

MECHANICAL ABBREVIATIONS

GENERAL ABBREVIATIONS:				CONTROLS ABBREVIATIONS:			
BMS	BUILDING MANAGEMENT SYSTEM	NIC	NOT IN CONTRACT	H	HUMIDISTAT		
BOP	BOTTOM OF PIPE	No.	NUMBER	HS	HUMIDITY SENSOR		
CDS	CEILING DIFFUSER SUPPLY	NTS	NOT TO SCALE	HZ	HERTZ		
CDR	CEILING DIFFUSER RETURN	OA	OUTSIDE AIR	RH	RELATIVE HUMIDITY		
CFM	CUBIC FEET PER MINUTE	PD	PRESSURE DROP	S	SWITCH		
CD	CONDENSATE DRAIN PIPE	PH	PHASE	SD	SMOKE DETECTOR		
CP	CONDENSATE PUMP	PSI	POUNDS PER SQUARE INCH	SPD	SPEED CONTROL		
DB	DRY BULB TEMPERATURE	QTY	QUANTITY	S/S	START/STOP		
DIA	DIAMETER	RTU	ROOF TOP UNIT	T	THERMOSTAT		
DIFF	DIFFUSER	RA	RETURN AIR	TS	TEMPERATURE SENSOR		
DIM	DIMENSION	REG	REGISTER				
DN	DOWN	RET	RETURN				
EG	EXHAUST GRILLE	REQD	REQUIRED				
EA	EACH OR EXHAUST AIR	RH	RELATIVE HUMIDITY				
EER	ENERGY EFFICIENCY RATIO	RLA	RUNNING LOAD AMPS				
EXIST.	EXISTING	RLL	REFRIGERANT LIQUID LINE				
F	FAHRENHEIT OR FAN	RM	ROOM				
FD	FIRE DAMPER (ACCESS DOOR)	RPM	REVOLUTIONS PER MINUTE				
FLA	FULL LOAD AMPS	RSL	REFRIGERANT SUCTION LINE				
FLEX	FLEXIBLE	SA	SUPPLY AIR				
HSFP	HEATING SEASONAL PERFORMANCE FACTOR	SEER	SEASONAL EER				
HR	HOOR	SP	STATIC PRESSURE				
HTG	HEATING	SQ	SQUARE				
HZ	HERTZ	SF	SQUARE FEET				
		SS	STAINLESS STEEL				
IN	INCHES	SUP	SUPPLY				
IEER	INTEGRATED EER	T	TEMPERATURE				
KW	KILOWATT	TEFC	TOT. ENCLOSED FAN COOLED				
L	LENGTH	TEMP	TEMPERATURE				
LAT	LEAVING AIR TEMPERATURE	TSTAT	THERMOSTAT				
LB	POUND	TON	12,000 BTH				
LF	LINEAR FEET	TOP	TOP OF PIPE				
MAX	MAXIMUM	TSP	TOTAL STATIC PRESSURE				
MBH	THOUSAND BTH	TYP	TYPICAL				
MCA	MINIMUM CIRCUIT AMPS	V	VOLTS				
MFR	MANUFACTURER	W	WIDTH OR WATT				
MIN	MINIMUM	W/	WITH				
N/A	NOT APPLICABLE	WB	WET BULB TEMPERATURE				
NC	NOISE CRITERIA	WG	WATER GAUGE				
		W/O	WITHOUT				

SECTION 230593 – TESTING, ADJUSTING, AND BALANCING FOR HVAC

- 1.1 SUMMARY
- A. TESTING, ADJUSTING, AND BALANCING FOR THE FOLLOWING:
1. AIR SYSTEMS: CONSTANT–VOLUME.
2. CONDENSING UNITS.
- 1.2 QUALITY ASSURANCE
- A. THE CONTRACTOR SHALL PROCURE THE SERVICES OF A TESTING, ADJUSTING AND BALANCING (TAB) SPECIALIST WHO SPECIALIZES IN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS. THE TAB AGENT SHALL HAVE THE FOLLOWING QUALIFICATIONS: AABC, NEBB OR TABB CERTIFIED.
- 1.3 EXECUTION
- A. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL EXISTING AIR AND HYDRONIC SYSTEMS THAT ARE TO REMAIN OR TO BE INCORPORATED INTO THE STARTING OF WORK IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.
- B. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL NEW AIR AND HYDRONIC SYSTEMS AS LISTED ABOVE IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.
- C. THE REPORT SHALL INDICATE A SCHEMATIC DIAGRAM INDICATING LOCATIONS OF ALL EQUIPMENT TESTED AND MEASUREMENT LOCATIONS.
- D. PRIOR TO FINAL INSPECTION OF THE WORK, THE TAB SPECIALIST SHALL BALANCE ALL SYSTEMS AS INDICATED ABOVE TO THE REQUIREMENTS OF THE DESIGN.
- E. THE CONTRACTOR SHALL HAVE FURNISH AND INSTALL ALL ADDITIONAL BALANCING EQUIPMENT, PRESSURE TAPS, GAUGES AND OTHER EQUIPMENT AS REQUIRED FOR A PROPERLY BALANCED SYSTEM AT NO ADDITIONAL COST TO THE OWNER. SUCH ADDITIONAL EQUIPMENT SHALL ADHERE IN STRICT ACCORDANCE WITH THE RESPECTIVE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- F. THE CONTRACTOR SHALL HAVE THE TESTING AND BALANCING SPECIALIST COORDINATE ALL WORK OF THIS SECTION WITH THE BUILDING MANAGER. BALANCING WORK SHALL NOT CONFLICT WITH OTHER WORK SO AS TO MAINTAIN COMPLETION WITHIN THE SPECIFIED TIME.
- G. ALL INSTRUMENTS USED FOR TAB SHALL BE MAINTAINED IN GOOD WORKING CONDITION AND ACCURATELY CALIBRATED.
- H. TOLERANCES: PLUS OR MINUS 5 PERCENT OF DESIGN VALUES.
- I. INSPECTIONS: RANDOM CHECKS BY OWNER OR ARCHITECT TO VERIFY FINAL TESTING, ADJUSTING, AND BALANCING REPORT.
- J. ADDITIONAL TESTS: RANDOM TESTS WITHIN 90 DAYS OF COMPLETING TAB TO VERIFY BALANCE CONDITIONS AND SEASONAL TESTS.
- END OF SECTION 230593

GENERAL CONSTRUCTION NOTES

1. 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.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
3. THIS CONTRACTOR, PRIOR TO SUBMITTING HIS BID, SHALL VISIT THE PROJECT SITE TO FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS; REQUESTS FOR COMPENSATION FOR EXTRA WORK, WHICH WOULD HAVE BEEN EVIDENT BY COMPLIANCE WITH THE PREVIOUS STATEMENT, WILL NOT BE CONSIDERED. THE CONTRACTOR SHALL CONDUCT A THOROUGH FIELD INVESTIGATION TO VERIFY WORK SHOWN ON THE DRAWINGS. THE DRAWINGS REFLECT THE BEST AVAILABLE INFORMATION FROM EXISTING PLANS AND SITE INVESTIGATIONS. NOTIFY THE ARCHITECT OF ANY CONDITIONS WHICH WOULD PREVENT THE INSTALLATION OF THE WORK AS SHOWN ON DRAWINGS.
4. THE MECHANICAL PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW THE EXACT ROUTING OF SYSTEMS OR LOCATION OF COMPONENTS. THE EXACT LOCATIONS, DIMENSIONS AND ALL OTHER DETAILS OF EQUIPMENT ARE THE RESPONSIBILITY OF THIS CONTRACTOR. THIS CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE AVAILABLE SPACE. PROVIDE ALL DUCT AND PIPE TRANSITIONS REQUIRED FOR
5. THIS CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONNECTION TO EQUIPMENT. CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK, WHERE DISCREPANCIES OCCUR BETWEEN THESE DOCUMENTS AND EXISTING CONDITIONS, THE DISCREPANCY SHALL BE REPORTED TO THE OWNER AND/OR ENGINEER FOR EXPEDITING AND RESOLVE.
6. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY MEANS OF TEMPORARY PARTITIONS AND/OR TARPS TO KEEP DUST AND DEBRIS WITHIN THE CONSTRUCTION AREA.
7. CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT, AND ENVIRONMENTAL CONDITIONS.
9. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION, PURCHASE AND/OR INSTALLATION OF ALL WORK.
10. CONTRACTOR SHALL REFER TO THE COMPLETE SET OF CONTRACT DOCUMENTS INCLUDING SPECIFICATIONS AND OTHER TRADES FOR A FULL UNDERSTANDING OF ALL WORK REQUIRED.
11. WHERE USED THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
12. PROVIDE ALL REQUIRED RIGGING TO ACCOMMODATE THE REMOVAL & INSTALLATION OF ALL EQUIPMENT.
13. ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ENGINEER OR ARCHITECT.
14. ALL CONCEALED ELECTRICAL CONNECTIONS SHALL BE HARD WIRED. PLUGS SHALL NOT BE USED AS A DISCONNECTING MEANS IN CONCEALED LOCATIONS.
15. 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.
16. 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.
17. 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.
18. 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.
19. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, CONDUIT AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.
20. 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.
21. HVAC CONTRACTOR TO FURNISH ACCESS LOCATION REQUIREMENTS TO GENERAL CONTRACTOR. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS, AND MARKERS TO IDENTIFY LOCATION OF EQUIPMENT.
22. CITIZENS ABOVE CEILING STANDARD HEIGHT FOR ALL EQUIPMENT AND SUPPLY DUCTWORK SHALL BE SET AT 12" TO BOTTOM ABOVE CEILING. ADDITIONALLY, EQUIPMENT SHALL NOT BE INSTALLED ABOVE ANY CEILING HIGHER THAN 11'6". EQUIPMENT REFERS TO ANY AND ALL HVAC, PLUMBING, ELECTRICAL AND/OR ANY ITEM THAT IS SERVICEABLE OR REQUIRES SERVICE, TESTING OR MAINTENANCE.

MECHANICAL SYMBOL LEGEND

AIR DEVICES

RETURN DIFFUSER

EXHAUST DIFFUSER

CONTROLS

THERMOSTAT

TAGS

DIFFUSER TAG

EQUIPMENT TAG

LEGEND NOTE:

NOT ALL SYMBOLS ARE NECESSARILY USED. ABSENCE OF A SYMBOL ON THE DRAWINGS DOES NOT NECESSARILY MEAN IT IS NOT REQUIRED. REFER TO DETAILS & SPECIFICATIONS FOR A COMPLETE UNDERSTANDING OF WORK REQUIRED.



TD BANK

NOTICE:

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT FROM KORNBLAU & RESNAY + ASSOCIATES, INC. IT SHALL BE A VIOLATION OF THE AGREEMENT TO REPRODUCE OR TRANSMIT IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM KORNBLAU & RESNAY + ASSOCIATES, INC. ANY SUCH VIOLATION SHALL BE AT THE VIOLATOR'S SOLE RISK AND WITHOUT LIABILITY TO KORNBLAU & RESNAY + ASSOCIATES, INC.

NEARBY ENGINEERS

382 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217

WWW.NY-ENGINEERS.COM

SHEET NAME

MECHANICAL
SYMBOLS, LEGENDS, NOTES
& ABBREVIATIONS

SHEET DESIGNATION

M-001

**TD BANK****NOTICE:**

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE
DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT
FROM ADRENALINE & BISBANO + ASSOCIATES, INC. SHOULD SUCH A
DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT,
ADRENALINE & BISBANO + ASSOCIATES, INC. ASSUME NO
RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

382 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217

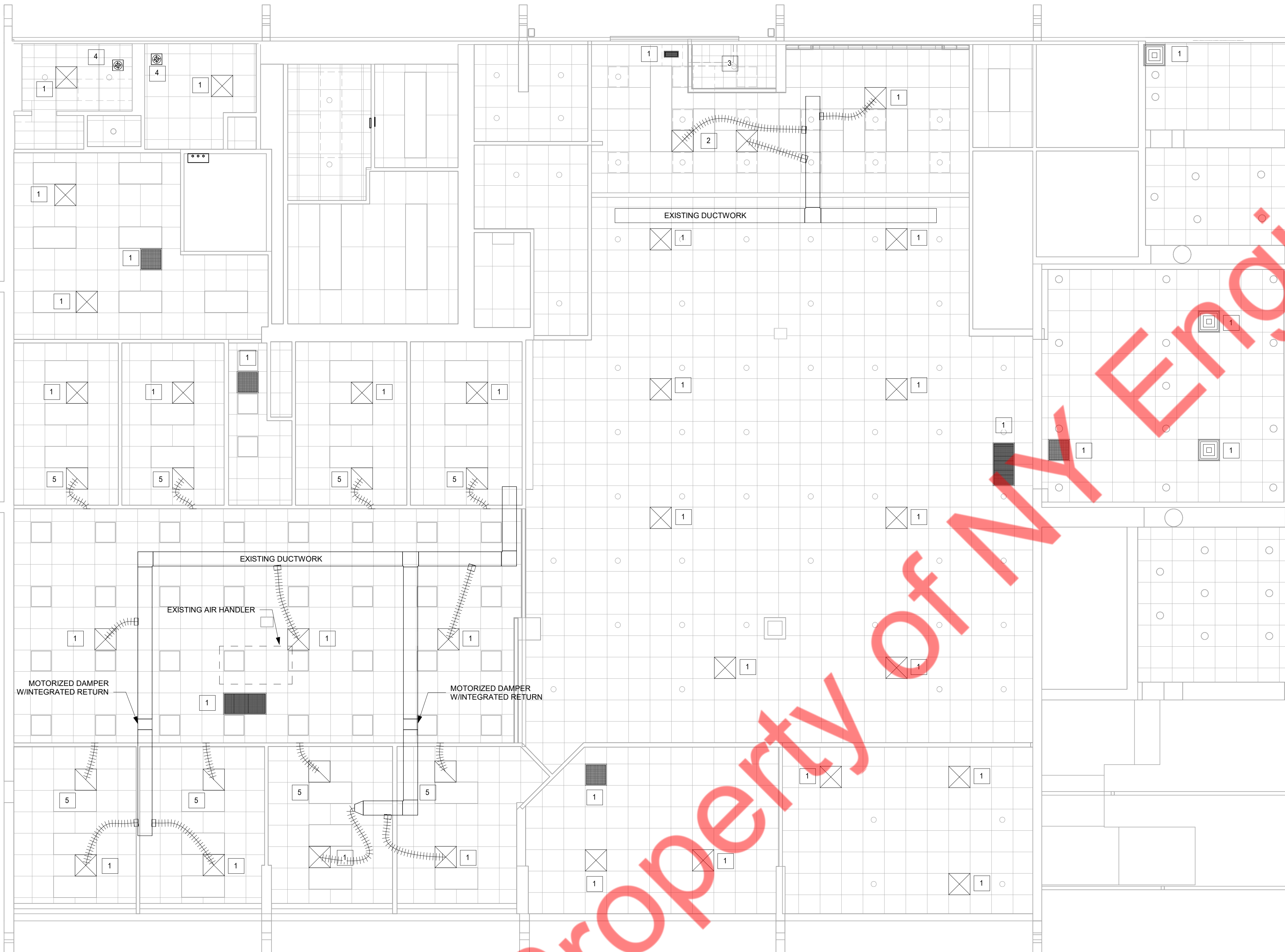
WWW.NY-ENGINEERS.COM

MECHANICAL GENERAL NOTES

1. ALL ITEMS TO BE RE-USED OR RELOCATED SHALL BE CLEANED, REPAIRED, AND RESTORED TO LIKE NEW CONDITION PRIOR TO RE-USE.
2. PROVIDE NECESSARY PROTECTIVE DEVICES WHERE REQUIRED AND IN STRICT ACCORDANCE WITH OSHA AND ICRA REGULATIONS.
3. AVOID FREE DUST MOVEMENT AND DIRT MIGRATING TO OCCUPIED AREAS OF THE BUILDING. BLANK OFF ANY RETURN AIR GRILLES/ DUCTS IN THE WORK AREA. PROVIDE TEMPORARY EXHAUST FANS, DUCTED DIRECTLY TO OUTDOORS, TO MAINTAIN NEGATIVE PRESSURE WITHIN THE WORK AREA.
4. KEEP ALL ADJOINING AREAS ADJACENT TO THE WORK AREAS CLEAN AND FREE OF DEBRIS.
5. MATERIAL FROM EXISTING SYSTEM WHICH IS RENDERED USELESS SHALL BE REMOVED AND DISPOSED OFF SITE.
6. REPAIR/ REPLACE EXISTING EQUIPMENT/ MATERIALS NOT SCHEDULED OR NOTED TO BE DEMOLISHED BUT BECOME DAMAGED DURING THE PROGRESS OF THE WORK. MAKE ANY AND ALL SUCH REPAIRS, REPLACEMENTS, MODIFICATIONS TO RESTORE THE DAMAGED ITEMS TO THEIR ORIGINAL CONDITIONS AT THE TIME OF DAMAGE, TO THE SATISFACTION OF AND AT NO ADDITIONAL COST TO THE OWNER.
7. COORDINATE CUTTING, PATCHING OF EXISTING ROOF, WALLS, CEILINGS, AND FLOORS AFFECTED BY MECHANICAL DEMOLITION WITH G.C.
8. ALL EXISTING EXHAUST SYSTEM REMAINS SAME. CONTRACTOR TO FIELD VERIFY CONDITIONS OF EXISTING FANS AND REPLACE IN CASE IF NOT IN PROPER WORKING CONDITION.
9. USE THE EXISTING DUCTWORK, GRILLES AND DIFFUSERS AS MUCH AS POSSIBLE. CLEAN, REPAIR THE EXISTING GRILLES/DIFFUSERS TO LIKE NEW CONDITION PRIOR TO RE-USE.

