOR/EXPOSED EQUIPMENT MUST HAVE NEMA 3R ENCLOSURES WITH WEATHER-TIGHT GASKETING. EXTERIOR RECEPTACLES MUST BE GFCI-RATED AND WEATHERPROOF.

ALL ACCESS PANEL LOCATIONS REQUIRE ARCHITECT REVIEW PRIOR TO INSTALLATION.

COORDINATE ALL WORK WITH GC AND OTHER TRADES. FIELD-VERIFY ALL DIMENSIONS. REFER TO ALL PROJECT DRAWINGS AND SPECS.

CONCEAL ALL CONDUITS/EQUIPMENT IN FINISHED AREAS UNLESS NOTED. CONDUITS IN SLABS MUST BE ENCASED.

ONLY PLENUM-RATED EQUIPMENT/MATERIALS PERMITTED IN PLENUM CEILINGS.

MAINTAIN 24" SEPARATION BETWEEN BOXES ON OPPOSITE SIDES OF FIRE-RATED WALLS UNLESS FIRE-RATED BOXES OR PUTTY PADS ARE USED.

COORDINATE FLOOR PENETRATIONS WITH STRUCTURAL/ARCHITECTURAL DRAWINGS. CONFIRM WITH ENGINEER AND OWNER.

COORDINATE DEVICE LOCATIONS WITH CASEWORK AND ARCHITECTURAL DETAILS.

REFER TO ARCHITECTURAL PLANS FOR FINAL LIGHTING/SWITCH LOCATIONS AND CEILING HEIGHTS.

REFER TO ARCHITECTURAL PLANS FOR ALL DEVICE LOCATIONS AND WALL/CEILING LAYOUTS.

EMERGENCY FIXTURES WITH BATTERY PACKS AND SWITCHES MUST HAVE THE CHARGING/SENSING CIRCUIT WIRED AHEAD OF SWITCHING.

CIRCUIT NUMBERS AT DEVICES INDICATE PANELBOARD CONNECTION. MATCH WIRING ACCORDINGLY.

ELEVATOR CAB LUMINAIRES MUST PROVIDE >35 LUMENS/WATT. FANS MUST CONSUME <0.33W/CFM. FANS/LIGHTS MUST SHUT OFF WHEN ELEVATOR IS STOPPED, UNOCCUPIED, WITH DOORS CLOSED.

ELECTRICAL ABBREVIATIONS

A	AMPERES	EC	ELECTRICAL CONTRACTOR
A/C, AC	AIR CONDITIONING UNIT	EF	EXHAUST FAN
AF	AMPERE FRAME/AMP FUSE	EM	EMERGENCY
AFF	ABOVE FINISHED FLOOR	EMT	ELECTRICAL METALLIC TUBING
AS	AMP SWITCH	EQUIP	EQUIPMENT
AIC	AMPS INTERRUPTING CAPACITY	ER	EXISTING TO BE RELOCATED
AWG	AMERICAN WIRE GAUGE	EWH	ELECTRIC WATER HEATER
C	CONDUIT	FA	FIRE ALARM
C/B,CB	CIRCUIT BREAKER	FDR	FEEDER
CKT	CIRCUIT	FIXT	FIXTURE
CLG	CEILING	FL	FLOOR
COMM	COMMUNICATION	FLUOR	FLUORESCENT
CU	COPPER	G	GROUND
°C	DEGREE CELSIUS	GFI	GROUND FAULT INTERRUPTER
°F	DEGREE FAHRENHEIT	HP	HORSEPOWER
DIA	DIAMETER	HWH	HOT WATER HEATER
DISC	DISCONNECT	HZ	HERTZ
DN	DOWN	IC	INTERRUPTING CAPACITY
DP	DISTRIBUTION PANEL	PP	POWER PANEL
DWG	DRAWING	PVC	POLYVINYL CHLORIDE
JB	JUNCTION BOX	PWR	POWER
KCMIL	ONE THOUSAND CIRCULAR MILS	R	REMOVE
KVA	KILOVOLT-AMPERES	RE	RELOCATED EXISTING
KW	KILOWATTS	REC	RECEPTACLE
LTG	LIGHTING	SPEC	SPECIFICATION
MAX	MAXIMUM	SW	SWITCH
MCB	MAIN CIRCUIT BREAKER	SWBD	SWITCHBOARD
MIN	MINIMUM	SYM	SYMMETRICAL
MLO	MAIN LUGS ONLY	SYS	SYSTEMS
MTD	MOUNTED	TELE	TELEPHONE
N	NEUTRAL	TEMP	TEMPERATURE
NIC	NOT IN CONTRACT	TYP	TYPICAL
NTS	NOT TO SCALE	UON	UNLESS OTHERWISE NOTED
P	POLES	V	VOLT/VOLTAGE
PB	PULLBOX	VA	VOLT AMPERE
PC	PERSONAL COMPUTER	VFD	VARIABLE FREQUENCY DRIVE
ø	PHASE	WP	WEATHER PROOF
PNL	PANEL	XFMR	TRANSFORMER
W	WATT	IG	ISOLATED GROUND
WH	WATER HEATER	E	EXISTING

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Project
NEUHAUS BELIGAN CHOCOLATE

Issue Description	Date
PERMIT SET	09/19/2025

Checked By: NYE
Drawn By: NYE
Scale: AS NOTED

Sheet Title
ELECTRICAL SYMBOL LIST, ABBREVIATIONS & GENERAL NOTES

Sheet No.
E-001.00

FILE NAME:

ELECTRICAL DEMOLITION NOTES

1. PRIOR TO SUBMITTING A PROPOSAL, THE ELECTRICAL CONTRACTOR SHALL VISIT AND CAREFULLY INVESTIGATE THE EXISTING AREAS AFFECTED BY THIS WORK IN ORDER TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. THE CONTRACTOR SHALL BASE HIS BID ACCORDINGLY. SUBMISSION OF PROPOSAL WILL BE CONSTRUED AS CONFIRMATION THAT A THOROUGH EXAMINATION OF THE SITE HAS BEEN MADE BY THE CONTRACTOR, LATER CLAIMS FOR UNFORESEEN EXTRA LABOR, EQUIPMENT OR MATERIALS WILL NOT BE ACCEPTED IF SAID CLAIM(S) COULD HAVE BEEN FORESEEN DURING THE SITE INVESTIGATION.

2. CONTRACTOR'S WORK SHALL COMPLY WITH ALL SAFETY RELATED WORK PRACTICES DETAILED IN THE LATEST EDITION OF NFPA 70E.

3. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL ELECTRICAL FACILITIES RENDERED INACTIVE OR OBSOLETE BY THE SCOPE OF THE ARCHITECTURAL, MECHANICAL AND PLUMBING DEMOLITION WORK. THE CONTRACTOR IS ALERTED THAT SUCH ELECTRICAL FACILITIES MAY NOT BE EXPLICITLY SHOWN ON THE ELECTRICAL DEMOLITION DRAWINGS. THE CONTRACTOR SHALL VISIT THE SITE, REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS, AND COORDINATE WITH THE GENERAL, MECHANICAL, AND PLUMBING CONTRACTOR(S), AND INCLUDE ALL ELECTRICAL DEMOLITION WORK INCLUDING, HOWEVER NOT NECESSARILY LIMITED TO, THE COMPLETE REMOVAL OF ALL ELECTRICAL AND CONTROL WIRES, CONDUIT, JUNCTION BOXES, ENCLOSURE AND RACEWAY SUPPORT SYSTEMS, DISCONNECT SWITCHES, CIRCUIT BREAKERS ETC. INTENDED FOR REMOVAL AS REQUIRED TO COMPLETE THE WORK.

4. THE INTENT OF THE DEMOLITION WORK REQUIREMENTS INCLUDE ALL LABOR AND EQUIPMENT REQUIRED TO ATTAIN THE FINAL CONDITIONS AS SHOWN ON THE ARCHITECTURAL, MECHANICAL, TEMPERATURE CONTROL, AND PLUMBING, STRUCTURAL, ELECTRICAL NEW WORK PLANS. THE CONTRACTOR SHALL REVIEW ALL OTHER TRADE DRAWINGS, AND COORDINATE WILL ALL OTHER TRADE CONTRACTORS, AND BASE HIS BID ACCORDINGLY.

5. THE ELECTRICAL CONTRACTOR SHALL REMOVE, IN THEIR ENTIRETY OR AS OTHERWISE INDICATED, ALL ELECTRICAL OUTLETS, RECEPTACLES, SWITCHES, LIGHTING FIXTURES, TELE/DATA OUTLETS, AND OTHER DEVICES AS REQUIRED, COMPLETE WITH ASSOCIATED WIRING, CONDUITS, AND SURFACE RACEWAY SYSTEMS ETC. FROM THE AFFECTED AREAS. PROVIDE ALL DEMOTION LABOR AND EQUIPMENT COSTS AS REQUIRED BY THE DEMOLITION CONTRACT DRAWINGS & WORK NOTES, AND AS INSTRUCTED IN FIELD BY THE GENERAL CONTRACTOR AND/OR CONSTRUCTION MANAGER.

6. WHERE THE REMOVAL OF EXISTING FACILITIES RESULT IN THE DEENERGIZATION OF EXISTING REMAINING FACILITIES, THE CONTRACTOR SHALL INSTALL JUNCTION BOXES AND/OR OTHER DEVICES, PROVIDE BYPASS CONNECTIONS NECESSARY TO MAKE THE AFFECTED CIRCUITS CONTINUOUS AND READY FOR OPERATION. OTHERWISE, WIRING SHALL BE REMOVED BACK TO THE NEAREST INTENDED POWER SOURCE AND SAFELY TERMINATED.

7. THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING ELECTRICAL FACILITIES THAT INTERFERE WITH THE NEW ARCHITECTURAL, MECHANICAL, PLUMBING, STRUCTURAL, AND ELECTRICAL LAYOUTS AND SCHEMES. REFER TO THE ARCHITECTURAL, MECHANICAL, PLUMBING, STRUCTURAL DRAWINGS, AND COORDINATE WITH THE GENERAL, MECHANICAL, PLUMBING AND TEMPERATURE CONTROL CONTRACTORS.

8. PRIOR TO THE COMMENCEMENT OF WORK, ELECTRICAL POWER SHALL BE DISCONNECTED AND/OR SAFED OFF AS REQUIRED. TEMPORARY LIGHTING AND POWER FOR ALL TRADES, REMAINING BUILDING OCCUPANTS, AND CRITICAL BUILDING SERVICES SHALL BE PROVIDED WITHOUT EXCEPTION. UNDER NO CIRCUMSTANCES SHALL POWER BE INTERRUPTED TO ANY AREA WITHOUT PRIOR WRITTEN APPROVAL FROM BUILDING/PROPERTY MANAGEMENT.

9. TEMPORARY STREAMERS, WHERE SPLICED, ARE TO EMPLOY COMPRESSION-TYPE FITTINGS OR SOLDERED CONNECTIONS, AND MADE UP NEATLY AND SAFELY AS REQUIRED.

10. MAINTAIN CONTINUOUS ELECTRICAL SERVICE TO ALL ACTIVE AREAS AT ALL TIMES EXCEPT WHERE GIVEN WRITTEN PERMISSION BY BUILDING/PROPERTY MANAGEMENT FOR A SCHEDULED OUTAGE FOR A DECLARED OUTAGE DURATION. ALL WORK REQUIRING SHUTDOWN OF EXISTING ACTIVE AREAS SHALL BE PERFORMED OFF NORMAL BUSINESS HOURS (PREMIUM HOURS) AS APPROVED BY OWNER, ARCHITECT OR BUILDING MANAGER AND AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL SUBMIT, WITH HIS BID, A PRELIMINARY SCHEDULE OF REQUIRED OUTAGES FOR REVIEW AND CONSIDERATION BY THE OWNER. THE ABILITY TO PERFORM WORK IN A MANNER THAT MINIMIZES THE SHUTDOWN OF ACTIVE AREAS WILL BE GIVEN RECOGNITION.

11. WHEN REMOVING EXISTING FACILITIES SERVED BY FEEDERS EMBEDDED IN CONCRETE OR MASONRY FLOORS OR WALLS, CONDUIT SHALL BE REMOVED AND CAPPED OUT OF THE FINISHED SURFACE PLANE (CHOPPING AND PATCHING OF CONCRETE SHALL BE INCLUDED), WIRE SHALL TO BE PULLED BACK TO THE NEAREST ACTIVE TERMINATION BOX, AND PROPER TERMINATION WORK SHALL BE PERFORMED TO RENDER THE REMAINING FACILITIES SAFE AND ACTIVE. IF SEPARATE CIRCUIT, WIRING SHALL BE PULLED BACK TO IT'S RESPECTIVE PANELBOARD SOURCE, AND REMOVED FROM THE BREAKER TERMINAL(S).

12. REMOVE EXPOSED CONDUITS, WIRE WAYS, OUTLET BOXES, HANGERS, SUPPORTS AND DEVICES MADE OBSOLETE BY THIS WORK UNLESS BEING REUTILIZED FOR THE NEW INSTALLATION. THE REUTILIZATION OF EXISTING FACILITIES BY THE CONTRACTOR SHALL RENDER A FINISHED INSTALLATION IN STRICT ACCORDANCE WITH THE NEC WITHOUT EXCEPTION.

13. ALL ADJACENT FACILITIES IMPACTED OR TEMPORARILY DISCONNECTED TO FACILITATE DEMOLITION WORK SHALL BE RECONNECTED AND RESTORED TO A CONDITION EQUAL TO OR BETTER THAN ORIGINALLY FOUND PRIOR TO THE COMMENCEMENT OF WORK. WHERE EXISTING CONDITIONS DO NOT MEET NEC REQUIREMENTS, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER PRIOR TO THE COMMENCEMENT OF WORK.
14. PROVIDE TEMPORARY CONSTRUCTION LIGHTING AND POWER AS REQUIRED BY ALL TRADES. PROVIDE RECONNECTIONS AND TEMPORARY INSTALLATION AS REQUIRED. ALL TEMPORARY FACILITIES SHALL BE SUPPLIED AND INSTALLED PER NEC 527 UNDER ALL CIRCUMSTANCES. REMOVE ALL TEMPORARY FACILITIES AT JOB COMPLETION.

15. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL TRACE EXISTING CIRCUITS AND CONFIRM OR IDENTIFY TYPE AND LOCATION OF LOAD SERVED.

16. FOR ALL EQUIPMENT CALLED FOR REMOVAL, THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING WIRING AND CONDUIT BACK TO IT'S RESPECTIVE SOURCE UNLESS OTHERWISE INDICATED.

17. WHERE EXISTING ELECTRICAL PANELBOARDS ARE CALLED FOR REMOVAL AND/OR REPLACEMENT, THE CONTRACTOR SHALL REMOVE ALL SERVING FEEDER WIRE AND CONDUIT BACK TO IT'S RESPECTIVE SOURCE OF POWER. THE CONTRACTOR SHALL REMOVE ALL TRIP CIRCUIT WIRING, CONDUIT AND CONTROL DEVICES IN THEIR ENTIRETY. REFER TO EXISTING BUILDING DRAWINGS (IF AVAILABLE) SHOWING THE DISTRIBUTION CONNECTION TO PANELBOARDS. ALL CIRCUIT DIRECTORIES MUST BE UPDATED FOR REMAINING EXISTING PANELBOARDS, AND SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO RECEIVING FINAL PAYMENT.

18. ALL OPEN FLOOR OUTLETS SHALL BE CAPPED WITH WALKER PARKERSBURG DUCT BLANKING PLATE NO. 1043-S (OR APPROVED EQUAL). ANY AND ALL PANELBOARD, ENCLOSURE OR EQUIPMENT TERMINAL BOX COMPARTMENTS WITH UNOCCUPIED KNOCKOUT, RACEWAY OR CABLE ASSEMBLY PENETRATIONS SHALL BE PLUGGED WITH A LISTED DEVICE OR FURNISHED WITH A SPARE, OPERABLE CIRCUIT BREAKER LISTED FOR USE IN THE PANELBOARD. PROVIDE LISTED PLATES ON ALL UNUSED OUTLET AND JUNCTION BOXES.

19. ELECTRIC PANELBOARD COVERS ARE NOT TO BE LEFT OFF AT ANY TIME UNLESS MEN ARE WORKING ON, ADEQUATELY PROTECTING AND BARRICADING THEM AS REQUIRED. COVERS SHALL BE REPLACED EACH NIGHT BEFORE LEAVING JOB SITE.

20. REMOVE AND PROPERLY DISPOSE OF ALL REMOVALS IN ACCORDANCE WITH APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS UNLESS OTHERWISE REQUESTED OR DIRECTED BY THE BUILDING PROPERTY MANAGER.

21. THE REMOVAL OF ALL FIRE ALARM, COMMUNICATIONS, DATA AND SECURITY EQUIPMENT AND ASSOCIATED CABLING SHALL BE COORDINATED WITH BUILDING OPERATING PERSONNEL. EXISTING BASE BUILDING FIRE ALARM SYSTEM (AND FLOOR SECURITY SYSTEM WHERE APPLICABLE) INTEGRITY SHALL BE MAINTAINED AT ALL TIMES BEFORE, DURING AND AFTER DEMOLITION.

22. BUILDING FIRE ALARM SYSTEM AND RELATED EQUIPMENT LOCATED IN THE AREA OF IMPACT ON ALL FLOORS SHALL REMAIN INTACT UNLESS SPECIFICALLY CALLED FOR REMOVAL. ANY SUCH REMOVALS SHALL BE COORDINATED WITH THE OWNER, AND SHALL NOT COMMENCE WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER. THIS INCLUDES PULL STATIONS, WARDEN STATIONS, FIRE ALARM SPEAKERS, STROBES, ETC. PROVIDE WIRING AS REQUIRED TO MAINTAIN CONTINUITY OF EXISTING CIRCUITS TO REMAIN. ALL FIRE ALARM DEVICES SHALL BE TURNED OVER TO BUILDING MANAGEMENT FOR DISPOSAL.

23. CONTRACTOR SHALL PERFORM THE FOLLOWING PRIOR TO THE START OF ANY TRADES DEMOLITION:

A. TRACE ALL INCOMING AND OUTGOING FEEDS (LOW VOLTAGE AND HIGH VOLTAGE) AS WELL AS LIGHTING CIRCUITS BACK TO THEIR ORIGINAL SOURCE OF POWER (I.E. SWITCHBOARDS, PANELBOARDS, ETC.).

B. IDENTIFY ALL CONDUITS, CABLES, ETC. WITH CLEARLY IDENTIFIABLE MARKINGS. IDENTIFICATION SHALL BE PROVIDED FROM EACH LOAD TO THE MOST UPSTREAM SOURCE PANELBOARD. IDENTIFICATION SHALL BE PROVIDED AT ALL JUNCTION AND ALL PULL BOXES, TERMINATION/SPLICE, AND PANELBOARD LOCATIONS AS REQUIRED.

C. REVIEW LOCATIONS, CONFIGURATION AND SERVICE AREAS OF ALL FEEDER AND BRANCH CIRCUIT POWER SOURCES WITH CONSTRUCTION MANAGER/GENERAL CONTRACTOR SO AS TO ENSURE SERVICES WILL REMAIN SERVICED OR INTERRUPTED AS ANTICIPATED. REFER TO EXISTING BUILDING RECORD DRAWINGS PRIOR TO COMMENCEMENT OF WORK.