MECHANICAL PLAN KEY NOTES

1. EXISTING SUPPLY/RETURN DIFFUSERS TO REMAIN . VERIFY SIZE, LOCATION ON FILED, AND COORDINATE WITH LATEST RCP FOR RELOCATIONS. CLEAN AND REFURBISH TO "LIKE NEW" CONDITION EXTEND/MODIFY DUCTWORK AS REQUIRED AT RELOCATED DIFFUSERS. PROVIDE VOLUME DAMPER OR COLLAR DAMPER, VERIFY IN FIELD PRIOR TO BID.
2. EXISTING SUPPLY/RETURN DIFFUSERS TO BE RELOCATED AS SHOWN . VERIFY SIZE, LOCATION AND COORDINATE WITH LATEST LOCATION. IF REQUIRED PROVIDE NEW DUCTWORK.
3. PROVIDE NEW DIFFUSER, MATCH THE NEW DIFFUSERS WITH SIMILAR KIND. CONNECT THE NEW DIFFUSER TO EXISTING SUPPLY DUCT.
4. EXISTING TOILET EXHAUST SYSTEM TO REMAIN AND REUSED. CLEAN THE EXISTING EXHAUST GRILLE/FANS. IF TOILET EXHAUST WORKING PROPERLY REPLACE WITH SIMILAR KIND.
5. PROVIDE FLEXABOOTS FOR THE OFFICES FOR RETURN AIR. CONTRACTOR TO COORDINATE EXACT LOCATION ON SITE.



① MECHANICAL FLOOR PLAN
3/16" = 1'-0"

SHEET NAME

MECHANICAL FLOOR
PLAN

SHEET DESIGNATION

M-101



TD BANK

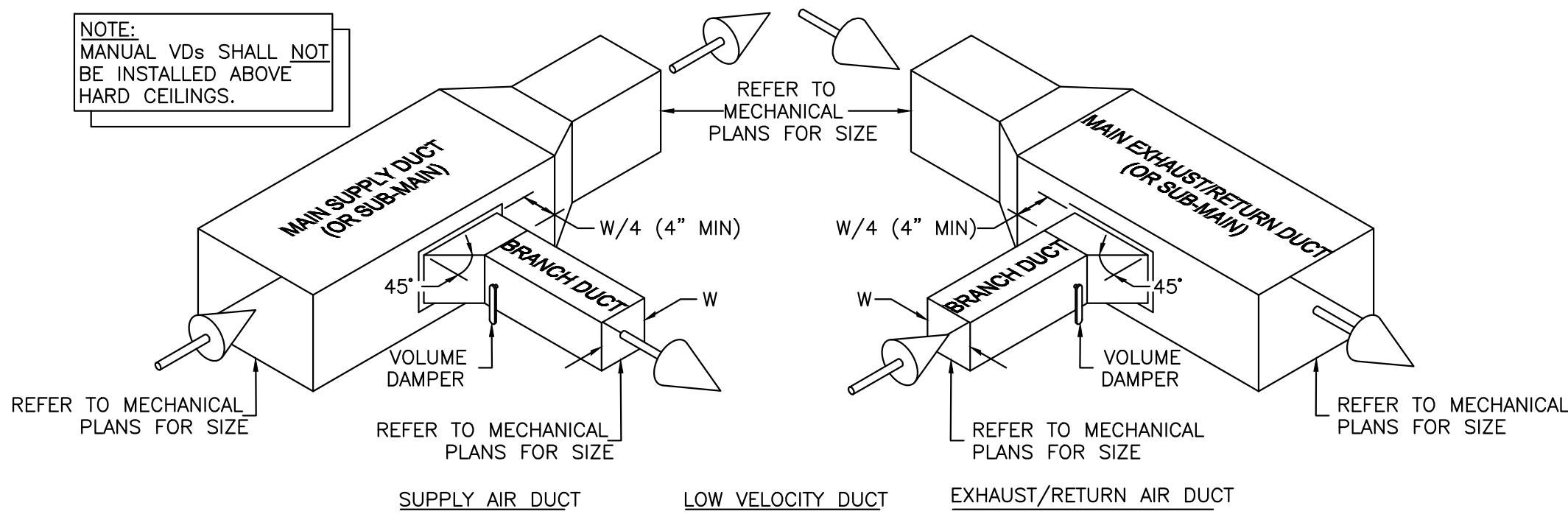
NOTICE:

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE
DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT
FROM KORNBLUM & RESNAY + ASSOCIATES, INC. SHOULD SUCH A
DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT,
KORNBLUM & RESNAY + ASSOCIATES, INC. ASSUME NO
RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

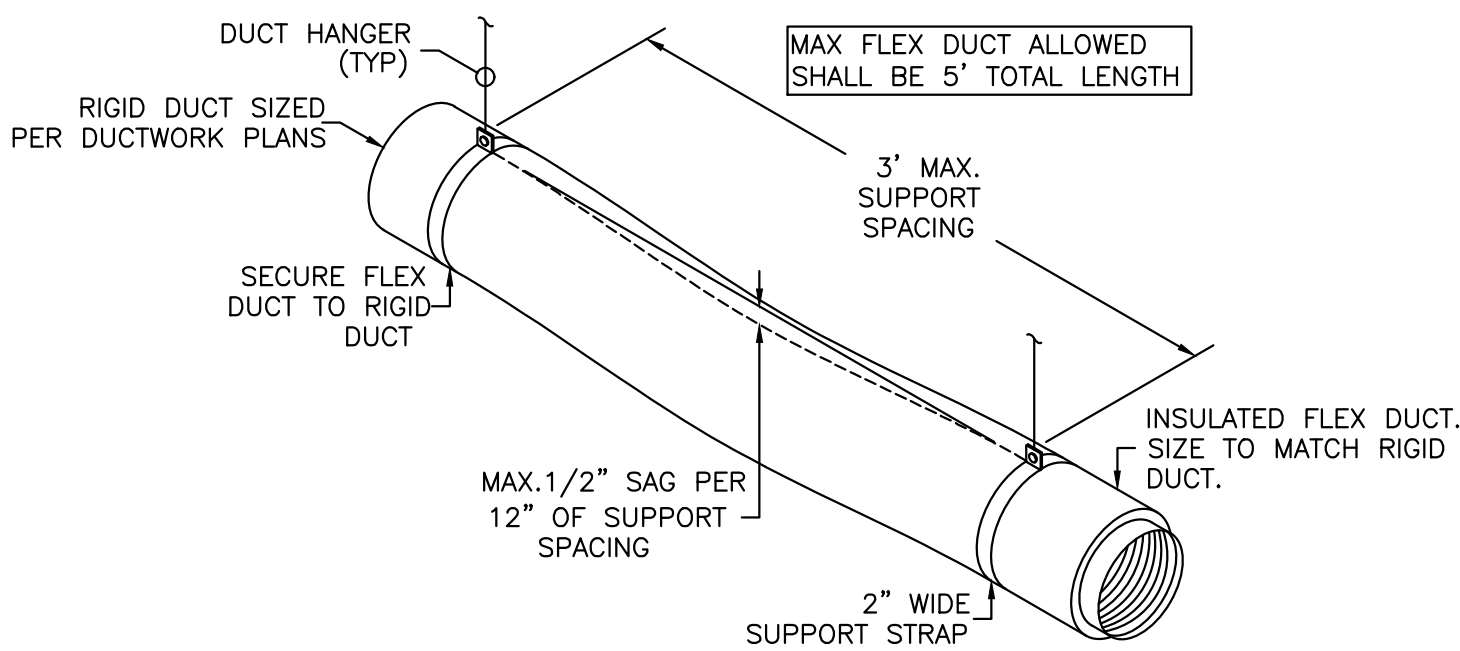
382 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217

WWW.NY-ENGINEERS.COM



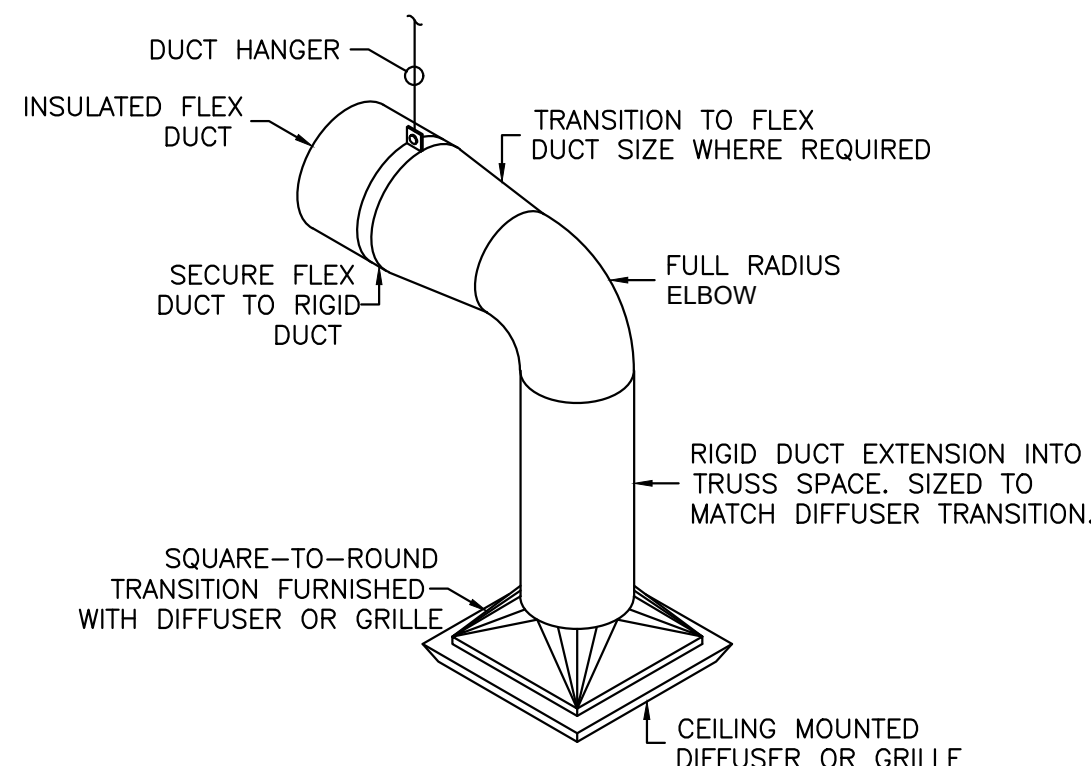
BRANCH DUCT CONNECTIONS

N.T.S.



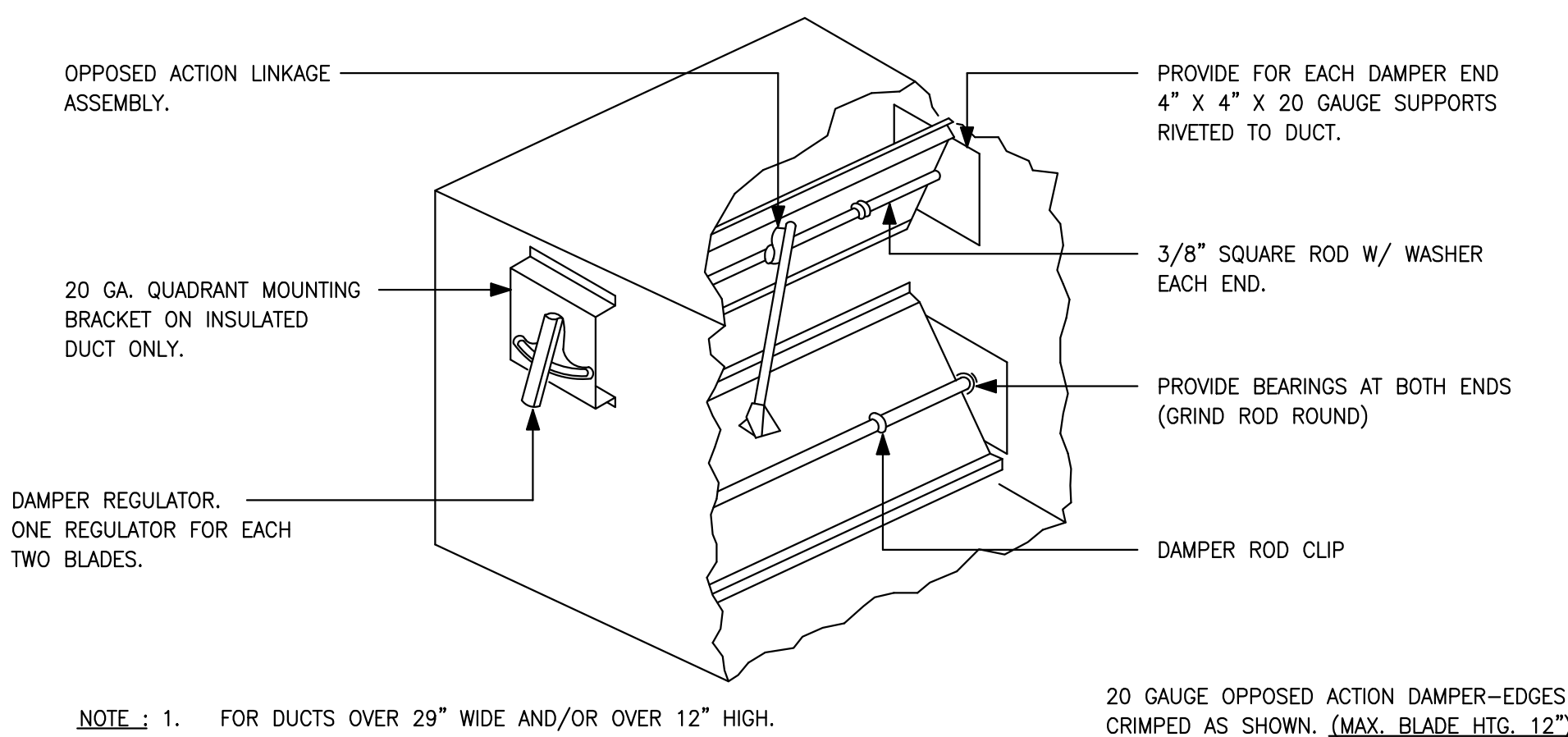
FLEX DUCT SUPPORT DETAIL

N.T.S.