D. COORDINATE ALL WORK WITH BUILDING/PROPERTY MANAGEMENT.

24. EXISTING CONDUITS WHEN REUSED, SHALL BE THOROUGHLY CLEANED AND REFURBISHED BEFORE REUSING. ANY AND ALL EXISTING REUSED SET SCREW-TYPE CONNECTORS SHALL BE RETIGHTENED.

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 FOROPERATION,MAINTANANCE 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 MANUFACTURER'S 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 THE 2008 NATIONAL ELECTRICAL CODE (NEC) NYC 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 THE NYC BUILDING CODE. 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

Consultant
NY ENGINEERS
NEARBY ENGINEERS
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Project
NEUHAUS BELIGAN CHOCOLATE

Issue Description	Date
PERMIT SET	09/19/2025

Checked By	NYE
Drawn By	NYE
Scale	AS NOTED

Sheet Title
ELECTRICAL SPECIFICATIONS SHEET 1 OF 3

Sheet No.
E-002.00

FILE NAME

ELECTRICAL SPECIFICATIONS (CONT.)

C. SUBMISSIONS:

1) SUBMISSIONS 11 IN. X 17 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 11 IN. X 17 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 NONFUSED 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. 6808F. 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 BUSSMAN 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 A ND 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.

H. PANELBOARD CONSTRUCTION FOR BOLTED TYPE BREAKERS. MINIMUM SHORT CIRCUIT RATING 25,000 AMPERES, RMS SYMMETRICAL FOR ALL 120/208V APPLICATIONS. INDIVIDUAL CIRCUIT BREAKERS SHALL HAVE MINIMUM 100A FRAME, TRIPS SIZED AS SHOW ON THE PLANS.

I. 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.

J. DISTRIBUTION AND SUB-DISTRIBUTION PANELBOARDS SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

K. PANELBOARD SHALL HAVE MAIN CIRCUIT BREAKER OR MAIN LUGS AS INDICATED ON THE DRAWINGS. QUANTITY, POLES AND TRIP RATINGS OF BRANCH CIRCUIT BREAKERS TO BE AS INDICATED ON DRAWINGS.

L. PANELBOARD SHALL HAVE ENGRAVED WHITE CORE, BLACK LAMACOID NAMEPLATE SCREWED ONTO PANE TRIM WITH DESIGNATION LISTED (PANELBOARD NAME, VOLTAGE, RATING OR MAINS IN AMPS).

8. DISTRIBUTION PANELBOARDS, SWITCH AND FUSE:

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

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

C. PANELBOARD SHALL BE CONSTRUCTED OF CODE-GAUGE STEEL, GRAY FINISH OVER RUST INHIBITOR, FOR SURFACE MOUNTING. BOX AND PANEL FRAME SHALL BE FLANGED AND REINFORCED FOR RIGID SUPPORT OF INTERIOR AND ACCURATE ALIGNMENT OF INTERIOR WITH FRONT. TRIMS TO BE FASTENED TO BACK BOX WITH SCREWS.

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

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

F. 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. DISTRIBUTION AND SUB-DISTRIBUTION PANELBOARDS SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

J. POWER PANELBOARDS SHALL BE SIMILAR TO GENERAL ELECTRIC TYPE "QMR", AS MANUFACTURED BY ATLAS SWITCH COMPANY, ELECTRIC SWITCHBOARD COMPANY OR APPROVED EQUAL.

K. PANELBOARD SHALL HAVE MAIN CIRCUIT BREAKER OR MAIN LUGS AS INDICATED ON THE DRAWINGS. QUANTITY, POLES AND TRIP RATINGS OF BRANCH CIRCUIT BREAKERS TO BE AS INDICATED ON DRAWINGS. C.

L. PANELBOARD SHALL HAVE ENGRAVED WHITE CORE, BLACK LAMACOID NAMEPLATE SCREWED ONTO PANE TRIM WITH DESIGNATION LISTED (PANELBOARD NAME, VOLTAGE, RATING OR MAINS IN AMPS).

B. 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 RIGID STEEL ELBOWS, 2 IN. OR LARGER.

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

d. BUSHINGS: METALLIC INSULATED TYPE.

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.

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.

D. PROVIDE CABLE SUPPORTS IN ACCORDANCE WITH NATIONAL 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).

A. 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.

D. 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.

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

F. 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.

9. WIRE AND CABLE:

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

B. 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.

C. 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.

D. 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).

E. ARMORED CABLE (BX) SHALL BE UTILIZED FOR BRANCH CIRCUITS IN DRY HOLLOW LOCATIONS, HUNG CEILINGS, AND BLOCK WALLS. WHEN USED IN LIEU OF WIRING IN CONDUIT, STATE IN PROPOSAL THAT PRICE IS BASED UPON THE USE OF HOSPITAL GRADE 'BX'.

F. COLOR CODING SHALL BE AS FOLLOWS:

120/208 VOLT SYSTEM:
BLACK FOR A PHASE
RED FOR B PHASE
BLUE FOR C PHASE

1) 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.

G. 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.

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.

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Project
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ELECTRICAL SPECIFICATIONS SHEET 2 OF 3

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ELECTRICAL SPECIFICATIONS (CONT.)

A. AND RELATED 120 VOLT CONTROL WIRING. THERMOPLASTIC WIRES SHALL NOT BE INSTALLED IN COMPUTER AREA RAISED FLOORS.

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

C. 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.

11. WIRING DEVICES:

A. 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.

B. 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).

C. 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).
2) 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.

1) HEALTH CARE FACILITIES:

a) DUPLEX, 20 AMP, 125 VOLTS, 2 POLE, 3 WIRE, U GROUND SLOT: SIMILAR TO HUBBELL NO. 8300 HOSPITAL GRADE.

b) SINGLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE, U GROUND SLOT: SIMILAR TO HUBBELL NO. 8310 HOSPITAL GRADE.

2) GROUND FAULT INTERRUPTER RECEPTACLES:

a. 20 AMP DUPLEX FEED-THROUGH TYPE. SIMILAR TO NO. GF8300.

E. DEVICE PLATES: SEE ARCHITECT FOR TYPE. FOR RECEPTACLES WITH OTHER THAN 120 VOLT, INSCRIBED VOLTAGE AVAILABLE.

F. COLORS: COORDINATE COLORS WITH ARCHITECT.

G. MOUNTING ORIENTATION OF RECEPTACLES (HORIZONTAL OR VERTICAL): COORDINATE WITH ARCHITECT.

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 NEW YORK CITY. 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.

13. TELEPHONE CONDUIT SYSTEM:

A. PROVIDE COMPLETE SYSTEM OF: RACEWAYS AND ACCESSORIES, OUTLET BOXES, SLEEVES AND FISHWIRES.

B. EQUIPMENT SHALL CONFORM TO REQUIREMENTS OF TELEPHONE COMPANY.

C. OUTLETS SHALL BE:

1) WALL: 4 IN. SQUARE WITH BUSHED COVER PLATE.

D. PROVIDE FISHWIRES, IN RACEWAYS OVER 10 FT LONG.

E. CONDUIT SHALL BE 3/4 IN. MINIMUM. FURNISH EMPTY CONDUIT FROM OUTLET BOX TO BUSHED END THRU WALL 6" BELOW THE PLASTER CEILING.

F. FACE RACEWAYS IN ROOMS SHALL HUBBELL HBL500, HBL750 OR HBL2000 SERIES OR AS ACCEPTABLE.

14. GROUNDING AND BONDING:

A. PROVIDE GROUNDING SYSTEM IN ACCORDANCE WITH (2011 NATIONAL ELECTRICAL CODE WITH NYC AMENDMENTS), AND THESE SPECIFICATIONS. THE WIRING SYSTEM SHALL BE INSTALLED AS REQUIRED TO PROVIDE A CONTINUOUSLY GROUNDED SYSTEM. WHERE FLEXIBLE CONDUIT IS USED FOR PART OF A CONDUIT RUN, EXCEPT LIGHTING BRANCH CIRCUITS, AN INSULATED GROUNDING CONDUCTOR SHALL BE PROVIDED IN THE CONDUIT AND CONNECTED TO GROUNDING BUSHINGS AT EACH END OF THE RUN.

B. USE EXOTHERMIC WELDING PROCESS FOR INACCESSIBLE CONNECTIONS.

C. EXTEND EXISTING SYSTEM GROUND TO INCLUDE ALL THE ELECTRICAL EQUIPMENT IN THE SCOPE OF WORK.

D. WHERE FLEXIBLE METALLIC CONDUIT IS USED AN INTERNAL BONDING CONDUCTOR SHALL BE INSTALLED.

E. IN ADDITION, FURNISH A SEPARATE INSULATED GREEN EQUIPMENT GROUND CONDUCTOR WHERE INDICATED ON DRAWINGS AND FOR THE FOLLOWING BRANCH CIRCUITS:
1) CIRCUITS SERVING ANY WALL BOX DIMMER.

2) CIRCUITS SERVING ANY ISOLATED GROUND RECEPTACLES. TERMINATE GROUND DIRECTLY AT AN EQUIPMENT GROUNDING CONDUCTOR TERMINAL OF THE SOURCE AT THE SOURCE , OR AS OTHER WISE NOTED ON DRAWINGS.

3) CIRCUITS SERVING ANY DUPLEX OR SIMPLEX COMPUTER RECEPTACLES

4) ANY CIRCUIT SERVED VIA AN ISOLATION TRANSFORMER OR COMPUTER POWER DISTRIBUTION UNIT.

15. PANELBOARDS:

A. PANELBOARDS SHALL BE OF THE DEAD FRONT TYPE MANUFACTURED IN CODE GAUGE AND SIZE BOXES FOR MOUNTING AS INDICATED ON PLANS COMPLETE WITH TRIM, DOORS AND LOCKS. ALL LOCKS SHALL BE KEYED ALIKE.

B. CIRCUIT BREAKERS SHALL BE OF THE BOLT-ON THERMAL MAGNETIC MOLDED CASE TYPE, AND SHALL HAVE THE TRIP RATINGS AND NUMBER OF POLES SHOWN IN SCHEDULES ON THE CONTRACT DRAWINGS. FOR BLANK (SPACE) COMPARTMENTS, PROVIDE FULL RATED BUS. MINIMUM GUTTER SPACES SHALL BE 5-3/4". SIDES, TOP AND BOTTOM, INCREASE FOR THROUGH FEEDERS. PROVIDE 25% COPPER GROUND BUS AND 100% COPPER NEUTRAL BUS AND INCREASE NEUTRAL BUS INDICATED.

C. LOCKING TABS SHALL BE PROVIDED ON ALL CIRCUIT BREAKERS SERVING EMERGENCY LIGHTING, FIRE ALARM SYSTEM, SECURITY SYSTEMS AND OTHER EMERGENCY OR CRITICAL EQUIPMENT AND AS NOTED ON THE CONTRACT DRAWINGS. A TOTAL OF 5 SPARE LOCKING TABS SHALL BE FURNISHED TO THE OWNER.

D. BUSES SHALL BE HARD DRAWN COPPER OF 98 PERCENT CONDUCTIVITY AND SHALL HAVE CROSS SECTIONAL AREAS LARGE ENOUGH TO LIMIT THE TEMPERATURE RISE, WHEN CARRYING FULL LOAD, TO 35 DEGREES C. ABOVE AN AMBIENT INSIDE THE ENCLOSURE OF 55 DEGREES C. AS DEFINED IN IEEE STANDARD RULES. MAIN BUS CAPACITY SHALL BE AS SHOWN ON THE CONTRACT DRAWINGS.

E. ENCLOSURES SHALL BE SURFACE OR FLUSH AS INDICATED. TRIMS SHALL BE SECURED TO PANEL WITH MACHINE SCREWS. COVERS SHALL BE HINGED DOOR-IN-DOOR CONSTRUCTION WITH CYLINDER LOCKS AND CATCHES. LOCKS MUST BE COMPATIBLE WITH BUILDING STANDARD KEY SYSTEM AND WHEN NONE EXISTS, THEY SHALL BE SIMILAR TO A YALE NO. 911 KEY.

F. DISTRIBUTION AND SUB-DISTRIBUTION PANELBOARD SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

G. ALL STANDARD PANELBOARDS SHALL BE A MINIMUM OF 20" WIDE AND 5 3/4" DEEP.

H. FURNISH ALL PANELBOARDS WITH FEED-THRU LUGS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

I. ALL NEW PANELBOARDS SHALL BE PROVIDED WITH AN ENGRAVED WHITE CORE LAMACOID NAMEPLATE, WITH 3/4 IN. WHITE LETTERING ON A BLACK BACKGROUND, WITH DESIGNATION LISTED (PANELBOARD NAME), FASTENED WITH EPOXY CEMENT OR OVAL HEAD CHROME PLATED MACHINE SCREWS.

J. THE CIRCUIT DIRECTORY SHALL BE TYPEWRITTEN AND PROVIDED INSIDE EACH PANEL DOOR TO INDICATE EQUIPMENT AND/OR AREA SERVED. DIRECTORY HOLDER SHALL BE METAL FRAME WITH CLEAR PLASTIC, TRANSPARENT COVER. THE TYPEWRITTEN LIST INDICATING CIRCUIT NUMBERS, OUTLETS SUPPLIED AND THEIR LOCATIONS SHALL BE PROVIDED.

K. TIE-BARS SHALL NOT BE USED TO CREATE MULTI-POLE CIRCUITS. MAXIMUM 42 CIRCUITS ALLOWED.

L. ONLY ONE WIRE SHALL BE INSTALLED UNDER EACH CIRCUIT BREAKER LUG.

M. SHORT CIRCUIT RATING OF PANELBOARDS SHALL NOT BE LESS THAN AS INDICATED ON THE CONTRACT DRAWINGS OR SPECIFIED HEREIN. WHERE NOT INDICATED OR SPECIFIED THE MINIMUM SHORT CIRCUIT RATING SHALL BE EQUAL TO THE INTERRUPTING CAPACITY OF THE LOWEST RATED CIRCUIT BREAKER IN THE PANELBOARD, BUT IN NO CASE LESS THAN 10,000 AMPERES R.M.S. SYMMETRICAL FOR 208Y/120 VOLT SYSTEM AND 14,000 AMPERES R.M.S. SYMMETRICAL FOR 480Y/277 VOLT SYSTEM. SERIES RATED PANELBOARDS SHALL BE USED TO ACHIEVE REQUIRED SHORT CIRCUIT RATINGS.

N. FOR ALL EXISTING PANELBOARDS, CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKERS TO REPLACE EXISTING AS REQUIRED AS INDICATED ON DRAWINGS.

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Project
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ELECTRICAL SPECIFICATIONS SHEET 3 OF 3

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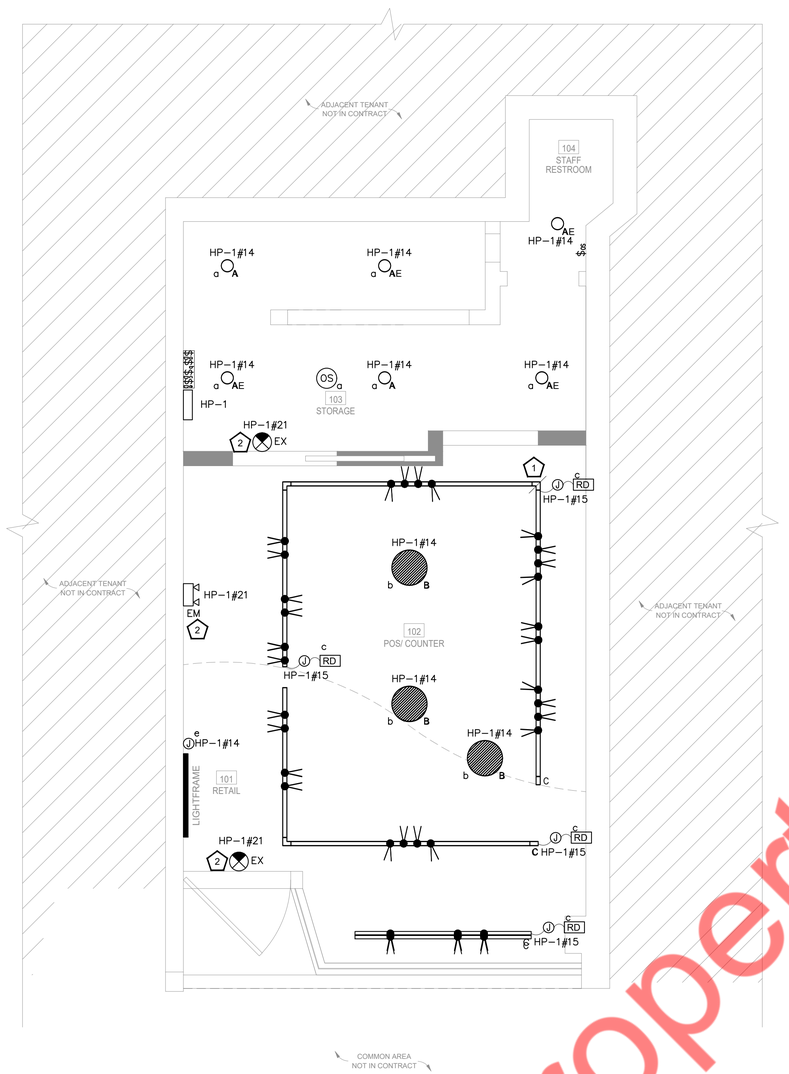

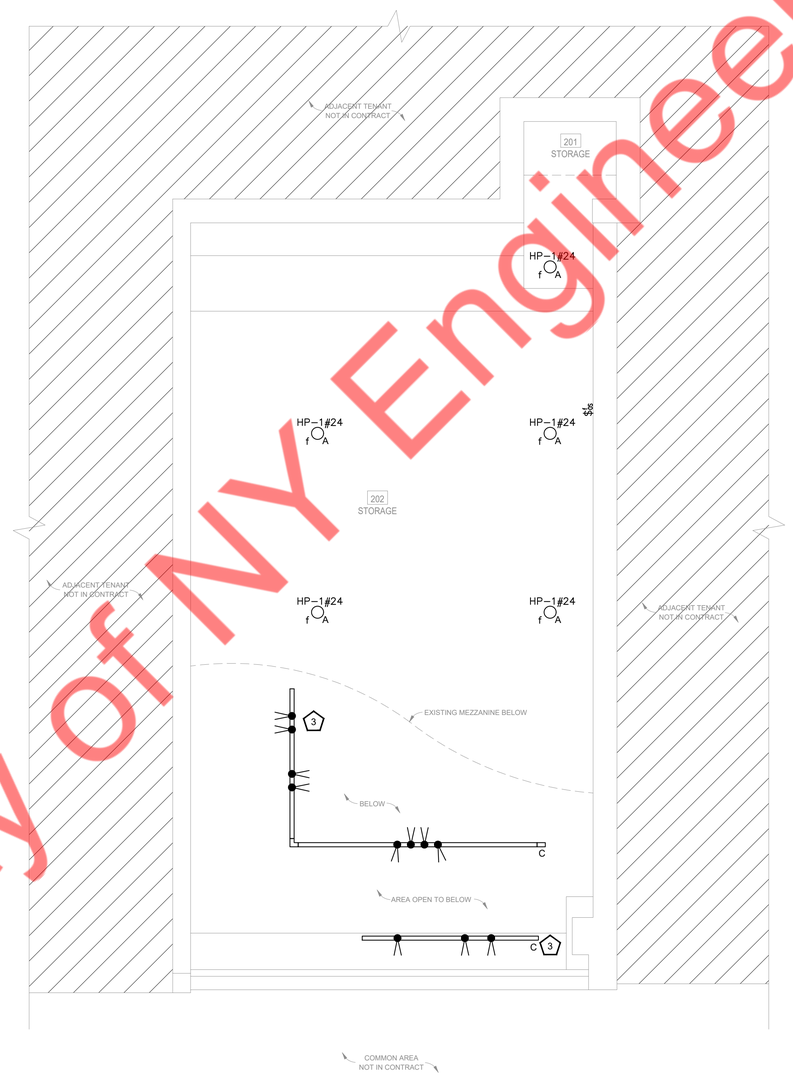

GENERAL ELECTRICAL POWER NOTES:

1. PLACEMENT OF LIGHT FIXTURES SHALL BE SET AS DIMENSIONED & AS SCHEDULED.
2. LIGHT FIXTURES SHALL BE SUPPLIED AS SCHEDULED WITH NO EXCEPTIONS.
3. MINIMUM WIRE SIZE SHALL BE NO. 12 COPPER.
4. ALL EMERGENCY AND EXIT LIGHTING SHALL BE WIRED AHEAD OF THE SWITCHING. EMERGENCY LIGHTING SHALL BE ON THE SAME CIRCUITRY AS THE GENERAL LIGHTING IN THE AREA THEY SERVE. EMERGENCY LIGHTING WIRING SHALL BE IDENTIFIED (MARKED) PER C.E.C. 70.9. PROVIDE GENERAL LIGHTING CIRCUITS, WHICH HAVE EMERGENCY LIGHTING CONNECTIONS, WITH LOCK–OUT ON BREAKER.
5. ALL LIGHTING FIXTURES IN FOOD AND BEVERAGE PREP AREA SHALL BE SHATTERPROOF.
6. VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO BID. NOTIFY OWNER OF ANY DISCREPANCIES. IF ACCEPTABLE TO OWNER'S REPRESENTATIVE, EXISTING EQUIPMENT MAY BE RE–USED. IF NOT ACCEPTABLE, FURNISH AND INSTALL NEW

KEY NOTES

1. DIVIDE THE LIGHTING TRACK INTO TWO PARTS.
2. CONNECT EXIT/EGRESS LIGHTING AHEAD OF ALL LIGHTING CONTROLS OF GENERAL LIGHTING CIRCUIT SERVING THIS AREA.
3. REFER TO FIRST FLOOR ELECTRICAL LIGHTING PLAN FOR THE LIGHTING CONTROL.