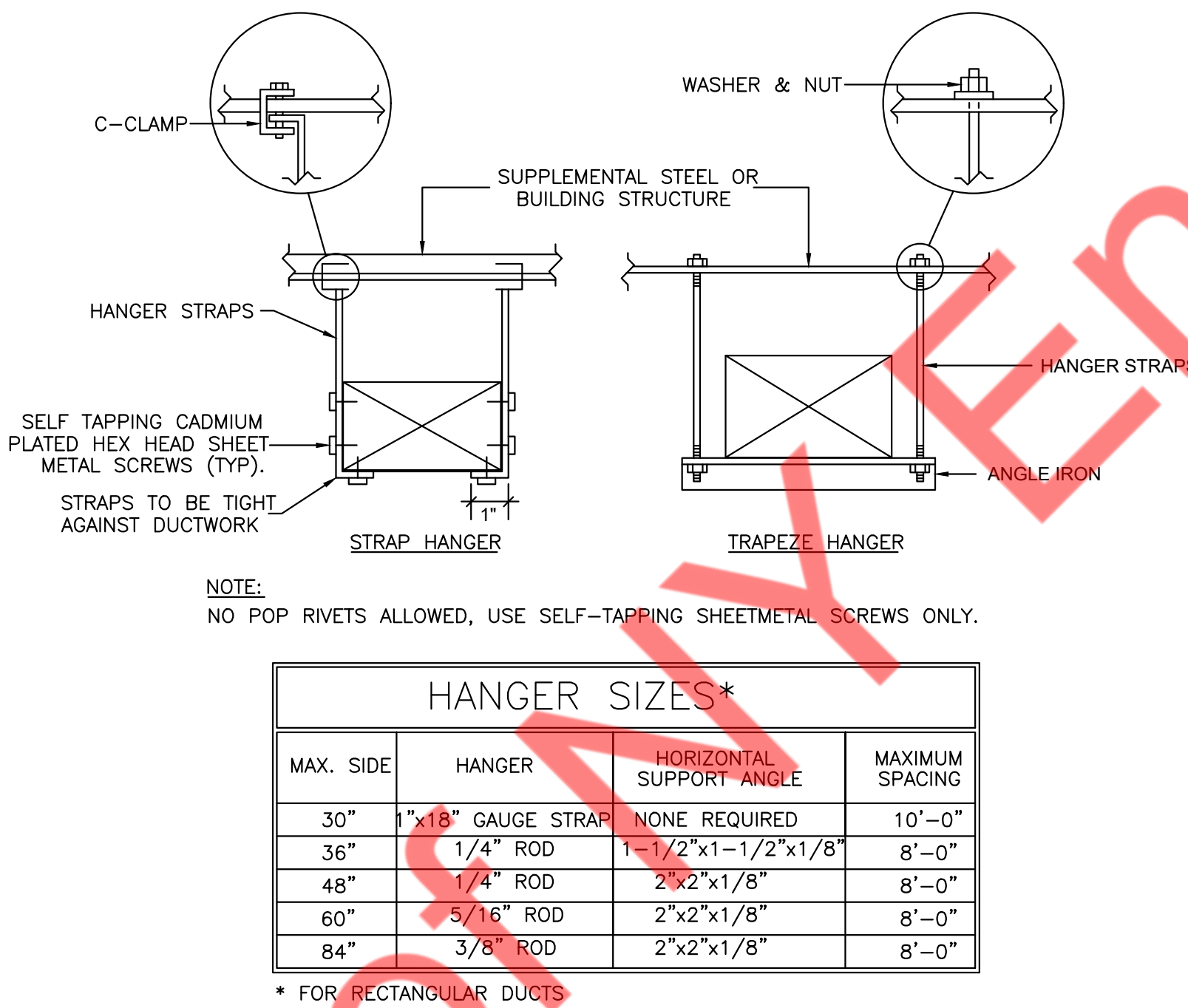
DIFFUSER CONNECTION DETAIL

N.T.S.



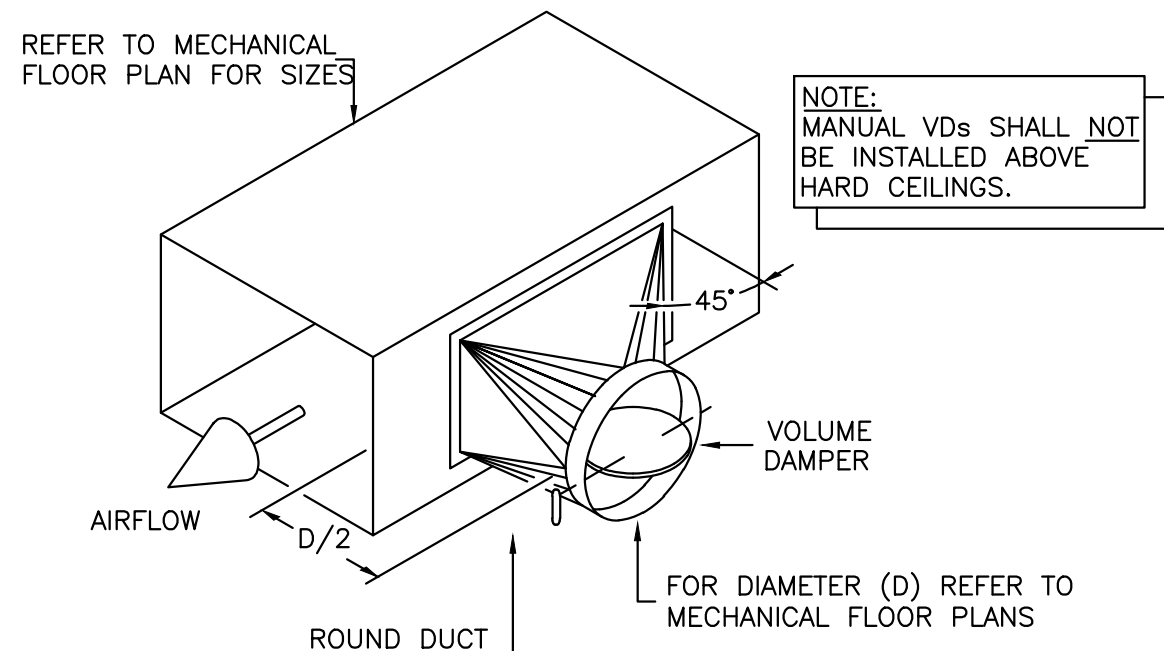
LOW PRESSURE CONTROL DAMPER

N.T.S.



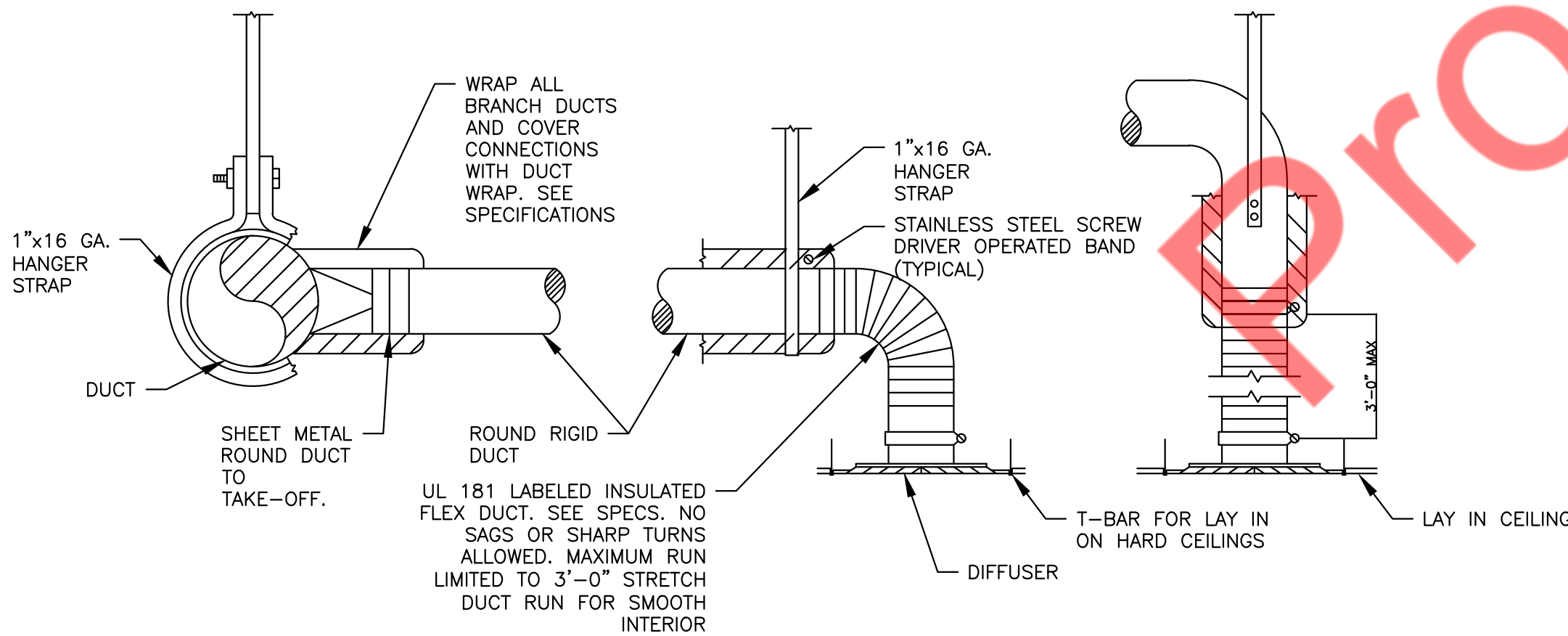
DUCT HANGER DETAIL

N.T.S.



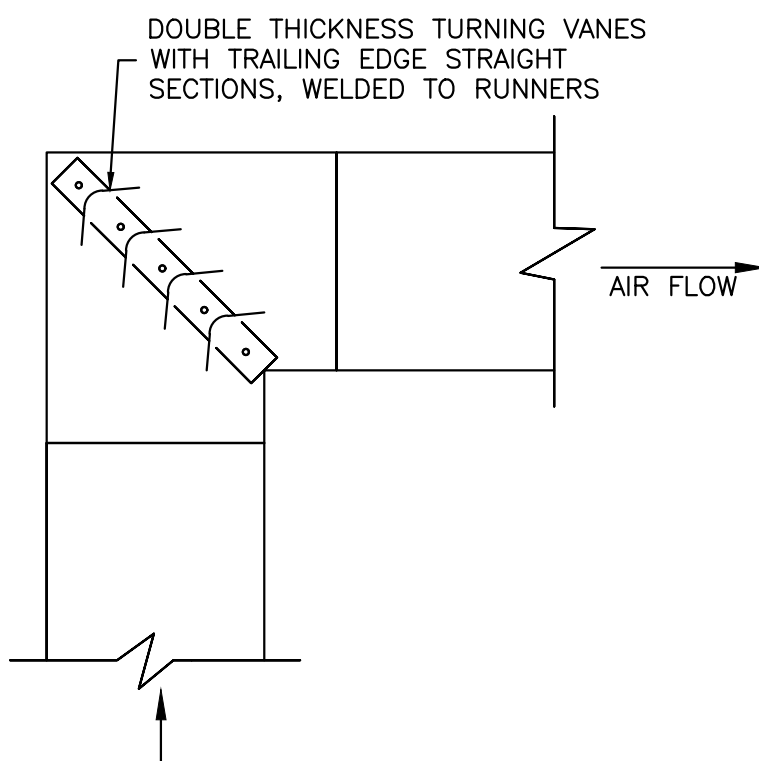
ROUND DUCT TAKE OFF DETAIL

N.T.S.



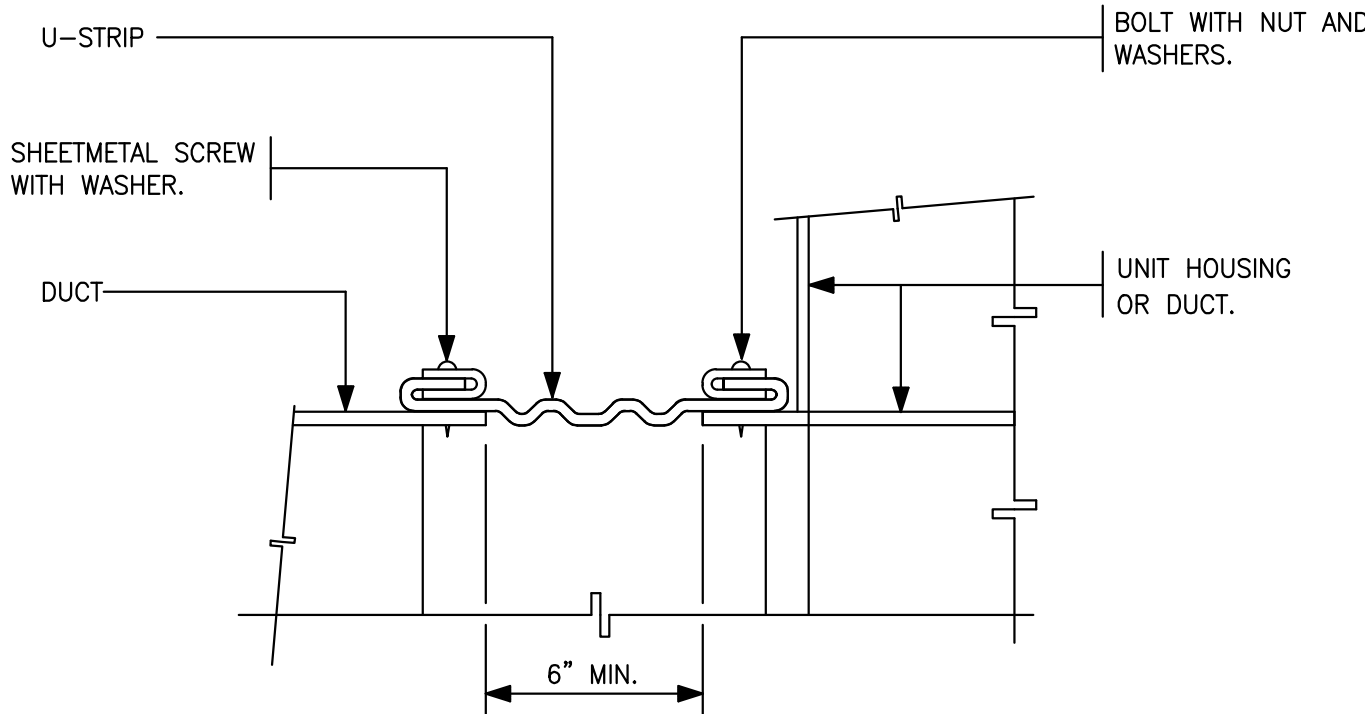
TYPICAL DIFFUSER CONNECTION DETAIL

N.T.S.



TYPICAL SQUARE ELBOW

N.T.S.



FLEXIBLE CONNECTION DETAIL

N.T.S.

SHEET NAME

MECHANICAL
DETAILS

SHEET DESIGNATION

M-400































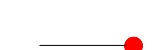


































NOTICE:

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT FROM ADRENALINE & BISBANO + ASSOCIATES, INC. SHOULD SUCH DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT, ADRENALINE & BISBANO + ASSOCIATES, INC. ASSUME NO RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

382 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217
WWW.NY-ENGINEERS.COM

GENERAL NOTES:

BASIC MATERIALS		BASIC MATERIALS CONT.		FIRE ALARM/DETECTION SYSTEM	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SINGLE POLE SWITCH (SUBSCRIPT INDICATES ITEM CONTROLLED)		BRANCH CIRCUIT PANELBOARD, UNDER 250 VOLTS, SURFACE MOUNTED		DUCT SMOKE DETECTOR
	THREE-WAY SWITCH		BRANCH CIRCUIT PANELBOARD, UNDER 250 VOLTS, FLUSH MOUNTED		SMOKE DETECTOR
	FOUR-WAY SWITCH		BRANCH CIRCUIT PANELBOARD, OVER 250 VOLTS, SURFACE MOUNTED		SUPERVISED CONTROL RELAY
	SINGLE POLE SWITCH WITH WEATHERPROOF COVER		BRANCH CIRCUIT PANELBOARD, OVER 250 VOLTS, FLUSH MOUNTED		COMBINATION HORN/STROBE NOTIFICATION DEVICE - 80" AFF (*) CD = CANDELA RATING
	SINGLE POLE SWITCH WITH WEATHERPROOF LOCKING COVER		BRANCH CIRCUIT CONDUIT CONCEALED ABOVE CEILING OR IN WALL. CONDUIT SHALL INCLUDE PHASE, NEUTRAL AND GROUND CONDUCTORS AS REQUIRED FOR CIRCUITS (UNLESS OTHERWISE NOTED).		REMOTE TROUBLE INDICATOR
	SINGLE POLE SWITCH WITH SECURITY LOCKING KEY		GROUND ROD 3/4" x 20'		REMOTE TEST SWITCH
	LIGHTING CONTROL MASTER STATION		CONDUIT TURNING UP		PULL STATION - 4" AFF
	FAN SWITCH		CONDUIT TURNING DOWN		FIRE ALARM ANNUNCIATOR PANEL
	MANUAL MOTOR STARTER WITH OVERLOAD HEATERS		CONDUIT STUB		FIRE ALARM CONTROL PANEL
	MANUAL MOTOR STARTER WITH OVERLOAD HEATERS AND PILOT LIGHT		CONDUIT CONTINUED		
	DUPLEX RECEPTACLE		LIGHTNING PROTECTION CU CABLE GROUND LOOP		
	FLOOR OUTLET BOX AND DUPLEX RECEPTACLE WITH APPROPRIATE FLANGE				
	FLOOR OUTLET BOX WITH DUPLEX RECEPTACLE AND ONE COMBINATION W/Voice/DA/TA OUTLET				
	FLOOR OUTLET BOX WITH TWO DUPLEX RECEPTACLES AND ONE COMBINATION W/Voice/DA/TA OUTLET				
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER C = RECEPTACLE CONTROLLED VIA LIGHTING CONTROL PANEL				
	DUPLEX RECEPTACLE WITH TOP HALF SWITCHED				
	DEVICE WITH DESIGNATED MOUNTING HEIGHT. REFER TO ARCHITECTURAL PLAN.				
	GFI RECEPTACLE. WIP DENOTES UL LISTED AS WEATHERPROOF IN USE AND UL LISTED WEATHER RESISTANT. MOUNTED AT 18" AFF.				
	GFI RECEPTACLE MOUNTED ABOVE COUNTER				
	TWO DUPLEX RECEPTACLES WITH COMMON COVER				
	TWO DUPLEX RECEPTACLES WITH COMMON COVER MOUNTED ABOVE COUNTER				
	ISOLATED GROUND DUPLEX RECEPTACLE. (ORANGE DEVICE)				
	DUPLEX RECEPTACLE				
	NOTE: TICK MARKS SHOWN ON ANY DEVICE REPRESENTS RECEPTACLE CONNECTED TO THE EMERGENCY CIRCUIT (RED DEVICE) TYPICAL FOR ANY DEVICE IN LEGEND				
	SPECIAL PURPOSE RECEPTACLE. RATING AS NOTED				
	LIGHTING CONTROL TIME CLOCK				
	PHOTOCELL, MOUNTED ON ROOF FACING NORTH				
	GROUND BAR				
	JUNCTION BOX				
	JUNCTION BOX- WALL MOUNTED				
	SURGE PROTECTION DEVICE				
	SHUNT-TRIP BUTTON - FLUSH MOUNTED UNLESS OTHERWISE NOTED NEMA 3R FOR EXTERIOR LOCATIONS				
	MAGNETIC MOTOR STARTER OR CONTACTOR SIZE AS NOTED				
	MOTOR CONNECTION. NUMBER DENOTES HORSEPOWER				
	VARIABLE FREQUENCY DRIVE				
	DIRECT DIGITAL CONTROL PANEL				
	TRANSFORMER				
	AUTOMATIC TRANSFER SWITCH				
	NON-FUSED DISCONNECT SWITCH, SIZE AS NOTED NF DENOTES NON-FUSED				
	FUSED DISCONNECT AR DENOTES AMP RATING OF SWITCH AF DENOTES AMP FUSE SIZE. * DENOTES SIZE PER MANUFACTURER RECOMMENDATIONS.				
	COMBINATION MAGNETIC MOTOR STARTER, SIZE & # OF POLES 3 POLE UNLESS OTHERWISE NOTED				
	ENCLOSURE NEMA RATING.				
	NEMA STARTER SIZE				
					</