1 GROUND FLOOR ELECTRICAL LIGHTING PLAN
SCALE: 1/2" = 1'-0"

GRAPHIC SCALE
0 1' 2' 4'

2 SECOND FLOOR ELECTRICAL LIGHTING PLAN
SCALE: 1/2" = 1'-0"

GRAPHIC SCALE
0 1' 2' 4'

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ELECTRICAL LIGHTING PLAN

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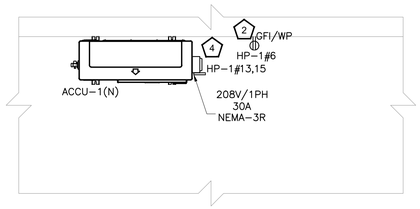
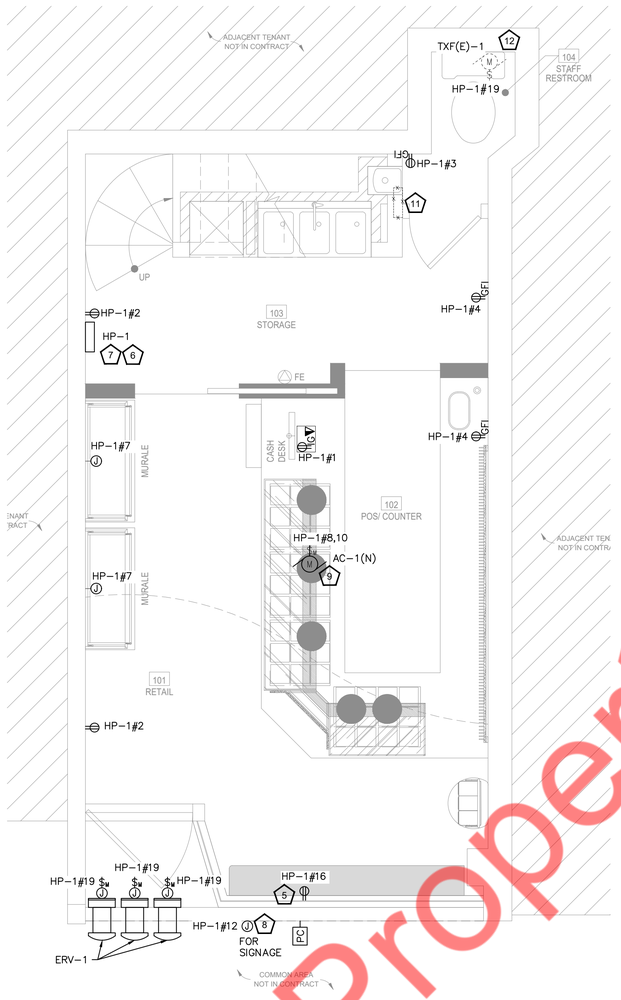


3 SETBACK ELECTRICAL PART PLAN

SCALE: 1/2" = 1'-0"

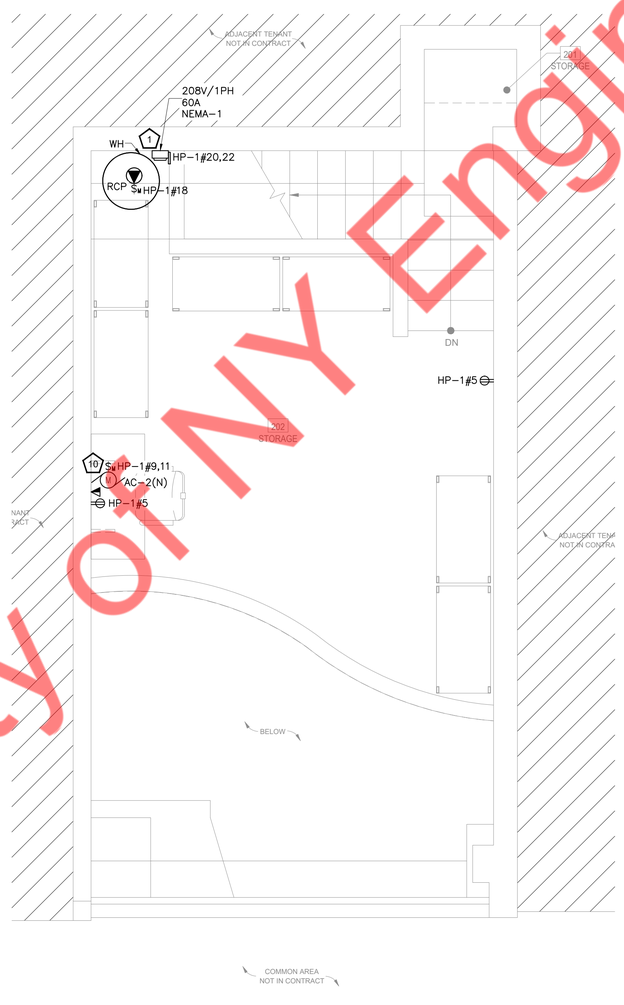


1 GROUND FLOOR ELECTRICAL POWER PLAN

SCALE: 1/2" = 1'-0"

GRAPHIC SCALE

0 1' 2' 4'



2 SECOND FLOOR ELECTRICAL POWER PLAN

SCALE: 1/2" = 1'-0"

GRAPHIC SCALE

0 1' 2' 4'

GENERAL ELECTRICAL POWER NOTES:

1. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH ELECTRICAL CODE AND ANY STATE/LOCAL CODES.
2. ALL CONDUIT SHALL BE GALVANIZED RIGID HEAVY WALL STEEL, OR EMT, SIZES SHALL BE DETERMINED PER N.E.C.WATERTIGHT FITTINGS SHALL BE PROVIDED AS REQUIRED BY CODE. EMT CONDUITS SHALL HAVE COMPRESSION FITTINGS. FLEXIBLE CONDUITS MAY BE USED FOR SHORT CONDITIONS TO VIBRATING EQUIPMENT, AND SHOWCASES, AS REQUIRED. 3/4 INCH SIZE MINIMUM.
3. ALL ELECTRICAL EQUIPMENT SHALL BE RESTRAINED FOR SEISMIC FORCES IN ACCORDANCE WITH ALL BUILDING CODES.
4. EXACT LOCATION, CUT-OUTS AND MOUNTING HEIGHTS FOR WIRING DEVICES IN CASEWORK SHALL BE COORDINATED WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
5. VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO BID. NOTIFY OWNER OF ANY DISCREPANCIES. IF ACCEPTABLE TO OWNER'S REPRESENTATIVE, EXISTING EQUIPMENT MAY BE RE-USED. IF NOT ACCEPTABLE, FURNISH AND INSTALL NEW.
6. ALL RECEPTACLES, DATA AND TELEPHONE OUTLETS ARE TO BE MOUNTED AT +18" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
7. PRIOR TO CONNECTION EC SHALL VERIFY THE VOLTAGE AND AMPERAGE REQUIREMENTS OF ALL EQUIPMENT DELIVERED TO THE SITE. EC SHALL NOTIFY OWNER OF ANY DIFFERENCE.
8. EC TO VERIFY PLUG TYPE, AMPERAGE, VOLTAGE, AND LOCATION PRIOR TO BID AND ROUGH IN.
9. ALL CIRCUITS SHALL INCLUDE EQUIPMENT GROUND SIZED PER NEC.
10. EC TO VERIFY ALL POWER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE HACR BREAKERS AS REQUIRED.
11. 3FT. CLEARENCE SHOULD BE PROVIDED TO EVERY PANEL ACCORDING TO NEC 110.26.
12. COORDINATE WITH THE MECHANICAL CONTRACTOR FOR THE LOCATION OF THE FSDs AND REQUIRED MDs. PROVIDE POWER ACCORDINGLY.

KEY NOTES

1. EC TO PROVIDE 208V, 60A, 2P, NON FUSED, NEMA 3R DISCONNECT SWITCH FOR WATER HEATER.
2. EC TO PROVIDE WEATHER RESISTANT TYPE GFCI RECEPTACLE IN WEATHERPROOF WHILE IN USE COVER AT HVAC EQUIPMENT,
3. ERV-1 PROVIDED BY MECHANICAL CONTRACTOR. EC TO PROVIDE A JUNCTION BOX AND A 20A, 120V SWITCH. EC TO COORDINATE WITH THE MANUFACTURER FOR ELECTRICAL POINT OF CONNECTION. VERIFY EXACT LOCATION ON FIELD WITH THE MECHANICAL CONTRACTOR. BASE BID ACCORDINGLY.
4. EC TO PROVIDE 30A, 208V, 2P NON FUSED NEMA 3R DISCONNECT SWITCH AT NEW ACCU-1, WITH (2)#10 CU, (1)#10 CU GND IN 3/4"C.
5. EC TO PROVIDE RECEPTACLE MOUNTED ABOVE WINDOW ON WALL OR CEILING AS REQUIRED TO MEET THE N.E.C.210.62 SHOW WINDOW REQUIREMENTS.
6. EC SHALL VERIFY WORKING SPACE IN FRONT OF THE ELECTRICAL EQUIPMENT PER NEC 110.26. ENSURE A MINIMUM CLEARANCE OF 3 FEET IN DEPTH, 30 INCHES IN WIDTH, AND 6 FEET 6 INCHES IN HEIGHT FOR SAFE OPERATION AND MAINTENANCE. RELOCATE AS REQUIRED.
7. NEW 100A MCB, 120/208V, 1-PHASE 3 WIRE ELECTRICAL PANEL "HP-1". EC TO COORDINATE WITH ARCHITECT FOR THE EXACT LOCATION OF THE PANEL.
8. EXTERNAL SIGNAGE WILL BE CONTROLLED BY THE PHOTOCELL.
9. CONNECTION TO AC-1(N) UNIT. EC TO COORDINATE WITH MECHANICAL CONTRACTOR/MANUFACTURER FOR EXACT LOCATION AND POINT OF CONNECTION. EC SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR TO ACCOUNT FOR THE CONDENSATE DRAIN PUMP. BASE BID ACCORDINGLY.
10. CONNECTION TO AC-2(N) UNIT. EC TO COORDINATE WITH MECHANICAL CONTRACTOR/MANUFACTURER FOR EXACT LOCATION AND POINT OF CONNECTION. EC SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR TO ACCOUNT FOR THE CONDENSATE DRAIN PUMP. BASE BID ACCORDINGLY.
11. EXISTING 100A PANEL TO BE DEMOLISHED. EC TO COORDINATE WITH THE ARCHITECT FOR THE EXACT LOCATION.
12. EXISTING EXHAUST FAN TXF-1(E) TO REMAIN. MAINTAIN EXISTING POINT OF CONNECTION AND CONTROLS. REROUTE EXISTING CONDUIT AND CIRCUITRY TO NEW BREAKER IN PANEL "HP-1". ELECTRICAL CONTRACTOR (EC) TO FIELD-VERIFY EXACT LOCATION AND OPERATIONAL CONDITION. PROVIDE NEW ELECTRICAL CONNECTION, CONTROLS, AND ALL ASSOCIATED COMPONENTS IF EXISTING SYSTEM IS FOUND INOPERABLE OR NONFEASIBLE.

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Project
NEUHAUS BELIGAN CHOCOLATE

Issue Description	Date
PERMIT SET	09/19/2025

Checked By	NYE
Drawn By	NYE
Scale	AS NOTED

Sheet Title
ELECTRICAL POWER PLAN

Sheet No.
E-201.00

FILE NAME

OAC AND VAC MANUAL MODE OPERATION:

1. SWITCHES ARE REQUIRED TO TURN LOAD ON.
2. LOAD TURNS OFF WHEN SENSOR TIMES OUT OR WITH SWITCH.

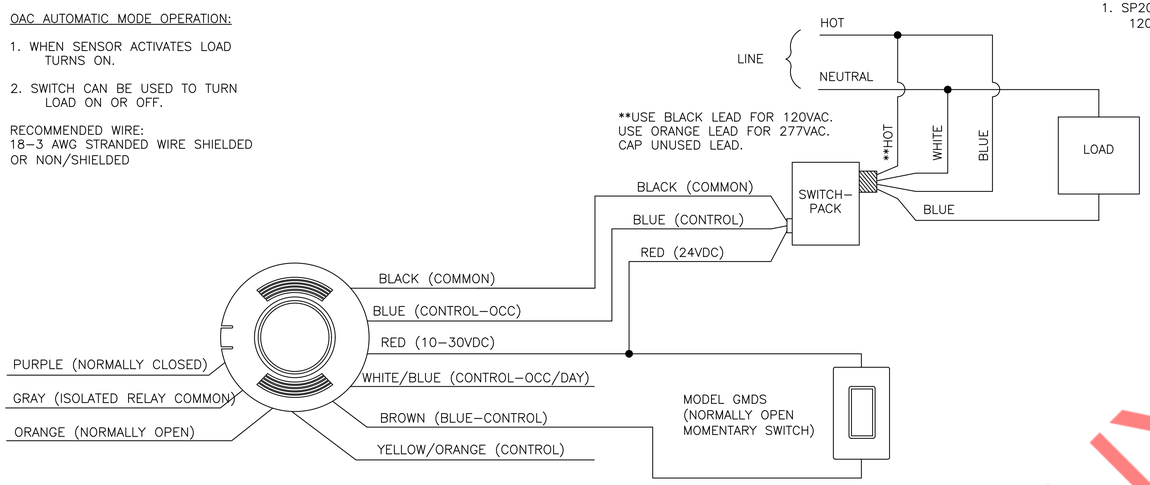
OAC AUTOMATIC MODE OPERATION:

1. WHEN SENSOR ACTIVATES LOAD TURNS ON.
2. SWITCH CAN BE USED TO TURN LOAD ON OR OFF.

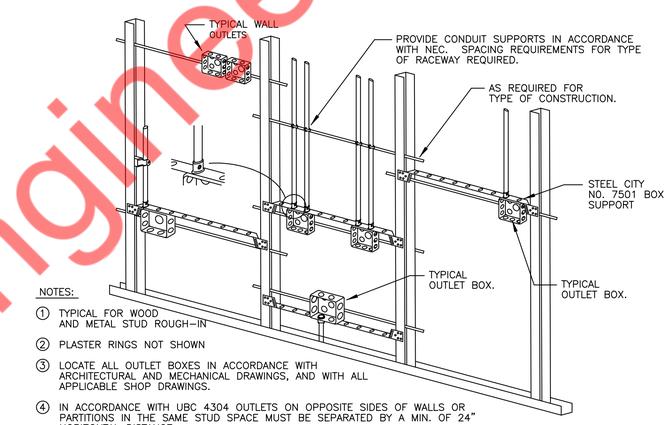
RECOMMENDED WIRE:
18-3 AWG STRANDED WIRE SHIELDED OR NON/SHIELDED

NOTES

1. SP20-RD4 SWITCHPACK SHOWN. 120/277VAC 20AMP RATING.



2 / E-401 N.T.S OCCUPANCY - AUTO ON/OFF.
WIRING DIAGRAM - LOW VOLTAGE CEILING SENSOR



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. IN ACCORDANCE WITH UBC 4304 OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MIN. OF 24" HORIZONTAL DISTANCE.

1 / E-401 N.T.S DETAIL TYPICAL ROUGH-IN REQUIREMENTS

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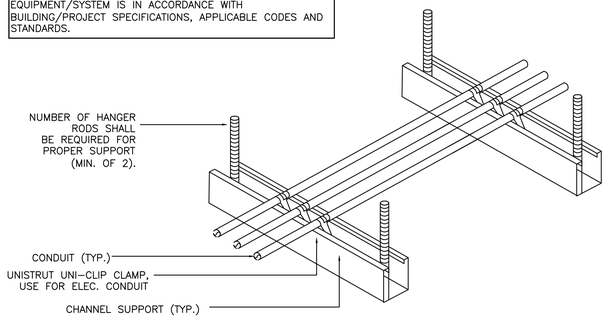
Sheet Title
ELECTRICAL DETAILS SHEET(1 OF 2)

Sheet No.
E-401.00

FILE NAME:

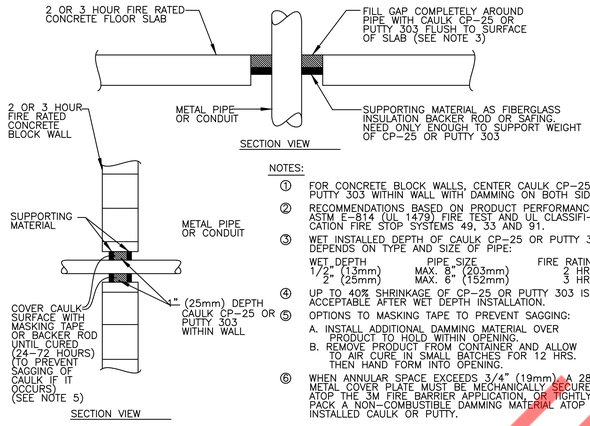
NOTE:
THIS INFORMATION MAY NOT CONTAIN ALL DETAILS REQUIRED FOR CONSTRUCTION. APPROPRIATE MODIFICATION MAY BE REQUIRED TO ENSURE SUITABILITY OF THESE DRAWINGS FOR THE SPECIFIC APPLICATION. IT IS THE USER'S RESPONSIBILITY TO ENSURE INSTALLATION OF THE EQUIPMENT/SYSTEM IS IN ACCORDANCE WITH BUILDING/PROJECT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

3 / E-402 CONDUIT SUPPORT DETAIL
N.T.S



NOTES:

① FOR CONCRETE BLOCK WALLS, CENTER CAULK CP-25 OR PUTTY 303 WITHIN WALL WITH DAMMING ON BOTH SIDES.