NOTE: SOME SYMBOLS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT

SHEET NAME

ELECTRICAL SYMBOLS, LEGENDS, ABBREVIATIONS & DRAWING INDEX

SHEET DESIGNATION

E-001

ELECTRICAL SPECIFICATIONS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. THESE SPECIFICATIONS AND DRAWINGS ARE INTENDED TO SERVE JOINTLY AS A BASIS UPON WHICH THE CONTRACTOR SHALL SUBMIT A PRICE FOR MATERIAL AND LABOR PROVISIONS.
- B. IT IS NOT INTENDED THAT THE PLANS OR SPECIFICATION SHOW OR STATE EVERY DETAILED REQUIREMENT OF THE WORK, BUT RATHER THAT THEY FURNISH ADEQUATE INFORMATION FOR AN EXPERIENCED CONTRACTOR TO PROVIDE A COMPLETELY ACCEPTABLE INSTALLATION. THE GENERAL CONDITIONS FORM A PART OF THESE SPECIFICATIONS WHETHER ATTACHED HERETO OR NOT, SHALL BE CAREFULLY EXAMINED BEFORE SUBMITTING A PROPOSAL. WHERE GENERAL CONDITIONS CLAUSES ARE REPEATED IN THIS SECTION, IT SHALL BE UNDERSTOOD AS CALLING SPECIAL ATTENTION TO THEM, OR AS A FURTHER QUALIFICATION, AND SHALL NOT BE ASSUMED AS OMITTING ANY OTHER CLAUSES. NO GENERAL CONDITIONS REFERRING TO THE WORK INCLUDED HEREIN SHALL BE CONSIDERED AS WAIVED UNLESS SPECIFICALLY STATED HEREIN.
- C. BEFORE SUBMITTING PROPOSAL, EXAMINE ALL PLANS RELATING TO THIS WORK, VERIFY ALL GOVERNING CONDITIONS AT THE SITE, BECOME FULLY INFORMED AS TO THE EXTENT AND CHARACTER OF THE WORK REQUIRED AND ITS RELATION TO THE WORK OF OTHER TRADES. SUBMISSION OF A COST PROPOSAL (BID) WILL BE JUDGED AS EVIDENCE THAT THE SITE EXAMINATION HAS BEEN MADE. NO CONSIDERATION WILL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED FOR WORK TO BE DONE. IT IS BEING UNDERSTOOD THAT THE SUBMISSION OF A PROPOSAL IS AN AGREEMENT TO ALL CONDITIONS REFERRED TO HEREIN OR INDICATED ON THE PLANS.
- D. PROPOSAL MUST INCLUDE EVERYTHING REQUIRED TO PROVIDE A COMPLETE INSTALLATION AS CONTEMPLATED IN A SPECIFICATIONS AND PLANS, WHETHER SPECIFICALLY SHOWN OR SPECIFIED OR NOT. INCLUDED ARE LABOR, MATERIALS, EQUIPMENT, LIGHTS, TOOLS, SCAFFOLDING, ETC. NECESSARY TO COMPLETE INSTALLATION OF EVERYTHING DESCRIBED, SHOWN OR REASONABLY IMPLIED.
- E. ANY DISCREPANCIES BETWEEN THESE SPECIFICATIONS AND THE ACCOMPANYING PLANS, OR THESE SPECIFICATIONS AND PLANS AND THE SPECIFICATIONS OF OTHER TRADES, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE SUBMISSION OF THE BID. FAILURE TO COMPLY WITH THE ABOVE SHALL ALLOW THE ARCHITECT TO MAKE A FINAL AND BINDING DECISION AT A LATER DATE AND NO ALLOWANCE WILL BE GIVEN IF THE MORE EXPENSIVE OF THE ITEM IN QUESTION IS SELECTED.
- F. THE WORK CALLED FOR IN THESE PLANS AND SPECIFICATIONS SHALL BE COORDINATED WITH THE STRUCTURE, WORK OF ALL RELATED TRADES, AND SHALL BE SO ARRANGED THAT THERE WILL BE NO DELAY IN THE PROPER INSTALLATION AND COMPLETION OF ANY PART OF EACH RESPECTIVE WORK, WHEREIN IT MAY BE INTERRELATED WITH THIS CONTRACT ALL WORK CAN PROCEED IN ITS NATURAL SEQUENCE WITHOUT UNNECESSARY DELAY. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL COST AND DELAYS IN THE WORK RESULTING FROM SUBSTITUTION UNDER THIS DIVISION: INCLUDING, BUT NOT LIMITED TO, ANY CHANGES, INDECISION, INSTALLATION OR THE WORK OF OTHER TRADES.
- G. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC (EXCEPT WHERE DIMENSIONED) AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEM AND WORK. FOLLOW ARCHITECTURAL, STRUCTURAL, AND MANUFACTURER'S SHOP DRAWINGS FOR GREATER ACCURACY. CONSULT ENGINEER IN CASE OF DOUBT OR CONFLICT, UNLESS, NOTED, FIXED DIMENSIONS ARE BASED ON THE PRODUCT OF ONE MANUFACTURER, VERIFY DIMENSIONS WITH THE SHOP DRAWINGS OF THE MATERIAL ACTUALLY APPROVED OR PURCHASED.
- H. EXACT LOCATION OF ALL EQUIPMENT, PANELS, PULL BOXES, FEEDERS, FIXTURES, ETC., SHALL BE APPROVED BY THE ARCHITECT, AND OWNER PRIOR TO THE INSTALLATION OF THE SAME.
- I. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS, AND ACCESSORIES TO FULFILL APPLICABLE CODES, REGULATIONS, AND THE BEST PRACTICES OF THE TRADE FOR INSTALLATION OF ALL ELECTRICAL WORK.
- J. ANY NECESSARY ELECTRICAL SERVICE INTERRUPTIONS SHALL BE AT A TIME CONVENIENT TO THE BUILDING OWNER.
- K. ALL PENETRATIONS THROUGH SLABS AND FIRE RATED PARTITIONS SHALL BE FIRE STOPPED USING APPROVED METHOD TO MAINTAIN THE FIRE RESISTANCE RATING.
- L. THE E.C. SHALL CALL FOR A FINAL PUNCH-LIST WHEN ALL ELECTRICAL WORK IS COMPLETE. IN THE EVENT REPRESENTATIVES OF THIS OFFICE ARRIVE AT THE SITE AND DEEM WORK IS NOT SUFFICIENTLY COMPLETE, NO REVIEW/PUNCH-LIST WILL OCCUR. THE E.C. WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH RESCHEDULING THE PUNCH-LIST.

1.02 SCOPE OF WORK

- A. WITHOUT INTENDING TO LIMIT AND/OR RESTRICT THE SCOPE OF WORK REQUIRED AND SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR, THE WORK OF THIS DIVISION SHALL, IN GENERAL COMPRISE THE FOLLOWING:
1. INSTALLATION OF NEW ELECTRICAL DISTRIBUTION SYSTEM AND PANELS.
 2. FURNISHING AND INSTALLING NEW LIGHTING FIXTURES AND LAMPS.
 3. FURNISHING AND INSTALLING NEW FEEDERS, CONDUITS, BRANCH CIRCUIT WIRING, ETC.
 4. FURNISHING AND INSTALLING NEW RACEWAYS, OUTLET BOXES, WIRING AND CONNECTIONS FOR LIGHTING FIXTURES, SWITCHES, AND RECEPTACLES.
 5. PROVIDE CONNECTIONS TO ALL ELECTRICAL EQUIPMENT FURNISHED BY OTHER TRADES OR BY THE OWNER.
 6. POWER WIRING FOR ALL MOTORS, INCLUDING INSTALLING ALL REQUIRED DISCONNECT SWITCHES AND MOUNTING OF STARTERS.
 7. FURNISHING AND INSTALLING ALL TELEPHONE/DATA SYSTEM CONDUITS, SLEEVES AND BOXES.
 8. TEMPORARY LIGHT AND POWER.
 9. GROUNDING.
 10. CUTTING, CHANNELING, AND PATCHING.
 11. FIRE ALARM SYSTEM.
 12. REMOVAL OF ELECTRICAL SYSTEM AS REQUIRED AND AS INDICATED ON PLANS.

1.03 WORK NOT INCLUDED

- A. FURNISHING MOTORS, MOTOR STARTER AND CONTROL DEVICES CONNECTED TO EQUIPMENT FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS. HOWEVER, ELECTRICAL CONTRACTOR WILL ERECT AND WIRE SAME, FURNISH AUXILIARY MOTOR DISCONNECTS AS REQUIRED BY DRAWINGS OR CODE.
- B. FINISH PAINTING.
- C. TELEPHONE/DATA WIRING AND DEVICES.

1.04 CODES, PERMITS, AND INSPECTIONS

- A. ELECTRICAL WORK SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE STATE ELECTRICAL CODE, LOCAL ORDINANCES, AND OTHER AUTHORITIES EXERCISING JURISDICTION OVER ALL ELECTRICAL CONSTRUCTION WORK AND THE PROJECT.
- B. NOTHING CONTAINED IN THESE SPECIFICATIONS OR PLANS SHALL BE SO CONSTRUED AS TO CONFLICT WITH ANY LOCAL, MUNICIPAL, AND NATIONAL BOARD OF THE FIRE UNDERWRITERS REGULATIONS GOVERNING THE INSTALLATION OF WORK SPECIFIED HEREIN. ALL SUCH LAWS, ORDINANCES, AND REGULATIONS, WHERE THEY APPLY TO THIS WORK, ARE HEREBY INCORPORATED INTO AND MADE A PART OF THE SPECIFICATIONS. ALL SUCH REQUIREMENTS SHALL BE SATISFIED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- C. ALL REQUIRED PERMITS AND INSPECTION CERTIFICATES SHALL BE OBTAINED, PAID FOR, AND MADE AVAILABLE AT THE COMPLETION OF THE WORK.
- D. COORDINATE ALL SERVICE WORK WITH THE LOCAL UTILITY COMPANIES. ALL WORK INCLUDING BUT NOT LIMITED TO, PRIMARY ELECTRIC DUCT BANKS, TRANSFORMER PADS, MANHOLES/ PULL BOXES, METERING, PROTECTION BOLLARDS AND TELEPHONE/CABLE TV SERVICE DUCT BANKS SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE LOCAL UTILITY COMPANIES.

1.05 GUARANTEES AND CERTIFICATIONS

- A. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM DEFECTS, DEFECTIVE MATERIALS OR WORKMANSHIP, AS WELL AS DAMAGE TO THE WORK OF ANY/ALL TRADES RESULTING FROM THE SAME, SHALL BE REPLACED OR REPAIRED AS DIRECTED FOR DURATION OF ONE YEAR, FROM THE DATE OF ACCEPTANCE.
- B. THE DATE OF ACCEPTANCE SHALL BE THE DATE OF THE FINAL PAYMENT FOR THE WORK OR THE DATE OF A FORMAL NOTICE OF ACCEPTANCE, WHATEVER IS EARLIER.
- C. NON-DURABLE ITEMS, SUCH AS ELECTRIC LAMPS, SHALL BE REPLACED UP TO THE DATE OF ACCEPTANCE, SUCH THAT THEY SHALL HAVE HAD NO MORE THAN 100 HOURS USE PRIOR TO THIS DATE.
- D. NO EQUIPMENT SHALL BE FABRICATED, DELIVERED, ERECTED, OR RECONNECTED THAN FROM DRAWINGS APPROVED BY THE ENGINEER. SHOP DRAWING IN THE NUMBER DIRECTED SHALL BE SUBMITTED FOR APPROVAL.
- E. IT SHALL BE UNDERSTOOD THAT APPROVAL OF DRAWINGS WILL NOT BIND THE ENGINEER OR THE OWNER TO THE FINAL ACCEPTANCE OF SUCH EQUIPMENT AS THE COMPLETED INSTALLATION AND TEST OF EQUIPMENT AS A WHOLE MUST BE PROVIDED AND GUARANTEED HEREIN AS SPECIFIED.

- | | |
|----------------------------------|--|
| 1. LIGHTING FIXTURES. | 5. PANEL BOARDS AND CIRCUIT BREAKERS |
| 2. WIRING DEVICES AND PLATES. | 6. SAFETY SWITCHES AND MOTOR STARTERS |
| 3. CONDUIT, BOXES, AND FITTINGS. | 7. FIRE ALARM SYSTEM INCLUDING BATTERY CALCULATIONS AND WIRING DIAGRAMS. |
| 4. WIRE AND CABLE | |

- E. IT SHALL BE UNDERSTOOD THAT APPROVAL OF DRAWINGS WILL NOT BIND THE ENGINEER OR THE OWNER TO THE FINAL ACCEPTANCE OF SUCH EQUIPMENT AS THE COMPLETED INSTALLATION AND TEST OF EQUIPMENT AS A WHOLE MUST BE PROVIDED AND GUARANTEED HEREIN AS SPECIFIED.

1.07 SAMPLES

- A. UPON REQUEST BY ARCHITECT OR OWNER, SUBMIT FOR APPROVAL ONE SAMPLE OF EACH OF THE FOLLOWING:
1. EACH TYPE OF LIGHTING FIXTURE.
 2. EACH TYPE OF WIRING DEVICE.
 3. EACH TYPE OF WIRING DEVICE PLATE.

1.08 AS-BUILT DRAWINGS

- A. THE CONTRACTOR SHALL, WITHIN 15 DAYS OF THE COMPLETION OF THE PROJECT AND PRIOR TO REQUESTING FINAL PAYMENT, SUBMIT AS-BUILT DRAWINGS OF THE ACTUAL INSTALLATION OF THE ELECTRICAL WORK. THREE (3) PAPER SETS OF DRAWINGS, SAME SCALE AS THE DESIGN SET UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS, AND THREE (3) CD DISKS WITH AutoCAD 2007 OR LATER VERSIONS OF THE AS-BUILTS ARE REQUIRED FOR SUBMISSION TO THE ARCHITECT ENGINEER.

1.09 TESTS

- A. BEFORE AN APPLICATION FOR THE FINAL ACCEPTANCE OF THE WORK WILL BE CONSIDERED, ALL TESTS DEEMED NECESSARY BY THE ARCHITECT TO SHOW PROPER EXECUTION OF THE WORK SHALL HAVE BEEN PERFORMED AND COMPLETED IN THE PRESENCE OF AN ARCHITECT'S REPRESENTATIVE. SCHEDULE OF ALL TESTING PROCEDURES SHALL BE ARRANGED TO SUIT THE CONVENIENCE OF THE ARCHITECT.
- B. ANY DEFECTS OR DEFICIENCIES DISCOVERED IN ANY OF THE ELECTRICAL WORK SHALL BE CORRECTED.

1.10 IDENTIFICATION

- A. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL TYPEWRITTEN DIRECTORIES BEHIND TRANSPARENT PLASTIC COVERS IN METAL FRAMES, IN ALL NEW AND EXISTING PANELS INDICATING TYPE AND LOCATION OF LOAD BEING SERVED BY INDIVIDUAL CIRCUIT BREAKERS.
- B. ALL PARTS OF EQUIPMENT, SUCH AS PANELS, JUNCTION BOXES, SAFETY SWITCHES, MOTOR STARTER, CIRCUIT BREAKERS, CONDUCTORS AND SIMILAR ITEMS SHALL BE IDENTIFIED BY NAME, AT SUPPLY END, "LOAD SUPPLIED", AND AT LOAD END "LOAD SUPPLIED FROM".

PART 2 – PRODUCTS

2.01 EQUIPMENT AND MATERIALS

- A. ALL EQUIPMENT AND MATERIALS FOR PERMANENT INSTALLATION SHALL BE THE PRODUCTS OF RECOGNIZED MANUFACTURERS AND SHALL BE NEW.
- B. NEW EQUIPMENT AND MATERIALS SHALL:
1. WHERE NORMALLY SUBJECTED TO UNDERWRITER'S LABORATORY INC. LISTING OR LABELING SERVICES, BE SO LISTED OR LABELED.
 2. BE WITHOUT BLEMISH OR DEFECT.
 3. NOT TO BE USED FOR TEMPORARY LIGHT AND POWER PURPOSES WITHOUT ARCHITECT'S AUTHORIZATION.
 4. BE IN ACCORDANCE WITH THE LATEST APPLICABLE N.E.M.A. STANDARD.
 5. BE APPROVED BY BUILDING MANAGER OR OWNER.

- C. FOR ITEMS WHICH ARE TO BE INSTALLED BUT NOT PURCHASED AS PART OF THE ELECTRICAL WORK, THE ELECTRICAL WORK SHALL INCLUDE:
1. THE COORDINATION OF THEIR DELIVERY.
 2. THEIR FIELD MAKE-UP AND INTERNAL WIRING AS MAY BE NECESSARY FOR THEIR OPERATION.

- D. ELECTRICAL RACEWAY AND SUPPORTING SYSTEMS SHALL BE FURNISHED AND INSTALLED COMPLETE, WITH ALL MATERIALS, FITTINGS, CONNECTIONS AND ACCESSORIES NECESSARY TO PROVIDE IN EACH INSTANCE A COMPLETE OPERATING INSTALLATION, AS DESCRIBED HEREIN, AS INDICATED ON THE DRAWINGS, AND/OR AS APPROVED BY THE BUILDING MANAGER OR OWNER.

- E. THE DRAWINGS ARE DIAGRAMMATIC AND GENERALLY INDICATIVE OF THE WORK TO BE INSTALLED, BUT DO NOT SHOW ALL BENDS, FITTINGS, AND BOXES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE JOB CONDITIONS INCLUDING STRUCTURAL AND FINISH CONDITIONS AFFECTING ALL HIS WORK AND ARRANGE THE SAME ACCORDINGLY, FURNISHING SUCH FITTINGS, BOXES AND SIMILAR ITEMS AS MAY BE REQUIRED TO MEET SUCH CONDITIONS.

2.02 WIRING MATERIALS

- A. WIRE AND CABLE SHALL BE COPPER, RATED FOR 600 VOLTS, TYPE THHN FOR BRANCH CIRCUITS AND XHHW FOR FEEDERS.
- B. WIRE #10 AWG AND SMALLER SHALL BE SOLID, WIRE #8 AWG AND LARGER SHALL BE STRANDED.
- C. WIRING SHALL BE CONSISTENTLY COLOR CODED THROUGHOUT. FOR 120/208 VOLT SYSTEMS, UTILIZE RED, BLUE, BLACK FOR LINE (PHASE) CONDUCTORS AND WHITE FOR NEUTRAL CONDUCTOR. SWITCH LEG SHALL BE SEPARATELY IDENTIFIED. GROUND CONDUCTOR SHALL BE GREEN. FOR 277/480V SYSTEMS, UTILIZE BROWN, ORANGE, YELLOW FOR LINE (PHASE) CONDUCTORS, AND GREY FOR NEUTRAL CONDUCTOR. GROUND CONDUCTOR SHALL BE GREEN WITH YELLOW TRACER.

- D. MINIMUM SIZE:
1. LIGHTING AND POWER: #12 AWG, UNLESS OTHERWISE INDICATED.
 2. CONTROL: #14 AWG.
 3. 120 VOLT CIRCUITS OVER 100 FEET IN LENGTH AND 277 VOLT CIRCUITS OVER 200 FEET IN LENGTH FROM THE POINT OF SUPPLY TO THE FIRST OUTLET SHALL BE #10 AWG.

- E. SPLICES IN BRANCH CIRCUIT WORK SHALL BE MADE BY MEANS OF TYPE "R" "SCOTCHLOCK" ELECTRICAL TYPE.
- F. ELECTRICAL INSULATION TAPE SHALL BE VINYL PLASTIC TYPE WITH PRESSURE ADHESIVE "SCOTCH" ELECTRICAL TYPE.

- G. BRANCH CIRCUITRY NUMBERS INDICATED ON THE DRAWINGS ON MULTI-CIRCUIT HOMERUNS ARE FOR IDENTIFICATION OF DEVICES OR EQUIPMENT THEY ARE CONNECTED TO AND DO NOT NECESSARILY REFER TO PANELBOARD CIRCUIT NUMBERS. ASSIGNMENT OF BRANCH CIRCUIT NUMBERS SHALL BE PART OF THIS WORK AND INDICATED ON PANEL DIRECTORIES. BRANCH CIRCUITS SHALL BE CONNECTED TO CIRCUITS ON PANELBOARDS SO AS TO SECURE A REASONABLE BALANCE ON THE THREE PHASES. WHERE MORE THAN ONE CIRCUIT WITH A COMMON NEUTRAL IS INSTALLED IN THE SAME CONDUIT, EACH PHASE WIRE SHALL BE CONNECTED TO A DIFFERENT LEG OF THE SYSTEM.

- H. ALL CONDUCTORS SHALL BE COLOR CODED THROUGHOUT AND NUMBERED AND TAGGED AT EACH JUNCTION BOX, PULL BOX, PANEL, AND DEVICE WITH SUITABLE FIREPROOF TAGS OR ADHESIVE IDENTIFICATION BANDS.

2.03 CONDUITS AND RACEWAYS

- A. LIQUID TIGHT FLEXIBLE, GALVANIZED STEEL CONDUIT WITH CONTINUOUS COPPER BONDING CONDUCTOR, SHALL BE USED FOR CONNECTIONS TO MOTORS AND AT OTHER LOCATIONS WHERE VIBRATION MOVEMENT IS ENCOUNTERED.
- B. UNLESS OTHERWISE INDICATED OR SPECIFIED ALL WIRING SHALL BE INSTALLED CONCEALED IN CEILINGS, WALLS, SLABS, PIPE CHASES AND FURRED SPACES WHENEVER POSSIBLE.
- C. CONDUIT AND FITTINGS SHALL CONFORM TO LATEST ACCEPTABLE STATE CODE AND ALL OTHER CODES HAVING JURISDICTION.
- D. CONDUIT SHALL BE 3/4" TRADE SIZE MINIMUM. UNLESS OTHERWISE INDICATED OR SPECIFIED.
- E. ALL CONDUITS WHICH ARE TO REMAIN EMPTY FOR FUTURE INTRODUCTION OF CONDUCTORS SHALL BE PROVIDED WITH A PULL LINE WITH IDENTIFICATION BAND AT BOTH ENDS.
- F. STEEL JACKETED METAL CLAD CABLE CAN BE USED FOR LIGHTING AND APPLIANCE BRANCH CIRCUITRY IN VOIDS OF CEILING AND PARTITIONS, PROVIDED THAT THIS TYPE OF WIRING IS ACCEPTABLE TO THE LOCAL BUILDING OFFICIAL OR HIS REPRESENTATIVE.
- G. RIGID GALVANIZED STEEL (RGS) CONDUIT SHALL CONFORM TO UL 6. FITTINGS SHALL BE THREADED.
- H. INTERMEDIATE METALLIC CONDUIT (IMC) SHALL CONFORM TO UL 1242. FITTINGS SHALL BE THREADED.
- I. ELECTRICAL METALLIC TUBING (EMT) SHALL CONFORM TO UL 797. FITTINGS SHALL BE GUND AND RING COMPRESSION TYPE.
- J. FLEXIBLE METALLIC CONDUIT SHALL CONFORM TO UL1. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL CONFORM TO UL 360.
- K. ALL CONDUIT FITTINGS AND CONNECTORS SHALL BE STEEL WITH INSULATED THROATS. DIE-FORMED ZINC FITTINGS ARE NOT ACCEPTABLE. BUSHINGS SHALL BE PROVIDED AT ALL CONDUIT TERMINATIONS. BUSHINGS LARGER THAN 1" SHALL BE GROUNDING TYPE. PVC BUSHINGS MAY BE UTILIZED ONLY FOR 3/4" BRANCH CIRCUIT CONDUITS TERMINATING AT PANELBOARDS.

2.04 JUNCTION BOXES

- A. JUNCTION BOX AND PULL BOXES SHALL BE PROVIDED WHERE INDICATED OR SPECIFIED AND WHERE NECESSARY TO FACILITATE THE INSTALLATION OF EQUIPMENT OR WIRING.
- B. ALL BOXES SHALL BE SIZED IN ACCORDANCE WITH NATIONAL ELECTRIC CODE.

2.05 OUTLET BOXES

- A. OUTLET, PULL AND JUNCTION BOXES SHALL BE FABRICATED FROM STEEL AND CONFORM TO UL 50, UL 514, AND NEMA OS1. BOXES FOR INTERIOR LOCATIONS SHALL BE CODE GAUGE, GALVANIZED SHEET STEEL.
- B. BOXES SHALL CONTAIN SUITABLE KNOCKOUTS. BARRIERS SHALL BE FURNISHED AS REQUIRED BY CODE.
- C. BOXES SHALL BE SIZED AS REQUIRED BY CODE FOR NUMBER AND GAUGE OF CONDUCTORS THEREIN, EXCEPT WHERE NOTED TO BE LARGER, THE MINIMUM BOX SIZE SHALL BE 4" SQUARE BE 1 1/2" DEEP. COVERS GREATER THAN 50LBS. SHALL BE DIVIDED INTO MULTIPLE SECTIONS.
- D. WHERE REQUIRED AND APPROVED BY THE ENGINEER, EXTRA DEEP OR EXTRA SHALLOW OUTLET BOXES SHALL BE USED TO FACILITATE THE INSTALLATION OF THE CONDUIT SYSTEM.

2.06 FASTENINGS, SUPPORTS, AND HANGERS

- A. ALL PARTS OF THE ELECTRICAL INSTALLATION SHALL BE ADEQUATELY SUPPORTED FROM THE BUILDING CONSTRUCTION USING APPROVED CLAMP SCREWS WITH THE INSERTS OF EXPANSION ANCHORS, EXPANSION BOLTS AND TOGGLE BOLTS. "IN NO CASE SHALL THE HUNG CEILING MEMBERS OR WIRES BE USED TO SUPPORT CONDUIT".
- B. ALL FASTENING, SUPPORTS, CLAMPS, ANCHORS, AND SIMILAR ITEMS SHALL BE OF TYPE SUITABLE FOR THE PURPOSE.

2.07 WIRING DEVICES

- A. ALL DEVICES SHALL BE SPECIFICATION GRADE, U.L. APPROVED.
- B. RECEPTACLE, 20 AMP, 2 POLE, 3 WIRE DUPLEX, 125 VOLT, GROUND TYPE.
- C. COLOR AND TYPE OF ALL DEVICE PLATES SHALL BE APPROVED BY ARCHITECT PRIOR TO PURCHASE/INSTALLATION.
- D. THE E.C. SHALL PROGRAM ALL OCCUPANCY SENSORS TO THE SATISFACTION OF THE TENANT. AS A MINIMUM, THE E.C. SHALL PROVIDE (4) HOURS OF TRAINING TO THE TENANT. ALL OCCUPANCY SENSORS SHALL BE FULLY PROGRAMMED AT TIME OF FINAL PUNCH-LIST.

2.08 GROUNDING

- A. ALL ENCLOSURES AND NON CURRENT CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT, RACEWAY SYSTEMS AND EQUIPMENT GROUND BUSES SHALL BE EFFECTIVELY GROUNDED TO THE BUILDING GROUNDING SYSTEMS THROUGH THE SYSTEM GROUND CONDUCTORS. METALLIC CONDUITS AND OTHER RACEWAYS AND ENCLOSURES FOR CONDUCTORS SHALL BE METALLIC ALLOY JOINED TOGETHER INTO A CONTINUOUS ELECTRICAL CONDUCTOR, AS TO PROVIDE EFFECTIVE ELECTRICAL CONTINUITY.
- B. GROUND CONTINUITY SHALL BE MAINTAINED THROUGHOUT.

2.09 LIGHTING FIXTURES

- A. ALL LIGHTING FIXTURES SHALL COMPLY WITH THE STATE ELECTRIC CODE AND SHALL BE U.L. APPROVED.
- B. ALL LIGHTING FIXTURES SHALL BE APPROVED PRIOR TO PURCHASE.
- C. ALL LIGHTING FIXTURES SHALL BE FURNISHED AND INSTALLED COMPLETE WITH NECESSARY COMPONENTS, ACCESSORIES, AND LAMPS OF CORRECT TYPE AND RATING AS INDICATED ON ELECTRICAL DRAWINGS.
- D. FIXTURES SHALL BE CAREFULLY SUPPORTED AND ALIGNED WITH NECESSARY HANGERS, SUPPORTING MEMBERS, AND FRAMES FOR PROPER INSTALLATION, ALL AS REQUIRED AND AS APPROVED.
- E. ALL FIXTURES SHALL BE PROPERLY WIRED AND CONNECTED TO BRANCH CIRCUITS, TESTED AND LEFT READY FOR OPERATION.
- F. FOR TYPE, MAKE, AND QUANTITIES OF LIGHTING FIXTURES REQUIRED, SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS.
- G. FIXTURES AND/OR FUTURE OUTLET BOXES SHALL BE PROVIDED WITH HANGERS TO ADEQUATELY SUPPORT THE COMPLETE WEIGHT OF THE FIXTURE. PROVIDE SUPPLEMENTAL SUPPORTS PER ALL LOCAL AND STATE CODES.
- H. ALL FLUORESCENT LIGHTING FIXTURES SHALL HAVE ENERGY SAVING LAMPS AND SOLID STATE ELECTRONIC ENERGY SAVING CLASS "P" BALLASTS.

2.10 TELEPHONE SYSTEM

- A. PROVIDE EMPTY CONDUIT WITH PULL LINE 3/4" MINIMUM AT EACH TEL/DATA OUTLET LOCATION. EXTEND IT UP TO 12" ABOVE HUNG CEILING AND TERMINATE WITH PLASTIC BUSHING.
- B. PROVIDE 5/8" THICK, 4'-0" WIDE AND 8'-0" HIGH FIRE RETARDANT PLYWOOD BACKBOARD IN TELEPHONE CLOSET. COORDINATE SIZE WITH OWNER'S TELEPHONE SYSTEM VENDOR.
- C. ALL TELEPHONE/DATA WIRING, JACKS, COVERPLATES, PUNCH DOWN BLOCKS, ETC., ARE FURNISHED AND INSTALLED BY OWNER'S PRIVATE VENDOR.