② RECOMMENDATIONS BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) FIRE TEST AND UL CLASSIFICATION FIRE STOP SYSTEMS 49, 33 AND 91.

③ WET INSTALLED DEPTH OF CAULK CP-25 OR PUTTY 303 DEPENDS ON TYPE AND SIZE OF PIPE:

WET DEPTH	PIPE SIZE	FIRE RATING
1/2" (13mm)	MAX. 8" (203mm)	2 HRS.
2" (25mm)	MAX. 6" (152mm)	3 HRS.

④ UP TO 40% SHRINKAGE OF CP-25 OR PUTTY 303 IS ACCEPTABLE AFTER WET DEPTH INSTALLATION.

⑤ OPTIONS TO MASKING TAPE TO PREVENT SAGGING:

A. INSTALL ADDITIONAL DAMMING MATERIAL OVER PRODUCT TO HOLD WITHIN OPENING.
B. REMOVE PRODUCT FROM CONTAINER AND ALLOW TO AIR CURE IN SMALL BATCHES FOR 12 HRS. THEN HAND FORM INTO OPENING.

⑥ WHEN ANNULAR SPACE EXCEEDS 3/4" (19mm) A 28 AWG METAL COVER PLATE MUST BE MECHANICALLY SECURED ATOP THE 3M FIRE BARRIER APPLICATION, OR TIGHTLY PACK A NON-COMBUSTIBLE DAMMING MATERIAL ATOP INSTALLED CAULK OR PUTTY.

2 / E-402 FIRE STOP DETAIL
N.T.S

MANUAL MODE OPERATION:

1. PUSHBUTTON PRESS IS REQUIRED TO TURN LOAD ON.
2. LOAD TURNS OFF WHEN SENSOR TIMES OUT OR BY PRESSING PUSH BUTTON.
3. IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, LOAD WILL NOT TURN ON.

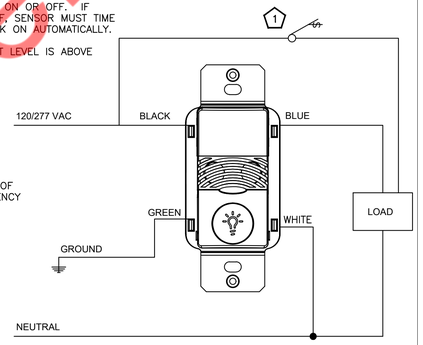
AUTOMATIC MODE OPERATION:

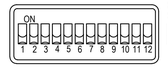
1. WHEN SENSOR ACTIVATES LOAD TURNS ON.
2. PUSHBUTTON CAN BE USED TO TURN LOAD ON OR OFF. IF PUSHBUTTON IS USED TO TURN LOAD OFF, SENSOR MUST TIME OUT FIRST, BEFORE LOAD CAN TURN BACK ON AUTOMATICALLY.
3. IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, LOAD WILL NOT TURN ON.

SENSOR TYPES INCLUDE:

ONW-D-1001-MV-N

① PROVIDE SENSING CONDUCTOR TAPPED AHEAD OF ANY SWITCHES WHERE SWITCH SERVES EMERGENCY FIXTURES.





(ONW-D-1001-MV-N SENSORS)
3
ON (UP) = MANUAL ON
OFF (DOWN) = AUTO ON

1 / E-402 CONNECTION) OCCUPANCY/VACANCY-SINGLE LEVEL WIRING DIAGRAM-LOW VOLTAGE WALL SWITCH SENSOR(NEUTRAL
N.T.S

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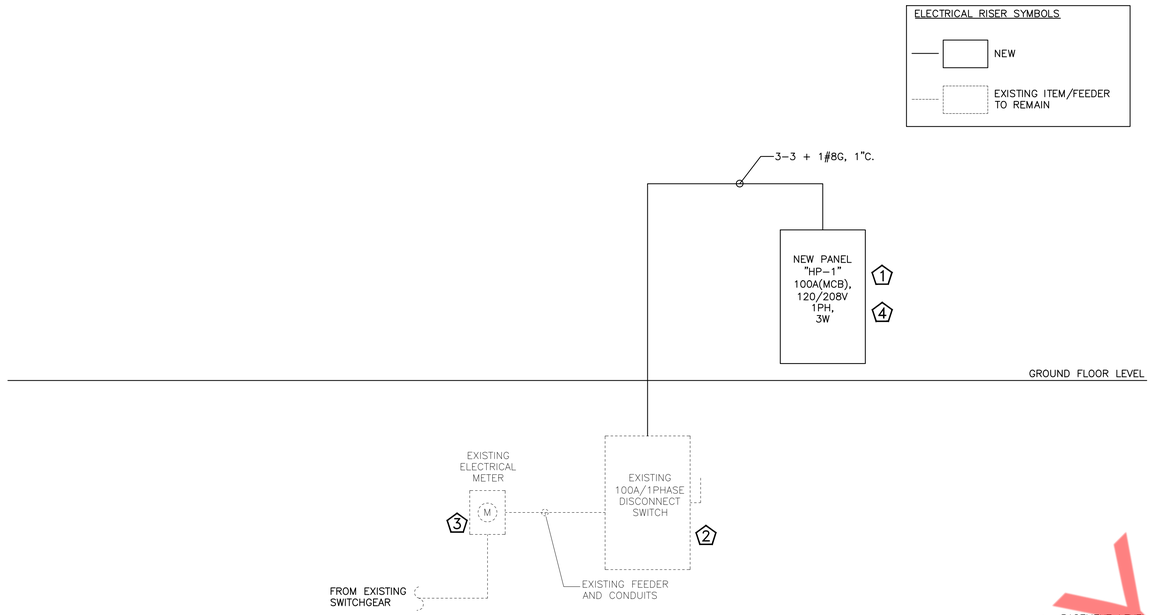
Sheet Title
ELECTRICAL DETAILS SHEET(2 OF 2)

Sheet No.
E-402.00

FILE NAME:



1 ELECTRICAL RISER DIAGRAM
NTS

ELECTRICAL RISER DIAGRAM KEY NOTES:

1. NEW 100A MCB, 120/208, 1-PHASE, 3-WIRE ELECTRICAL PANEL "HP-1". E.C. TO FIELD VERIFY EXACT SIZE AND LOCATION OF THE PANEL.
2. EXISTING SERVICE DISCONNECT SWITCH TO REMAIN. EC NEEDS TO VERIFY ON FEILD EXACT SIZE, LOCATION AND OPERABLE CONDITION OF THE DISCONNECT SWITCH.
3. EXISTING ELECTRIC METER TO REMAIN. EC NEEDS TO VERIFY ON FEILD LOCATION AND OPERABLE CONDITION OF THE ELECTRICAL METER.
4. E.C. SHALL VERIFY FAULT CURRENT AVAILABLE WITH LANDLORD AND CALCULATE EXACT A.I.C. RATING REQUIRED PRIORITIZED.

ELECTRICAL RISER DIAGRAM GENERAL NOTES:

1. THE COMBINED VOLTAGE DROP OF THE FEEDER AND BRANCH CIRCUIT SHALL NOT EXCEED 5% PER CODE.
2. E.C. SHALL VERIFY THAT THE PART OF RISER MARKED AS EXISTING MATCHES WITH THE SITE CONDITION.

PANEL: HP-1

208Y/120 VOLTS, **1** PHASE, **3** WIRE

MAIN CB **100A** BUS **125A** MIN, INTERRUPTING RATING **22 KAIC** (4)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	PER PHASE (KVA) B	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	CASH DESK REC.	R	0.18	2#12, #12G, 3/4"C	0.5		2#12, #12G, 3/4"C	0.4	R	GENERAL REC.	20	2
3	20	RESTROOM REC.	R	0.18	2#12, #12G, 3/4"C		0.54	2#12, #12G, 3/4"C	0.4	R	GFI REC.	20	4
5	20	STORAGE REC.	R	0.36	2#12, #12G, 3/4"C	0.5		2#12, #12G, 3/4"C	0.18	R	OUTDOOR REC.	20	6
7	20	MURALE	L	0.1	2#12, #12G, 3/4"C		0.3	2#12, #12G, 3/4"C	0.2	H	AC-1(N)	15/2P	8
9	15/2P	AC-2(N)	H	0.03	2#12, #12G, 3/4"C	0.2			0.2	H			10
11			H	0.03			1.23	2#12, #12G, 3/4"C	1.2	L	EXTERIOR SIGNAGE	20	12
13	30/2P	ACCU-1	H	2.7	2#10, #10G, 3/4"C	3.1		2#12, #12G, 3/4"C	0.4	L	FIRST FLOOR LIGHTING	20	14
15			H	2.7			3.2	2#12, #12G, 3/4"C	0.5	L	FIRST FLOOR TRACK LIGHTING	20	16
17	20	SHOW WINDOW	L	1.5	2#12, #12G, 3/4"C	1.6		2#12, #12G, 3/4"C	0.1	M	RCP	20	18
19	20	ERVs AND TXF	M	0.13	2#12, #12G, 3/4"C		3.13	2#8, #10G, 3/4"C	3	E	WH	40/2P	20
21	20	EXIT/EMERGENCY LIGHT	L	0.03	2#12, #12G, 3/4"C	3.0			3	E			22
23	20	FSD/MD	M	0.1	2#12, #12G, 3/4"C		0.2	2#12, #12G, 3/4"C	0.1	L	MEZZANINE LIGHTING	20	24
25	20	SPARE				0					SPARE	20	26
27		SPACE					0				SPACE		28
29		SPACE				0					SPACE		30
		TOTAL LOAD (kVA)				**9.04**	**8.60**						

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Scale AS NOTED

Sheet Title
ELECTRICAL RISER DIAGRAM AND PANEL SCHEDULE

Sheet No.
E-501.00

FILE NAME:

PLUMBING SYMBOLS LIST

- V — VENT PIPING
- UNDG.SAN — UNDER GROUND SANITARY PIPING
- ABOVE GROUND SANITARY PIPING
- COLD WATER PIPING
- EX. COLD WATER PIPING
- HOT WATER PIPING
- HOT WATER RETURN PIPING
- P—TRAP
- PIPE UP
- PIPE DOWN
- PLUGGED OUTLET/ FLOOR CLEANOUT
- BALANCING VALVE
- POINT OF CONNECTION
- FLOOR SINK HALF GRATE

PLUMBING ABBREVIATIONS

FFD	FUNNEL DRAIN	FS	FLOOR SINK
CW	COLD WATER	AFF	ABOVE FINISH FLOOR
HW	HOT WATER	DN	DOWN
SAN	SANITARY	TYP	TYPICAL
V	VENT	VTR	VENT THROUGH ROOF
W	WASTE	TMV	THERMOSTATIC MIXING VALVE
WH	WATER HEATER	GI—1	GREASE INTERCEPTOR
WC	WATER CLOSET	IW	INDIRECT WASTE
LAV	LAVOTARY	DW	DIRECT WASTE
HWR	HOT WATER RETURN	GW	GREASE WASTE
EX	EXISTING	FCO	FLOOR CLEAN OUT
T&P	TEMPERATURE & PRESSURE	RCP	RECIRCULATION PUMP
		HWR	HOT WATER RETURN

SPECIAL INSPECTION PLUMBING NOTE:

1. FIRE RESISTANT PENETRATION & JOINTS IN ACCORDANCE WITH NY CITY BUILDING CODE BC—1705.17

SCOPE OF WORK:

1. FILING HEREWITH PLUMBING WORK (WATER SUPPLY, SANITARY & VENT) FOR BUILDING.
2. PLUMBING SYSTEMS COMPLIES WITH STANDARDS OF NYC BC 2022, NYC PC 2022.

PLUMBING DRAWING LIST

NOTE:

THIS IS APPLICATION IS FOR PLUMBING WORK ONLY.
GENERAL CONSTRUCTION IS FILED SEPARATELY UNDER DOB NOW APPLICATION NO. M01282042—I1
MECHANICAL WORK IS FILED SEPARATELY UNDER DOB NOW APPLICATION NO. M01282042—S2

THIS PROPERTY IS A CONTRIBUTING MEMBER OF THE STATE/NATIONAL HISTORIC REGISTRY, THUS IS EXEMPT FROM COMPLIANCE WITH ENERGY CODE REQUIREMENTS.

BUILDING DEPARTMENT PLUMBING NOTES:

1. ALL PLUMBING SYSTEMS (SANITARY, WASTE, VENT & WATER DISTRIBUTION) AND ASSOCIATED EQUIPMENT SHALL BE INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF 2022 THE NEW YORK CITY PLUMBING CODE (NYC PC)& 2020 NEW YORK CITY ENERGY CONSERVATION CODE (NYC ECC).
2. PROTECTION OF PIPING AND PLUMBING SYSTEM COMPONENTS AS PER SECTION NYC PC 305.
3. RODENT PROOFING AS PER NYC PC 304
4. MATERIALS USED IN PLUMBING SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION NYC PC 303, 605, 702, 902, 1102.
5. EQUIPMENT CONNECTIONS AND JOINING OF PIPING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTERS NYC PC 4, 5, 6, 7 AND 9.
6. DEEP SEAL TRAPS FOR FLOOR DRAINS SHALL BE PROVIDED AS PER NYC PC 1002, AND CLEAN—OUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION NYC PC 708
7. DRAINAGE PIPE CLEANOUTS AS PER SECTION NYC PC 708.
8. VERTICAL AND HORIZONTAL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION NYC PC 308
9. WATER SUPPLY SYSTEMS SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 6 SECTION NYC PC 601—603, 604, 606, 607, 608, 610
10. THE SANITARY DRAINAGE SYSTEM SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF NYC PC CHAPTER 7 SECTIONS 701 THROUGH 712.
11. VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 9 SECTIONS NYC PC 901 THROUGH 912 THROUGH 917
12. MINIMUM NUMBER OF PLUMBING FIXTURES SHALL COMPLY WITH NYC PC 2022 TABLE 403.1 AND TABLE 403.2. COORDINATE WITH ARCHITECT FOR EXACT NUMBER OF FIXTURES.

PLOT PLAN:

1268 MADISON AVENUE, NEW YORK, NY 10128

BLOCK : 1502
LOT : 56
ZONE : C1—5
MAP : 5D
BUILDING USE : COMMERCIAL & OFFICE BUILDING

THIS PROPERTY IS NOT WITHIN THE SPECIAL HAZARD AREA AS PER FEMA FIRMETTE NUMBER 3604970201F, 2007 AND 3604970201G ,2013.

PLUMBING SPECIFICATIONS:

1. BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS

1.01 SCOPE

A. PROVIDE ALL MATERIAL, TOOLS, SUPERVISION AND LABOR INCLUDING ALL MISCELLANEOUS AND INCIDENTAL ITEMS REQUIRED FOR COMPLETE AND OPERABLE PLUMBING INSTALLATIONS AS SHOWN OR DESCRIBED ON THE DRAWINGS AND IN THESE SPECIFICATIONS.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING AND NEW CONDITIONS AND MATERIALS WITHIN THE CONSTRUCTION AREA. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE OWNER'S SATISFACTION.

C. OBTAIN ALL PERMITS, PAY ALL PERMIT FEES AND SCHEDULE ALL REQUIRED INSPECTIONS. COPIES OF ALL PERMITS AND INSPECTION CERTIFICATES SHALL BE FORWARDED TO THE OWNER FOR RECORD.

D. THE GENERAL CONDITIONS OF THE CONTRACT AND ALL DIVISION 1 REQUIREMENTS APPLY TO THE WORK OF THIS SECTION.

E. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING BID TO DETERMINE CONDITIONS AND THE EXTENT OF THE WORK. BY COMMENCING WORK, THE CONTRACTOR ACKNOWLEDGES HIS CONFIRMATION OF ALL CONDITIONS AS ACCEPTABLE WITH REFERENCE TO HIS CONTRACT, SCOPE OF WORK AND BID PRICE SUCH THAT NO ADDITIONAL COMPENSATION SHALL BE FORTHCOMING FOR UNFORESEEN EXISTING CONDITIONS.

F. IN ALL AREAS SUBJECT TO FREEZING CONDITIONS, THE CONTRACTOR SHALL PROVIDE FREEZE PROTECTION FOR ALL DOMESTIC WATER PIPING INSTALLED UNDER HIS CONTRACT.

G. ALL ELECTRICAL REQUIREMENTS SHALL BE COORDINATED WITH THE CONTRACTOR FOR ELECTRICAL WORK. THIS CONTRACTOR IS RESPONSIBLE FOR ALL LOW VOLTAGE WIRING FOR EQUIPMENT INSTALLED UNDER HIS CONTRACT. THE CONTRACTOR FOR ELECTRICAL WORK IS RESPONSIBLE FOR LINE VOLTAGE POWER WIRING ONLY.

H. COLOR AND FINISH SELECTIONS FOR ALL MATERIALS, INCLUDING PAINTING OF PIPING, SHALL BE AS DIRECTED AND/OR APPROVED BY THE ARCHITECT.

I. MINOR DETAILS NOT SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER AND ACCEPTABLE CONSTRUCTION, INSTALLATION OR OPERATION OF ANY PART OF THE WORK AS DETERMINED BY THE ENGINEER SHALL BE INCLUDED AS IF SPECIFIED OR INDICATED ON THE DRAWINGS.

J. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIREMENTS FOR THE INSTALLATION, CONNECTION, EXTENSION OR MODIFICATION TO ALL UTILITY SERVICES WITH RESPECTIVE PROVIDERS INCLUDING PAYMENT OF ALL ASSOCIATED FEES.

K. THE CONTRACTOR IS RESPONSIBLE FOR ALL PAINTING ASSOCIATED WITH CUTTING AND PATCHING. ALL PAINTING IN AREAS WITH COMPLETE FINISH RENOVATIONS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.

1.02 SUBMITTALS

A. SUBMITTAL REQUIREMENTS SHALL BE COORDINATED WITH THE ARCHITECT AND AUTHORITIES HAVING JURISDICTION. UNLESS OTHERWISE DIRECTED, CONTRACTOR SHALL PROVIDE SUBMITTALS AS LISTED BELOW.

1. PIPE AND FITTINGS
2. VALVES
3. HANGERS AND SUPPORTS
4. PLUMBING PIPING LAYOUT
5. TESTS
6. PLUMBING FIXTURES
7. ALL SCHEDULED PLUMBING EQUIPMENT
8. GREASE TRAP
9. WATER HEATER

B. SUBMITTALS FROM SUPPLIERS OR MANUFACTURERS WHICH DO NOT BEAR THE STAMP OF THE SUBMITTING CONTRACTOR INDICATING THAT THE CONTRACTOR HAS REVIEWED THE SUBMITTAL FOR CONFORMANCE WITH THE PROJECT REQUIREMENTS WILL BE RETURNED REJECTED.

C. THE ENGINEER'S REVIEW OF SUBMITTALS IS A COURTESY WHICH DOES NOT RELIEVE THE CONTRACTOR FROM CONFORMING WITH THE CONSTRUCTION DOCUMENTS, REGARDLESS OF THE ACTION INDICATED BY THE SHOP DRAWINGS STAMP.