2.11 PANEL BOARDS

- A. PANEL BOARDS SHALL CONSIST OF FACTORY COMPLETED DEADFRONT ASSEMBLIES OF BACK PANS, MAIN BUSSES, OVER CURRENT AND SWITCHING UNITS, SHEET METAL CABINETS AND TRIMS. THEY SHALL BE SO DESIGNED THAT SWITCHING AND OVER CURRENT DEVICES CAN BE REPLACED WITHOUT DISTURBING ADJACENT UNITS AND WITHOUT REMOVING THE MAIN BUS CONNECTORS, SO THAT CIRCUITS MAY BE CHANGED WITHOUT MACHINING, DRILLING, OR TAPPING.
- B. BUS BARS FOR THEIR MAINS SHALL BE OF COPPER HAVING CURRENT CAPACITIES AS INDICATED AND SIZED FOR SUCH CAPACITIES IN ACCORDANCE WITH UNDERWRITER LABORATORY STANDARDS. UNLESS OTHERWISE NOTED, FULL SIZE NEUTRAL BARS SHALL BE INCLUDED. BUS BAR TAPS FOR PANELS WITH SINGLE POLE BRANCHES SHALL BE ARRANGED FOR SEQUENCE PHASING OF THE BRANCH CIRCUIT DEVICES. BUSSING SHALL BE BRACED THROUGHOUT TO CONFORM TO INDUSTRY STANDARD PRACTICE GOVERNING SHORT CIRCUIT STRESSES IN PANELBOARDS. PHASE BUSSING SHALL BE FULL HEIGHT WITHOUT REDUCTION.
- C. A GROUND BUS SHALL BE PROVIDED FOR EACH PANEL. EACH GROUND BUS SHALL BE OF THE SAME MATERIAL AS THE PHASE AND NEUTRAL BUSES.
- D. PANEL BOARDS SHALL COMPLY WITH THE FOLLOWING INDUSTRY STANDARDS:
1. UL STANDARDS
 - a. PANEL BOARDS – UL67
 - b. CABINET & BOXES – UL50
 2. NEMA STANDARD – PB1
- E. CIRCUIT BREAKERS FOR PANEL OR INDIVIDUAL MOUNTING SHALL BE MOLDED CASE TYPE, QUICK-MAKE, QUICK-BREAK, OR MANUAL OR AUTOMATIC OPERATION.
- F. AMPERE RATING AND NUMBER OF POLES SHALL BE AS INDICATED ON THE DRAWINGS.
- G. BREAKERS SHALL BE TYPE AS MANUFACTURED BY SQUARE D OR APPROVED EQUAL. MINIMUM CIRCUIT BREAKER INTERRUPTING CAPACITY SHALL MATCH EXISTING SYSTEM, BUT IN NO CASE SHALL BE LESS THAN 22,000 SYM RMS AMPERES.

2.12 FIRESTOPPING, SMOKEPROOFING AND WATERPROOFING

- A. PROVIDE FIRESTOP OR SMOKESTOP BETWEEN SLEEVES AND CONDUIT MANUFACTURED BY BIO FIRE SHIELD, INC., OR DOW CORNING CORP. AS FOLLOWS:
1. DOW CORNING SILICONE RTV FOAM.
 2. DOW CORNING 96-081 RTV SILICONE ADHESIVE SEALANT.
 3. MINERAL FIBER BOARD, MATTING AND PUTTY.
- B. PROVIDE WATERPROOFING OF ALL MATERIALS WHICH PENETRATE A FLOOR, EXTERIOR WALL SLAB OR ROOF. ALL SLEEVES SHALL EXTEND A MINIMUM OF 3 INCHES ABOVE FLOOR OR ROOF.



TD BANK

NOTICE:

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT FROM NEARBY & BERKOVIC & ASSOCIATES, INC. SHOULD SUCH A DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT, NEARBY & BERKOVIC & ASSOCIATES, INC. ASSUME NO RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

382 NE 191ST STREET, SUITE 49674

MIAMI, FL 33179

(646) 878-9217

WWW.NY-ENGINEERS.COM

SHEET NAME

ELECTRICAL
GENERAL NOTES

SHEET DESIGNATION

E-002



NOTICE:

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT FROM ADRENALINE & BISBANO + ASSOCIATES, INC. SHOULD SUCH DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT ADRENALINE & BISBANO + ASSOCIATES, INC. ASSUME NO RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

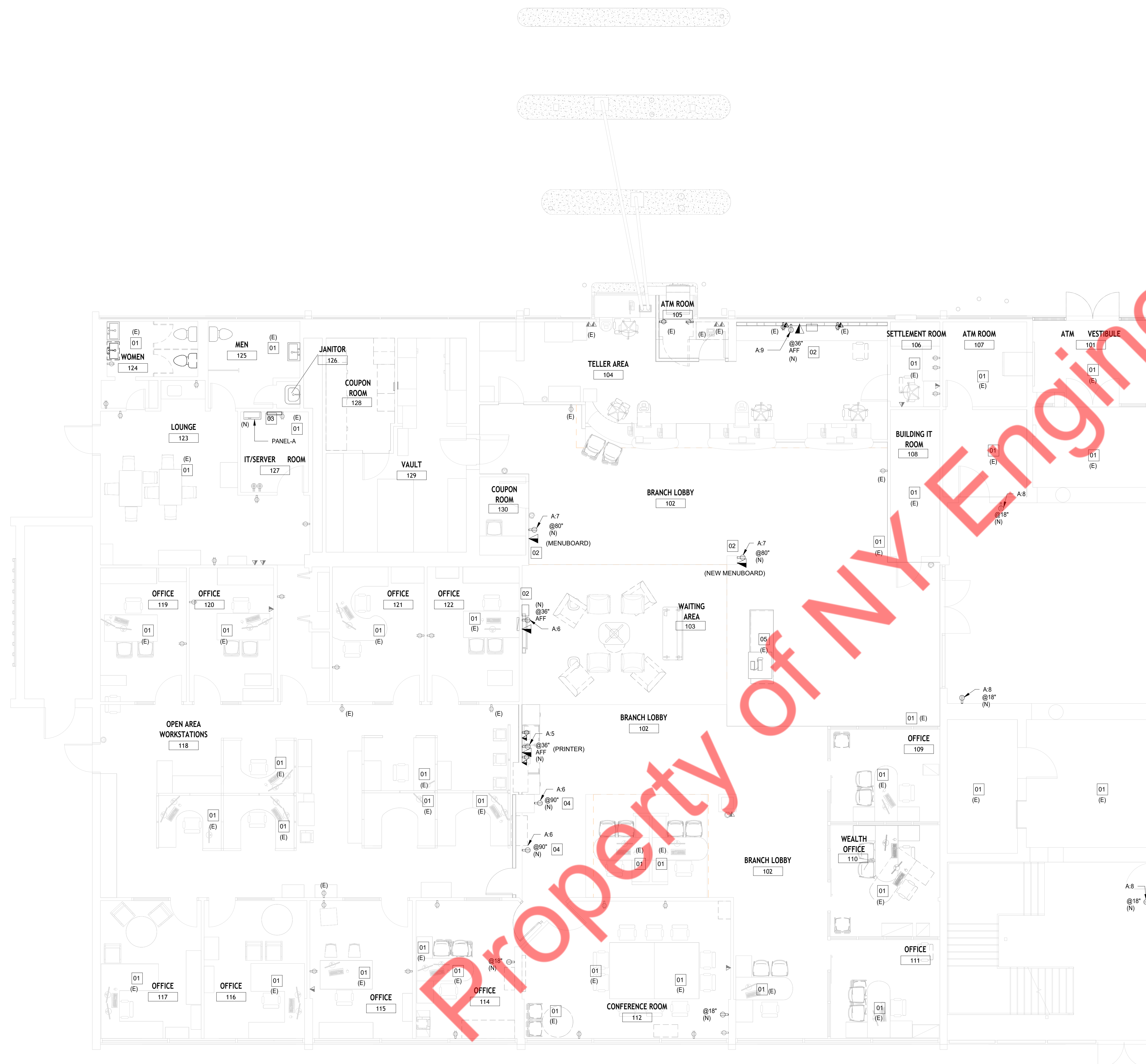
382 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217

WWW.NY-ENGINEERS.COM

- A. E.C. SHALL COORDINATE WITH THE ARCHITECT/OWNER/VE VENDOR FOR EXACT LOCATION OF THE LV DEVICES. PROVIDE CIRCUIT CIRCUL AS REQUIRED.
- B. E.C. SHALL COORDINATE WITH THE OWNER FOR EXACT LOCATION OF SECURITY CAMERA, CARD READER ETC. AND PROVIDE CIRCUITING AS REQUIRED.
- C. E.C. SHALL COORDINATE WITH THE ARCHITECT/OWNER/VENDOR FOR VACP, BACP, NVR, AND OTHER PANELS IN FIELD. PROVIDE CIRCUIT AS REQUIRED.
- D. ALL SECURITY ITEMS AND ASSOCIATED WIRING TO BE PROVIDED BY OTHERS. GC TO COORDINATE WITH SECURITY AND FURNITURE PLANS.
- E. ALL POWER, DATA AND WATER LOCATIONS TO BE COORDINATED WITH FINAL MILLWORK SHOP DRAWINGS AND FURNITURE PLANS.
- F. PROVIDE HDMI CABLES WHERE EVER REQUIRED.
- G. COORDINATE EXACT LOCATION OF THE THERMOSTATS WITH THE MECHANICAL DRAWINGS. PROVIDE WIRING AS REQUIRED.
- H. COORDINATE LOCATION OF THE ELECTRIC DAMPERS WITH THE MECHANICAL DRAWINGS. PROVIDE CIRCUITING AS REQUIRED.
- I. E.C. SHALL COORDINATE WITH THE RELOCATION OF THE MONUMENT SIGNAGE. RELOCATE SIGNAGE POWER AS REQUIRED. BASE BID ACCORDINGLY.
- J. ALL THE EXISTING TO REMAIN RECEPTACLES SHALL REMAIN CONTAINED ALONG WITH ITS CIRCUIT. E.C. SHALL ENSURE PROPER WORKING OF RECEPTACLES, PROVIDE NEW AS NEEDED.
- K. DRAWINGS TO BE UPDATED ONCE IEV SURVEYS ARE RECEIVED.
- L. THE ELECTRICAL OUTLETS IN THE ADA ROOMS SHALL COMPLY WITH THE ADA REQUIREMENTS.

1. EXISTING EQUIPMENT TO REMAIN ALONG WITH IT CIRCUIT AND CONTROL TO REMAIN. E C TO VERIFY OPERABLE CONDITION IN FIELD. PROVIDE NEW CIRCUITING IF REQUIRED.
2. PROVIDE DUPLEX RECEPTACLE, DATA/TEL AND AV AS REQUIRED FOR DIGITAL SCREEN AND SOUND. COORDINATE EXIST MOUNTING HEIGHT IN FIELD.
3. COORDINATE EXIST LOCATION OF THE PANEL IN FIELD. E.C. SHALL ENSURE CLEAR WORKING AND DEDICATED SPACE HAS BEEN PROVIDED AS PER CODE.
4. PROVIDE NEW WALL SIGNAGE, TO MATCH CURRENT STANDARD PER LOCATION INSTALLED.
5. EXISTING FLOOR BOX TO REMAIN ALONG WITH IT CIRCUIT TO REMAIN. E C TO VERIFY OPERABLE CONDITION IN FIELD. PROVIDE NEW CIRCUITING IF REQUIRED.

(E) = EXISTING TO REMAIN.
(RL) = RELOCATED.
(N) = NEW.



SHEET NAME

ELECTRICAL PLAN -
POWER

	SHEET DESIGNATION
--	--------------------------

E-101

NOTICE:

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE
DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT
FROM ADRIANNE & BERNARD ASSOCIATES, INC. SHOULD SUCH A
DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT,
ADRIANNE & BERNARD ASSOCIATES, INC. ASSUME NO
RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

382 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217

WWW.NY-ENGINEERS.COM

LIGHTING SCHEDULE			
TAG NO.	ITEM	QTY.	REMARKS
FL2	LARGE DOME PENDANT	7	BLACK ALUMINUM SHELL WITH EMERALD GREEN INTERIOR-SEE CUTSETS FOR MORE INFORMATION
R1	RECESSED LED DOWNLIGHT 6" APERTURE	94	TRIM: COMFORT CLEAR FLANGE COLOR TO MATCH ADJACENT FINISH
FL6	GEOMETRIC PENDANT - CLUSTER OF 3	1	BLACK ALUMINUM SHELL WITH EMERALD GREEN INTERIOR - SEE CUTSETS FOR MORE INFORMATION.

LIGHTING PLAN GENERAL NOTES

- COORDINATE ALL DIMMER SWITCHES WITH ARCHITECT. SWITCHES AND CONTROLS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
- ALL THE CABLES, WIRES, CONDUITS, EQUIPMENTS AND ACCESSORIES GOING THROUGH THE CEILING SHALL BE PLENUM RATED.
- ADDITIONS TO EXISTING BUILDING MUST COMPLY WITH THE NYSECC WITH RESPECT TO NEW CONSTRUCTION.
- ALTERATIONS MUST COMPLY WITH THE ENERGY CODE WHERE ANY BUILDING SYSTEM OR SUBSYSTEM IS BEING EXCEPT WHERE EXCLUDED BY THE CODE.
- CONNECT ALL EMERGENCY LIGHTS AND EXIT SIGNS TO THE INDICATED CIRCUIT AHEAD OF SWITCHING FOR CONTINUOUS OPERATION.
- RELAMP ALL EXISTING FIXTURE WITH ENERGY EFFICIENT LED'S.
- DRAWINGS TO BE UPDATED ONCE ICE SURVEYS ARE RECEIVED.

LIGHTING FIXTURE SCHEDULE NOTES

- PROVIDE ACCESSORIES AND MOUNTING HARDWARE FOR ALL FIXTURES.
- COLORS SHALL BE AS SELECTED BY ARCHITECT.
- COORDINATE EXACT LOCATION WITH THE ARCHITECT PRIOR TO ROUGH-IN.
- ALL LIGHT FIXTURES SHALL BE LED.

LIGHTING PLAN KEY NOTES #

- RELAMP ALL REMAINING EXISTING LIGHTING FIXTURES THAT ARE NOT BEING REPLACED WITH ENERGY EFFICIENT LED.
- EXISTING EMERGENCY LIGHT FIXTURE. E.C SHALL E.C SHALL VERIFY EXACT LOCATION & CONTROL IN THE FIELD.
- CEILING MOUNTED OCCUPANCY SENSOR.
- WALL MOUNTED OCCUPANCY SENSOR.
- LIGHT FIXTURE CONTROL FROM THE EXISTING CIRCUIT.
- E.C TO PROVIDE CIRCUIT & CONTROL TO NEW LIGHT FIXTURE AS REQUIRED. E.C SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION IN THE FIELD.
- ELECTRICAL CONTRACTOR (EC) SHALL COORDINATE WITH THE ARCHITECT/OWNER FOR EXACT LOCATION OF THE SIGNAGE IN FIELD. PROVIDE DISCONNECT AND CIRCUIT AS REQUIRED.
- SWITCHES FOR LIGHTING CONTROL. COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

ABBREVIATIONS/TAG USED ON PLAN

(E) = EXISTING TO REMAIN.
(RL) = RELOCATED.
(N) = NEW.

NOTE:

- ALL THE EXISTING TO REMAIN (E) LIGHTING FIXTURES SHALL REMAIN CONNECTED, ALONG WITH ITS CIRCUIT AND CONTROL. E.C SHALL ENSURE PROPER WORKING OF FIXTURES. PROVIDE NEW AS NEEDED.
- FIXTURES WITHOUT (E) TAG ARE NEW.



SHEET NAME

ELECTRICAL
LIGHTING PLAN

SHEET DESIGNATION

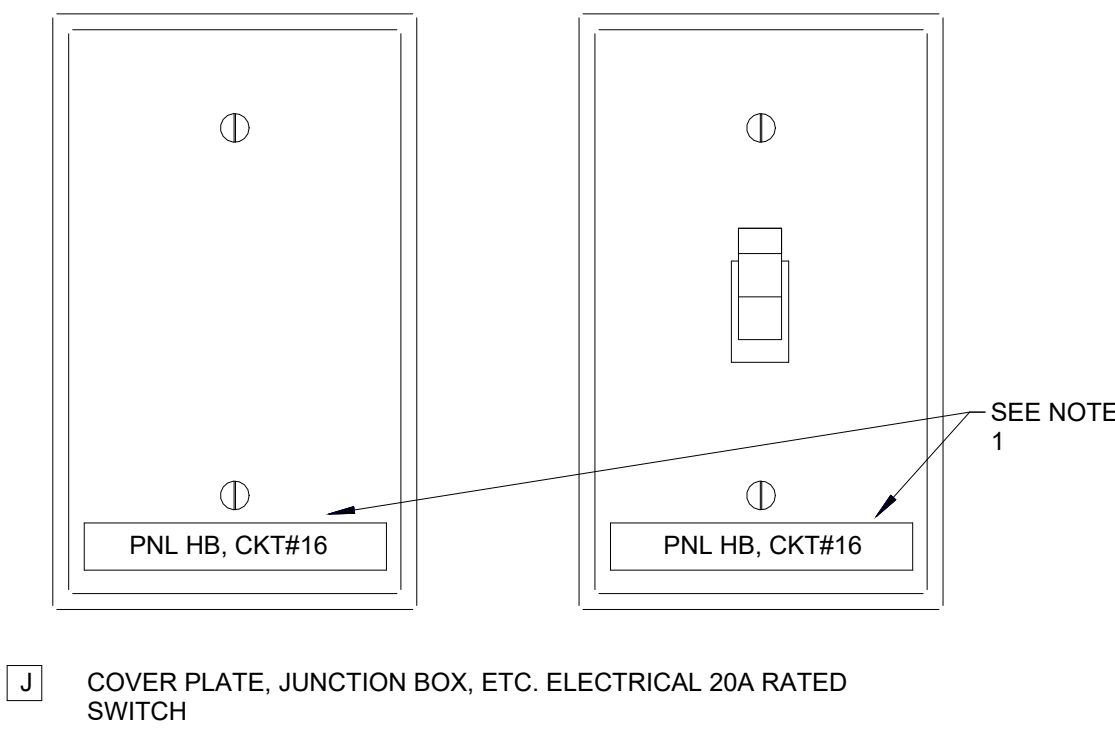
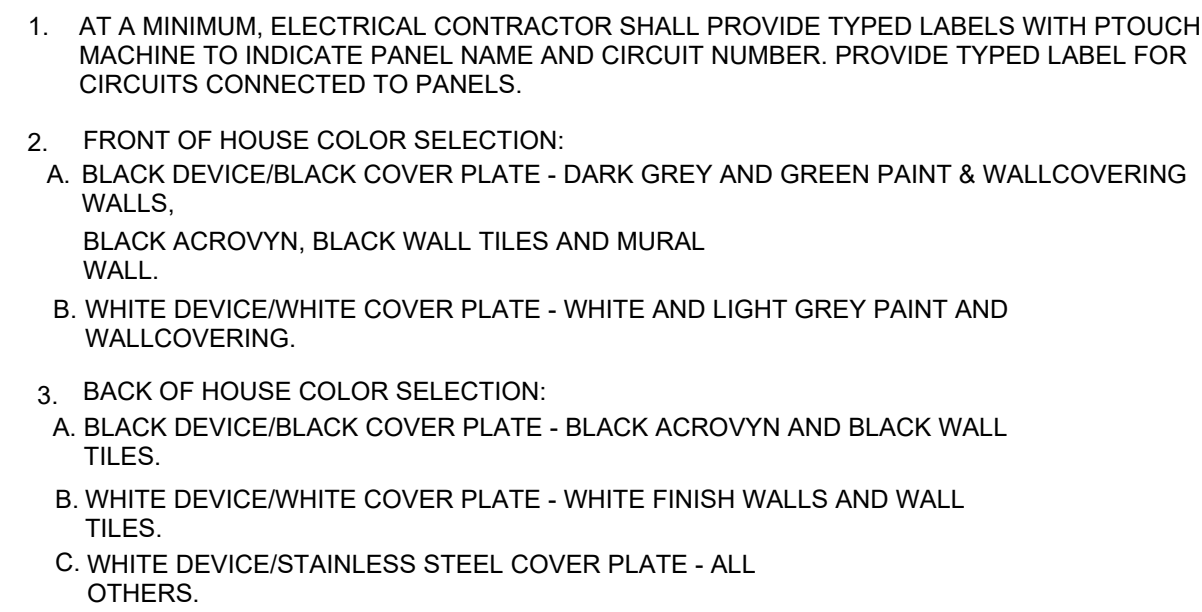
E-201

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT FROM ADRENALINE & BISBANO + ASSOCIATES, INC. SHOULD SUCH A DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT, ADRENALINE & BISBANO + ASSOCIATES, INC. ASSUME NO RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

182 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217

WWW.NY-ENGINEERS.COM



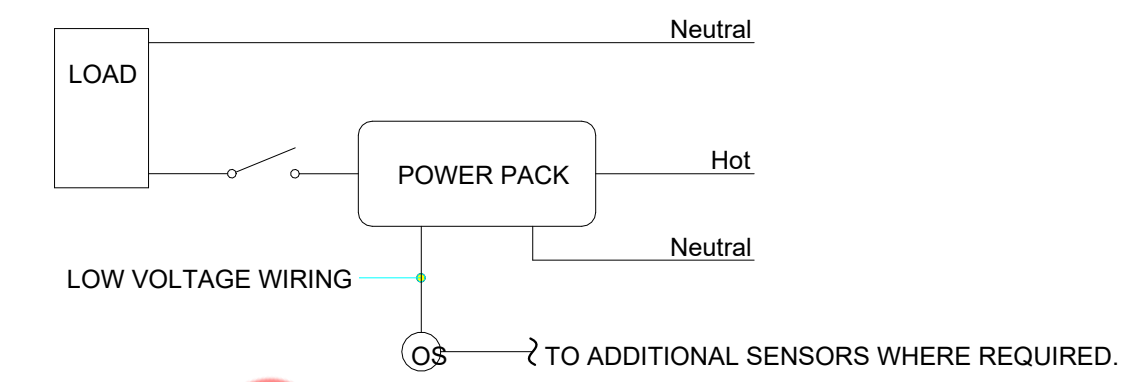
AT A MINIMUM, ELECTRICAL CONTRACTOR SHALL PROVIDE TYPED LABELS WITH PTOUCH MACHINE TO INDICATE PANEL NAME AND CIRCUIT NUMBER. PROVIDE TYPED LABEL FOR CIRCUITS CONNECTED TO HOUSE PANELS. COORDINATE EXACT NAMING WITH OWNERS REPRESENTATIVE.

FRONT OF HOUSE COLOR SELECTION:

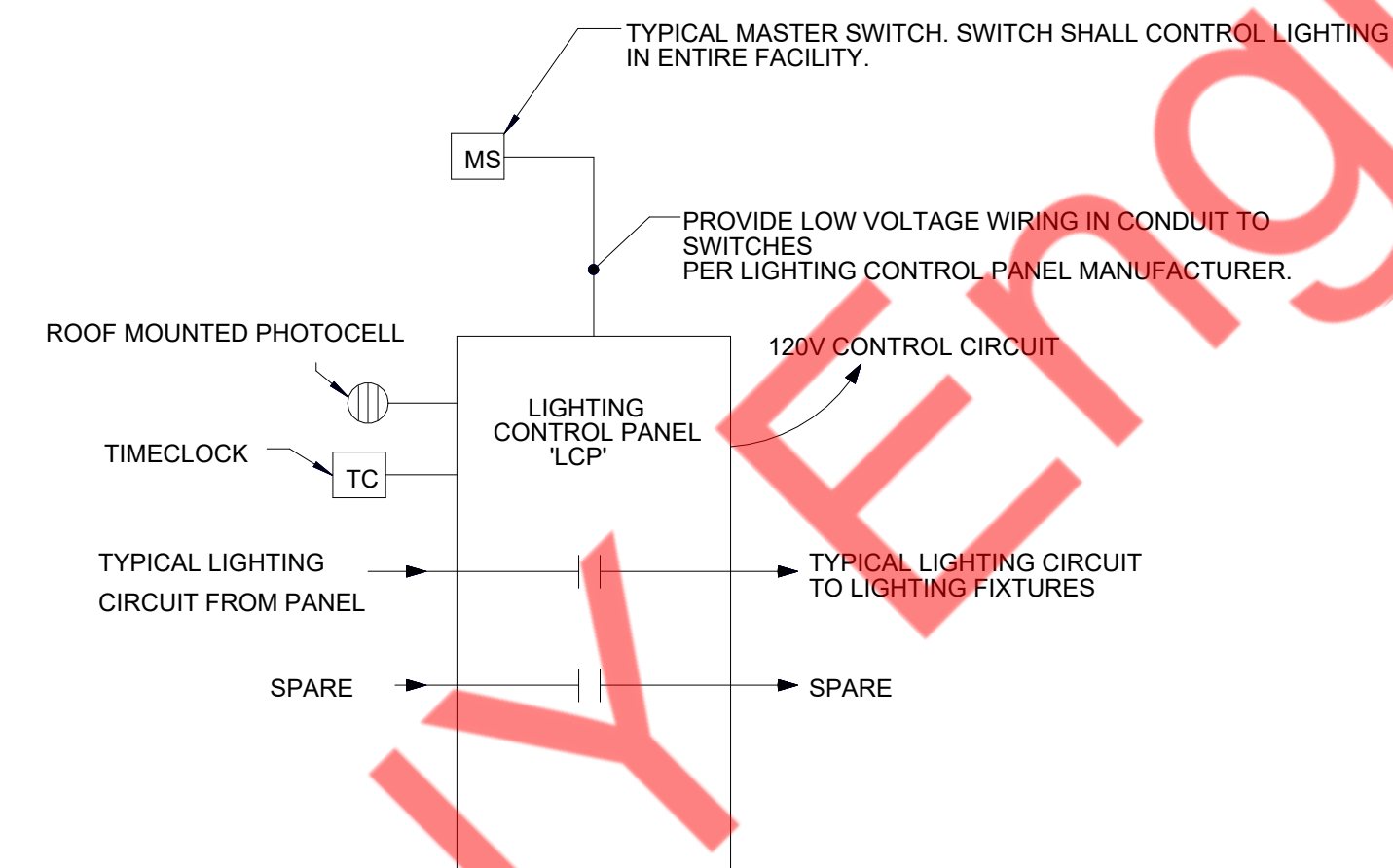
- A. BLACK DEVICE/BLACK COVER PLATE - DARK GREY AND GREEN PAINT & WALLCOVERING WALLS, BLACK ACROVYN, BLACK WALL TILES AND MURAL WALL.
- B. WHITE DEVICE/WHITE COVER PLATE - WHITE AND LIGHT GREY PAINT AND WALLCOVERING

BACK OF HOUSE COLOR SELECTION:

- A. BLACK DEVICE/BLACK COVER PLATE - BLACK ACROVYN AND BLACK WALL TILES.
B. WHITE DEVICE/WHITE COVER PLATE - WHITE FINISH WALLS AND WALL TILES.
C. WHITE DEVICE/STAINLESS STEEL COVER PLATE - ALL OTHERS.

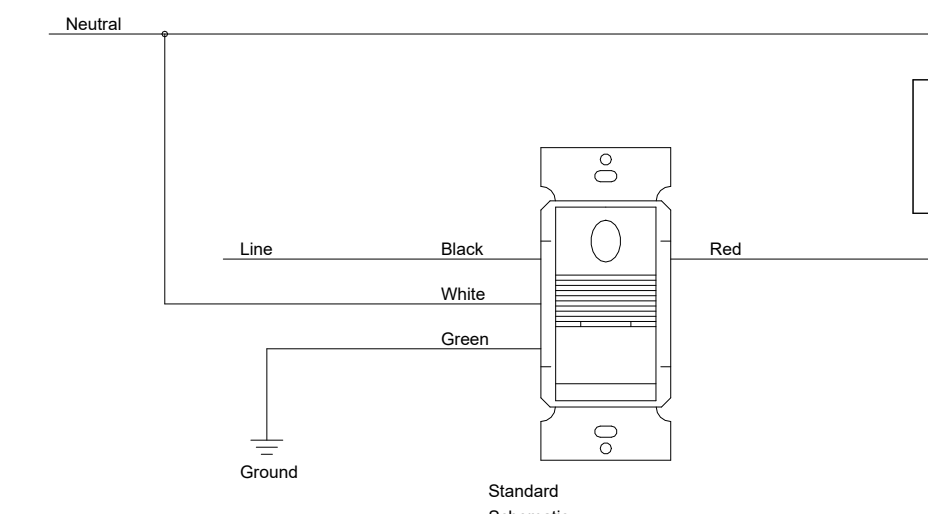


ELECTRICAL OCCUPANCY SENSOR WIRING DETAIL

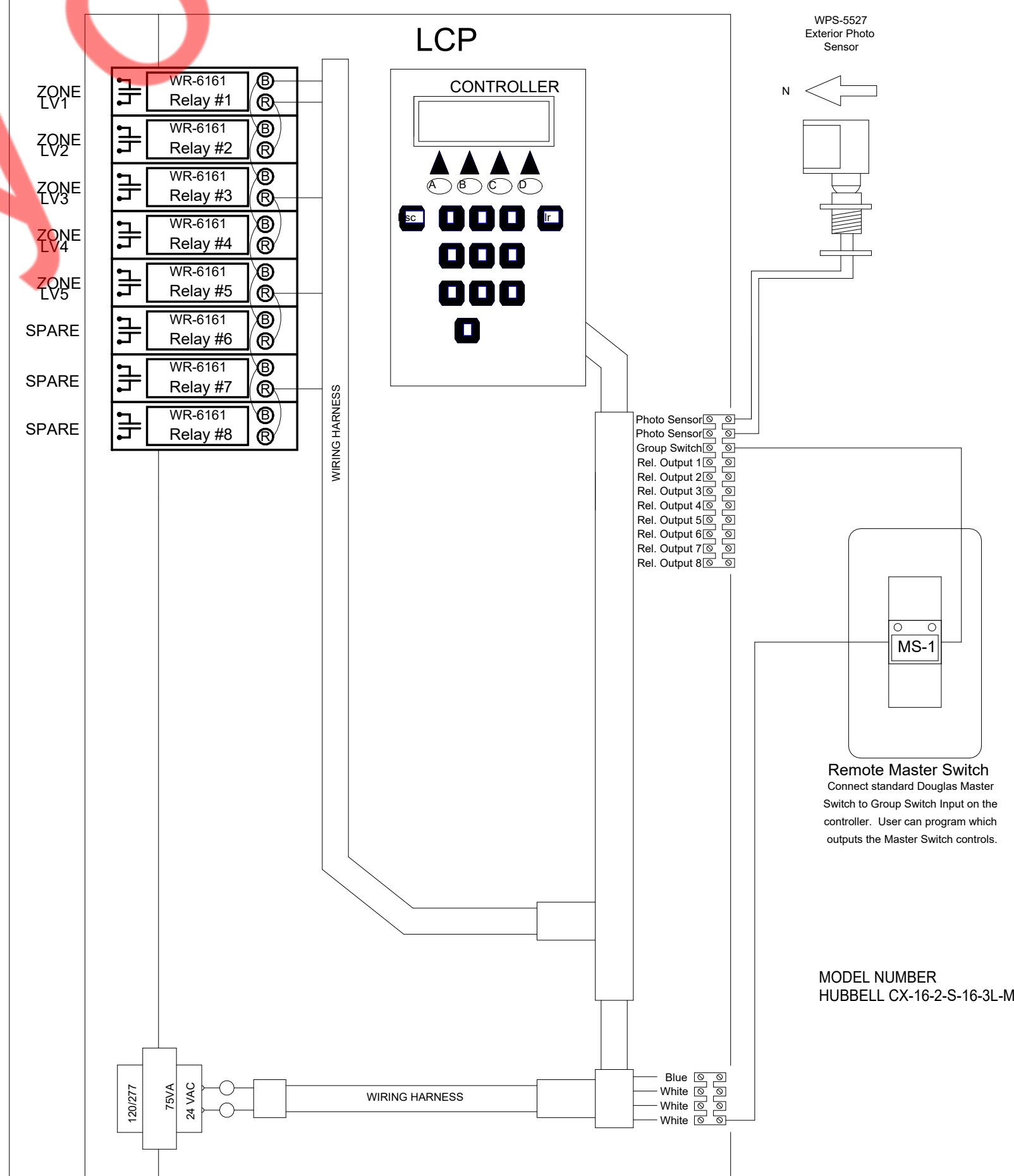


NOTES:

1. LIGHTING CONTROL PANEL SHALL HAVE ABILITY TO TURN OFF EACH INDIVIDUAL CIRCUIT BASED UPON TIME OF DAY AND/OR AMOUNT OF DAYLIGHT.
2. SEE FLOOR PLANS FOR LOCATION AND QUANTITY OF SWITCHES.
3. LOCAL SWITCH CONTROLS TO BE INSTALLED IN SERIES WITH THE LIGHTING CONTROL PANEL.