D. REVIEW OF SHOP DRAWINGS BY THE ENGINEER SHALL BE LIMITED TO THE INITIAL REVIEW, AND A SECOND REVIEW OF ANY REQUIRED RESUBMITTED DATA. IF THE ENGINEER IS REQUIRED TO REVIEW SHOP DRAWINGS FOR A THIRD (OR MORE) SUBMISSION OF THE SAME ITEM, THE CONTRACTOR SHALL BE LIABLE FOR COMPENSATING THE ENGINEER FOR THESE SUBSEQUENT REVIEWS AS PER THE ENGINEER'S CURRENT HOURLY RATE SCHEDULE.

E. SUBMIT PROOF OF APPROVAL AND/OR CONFIRMATION OF SATISFACTORY TEST RESULTS TO THE OWNER AND THE ARCHITECT.

F. SUBMIT TO THE OWNER'S MAINTENANCE PERSONNEL OPERATION AND MAINTENANCE DATA FOR ALL SYSTEM COMPONENTS, SERVICING REQUIREMENTS, INSPECTION DATA, REPLACEMENT PART NUMBERS AND AVAILABILITY AND CONTACT INFORMATION FOR SERVICE/SUPPLY COMPANY.

G. FOR ALL BELOW GRADE PIPING WHERE ACTUAL INSTALLATION DEVIATES FROM CONSTRUCTION DRAWINGS, THE CONTRACTOR SHALL PROVIDE AS—BUILT DRAWINGS INDICATING BELOW GRADE PIPE LOCATIONS DIMENSIONED TO NEAREST COLUMN LINES.

H. RECORD AS—BUILT DRAWINGS SHALL BE SUPPLIED TO THE OWNER/TENANT AFTER COMPLETION OF THE WORK SHOWING ANY ALTERATIONS, ADDITIONS AND/OR DELETIONS TO THE SYSTEM(S) INSTALLED.

1.03 SUBSTITUTIONS

A. ALL EQUIPMENT SHALL BE PRODUCTS OF THE SPECIFIED MANUFACTURER OR MANUFACTURERS. ALL BIDS SHALL BE BASED ON THE SPECIFIED MANUFACTURER OR MANUFACTURER'S EQUIPMENT. FOR SUBSTITUTIONS OF OTHER MANUFACTURER'S EQUIPMENT TO BE CONSIDERED, THE SUBSTITUTION MUST BE INDICATED PRIOR TO BIDDING WITH THE REASON FOR THE PROPOSED SUBSTITUTION IDENTIFIED, AND THE PROPOSED CREDIT TO THE OWNER INDICATED. THE ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF ANY PROPOSED SUBSTITUTIONS.

B. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR COORDINATING THE WORK OF OTHER TRADES WHICH MAY BE AFFECTED BY SUBSTITUTIONS, INCLUDING ALL RELATED COSTS.

1.04 DEFINITIONS

A. FURNISH: TO PURCHASE, PROCURE, ACQUIRE AND DELIVER, COMPLETE WITH RELATED ACCESSORIES.

B. INSTALL: TO ERECT, MOUNT AND CONNECT, COMPLETE WITH RELATED ACCESSORIES.

C. PROVIDE: TO FURNISH AND INSTALL.

D. PLUMBING CONTRACTOR, THE CONTRACTOR, THIS CONTRACTOR: THE CONTRACTOR FOR PLUMBING WORK WHICH IS SPECIFIED HEREIN AND SHOWN ON THESE DRAWINGS.

E. REFER TO THE NATIONAL STANDARD PLUMBING CODE FOR ADDITIONAL DEFINITIONS.

1.05 DRAWINGS

A. THE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO ILLUSTRATE THE GENERAL ARRANGEMENT AND ROUTING OF PIPING AND GENERAL LOCATIONS OF EQUIPMENT. PRECISE LOCATIONS OF EQUIPMENT, RISERS AND STACKS, AND ROUTING AND ELEVATION OF ALL PIPING SYSTEMS SHALL BE COORDINATED IN THE FIELD WITH THE ARCHITECT, ARCHITECTURAL DRAWINGS, THE WORK OF OTHER TRADES, EXISTING AND NEW BUILDING CONDITIONS AND/OR THE PREFERENCES OF THE OWNER/TENANT AS CONSTRUCTION PROCEEDS. ALL PIPING SHALL BE INSTALLED CONCEALED IN FINISHED SPACES, UNLESS NOTED OTHERWISE.

B. PROVIDE ALL NECESSARY INCIDENTAL MATERIALS AND ACCESSORIES REQUIRED TO MAKE THE WORK COMPLETE IN ALL RESPECTS, EVEN IF NOT PARTICULARLY SHOWN OR SPECIFIED.

C. REFER TO PLUMBING EQUIPMENT/FIXTURE SCHEDULE ON THE DRAWINGS FOR ALL FIXTURE AND EQUIPMENT SPECIFICATIONS.

D. REFER TO FIXTURE CONNECTION SIZE SCHEDULE FOR ALL FIXTURE ROUGHING SIZE REQUIREMENTS.

E. VERIFY ALL INDICATED CONDITIONS BEFORE STARTING WORK AND REPORT ANY DISCREPANCIES. THE DRAWINGS REFLECT CONDITIONS WHICH CAN BE REASONABLY INTERPRETED FROM THE EXISTING VISIBLE CONDITIONS OR FROM DRAWINGS AND INFORMATION FURNISHED BY THE OWNER.

F. LOCATE ALL FIXTURES AND EQUIPMENT AS PER THE FINAL ARCHITECTURAL DRAWINGS.

1.06 PRODUCTS

A. SANITARY AND VENT PIPING:

1. ABOVE GRADE PIPING SHALL BE HUBLESS CAST IRON PIPE WITH STAINLESS STEEL COUPLINGS AND ELASTOMERIC GASKETS WITH A MINIMUM NO. OF BANDS PER COUPLING AS PER CISPI 310—12.
2. SLOPE OF DRAINAGE SYSTEM SHALL BE 1/8" PER FOOT OF RUN FOR PIPE 3" & OVER AND 1/4" PER FOOT OF RUN FOR PIPE 2—1/2" AND SMALLER. VENT PIPING SHALL BE PITCHED TO DRAIN.
3. ALL CAST IRON SOIL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND BE LISTED BY NSF INTERNATIONAL.

B. DOMESTIC WATER PIPING:

1. ABOVE GRADE WATER PIPING SHALL BE TYPE 'L' HARD—DRAWN COPPER TUBE.
2. FITTINGS IN DOMESTIC WATER PIPING SHALL BE WROUGHT COPPER OR CAST BRASS.
3. JOINTS SHALL BE MADE WITH LEAD—FREE SOLDER.
4. THE ENTIRE DOMESTIC WATER DISTRIBUTION SYSTEM SHALL BE INSULATED INCLUDING ALL VALVES, FITTINGS, ETC.
5. COMPLY WITH NSF 61 FOR MATERIALS FOR WATER—SERVICE PIPING AND SPECIALTIES FOR DOMESTIC WATER.
6. ALL DOMESTIC WATER PIPING ABOVE GRADE SHALL BE INSULATED WITH FIRE—RETARDANT, FACTORY—APPLIED JACKET. PROVIDE COLD WATER PIPING WITH FACTORY—APPLIED VAPOR BARRIER. INSULATION REQUIREMENT SHOULD COMPLY WITH NYC ENERGY CONSERVATION CODE 2020 SECTION C—404.5 & TABLE C403.11.3 REFER BELOW TABLE.

MINIMUM PIPE INSULATION THICKNESS						
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)			
	CONDUCTIVITY BTU· IN./ (H· FT2 ·°F)	MEAN RATING TEMPERATURE, °F	<1	1 to < 1½	1½ to < 4	4 to < 8	<8
105—140	0.21—0.28	100	1.0	1.0	1.5	1.5	1.5
40—60	0.21—0.27	75	0.5	0.5	1.0	1.0	1.0

7. WATER DISTRIBUTION SYSTEM AS PER NYC ENERGY CONSERVATION CODE 2020 C404.7, HAVING ONE OR MORE RECIRCULATION PUMPS THAT PUMP WATER FROM A HEATED—WATER SUPPLY PIPE BACK TO THE HEATED—WATER SOURCE THROUGH A COLD—WATER SUPPLY PIPE SHALL BE A DEMAND RECIRCULATION WATER SYSTEM. PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING:

a. THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE.
b. THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD—WATER PIPING TO 104°F (40°C).

8. AS PER NYC ENERGY CONSERVATION CODE 2020 C404.6.1 HEATED—WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER
9. HW SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER NYC ECC 2020, C404.5.1. THE HW PIPE LENGTH FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER FOLLOWING TABLE.

NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPING LENGTH (FEET)	
	PUBLIC LAV	OTHER FIXTURES
½"	2'	20'
¾"	0.5'	20'
1"	0.5'	13'
1¼"	0.5'	8'
1½"	0.5'	6'
2" OR LARGER	0.5'	4'

10. SEAL ALL JOINTS BETWEEN SEGMENTS OF INSULATION.
11. PROVIDE SHIELDS BETWEEN HANGERS AND INSULATION.
12. AS PER NYC ECC 2020 C404.3 STORAGE TANK TYPE WATER HEATERS AND HOT WATER STORAGE TANKS THAT HAVE VERTICAL WATER PIPES CONNECTING TO THE INLET AND OUTLET OF THE TANK SHALL BE PROVIDED WITH INTEGRAL HEAT TRAPS AT THOSE INLETS AND OUTLETS OR SHALL HAVE PIPE CONFIGURED HEAT TRAPS IN THE PIPING CONNECTED TO THOSE INLETS AND OUTLETS

C. VALVES:

1. PROVIDE GATE VALVES, BUTTERFLY OR BALL VALVES FOR SHUT—OFF DUTY ON MAIN AND BRANCH SUPPLY LINES. FOR ALL PIPE RUNS 2" AND SMALLER, PROVIDE BALL VALVES. FOR ALL PIPE RUNS LARGER THAN 2" AND SMALLER THAN 4", PROVIDE GATE VALVES. PIPING 4" AND LARGER, PROVIDE BUTTERFLY VALVES FOR SHUT—OFF DUTY.
2. ALL FIXTURES WITH THE EXCEPTION O FLUSHOMETER—EQUIPPED WATER CLOSETS SHALL HAVE STOP VALVES TO CONTROL SUPPLY TO THE FIXTURE. WHERE SUPPLIES ARE EXPOSED PROVIDE CHROME—PLATED STOPS WITH CHROME—PLATED ESCUTCHEONS ON PIPING PENETRATIONS.
3. ALL PLUMBING FIXTURES AND EQUIPMENT TO HAVE SHUT—OFF VALVES ON SUPPLY LINES.
4. ALL BRANCH LINES TO HAVE SHUT—OFF VALVES.
5. ALL VALVES SHALL BE ACCESSIBLE. PROVIDE ACCESS DOORS WHERE REQUIRED FOR VALVE ACCESS.
6. PROVIDE GLOBE VALVES FOR THROTTLING/BALANCING OF THE HOT WATER CIRCULATING SYSTEM.

D. HANGERS AND SUPPORTS:

1. HANGERS SHALL BE STANDARD STEEL, MALLEABLE OR WROUGHT IRON, AS MANUFACTURED BY GRINNELL OR APPROVED EQUAL, SUITABLE FOR THE TYPE OF CONSTRUCTION. PIPING SHALL NOT BE HUNG FROM OTHER PIPE.
2. SECTIONS OF INDIVIDUAL PIPE RUNS SHALL BE SUPPORTED BY CLEVIS HANGERS.
3. ALL EQUIPMENT SHALL BE PROVIDED WITH APPROVE SUPPORTS.
4. PROVIDE SEISMIC RESTRAINTS IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND STANDARDS AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. UNLESS OTHERWISE INDICATED OR REQUIRED BY AUTHORITIES HAVING JURISDICTION, THE FOLLOWING SHALL BE PROVIDED WITH SEISMIC RESTRAINTS AS REQUIRED BY THE BOCA NATIONAL BUILDING CODE, SECTION 1610.6.4: ALL EQUIPMENT AND MACHINERY, ALL NEW PIPING 2—1/2" AND LARGER (1—1/4" AND LARGER INBOILER/MECHANICAL ROOMS) WITH HANGERS GREATER THAN 12" IN LENGTH FROM THE TOP OF PIPE TO THE STRUCTURE.
6. SUPPORTS SHALL BE PROVIDED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE PIPING MANUFACTURER.

E. MIXING VALVES

1. VALVE BODY SHALL BE MADE OF CAST BRASS. THE INTERNAL COMPONENTS SHALL BE MADE OF BRASS OR STAINLESS STEEL.
2. TYPES A, C & D VALVES: VALVE SHUTS OFF IN FULL COLD POSITION AND MUST PASS THROUGH COLD RANGE BEFORE DELIVERING WARM, AND/OR HOT WATER. TEMPERATURE LIMIT SET AT 105°F MAXIMUM DELIVERY TEMPERATURE. IF ONE SUPPLY SHOULD FAIL, THE OTHER WILL AUTOMATICALLY AND INSTANTLY SHUT DOWN. DELIVERY CAPACITY IS 5GPM @ 45 PSIG DIFFERENTIAL.
3. TYPES OF VALVES: TYPE A— THERMOSTATICALLY OPERATED BY MEANS OF BI—METALLIC STRIP, OR EXPANSION BELLOWS; TYPE B— SINGLE HANDLE MECHANICAL MIXER, OR INDIVIDUAL HOT AND COLD CONTROL VALVES; TYPE C— PRESSURE BALANCING SHOWER VALVE/PISTON OPERATED MIXING VALVE; TYPE D— BALANCED PRESSURE OPERATION, WITH INTEGRAL DIAL THERMOMETER INDICATING DELIVERED WATER TEMPERATURE.

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Project

NEUHAUS BELIGAN CHOCOLATE

PERMIT SET	09/19/2025
Issue Description	*Date*

Checked By	NYE
Drawn By	NYE
Scale	AS NOTED

Sheet Title

PLUMBING SYMBOLS, NOTES, PLOT PLAN & ABBREVIATIONS.

Sheet No.

P-001.00

FILE NAME

4. EACH ELEMENT SHALL BE CONTROLLED BY AN INDIVIDUALLY MOUNTED THERMOSTAT AND HIGH TEMPERATURE CUT–OFF SWITCH. ALL INTERNAL CIRCUITS SHALL BE FUSED. THE OUTER JACKET SHALL BE OF BAKED ENAMEL FINISH AND SHALL BE PROVIDED WITH FULL SIZE CONTROL COMPARTMENT FOR PERFORMANCE OF SERVICE AND MAINTENANCE THROUGH HINGED FRONT PANEL AND SHALL ENCLOSE THE TANK WITH FOAM INSULATION. ELECTRICAL JUNCTION BOX WITH HEAVY DUTY TERMINAL BLOCK SHALL BE PROVIDED. THE DRAIN VALVE SHALL BE LOCATED IN THE FRONT FOR EASE OF SERVICING.

F. SLEEVES AND ESCUTCHEONS:

1. SLEEVES THROUGH STRUCTURAL CONCRETE MEMBERS AND SLEEVES FOR WALLS BELOW GRADE AND FLOORS ON GRADE SHALL BE STANDARD WEIGHT GALVANIZED SCHEDULE 40 STEEL PIPE. SLEEVES THROUGH OTHER THAN STRUCTURAL COMPONENTS OF THE BUILDING SHALL BE 20 GAGE GALVANIZED SHEET METAL WITH LOCK SEAM JOINTS. USG THERMAFIBER SAFING INSULATION SHALL BE INSTALLED BETWEEN PIPE AND SLEEVE.

2. PIPE ESCUTCHEON PLATES SHALL BE INSTALLED WHERE EXPOSED PIPING PASSES THROUGH WALLS, CEILINGS, AND FLOORS AND SHALL BE MINIMUM 20 GAGE STEEL. PROVIDE CHROME PLATED ESCUTCHEON PLATES IN FINISHED AREAS.

G. ELECTRIC STORAGE TYPE WATER HEATER

1. FOR TANK CAPACITY REFER ELECTRIC HOT WATER HEATER SCHEDULE.

2. ALL INTERNAL SURFACES OF THE HEATER(S) EXPOSED TO WATER SHALL BE GLASS–LINED WITH AN ALKALINE BORO SILICATE COMPOSITION THAT HAS BEEN FUSED–TO–STEEL BY FIRING AT A TEMPERATURE RANGE OF 1400°F TO 1600°F.

3. ELECTRIC HEATING ELEMENTS SHALL BE LOW WATT DENSITY GOLDENROD 1" SCREW–IN TYPE.

4. EACH ELEMENT SHALL BE CONTROLLED BY AN INDIVIDUALLY MOUNTED THERMOSTAT AND HIGH TEMPERATURE CUT–OFF SWITCH. ALL INTERNAL CIRCUITS SHALL BE FUSED. THE OUTER JACKET SHALL BE OF BAKED ENAMEL FINISH AND SHALL BE PROVIDED WITH FULL SIZE CONTROL COMPARTMENT FOR PERFORMANCE OF SERVICE AND MAINTENANCE THROUGH HINGED FRONT PANEL AND SHALL ENCLOSE THE TANK WITH FOAM INSULATION. ELECTRICAL JUNCTION BOX WITH HEAVY DUTY TERMINAL BLOCK SHALL BE PROVIDED. THE DRAIN VALVE SHALL BE LOCATED IN THE FRONT FOR EASE OF SERVICING.

H. GREASE INTERCEPTOR/TRAP

1. IT SHOULD BE OF CAST IRON OR STEEL CONSTRUCTION WITH THREADED INLET AND OUTLET CONNECTIONS, REMOVABLE BAFFLES OR SCREENS, BOLTED AND GASKETED COVER WITH RECESSED LIFT RINGS OR GRIP HOLES.
2. IT SHOULD HAVE FACTORY ENAMEL COATED INSIDE AND OUTSIDE FINISH
3. IT SHOULD HAVE NON–SKID COVER TOP SURFACE (ONLY APPLICABLE TO GREASE TRAPS RECESSED IN THE FLOOR)
4. PROVIDE BUILT–IN FLOW CONTROL OR ADJUSTABLE FLOW CONTROL FITTING FOR INSTALLATION IN SYSTEM PIPING.
5. SET FLOW CONTROL AS RECOMMENDED BY THE MANUFACTURER'S INSTRUCTIONS.
6. ALL PREFABRICATED GREASE INTERCEPTORS SHALL BE APPROVED BY THE NEW YORK CITY BOARD OF STANDARDS & APPEALS PRIOR TO JULY 10, 1991, APPROVED BY THE NEW YORK CITY DEPARTMENT OF BUILDINGS MATERIALS AND EQUIPMENT ACCEPTANCE DIVISION PRIOR TO JULY 1, 2008, OR SHALL CONFORM TO PDI G101, ASME A112.14.3 OR ASME A112.14.4 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
7. GREASE INTERCEPTORS SHALL REMOVE AN AVERAGE OF 90 PERCENT OR MORE OF THE GREASE OR OTHER EXTRACTABLE MATTER IN THE WASTEWATER.
8. THE TEMPERATURE OF WATER ENTERING A GREASE INTERCEPTOR SHALL NOT EXCEED 180°F.
9. ALL GREASE INTERCEPTORS MUST BE READILY ACCESSIBLE FOR INSPECTION BY DULY AUTHORIZED EMPLOYEES OF THE DEPARTMENT.

I. INSTALL PIPING TO CONSERVE BUILDING SPACE. DO NOT INTERFERE WITH USE OF BUILDING SPACE AND THE WORK OF OTHER TRADES. ALL PIPING RUN IN CEILING SHALL BE INSTALLED TIGHT TO THE STRUCTURE ABOVE.

J. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS OR CONNECTED EQUIPMENT. PROVIDE PIPE ANCHORS, GUIDES AND EXPANSION JOINTS OR LOOPS IN ALL HOT WATER AND HOT WATER CIRCULATING MAIN SUPPLY PIPING AND SEGMENTS OF SUCH PIPE THAT EXCEED 30'–0" IN LENGTH.

K. IN ALL AREAS WITH FINISHED SURFACES, SYSTEM PIPING AND COMPONENTS SHALL BE CONCEALED ABOVE OR WITHIN FINISHED SURFACES.

L. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL. REMOVE PROTECTIVE COATINGS PRIOR TO INSTALLATION.

M. REDUCTIONS IN PIPE SIZES SHALL BE MADE WITH ONE–PIECE REDUCING FITTINGS. BUSHINGS ARE NOT ACCEPTABLE. USE FLANGED FITTINGS AT THE BASE OF RISERS.

N. IF WATER PRESSURE EXCEEDS 80 PSI, A WATER PRESSURE REDUCING VALVE SHALL BE INSTALLED IN WATER PIPING AT CONNECTION TO MAIN.

O. PROVIDE DIELECTRIC FITTINGS BETWEEN DISSIMILAR METALS.

2. INSTALLATION

2.01 GENERAL

A. COORDINATE THE PLUMBING WORK WITH ALL OTHER AFFECTED WORK AND THE CONSTRUCTION SCHEDULE.

B. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN AND FERROUS END PIPE.

C. REMOVE SCALE AND FOREIGN MATERIAL, FROM INSIDE AND OUTSIDE, BEFORE ASSEMBLY.

D. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES AND UNIONS.

E. COORDINATION WITH THE WORK OF OTHER TRADES IS REQUIRED. PROVIDE OFFSETS IN PIPING SYSTEMS OR MINOR DEVIATIONS TO THE INDICATED PIPE ROUTING IN ORDER TO COORDINATE THE PLUMBING WORK WITH THE WORK OF ALL OTHER TRADES AND THE GENERAL BUILDING CONDITIONS.

F. NO DOMESTIC WATER PIPING SHALL BE INSTALLED IN UNHEATED SPACES.

G. PROVIDE HEAT TRACE FOR WATER PIPING, P–TRAPS & NON–FREEZE HOSE BIB IN NON HEATED AREAS.

2.02 ABOVE GRADE

A. INSTALL PLUMBING PIPING IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PIPING COMPLIES WITH REQUIREMENTS AND SERVES INTENDED PURPOSES.

B. ROUTE PIPING IN AN ORDERLY MANNER, PLUMB AND PARALLEL TO BUILDING STRUCTURE. MAINTAIN GRADIENT. SLOPE PIPING AND ARRANGE SYSTEMS TO DRAIN. IN DOMESTIC WATER SYSTEMS, PROVIDE DRAIN VALVES AT MAIN SHUT–OFF VALVES AND ALL LOW POINTS IN PIPING.

C. USE EXISTING CONNECTIONS AT MAINS WHERE AVAILABLE FOR NEW BRANCH PIPING. LOCATE ALL RISERS AND PIPING BEFORE CONSTRUCTION COMMENCES AND TAKE CARE NOT TO DAMAGE SAME. ANY DAMAGE OCCURRING TO THE EXISTING PIPING WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

2.03 INSULATION (PIPE AND FITTINGS)

COVER ALL HOT WATER AND HOT WATER RECIRCULATION PIPE WITH 1" THICK FOR PIPE SIZE UP TO 1¼" AND 1½" THICK FOR PIPE SIZE 1½" AND GREATER WITH MANVILLE MICRO–LOK AP–T PLUS FIBERGLASS INSULATION. COVER ALL COLD WATER PIPE WITH ½" THICK FOR PIPE SIZE UP TO 1¼" AND 1" THICK FOR PIPE SIZE 1½" AND GREATER WITH 1" MANVILLE MICRO–LOK AP–T PLUS FIBERGLASS INSULATION. FITTINGS AND VALVES SHALL BE INSULATED WITH MANVILLE ZESTON 2000 PVC INSULAT–ED FITTING COVERS. INSTALL ALL INSULATION AS PER MANUFACTURERS RECOMMENDATIONS. ALL INSULATION MATERIAL SHALL COMPLY WITH THE NEW YORK CITY BUILDING CODE REQUIREMENT OF A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DEVELOPED RATING NOT TO EXCEED 50. ALL PIPE INSULATION SHALL COMPLY WITH 2020 NYC ENERGY CONSERVATION CODE APPENDIX CA (MODIFIED 90.1–2016).

2.04 PRESS JOINERY SYSTEM:

A. FITTINGS ½" – 4":

1. WHERE APPROVED BY THE LOCAL JURISDICTION, THE NIBCO® PRESS SYSTEM™ MAY BE USED AT THE CONTRACTOR'S OPTION FOR THE FOLLOWING BUILDING SERVICES PIPING –20°F TO +250°F UP TO 200 PSI:
   a. HOT AND COLD DOMESTIC WATER; FITTINGS AND VALVES SHALL BE NSF–61 APPROVED.
   b. POTABLE WATER; FITTINGS AND VALVES SHALL BE NSF–61 APPROVED.
   c. HOT WATER HEATING SERVICE

   ALL LEAD FREE WROT COPPER PRESS FITTINGS SHALL BE MADE FROM COMMERCIALLY PURE COPPER MILL PRODUCTS PER ASTM B 75 ALLOY C12200. THESE FITTINGS SHALL BE THIRD–PARTY CERTIFIED TO NSF/ANSI 61 ANNEX G AND COMPLY WITH NEW YORK CITY HEALTH AND SAFETY CODE,NYC PC 2022 AND VERMONT ACT 193. NIBCO LEAD FREE CAST DEZINCIFICATION–RESISTANT (DZR) FITTINGS SHALL BE MADE FROM A HIGH QUALITY LEAD FREE PERFORMANCE BRONZE ALLOY PER ASTM B 584 ALLOY C87850. THE PRESS FITTINGS CONNECTIONS SHALL BE COMPATIBLE WITH SEAMLESS K, L OR M COPPER TUBE MADE TO ASTM B 88. FITTINGS SHALL HAVE A MAXIMUM NON–SHOCK WORKING PRESSURE OF 200 PSI BETWEEN THE TEMPERATURES OF –20°F AND +250°F. ELASTOMERIC SEALS WITH LEAK DETECTION DESIGN SHALL BE MADE OF EPDM MATERIAL, AND THE FITTINGS SHALL BE MANUFACTURED WITH AN INBOARD BEAD DESIGN. NIBCO PRESS FITTINGS MEET ALL PERFORMANCE REQUIREMENTS OF ASME B16.22 AND B16.18ALL FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ACCORDING TO LOCAL PLUMBING AND MECHANICAL CODES. THE PRESS–TO–CONNECT JOINT SHALL BE MADE WITH PRESSING TOOLS AND JAW SETS RECOMMENDED AND AUTHORIZED BY NIBCO. ALL FITTINGS, VALVES AND TOOLS SHALL BE PROVIDED BY SAME MANUFACTURER; NIBCO.
   d. VALVES 2" AND SMALLER: BALL VALVES: (ON/OFF, ISOLATION OR THROTTLING)
2. BALL VALVES (STAINLESS STEEL BALL AND STEM) WITH MALE OR FEMALE PRESS–TO–CONNECT ENDS SHALL BE RATED AT 200 PSI CWP TO +250°F MAXIMUM. NIBCO LEAD FREE VALVES SHALL BE MANUFACTURED IN ACCORDANCE WITH MSS SP–110 AND CONSTRUCTED OF DEZINCIFICATION–RESISTANT (DZR) BRONZE BODIES AND END PIECES AND SHALL BE MADE FROM A HIGH QUALITY LEAD FREE PERFORMANCE BRONZE ALLOY PER ASTM B 584 ALLOY C87850. NO BRASS CONTAINING MORE THAN 15% ZINC SHALL BE APPROVED. VALVE SHALL HAVE REINFORCED TEFLON SEATS, BLOW–OUT PROOF STEM, SOLID STAINLESS STEEL BALL AND STEM. NO HOLLOW CHROME PLATED BALLS ACCEPTED. ALL VALVES SHALL BE FULL PORT. ALL ELASTOMERIC SEALS SHALL HAVE LEAK DETECTION DESIGN.
   - WHERE PIPING IS TO BE INSULATED, BALL VALVES SHALL BE EQUIPPED WITH 2" EXTENDED HANDLES OF NON–THERMAL CONDUCTIVE MATERIAL. HANDLE TO HAVE EXTENDED SLEEVE INCORPORATING AN INSULATION PLUG TO PROVIDE A VAPOR BARRIER AND ALLOW VALVE OPERATION WITHOUT DISTURBING THE INSULATION, AND A MEMORY STOP, WHICH CAN BE SET AFTER INSTALLATION.
   - ACCEPTABLE VALVES: (NSF–61, NON–INSULATED LINES): NIBCO PC585–66–LF, –HC, –LL.
3. CHECK VALVES: (BACKFLOW PREVENTION)

   VALVES WITH PRESS–TO–CONNECT ENDS SHALL BE RATED TO 200 PSI CWP AT +250°F MAXIMUM. NIBCO LEAD FREE VALVES SHALL BE MANUFACTURED IN ACCORDANCE WITH MSS SP–80 AND CONSTRUCTED OF DEZINCIFICATION–RESISTANT (DZR) BRONZE BODY & CAP SHALL BE MADE FROM A HIGH QUALITY LEAD FREE PERFORMANCE BRONZE ALLOY PER ASTM B 584 ALLOY C87850. DISC SHALL BE TFE TEFLON. ALL ELASTOMERIC SEALS SHALL HAVE LEAK DETECTION DESIGN.
   a. ACCEPTABLE CHECK VALVES: NIBCO PS413–Y–LF: Y PATTERN, SWING TYPE CHECK VALVE; NIBCO PS480–Y–LF : IN–LINE SPRING LOADED SILENT CHECK VALVE

4. TESTING

A. AT THE COMPLETION OF THE PLUMBING WORK, COMPLETELY TEST THE ENTIRE INSTALLATION OF ALL SYSTEMS FOR PROPER OPERATION AND COMPLIANCE WITH APPLICABLE CODES AND LOCAL REQUIREMENTS. CORRECT ALL DEFICIENCIES FOUND.

B. TESTING OF THE INSTALLED SYSTEMS SHALL BE MADE BY THE CONTRACTOR IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER.

C. THE CONTRACTOR SHALL NOT COVER UP OR PERMANENTLY CONCEAL PIPING, DEVICES OR ANY PORTION OF NEWLY CONSTRUCTED PLUMBING SYSTEM(S) UNTIL SUCH SYSTEM, OR PORTION OF THE SYSTEM, HAS BEEN TESTED IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER AND INSPECTED BY THE LOCAL INSPECTOR AND APPROVED IN WRITING, EXCEPT PIPING PASSING THROUGH FLOORS, WALLS, PARTITIONS, OR BEAMS, FOR DISTANCES EQUAL TO THE THICKNESS OF SUCH FLOOR, WALL, PARTITION OR BEAM.

D. THIS CONTRACTOR SHALL NOTIFY THE VARIOUS DEPARTMENTS, BUREAUS AND INDIVIDUALS AT LEAST TWO WEEKS IN ADVANCE OF THE TIME THAT THE TESTS ARE TO BE CONDUCTED.

E. ALL DEFECTIVE PARTS SHALL BE REPLACED OR CORRECTED BY THIS CONTRACTOR AND AN EXTRA TEST OR TESTS SHALL BE MADE UNTIL THE OPERATION IS SATISFACTORY. ALL ARRANGEMENTS AND EXPENSES NECESSARY TO CONDUCT ALL TESTS REQUIRED BY THESE SPECIFICATIONS AND THE VARIOUS AGENCIES HAVING JURISDICTION OVER THE WORK INSTALLED UNDER THIS CONTRACT SHALL BE MADE BY THIS CONTRACTOR. NO EXTRA COMPENSATION WILL BE ALLOWED FOR THESE TESTS, THE COST THEREOF BEING INCLUDED IN THE LUMP SUM BID FOR THIS CONTRACT.

F. WHERE ANY EVIDENCE OF STOPPAGE IS FOUND IN PIPING OR EQUIPMENT, THIS CONTRACTOR SHALL DISCONNECT, CLEAN, REPAIR AND RECONNECT ALL OBSTRUCTED PIPING OR EQUIPMENT AND SHALL ALSO PAY FOR ALL NECESSARY CUTTING AND REPAIRS TO ADJOINING WORK.

G. ALL PIPING AND EQUIPMENT SHALL BE THOROUGHLY CLEANED INSIDE AND OUT, OF DIRT, CUTTINGS, OILS AND OTHER FOREIGN SUBSTANCES AND SHALL BE LEFT CLEAN.

H. ALL REQUIRED TESTS SHALL BE WITNESSED BY LOCAL AUTHORITIES AND THE OWNER'S REPRESENTATIVE.

I. ALL EQUIPMENT WILL BE FACTORY TESTED.

J. CONTRACTOR SHALL IDENTIFY TO THE OWNER'S REPRESENTATIVE ANY LEAKS OR DAMAGE THAT OCCURS AS A RESULT OF SYSTEM TESTING. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO LIMIT ANY POTENTIAL DAMAGE. CORRECTIVE ACTION REQUIRED AS A RESULT OF TESTING SHALL BE PERFORMED IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.

K. REPORT IN WRITING TO AUTHORITIES HAVING JURISDICTION, THE ARCHITECT AND THE OWNER THE RESULTS OF ALL TESTING.

L. TESTING REQUIREMENTS

a. TEST ALL DOMESTIC WATER PIPING HYDROSTATICALLY TO 125 PSIG.

b. HYDROSTATIC TEST PRESSURES SHALL REMAIN CONSTANT WITH NO VARIATION FOR 120 MINUTES.

c. TESTS SHALL BE WITNESSED BY THE BUILDING ENGINEER.

d. THE PLUMBING CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGE DUE TO TEST FAILURES AND LEAKAGE IN THE TEST AREA AND ADJACENT TENANT OR ESB SPACES.

M. REFILL ENTIRE POTABLE HOT AND COLD WATER SUPPLY SYSTEM WITH CHLORINE SOLUTION (HTH OLIN CHEMICAL CORP.) AT A STRENGTH TO MEET STANDARDS OF THE DEPARTMENT OF HEALTH, AND FOR A PERIOD OF RETENTION AS STIPULATED.

N. THOROUGHLY FLUSH PIPING SYSTEM WITH FRESH WATER IMMEDIATELY PRIOR TO FINAL ACCEPTANCE.

4. WARRANTY

A. EQUIPMENT, MATERIALS AND WORKMANSHIP FURNISHED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR SHALL KEEP THE WORK IN GOOD REPAIR FOR ONE YEAR AFTER THE DATE OF FINAL APPROVAL. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROMPTLY CORRECT AND REPAIR ANY AND ALL BREAKS, FAILURES OR WEAR DUE TO FAULTY MATERIALS, WORKMANSHIP OR EQUIPMENT. ALL SETTLEMENTS OF SURFACES THAT MAY OCCUR WITHIN THAT PERIOD SHALL ALSO BE PROMPTLY REPAIRED.

OCCUPANCY PROTECTION PLAN 2022 CODE CHAPTER 33 AND LOCAL LAW 154/2017

THIS IS AN 13 STORY COMMERCIAL OFFICE BUILDING. THE WORK WILL BE LIMITED TO A PORTION OF THE 1ST FLOOR RETAIL SPACE. THE BUILDING WILL BE OCCUPIED DURING THIS WORK.

1. EGRESS: REQUIRED EGRESS SHALL NOT BE OBSTRUCTED AT THE 1ST FLOOR AT ANY TIME. AN EGRESS PATH AT EXISTING CORRIDORS TO THE EGRESS STAIRS WILL BE MAINTAINED AT ALL TIMES ON ALL FLOORS INCLUDING THE STAIR OPENING AT THE 1ST FLOOR AND MAINTAINED THROUGH THE STREET FLOOR LOBBY TO THE STREET.

2. FIRE SAFETY: ALL EXISTING FIRE SAFETY SHALL BE MAINTAINED THROUGHOUT THE RENOVATION. EXISTING SPRINKLER, STANDPIPE, FIRE ALARM AND EMERGENCY GENERATOR WILL BE MAINTAINED AND OPERATIONAL FOR THE RESIDENTIAL PORTION.

3. HEALTH REQUIREMENTS: THE GENERAL CONTRACTOR SHALL ENSURE THAT DUST IS CONTROLLED, AND THAT DISPOSAL OF CONSTRUCTION DEBRIS IS PERFORMED IN SUCH A MANNER AS TO NOT INTERFERE WITH THE OTHER OCCUPIED FLOORS. DEBRIS, DIRT AND DUST ARE TO BE KEPT TO A MINIMUM AND BE CONFINED TO THE WORK AREA AS MUCH AS POSSIBLE, AND BE CLEANED UP AND CLEARED FROM THE BUILDING PERIODICALLY TO AVOID ANY EXCESSIVE ACCUMULATION. DUST ACCUMULATIONS IN OCCUPIED CORRIDOR FLOORS AND ALL STAIRS AND LANDING SHALL BE REGULARLY SWEPT AND KEPT DUST FREE AT ALL TIMES. ANY AREAS TO BE FOUND TO CONTAIN LEAD OR ASBESTOS WILL BE ABATED BY A LICENSED COMPANY CERTIFIED TO PERFORMS SUCH WORK AND NO OTHER WORK WILL BE PERFORMED UNTIL ALL ABATEMENT WORK IS COMPLETED 3.1 LEAD AND ASBESTOS: IF THE WORK INVOLVES DISTURBANCE OF LEAD–BASED PAINT, AS DEFINED IN SECTION 27–2056.2, OR PAINT OF UNKNOWN LEAD CONTENT OF ASBESTOS INCLUDE A STATEMENT OF COMPLIANCE WITH APPLICABLE PROVISIONS OF LAW RELATING TO LEAD AND ASBESTOS. INDICATE WHETHER THE FIRM PERFORMING THE WORK HOLDS THE CERTIFICATIONS REQUIRED TO PERFORM THE WORK PURSUANT TO SECTION 27–2056.11 AND INCLUDE THE FIRM NAME AND CERTIFICATION NUMBERS. LIST ANY OPEN VIOLATIONS RELATED TO LEAD ISSUED BY THE NYC DEPARTMENT OF HEALTH AND MENTAL HYGIENE (DOHMH) OF THE NYC DEPARTMENT OF HOUSING PRESERVATION AND DEVELOPMENT (HPD). IF THERE ARE OPEN VIOLATIONS RELATED TO LEAD, INCLUDE THE VIOLATION NUMBERS, DATE ISSUED AND CITY AGENCY THAT ISSUED THE VIOLATION.

4. STRUCTURAL WORK IS NOT BEING PERFORMED AND THE STRUCTURAL SAFETY OF THE BUILDING WILL NOT BE AFFECTED.

5. NOISE RESTRICTION: THE GENERAL CONTRACTOR SHALL ENSURE THAT NOISE IS LIMITED TO ACCEPTABLE LEVELS. NOISE WILL BE MONITORED PERIODICALLY TO ENSUED THE BUILDINGS TENANTS QUALITY OF LIFE IS MAINTAINED.

6. MAINTAINING ESSENTIAL SERVICES: CONSTRUCTION OPERATIONS WILL BE CONFINED TO NORMAL WORKING HOURS 7AM TO 6PM, MONDAYS THRU FRIDAYS. EXCEPT LEGAL HOLIDAYS, UNLESS AN AFTER–HOURS WORK PERMIT IS ISSUED. AS PREVIOUSLY MENTIONED HEAT, HOT AND COLD WATER, ELECTRICITY AND GAS WILL NOT BE DISRUPTED FOR ANY OF THE OTHER TENANTS.

· §28–104.8.4.1 PUBLIC AVAILABILITY OF OCCUPANCY PROTECTION PLAN. UPON ISSUANCE OF A PERMIT FOR WORK CONTAINING OCCUPANCY PROTECTION PLAN, THE DEPARTMENT SHALL MAKE THE TENANT PROTECTION PLAN PUBLICLY AVAILABLE ON ITS WEBSITE.

· §28–104.8.4.2 PROVISION OF COPY OF OCCUPANCY PROTECTION PLAN TO OCCUPANTS UPON REQUEST. THE OWNER OF A BUILDING UNDERGOING WORK OR WHICH AN OCCUPANCY PROTECTION PLAN IS REQUIRED BY SECTION 28–104.8.4 SHALL, UPON REQUEST FROM A TENANT WITHIN SUCH BUILDING, PROVIDE SUCH OCCUPANT WITH A PAPER COPY OF THE TENANT PROTECTION PLAN APPROVED BY THE DEPARTMENT.

· §28–104.8.4.3 NOTICE TO OCCUPANTS. UPON ISSUANCE OF A PERMIT FOR WORK CONTAINING A OCCUPANCY PROTECTION PLAN, THE OWNER SHALL (I) DISTRIBUTE A NOTICE REGARDING SUCH PLAN TO TENANT (II) POST A NOTICE REGARDING SUCH PLAN IN A CONSPICUOUS MANNER IN THE BUILDING LOBBY, AS WELL AS ON EACH FLOOR WITHIN TEN FEET OF THE ELEVATOR, OR IN A BUILDING WHERE THERE IS NO ELEVATOR, WITHIN TEN FEET OF OR IN THE MAIN STAIRWELL ON SUCH FLOOR. THE NOTICE SHALL BE IN A FORM CREATED OR APPROVED BY THE DEPARTMENT AND SHALL INCLUDE:

a. A STATEMENT THAT OCCUPANTS OF THE BUILDING MAY OBTAIN A PAPER COPY OF SUCH PLAN FROM THE OWNER AND MAY ACCESS SUCH PLAN ON THE DEPARTMENT WEBSITE;
b. THE NAME AND CONTACT INFORMATION FOR THE SITE SAFETY MANAGER, SITE SAFETY COORDINATOR OR SUPERINTENDENT OF CONSTRUCTION REQUIRED BY SECTION 3301.3 OF THE NEW YORK CITY BUILDING CODE, AS APPLICABLE, OR, IF THERE IS NO SITE SAFETY MANAGER, SITE SAFETY COORDINATOR OR SUPERINTENDENT OF CONSTRUCTION, THE NAME AND CONTACT INFORMATION OF THE OWNER OF THE BUILDING OR SUCH OWNER 'S DESIGNEE; AND
c. A STATEMENT THAT OCCUPANTS OF THE BUILDING MAY CALL 311 TO MAKE COMPLAINTS ABOUT THE WORK.

NOTE: CONTRACTOR TO RETAIN DESIGN PROFESSIONAL TO PREPARE THE OPP PLAN TO HAVE AT THE SITE PRIOR TO BEGINNING WORK AS PER LOCAL LAW 154/17 PLANS AND NARRATIVE STATEMENT MUST INCLUDE THE MEANS AND METHOD TO BE EMPLOYED TO SAFEGUARD THE SAFETY AND HEALTH OF THE OCCUPANTS OF THE BUILDING DURING CONSTRUCTION WORK AND MUST BE DESCRIBED WITH PARTICULARITY TO THE JOB FILED. IN NO CASE SHALL THE TERMS CODE– COMPLIANT, APPROVED, LEGAL, IN ACCORDANCE WITH THE LAW OR SIMILAR TERMS BE USED AS A SUBSTITUTE FOR THE ACTUAL DISCRETION TO BE EMPLOYED. DESCRIBE HOW DEBRIS WILL BE REMOVED AND HOW NEW MATERIAL WILL BE BROUGHT TO THE SITE. AS PER LOCAL LAW 77 OF 2023 BUILDING OWNERS REQUIRED TO NOTIFY THE DEPARTMENT OF BUILDINGS NOT LESS THAN 24 HOURS BUT NOT MORE THAN 72 HOURS BEFORE THE START OF WORK AS REQUIRING A TENANT PROTECTION PLAN BY LOCAL LAW 154 OF2017. LOG INTO DOB NOW AND FROM THE DASHBOARD SELECT NOTIFICATIONS AND THEN TENANT PROTECTION PLAN.

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 NEW YORK CITY 2020

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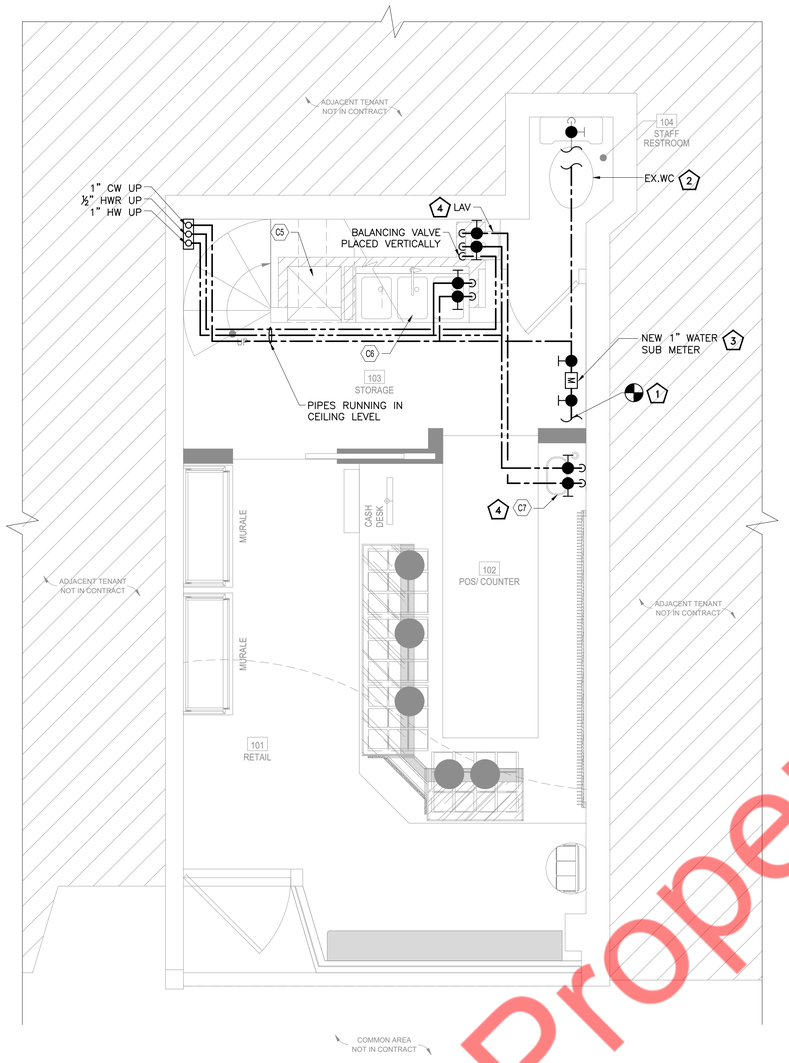
Sheet Title
PLUMBING SPECIFICATIONS

Sheet No.
P-002.00

FILE NAME:

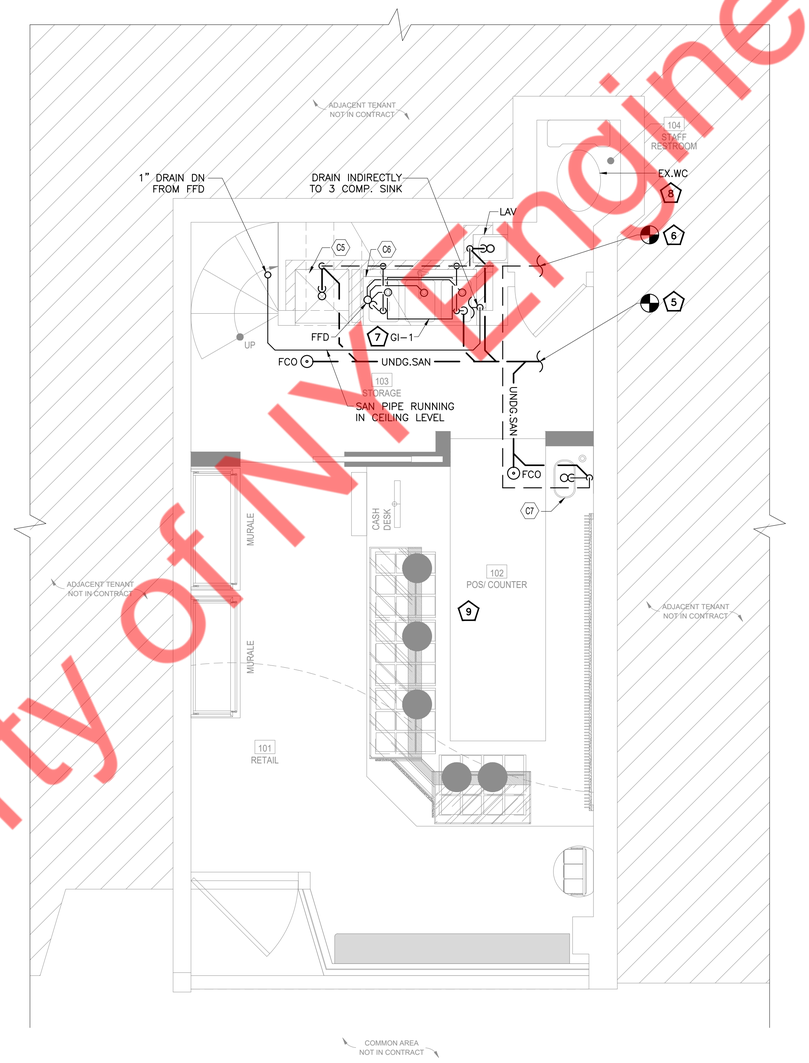


1 GROUND FLOOR WATER SUPPLY PLAN

SCALE: 1/2" = 1'-0"

GRAPHIC SCALE

0 1' 2' 4'



2 GROUND FLOOR SANITARY AND VENT PLAN

SCALE: 1/2" = 1'-0"

GRAPHIC SCALE

0 1' 2' 4'

GENERAL NOTES:

1. ALL WATER PIPING SHOULD BE PROVIDED WITH INSULATION ACCORDING TO POINT 1.06 ,B #6 ON P-001.00
2. CONTRACTOR TO COORDINATE WITH ARCHITECTURAL DRAWINGS FOR ALL PLUMBING FIXTURES SPECIFICATIONS AND MOUNTING HEIGHT INSTALLATION.
3. FOR ALL PIPE SIZES, REFER TO RISER DIAGRAM.
4. FOR LAV PROVIDE HOT WATER AT 110°F. PROVIDE POINT OF USE MIXING VALVE IF REQUIRED.
5. PROVIDE MINIMUM PRESSURE REQUIRED FOR WATER LINES AT EXTREME FIXTURE AS PER TABLE NO 604.3 FROM NYC PLUMBING CODE. PROVIDE BRANCH PRV IF PRESSURE INCREASES 85 PSI.
6. SLOPE OF DRAINAGE SYSTEM SHALL BE 1/8" PER FOOT OF RUN FOR PIPE 3" & OVER AND 1/4" PER FOOT OF RUN FOR PIPE LESS THAN 3". VENT PIPING SHALL BE PITCHED TO DRAIN.
7. PROVIDE ACCESS PANEL FOR CLEANOUTS AND ALL CONCEALED EQUIPMENTS THAT REQUIRE MAINTENANCE ACCESS. CONTRACTOR TO COORDINATE WITH ARCHITECT FOR LOCATION.
8. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION & SIZES OF ALL EXIST. RISERS (CW, SAN, VENT), ALL EXIST. PLUMBING FIXTURES, ALL PLUMBING EQUIPMENTS ETC.
9. ALL EXIST. PLUMBING SYSTEM TO REMAIN UNLESS SPECIFIED TO DEMOLISH OR TO REPLACE OR TO RELOCATE.
10. PROVIDE WALL CLEANOUTS WHEREVER POSSIBLE FOR EACH CHANGE IN DIRECTION OF MORE THAN 45DEG.
11. ALL EXISTING PIPING & ACCESSORIES NEED TO SNAKE CLEAN PRIOR TO NEW CONNECTION, ALSO MAKE SURE EXISTING PIPING & ACCESSORIES IN WORKING CONDITION OTHERWISE PROVIDE NEW PIPING & ACCESSORIES.

KEY NOTES

1. CONNECT NEW 1" CW WITH NEW WATER SUB METER TO EXISTING CW LINE IN THE SPACE, CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION, SIZE AND PRESSURE OF EXISTING CW LINE PRIOR TO THE NEW CONNECTION AND UPGRADE IF REQUIRED.
2. CONNECT NEW ½" CW PIPING TO THE EXISTING CW PIPING OF THE EXISTING WC. CONTRACTOR TO FILED VERIFY THE CONDITION OF THE EXISTING PIPING, FIXTURE AND REPLACE IF REQUIRED.
3. CONTRACTOR SHALL INSTALL THE NEW 1" WATER SUB METER AT THE WALL-MOUNTED LOCATION, POSITIONED AT THE HIGHER ELEVATION AS INDICATED ON THE PLAN.
4. PROVIDE TMV TO LAVATORY, HAND SINK AND SET AT 110°F MAXIMUM.
5. CONNECT NEW 4" SAN PIPING TO EXISTING SANITARY PIPING IN SPACE CONTRACTOR TO FILED VERIFY THE EXACT LOCATION, SIZE AND INVERT OF THE EXISTING SANITARY PIPING IN SPACE AND REPLACE IF REQUIRED.
6. CONNECT NEW 2" VENT PIPING TO EXISTING VENT LINE IN THE SPACE, CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION, SIZE OF EXISTING VENT LINE IN SPACE AND UPGRADE IF REQUIRED. CONTRACTOR TO CONSIDER ALTERNATE BID FOR NEW 4" VTR IF THERE IS NO EXISTING VTR IN SPACE.
7. PROVIDE NEW GREASE INTERCEPTOR (GI-1) PLACED BELOW 3 COMP. SINK, ABOVE THE GRADE. REFER EQUIPMENT SCHEDULE FOR GREASE INTERCEPTOR MAKE AND MODEL.
8. EXISTING WC TO REMAIN WITH EXISTING SANITARY AND VENT PIPING IN SPACE. CONTRACTOR TO FILED VERIFY THE CONDITION OF THE EXISTING PIPING, FIXTURE AND REPLACE IF REQUIRED.
9. PLUMBING CONTRACTOR TO CO-ORDINATE WITH MECHANICAL CONTRACTOR FOR ANY CONDENSATE DRAIN REQUIREMENT & CONNECT THE CONDENSATE DRAIN TO SANITARY SYSTEM WITH AIR GAP FITTING. REFER DETAILS #1 ON SHEET P-502.00

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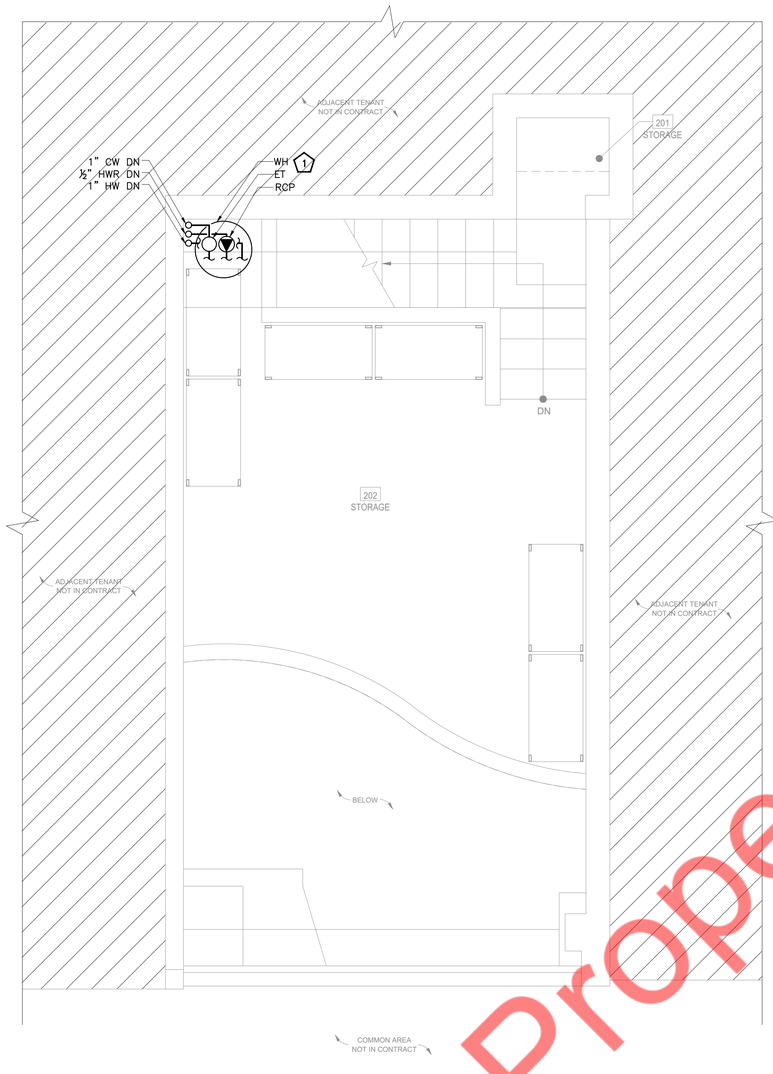
Sheet Title

GROUND FLOOR PLUMBING PLAN

Sheet No.

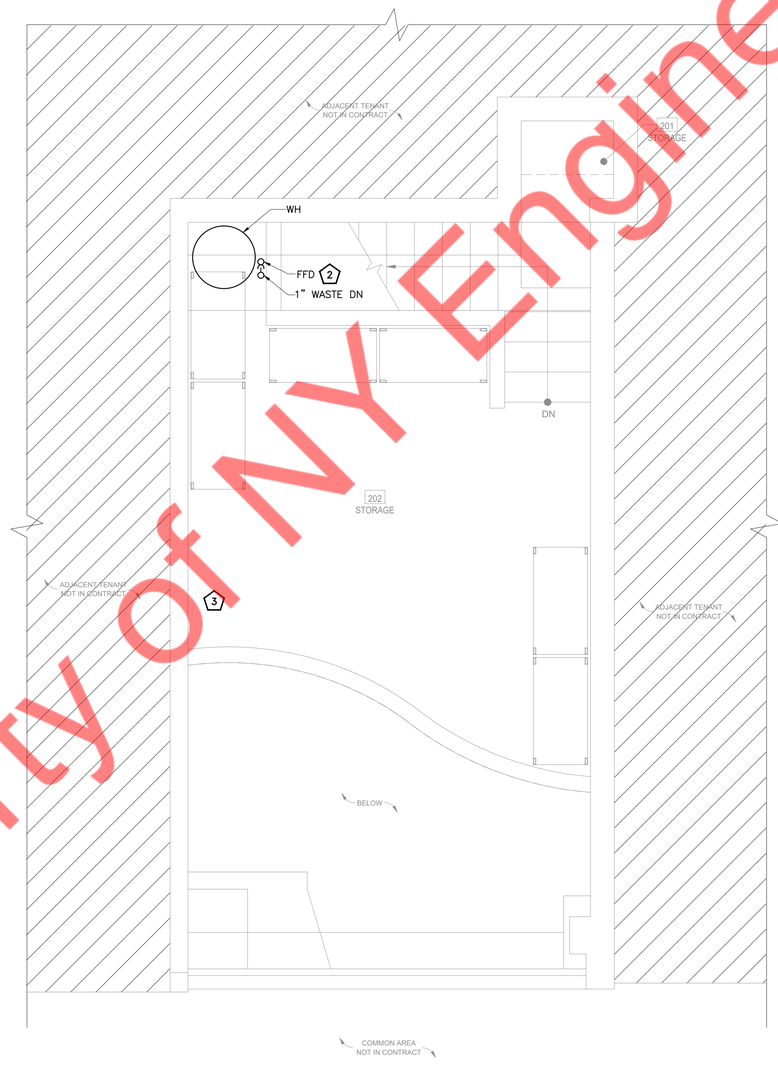
P-101.00

FILE NAME:



1 SECOND FLOOR WATER SPPLY PLAN
SCALE: 1/2" = 1'-0"

GRAPHIC SCALE
0 1' 2' 4'



2 SECOND FLOOR SANITAY PLAN
SCALE: 1/2" = 1'-0"

GRAPHIC SCALE
0 1' 2' 4'

GENERAL NOTES:

1. ALL WATER PIPING SHOULD BE PROVIDED WITH INSULATION ACCORDING TO POINT 1.06 ,B #6 ON P-001.00
2. CONTRACTOR TO COORDINATE WITH ARCHITECTURAL DRAWINGS FOR ALL PLUMBING FIXTURES SPECIFICATIONS AND MOUNTING HEIGHT INSTALLATION.
3. FOR ALL PIPE SIZES, REFER TO RISER DIAGRAM.
4. FOR LAV PROVIDE HOT WATER AT 110°F. PROVIDE POINT OF USE MIXING VALVE IF REQUIRED.
5. PROVIDE MINIMUM PRESSURE REQUIRED FOR WATER LINES AT EXTREME FIXTURE AS PER TABLE NO 604.3 FROM NYC PLUMBING CODE. PROVIDE BRANCH PRV IF PRESSURE INCREASES 85 PSI.
6. SLOPE OF DRAINAGE SYSTEM SHALL BE 1/8" PER FOOT OF RUN FOR PIPE 3" & OVER AND 1/4" PER FOOT OF RUN FOR PIPE LESS THAN 3". VENT PIPING SHALL BE PITCHED TO DRAIN.
7. PROVIDE ACCESS PANEL FOR CLEANOUTS AND ALL CONCEALED EQUIPMENTS THAT REQUIRE MAINTENANCE ACCESS. CONTRACTOR TO COORDINATE WITH ARCHITECT FOR LOCATION.
8. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION & SIZES OF ALL EXIST. RISERS (CW, SAN, VENT), ALL EXIST. PLUMBING FIXTURES, ALL PLUMBING EQUIPMENTS ETC.
9. ALL EXIST. PLUMBING SYSTEM TO REMAIN UNLESS SPECIFIED TO DEMOLISH OR TO REPLACE OR TO RELOCATE.
10. PROVIDE WALL CLEANOUTS WHEREVER POSSIBLE FOR EACH CHANGE IN DIRECTION OF MORE THAN 45DEG.
11. ALL EXISTING PIPING & ACCESSORIES NEED TO SNAKE CLEAN PRIOR TO NEW CONNECTION, ALSO MAKE SURE EXISTING PIPING & ACCESSORIES IN WORKING CONDITION OTHERWISE PROVIDE NEW PIPING & ACCESSORIES.

KEY NOTES

1. PROVIDE NEW CEILING MOUNTED ELECTRIC STORAGE TYPE WATER HEATER WH (REFER SCHEDULE).
2. THE T&P RELIEF DRAIN AND DRAIN VALVE FROM THE WATER HEATER (WH) TO BE DRAINED INDIRECTLY TO THE PROVIDED FUNNEL DRAIN.
3. PLUMBING CONTRACTOR TO CO-ORDINATE WITH MECHANICAL CONTRACTOR FOR ANY CONDENSATE DRAIN REQUIREMENT & CONNECT THE CONDENSATE DRAIN TO FUNNEL DRAIN NEAR THE WATER HEATER WITH AIR GAP AS PER LOCAL CODES AND STANDARDS.

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SECOND FLOOR PLUMBING PLAN

Sheet No.
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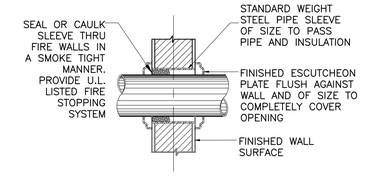
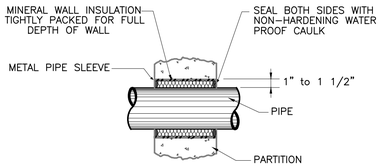
FILE NAME

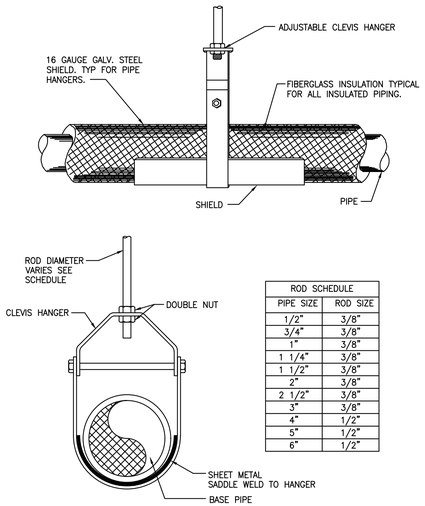


PIPE THRU FIRE RATED WALL OR FLOOR



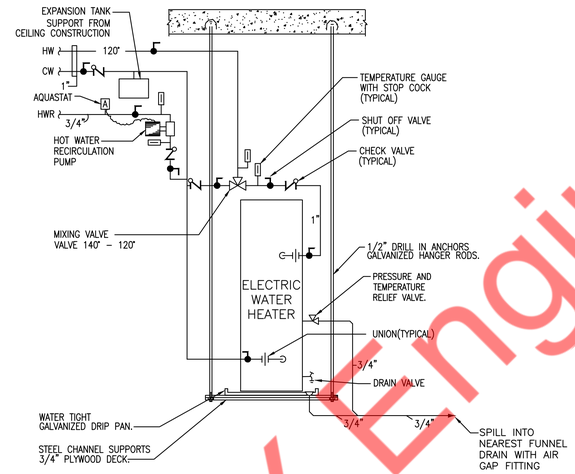
PIPE PENETRATION THRU NON FIRE RATED WALL

1 / P-501 PIPE SLEEVE THRU WALL SECTION N.T.S

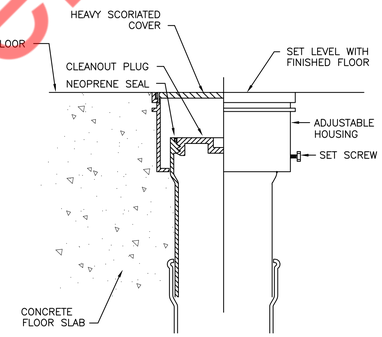


ROD SCHEDULE	
PIPE SIZE	ROD SIZE
1/2"	3/8"
3/4"	3/8"
1"	3/8"
1 1/4"	3/8"
1 1/2"	3/8"
2"	3/8"
2 1/2"	3/8"
3"	3/8"
4"	1/2"
5"	1/2"
6"	1/2"

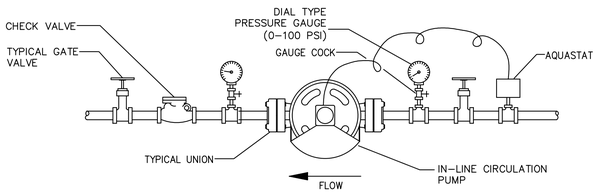
2 / P-501 HANGER DETAIL N.T.S



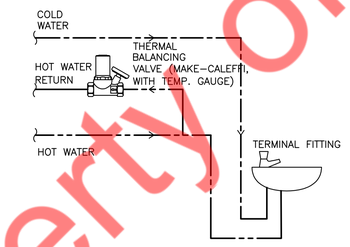
3 / P-501 HOT WATER HEATER CEILING MOUNTED INSTALLATION DETAIL N.T.S



4 / P-501 FLOOR CLEANOUT DETAIL N.T.S



5 / P-501 INLINE RECIRCULATION PUMP DETAIL N.T.S



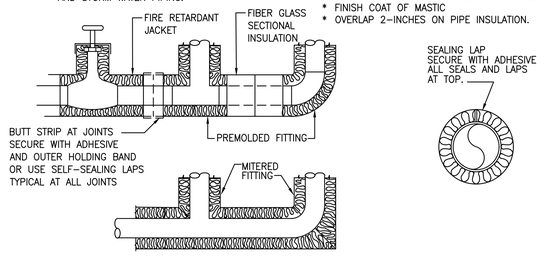
6 / P-501 BALANCING VALVE PIPING DETAIL. N.T.S

CONCEALED VALVES AND FITTINGS

* WRAP WITH 1-INCH THICK, 1-POUND DENSITY TO REQUIRED PIPE INSULATION THICKNESS
* SECURE WITH WIRE OR TAPE.
* VAPOR SEAL COLD WATER, CHILLED WATER AND STORM WATER PIPING.

CONCEALED VALVES AND FITTINGS

* PREMOLDED FIBER GLASS OR RADIAL MITERED PIPE INSULATION
* SKIM COAT OF INSULATION CEMENT
* COAT OF MASTIC
* WRAP WITH FIBER GLASS REINFORCING CLOTH.
* FINISH COAT OF MASTIC
* OVERLAP 2-INCHES ON PIPE INSULATION.



7 / P-501 INSULATION OF PIPING, VALVES AND FITTINGS FOR EXPOSED AND CONCEALED LOCATIONS N.T.S

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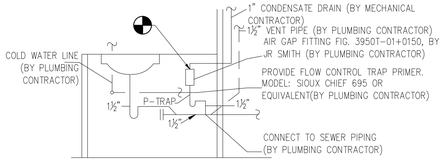
Sheet Title
PLUMBING DETAILS (1 OF 2)

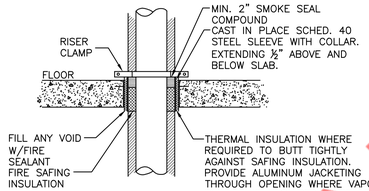
Sheet No.
P-501.00

FILE NAME



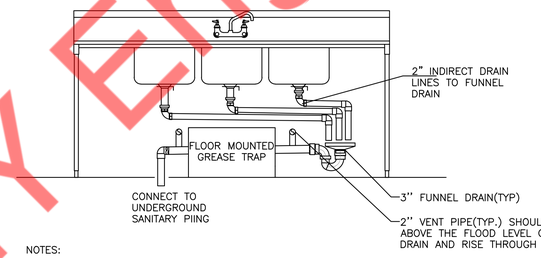
NOTE:
LOCATE AIR GAP FITTING AND PIPING WITHIN SINK/LAVATORY ENCLOSURE.

1 P-502 AIR GAP FITTING DETAIL N.T.S



NOTES:
1. SLEEVES TO BE SIZED AS REQUIRED FOR OVERALL PIPE DIAMETER. (INCLUDING INSULATION, WHERE APPLICABLE)
2. PIPE CLAMPS FOR COPPER PIPING SHALL BE COPPER PLATED.

2 P-502 FLOOR PENETRATION DETAIL N.T.S



NOTES:
1. COORDINATE INDIVIDUAL BAY DRAINAGE , AIR GAP, & DRAIN FUNNEL WITH LOCAL CODE REQUIREMENTS.

3 P-502 3 COMPARTMENT SINK DETAIL N.T.S

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Sheet Title
PLUMBING DETAILS (2 OF 2)

Sheet No.
P-502.00

FILE NAME

PLUMBING FIXTURE SCHEDULE

LEGEND	PLUMBING FIXTURE	COLD WATER	HOT WATER	DW	IW	REMARKS
LAV	LAVATORY	½"	½"	2"	–	PROVIDE 'P' TRAP
C6	3 COMPARTMENT SINK	¾"	¾"	–	(3) 1–1/2"	
C5	MOP SINK	¾"	¾"	3"	–	PROVIDE 'P' TRAP
C7	DROP IN HAND SINK	½"	½"	2"	–	PROVIDE 'P' TRAP

NOTE: CONTRACTOR TO COORDINATE WITH ARCHITECTURAL DRAWINGS FOR ALL PLUMBING FIXTURES SPECIFICATIONS AND MOUNTING HEIGHT INSTALLATION.

WATER HEATER SCHEDULE

TAG No.	QTY	NO. OF ELEMENTS	STORAGE GALLONS	RECOVERY CAP. (GPM @ RISE)	TYPE	ELECTRICAL				MANUFACTURER & MODEL NO.	REMARKS
						VOLTS	PHASE	HERTZ	INPUT KW		
WH	1	1	20	27 GPH @ 90°F	ELECTRIC WATER HEATER	208	1	60	6	AO SMITH DEL–20	–DIMENSIONS 21"DIA X 22"H –HEATER SHALL HAVE 150PSI WORKING PRESSURE. –WATER HEATER SHALL BE CEILING MOUNTED

THERMOSTATIC MIXING VALVE

ITEM	QUANTITY	LOCATION	CAPACITY (GPM)	PRESSURE DROP (PSI)	MINIMUM FLOW (GPM)	MAKE	CW INLET	HIGH TEMP. INLET	LOW TEMP. OUTLET	REMARKS
TMV	1	REFER PLAN	5	5	0.5	ACORN MV17–1	½"	½"(140°F)	½"(120°F)	–BRONZE BODY AND LEAD FREE CONSTRUCTION –ASSE CERTIFIED

HOT WATER RECIRCULATION PUMP SCHEDULE

TAG	QTY	SERVICE	PERFORMANCE DATA			PUMP CONSTRUCTION DATA	MOTOR DATA					MFGR MODEL	REMARKS
			GPM PER PUMP	TDH PER PUMP (FT)	WATER TEMP. (°F)	PUMP TYPE	MHP PER PUMP	STARTER TYPE	V/PH/HZ	RPM	ROTATION		
RCP	1	HWR	2	15	120	INLINE, NORYL	39 WATTS	AQUA STAT	115/1/60	2800	PER MFG	BELL & GOSSETT NBF 8U/LW	– INLINE ON HWR LINE AT WATER HEATER NEMA 1 RATED MOTOR – UL LISTED & NSF CERTIFIED

EXPANSION TANK SCHEDULE

ITEM	QUANTITY	LOCATION	SERVICE	GALLONS	MAKE	REMARKS
EXPANSION TANK (ET)	01	REFER PLAN	HOT WATER	2	AMTROL ST–12	DIMENSIONS– 15"(H) X 11"(DIA.)

GREASE INTERCEPTOR CALCULATIONS PER DEP GUIDELINES 19–11 (GI–1)–TABLE–1

DESCRIPTION: ONE QUANTITY 3–COMP. SINK

SIZE 1ST COMP. =10"L x 14"W x 10"H	=1400 CU.IN.
SIZE 2ND COMP. =10"L x 14"W x 10"H	=1400 CU.IN.
SIZE 2ND COMP. =10"L x 14"W x 10"H	=1400 CU.IN.
TOTAL VOLUME:	=4200 CU.IN.
TOTAL TABLE 1 VOLUME	=4200 CU.IN.
TOTAL TABLE 1 FLOW	=7 GPM, 14 LBS

PROPOSED GREASE INTERCEPTOR GI–1 MODEL & CAPACITY
REGENCY 600GT10 10 GPM, 20 LBS

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Project
NEUHAUS BELIGAN CHOCOLATE

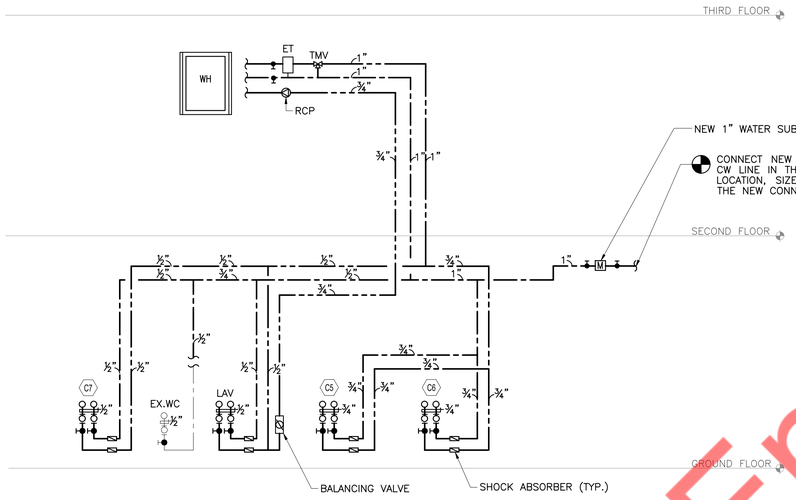
Issue Description	Date
PERMIT SET	09/19/2025

Checked By: NYE
Drawn By: NYE
Scale: AS NOTED

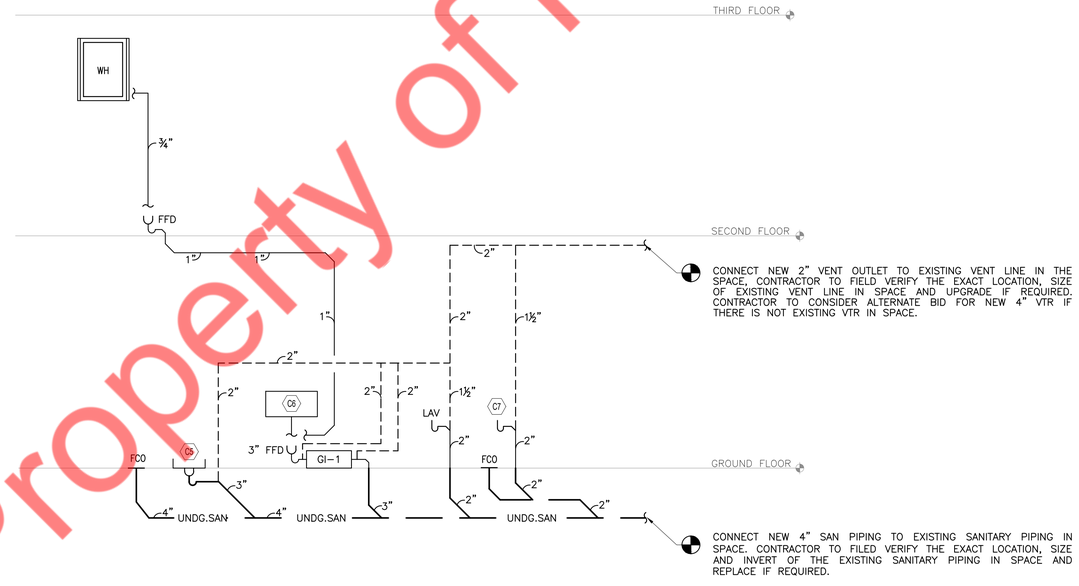
Sheet Title
PLUMBING SCHEDULES

Sheet No.
P-601.00

FILE NAME:



1 WATER SUPPLY RISER DIAGRAM
SCALE: N.T.S



2 SANITARY RISER DIAGRAM
SCALE: N.T.S

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