ELECTRICAL OCCUPANCY SENSOR SWITCH WIRING DIAGRAM



ELECTRICAL LIGHTING CONTROL PANEL

SHEET NAME

ELECTRICAL DETAILS

SHEET DESIGNATION

E-401

PANEL:	A	(NEW)											MOUNTING: RECESSED	
208Y/120	VOLTS	PHASE	3		-	-			DEMAND LOAD	7.52		PANEL LOCATION: IT/SERVER ROOM		
50A	MCB	WIRE	4		-	-			DEMAND CURRENT	20.90		FED FROM: TBD		
NOTE:														
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
						A	B	C						
1	20	LIGHTING	L	1.50	2-12 + 1#12G, 3/4"C.	2.10			2-12 + 1#12G, 3/4"C.	0.60	L	LIGHTING	20	2
3	20	LIGHTING	L	1.30	2-12 + 1#12G, 3/4"C.		2.30		2-12 + 1#12G, 3/4"C.	1.00	L	LOCKUP SIGNAGE	20	4
5	20	RECEPTACLE @PRINTER	R	0.40	2-12 + 1#12G, 3/4"C.			0.76	2-12 + 1#12G, 3/4"C.	0.36	R	RECEPTACLE @WAITING AREA	20	6
7	20	GENERAL RECEPTACLE	R	0.18	2-12 + 1#12G, 3/4"C.	0.72			2-12 + 1#12G, 3/4"C.	0.54	R	GENERAL RECEPTACLE	20	8
9	20	RECEPTACLE @ TELLER AREA	R	0.54	2-12 + 1#12G, 3/4"C.		0.54					SPARE	20	10
11	20	SPARE						0.00				SPARE	20	12
13	20	SPARE				0.00						SPARE	20	14
15	20	SPARE					0.00					SPARE	20	16
17	20	SPARE						0.00				SPARE	20	18
19	20	SPARE				0.00						SPARE	20	20
21	20	SPARE					0.00					SPARE	20	22
23	20	SPARE						0.00				SPARE	20	24
25	20	SPARE				0.00						SPARE	20	26
27	20	SPARE					0.00					SPARE	20	28
29	20	SPARE						0.00				SPARE	20	30
						2.82	2.84	0.76						



TD BANK

NOTICE:

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE
DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT
FROM ADRENALINE & RISERNO + ASSOCIATES, INC. SHOULD SUCH A
DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT,
ADRENALINE & RISERNO + ASSOCIATES, INC. ASSUME NO
RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

382 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217

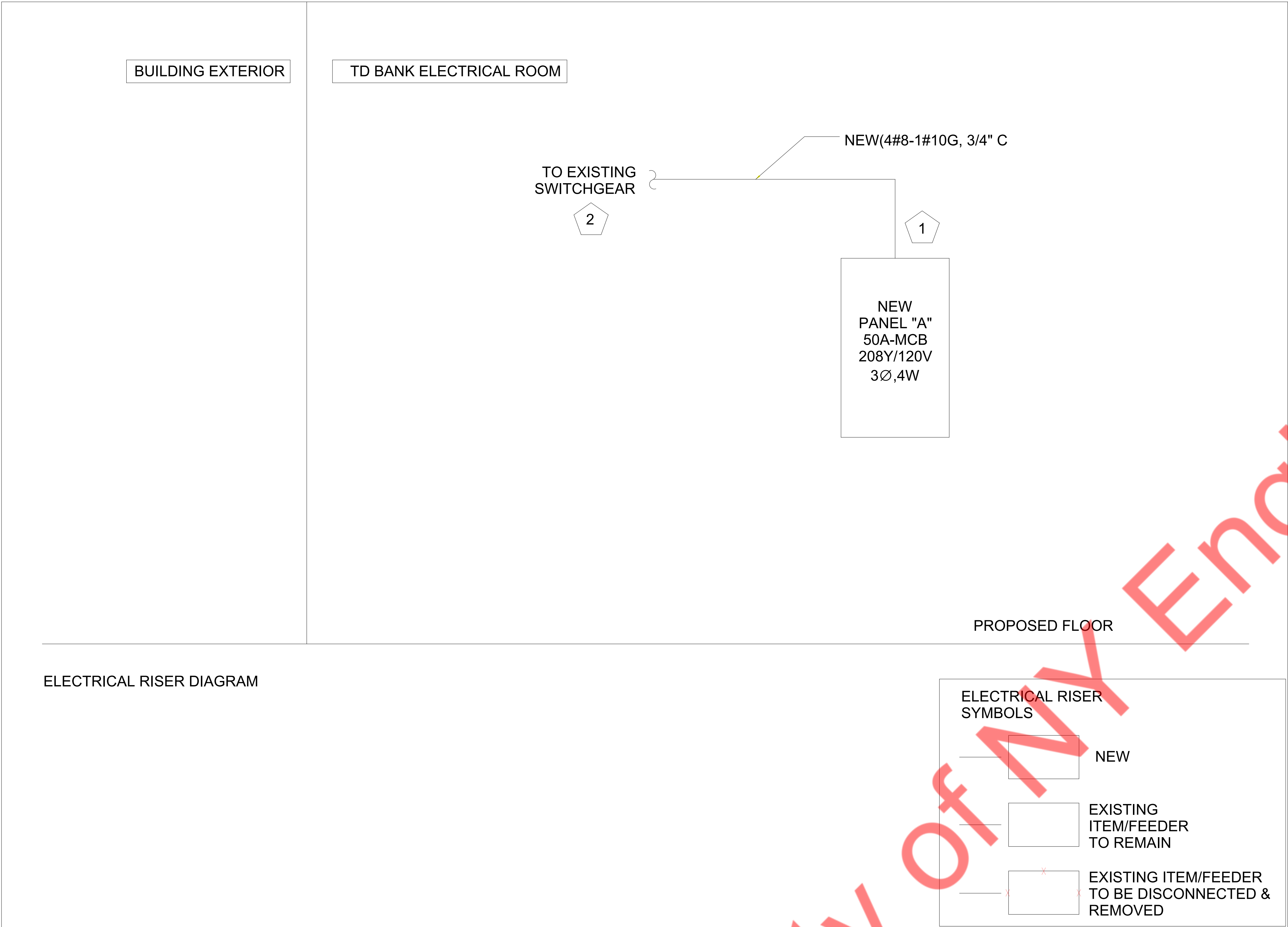
WWW.NY-ENGINEERS.COM

SHEET NAME

ELECTRICAL
SCHEDULES

SHEET DESIGNATION

E-501



ELECTRICAL RISER DIAGRAM KEYED NOTES:

1. NEW PANEL FOR THE PROJECT SPACE. E.C. TO COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION.
2. E.C. SHALL CHECK IF THE EXISTING ELECTRICAL SYSTEM HAVE SPARE CAPACITY OF THE 50A @208Y/120V, 3 PHASE. PROVIDE NEW TAPPING IN THE EXISTING ELECTRICAL SYSTEM TO FEED THE NEW PANEL A. E.C. SHALL COORDINATE WITH THE ARCHITECT/LANDLORD PRIOR TO BID. INFORM ENGINEER ON RECORD OF ANY DISCREPANCY BEFORE BIDDING.

ELECTRICAL RISER DIAGRAM GENERAL NOTE:

- A. ELECTRICAL CONTRACTOR TO COORDINATE FAULT CURRENT (Isc) RATING WITH UTILITY COMPANY AND CALCULATE ACTUAL AIC REQUIRED PRIOR TO BID.
- B. E.C. TO COORDINATE EXACT POWER DISTRIBUTION IN FIELD AND INFORM ENGINEER ON RECORD FOR ANY DISCREPANCY.
- C. E.C. TO COORDINATE INCOMING SERVICE AMPERAGE AND FEEDER SIZE IN FIELD.
- D. E.C. SHALL COORDINATE SCOPE OF WORKS WITH BASE BUILDING REPRESENTATIVE PRIOR TO BID.
- E. ALL THE ELECTRICAL DEVICES SHOWN ON RISER ARE NEW.
- F. DRAWINGS TO BE UPDATED ONCE ICE SURVEYS ARE RECEIVED.

PANEL SCHEDULE ABBREVIATIONS:

L=LIGHTING
R=RECEPTACLES
H=HVAC
M=MOTOTR
E=EQUIPMENTS
O=OTHER LOAD



TD BANK

NOTICE:

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT FROM ADRENALINE & RISERVOY ASSOCIATES, INC. SHOULD SUCH A DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT, ADRENALINE & RISERVOY ASSOCIATES, INC. ASSUME NO RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

382 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217

WWW.NY-ENGINEERS.COM

SHEET NAME

ELECTRICAL RISER
DIAGRAM

SHEET DESIGNATION

E-601

PLUMBING SYMBOLS LIST	
	EXISTING SANITARY SEWER
	SANITARY SEWER
	VENT PIPING
	COLD WATER PIPING
	EXISTING COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
	P-TRAP
	PIPE UP
	PIPE DROP
	CLEANOUT
	PLUGGED OUTLET/CLEANOUT
	POINT OF CONNECTION
PLUMBING ABBREVIATIONS	
CO	CLEANOUT
CW	COLD WATER
HW	HOT WATER
HWR	HOT WATER RETURN
SAN	SANITARY
V	VENT
W	WASTE
LAV	LAVATORY
WC	WATER CLOSET
TP, TYP.	TYPICAL
DN	DOWN
AF	ABOVE FINISH FLOOR
FD	FLOOR DRAIN
W/D	WASHER DRYER
RFP	BACK FLOW PREVENTER
WH-1	WATER HEATER
ET-1	EXPANSION TANK
RCP-1	HOT WATER CIRCULATION PUMP
MS	MOP SINK

PLUMBING DRAWING LIST

P-001 SYMBOLS, ABBREVIATIONS, NOTES & SPECIFICATIONS

P-101 PLUMBING FLOOR PLAN AND SCHEDULE

- BUILDING DEPARTMENT PLUMBING NOTES
- ALL PLUMBING SYSTEMS (SANITARY, WASTE, VENT, WATER) AND ASSOCIATED EQUIPMENT SHALL BE INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF 2018 INTERNATIONAL PLUMBING CODE.
 - INSTALLATION OF UNDERGROUND PIPING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 702.2
 - PROTECTION OF PIPING AND PLUMBING SYSTEM COMPONENTS AS PER SECTION PC 305.
 - TRENCHING, EXCAVATION AND BACKFILL AS PER SECTION PC 306.
 - MATERIALS USED IN PLUMBING SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 303, PC 605, PC 702, PC 902, PC 1102.
 - EQUIPMENT CONNECTIONS AND JOINING OF PIPING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTERS 4, 5, 6, 7 AND 9.
 - DEEP SEAL TRAPS FOR FLOOR DRAINS SHALL BE PROVIDED AS PER PC 1002, AND CLEAN-OUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 708
 - DRAINAGE PIPE CLEANOUTS AS PER SECTION PC 708.
 - VERTICAL AND HORIZONTAL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 308
 - WATER SUPPLY SYSTEMS SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 6 SECTION PC 601-603, 604, 606, 607, 608, 610
 - THE SANITARY DRAINAGE SYSTEM SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 7 SECTION PC 701, 704, 705, 706, 707, 708, 711.
 - VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 9 SECTIONS PC 901 THROUGH PC 912 THROUGH PC 917
 - INSPECTION AND TESTING OF PLUMBING SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION 107.

- 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. WATER HEATERS & ACCESSORIES
8. WIRING VALUES
9. ALL SCHEDULED PLUMBING EQUIPMENT
- 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 GAS PIPING:
1. GAS PIPING SHALL BE SIZED IN ACCORDANCE WITH PIPE SIZING TABLES OR SIZING EQUATIONS IN ACCORDANCE WITH SECTION 402.4.
2. METALLIC PIPE SHALL COMPLY WITH SECTIONS 403.4.1 THROUGH 403.4.4.
3. PIPING SYSTEM INSTALLATION SHALL COMPLY WITH REQUIREMENTS OF INTERNATIONAL FUEL GAS CODE 2015 SECTION 404.
4. SHUTOFF VALVES SHALL BE LOCATED IN PLACES SO AS TO PROVIDE ACCESS FOR OPERATION AND SHALL BE INSTALLED SO AS TO BE PROTECTED FROM DAMAGE.
- 1.05 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.
- 1.06 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.
- 1.07 PRODUCTS
- A. SANITARY AND VENT PIPING:
1. ABOVE GRADE AND UNDERGROUND PIPING SHALL BE HUBLESS CAST IRON PIPE WITH STAINLESS STEEL COUPLINGS AND ELASTOMERIC GASKETS WITH A MINIMUM 4 BANDS PER COUPLING AS PER ASTM A74, ASTM A888, CISPI 301 AS PER OHIO LISTED PLUMBING CODE 2017 (IPC 2015), TABLE 702.1 AND TABLE 702.2. PVC PIPING AS PER OHIO PLUMBING CODE 2017, TABLE 702.1 AND TABLE 702.2 MAY BE USED IF APPROVED BY LOCAL AUTHORITIES.
2. SLOPE OF DRAINAGE SYSTEM SHALL BE 1/8" PER FOOT OF RUN FOR PIPE OVER 3" (I.D.) AND 1/4" PER FOOT OF RUN FOR PIPE 3" AND SMALLER (I.D.). 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.
- 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 INTERNATIONAL ENERGY CONSERVATION CODE 2018 SECTION 403.11.3 REFER BELOW TABLE.
- | MINIMUM PIPE INSULATION THICKNESS | | | |
|--|---|-----------------------------|----------------------------|
| FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F) | INSULATION CONDUCTIVITY BTU·IN./ (H·FT²·°F) | MEAN RATING TEMPERATURE, °F | NOMINAL PIPE SIZE (INCHES) |
| 141-200 | 0.25-0.29 | 125 | 1/2 3/4 1 1 1/2 2 |
| 105-140 | 0.21-0.28 | 100 | 1/2 3/4 1 1 1/2 2 |
| 40-60 | 0.21-0.27 | 75 | 1/2 3/4 1 1 1/2 2 |
7. WATER DISTRIBUTION SYSTEM AS PER INTERNATIONAL ENERGY CONSERVATION CODE 2018 SECTION 403.11.3. PROVIDE ONE OR MORE RECIRCULATION PUMPS THAT PUMP WATER FROM A HEATED-WATER SUPPLY PIPE BACK TO THE HEATED-WATER SOURCE THROUGHOUT THE SYSTEM. SUPPLY PIPE SHALL BE A DEMAND REGULATING 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 INTERNATIONAL ENERGY CONSERVATION CODE 2018 404.6.1 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 INTERNATIONAL ENERGY CONSERVATION CODE 2018 404.5.1. 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 LAW | OTHER FIXTURES |
| 3/4" | 2' | 43' |
| 1" | 0.5' | 21' |
| 1 1/4" | 0.5' | 13' |
| 1 1/2" | 0.5' | 8' |
| 2" OR LARGER | 0.5' | 4' |
10. SEAL ALL JOINTS BETWEEN SEGMENTS OF INSULATION.
11. PROVIDE SHIELDS BETWEEN HANGERS AND INSULATION.
- C. 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 APPROVED 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. SUPPORTS SHALL BE PROVIDED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE PIPING MANUFACTURER.
- D. 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 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 OF FLUSH-TOILET-EQUIPPED WATER CLOSETS AND URINALS SHALL HAVE SHUTOFF VALVES TO CONTROL SUPPLY TO THE FIXTURE. WHERE SUPPLIES ARE EXPOSED PROVIDE CHROME-PLATED VALVES 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 SERVICE ACCESS.
6. PROVIDE GLOBE VALVES FOR THROTTLING/BALANCING OF THE HOT WATER CIRCULATING SYSTEM.
- E. INSTALL PIPING TO CONSERVE BUILDING SPACE. DO NOT INTERFERE WITH THE WORK OF OTHER TRADES AND THE WORK OF OTHER TRADES. ALL PIPING RUN IN CEILING SHALL BE INSTALLED TIGHT TO THE STRUCTURE ABOVE.
- F. 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.
- G. IN ALL AREAS WITH FINISHED SURFACES, SYSTEM PIPING AND COMPONENTS SHALL BE CONCEALED ABOVE OR WITHIN FINISHED SURFACES.
- H. REDUCTIONS IN PIPE SIZES SHALL BE MADE WITH ONE-PIECE REDUCING FITTINGS. BUSHINGS ARE NOT ACCEPTABLE. USE FLANGED FITTINGS AT THE BASE OF RISERS.
- I. VENT PENETRATIONS THROUGH THE ROOF SHALL BE FLASHED.
- J. IF WATER PRESSURE EXCEEDS 80 PSI, A WATER PRESSURE REDUCING VALVE SHALL BE INSTALLED IN WATER PIPING AT CONNECTION TO MAIN.
- K. PROVIDE DIELECTRIC FITTINGS BETWEEN DISSIMILAR METALS.
- L. PIPE BACKFLOW PREVENTER DRAINS TO FLOOR DRAIN OR OTHER APPROVED INDIRECT WASTE SOURCE.
- M. PROVIDE ACCESS DOORS/PANELS FOR SERVICE AND ACCESS TO ALL VALVES AND OTHER SYSTEM COMPONENTS ENCLOSED IN WALLS AND CEILINGS. ACCESS DOORS SHALL BE FURNISHED BY THIS CONTRACTOR, INSTALLED BY THE GENERAL CONTRACTOR.
- N. ALL FIXTURES REQUIRING VACUUM BREAKERS SHALL BE EQUIPPED WITH INTEGRAL VACUUM BREAKERS.
- O. ANY PENETRATIONS THROUGH FIRE RATED PARTITIONS, FLOORS, OR CEILINGS SHALL BE STEEL SLEEVED AND SEALED WITH 3M BRAND UL RATED FIRE BARRIER CAULK OR APPROVED EQUAL.
- P. WHEN THE WATER PIPING SYSTEM IS COMPLETE, THOROUGHLY FLUSH ALL DIRT, SEDIMENT, SOLDER, ETC. OUT OF THE SYSTEM, REMOVING ALL STRAINERS, VALVE STEM SEATS, ETC., REQUIRED TO ACCOMPLISH THE FLUSHING.
- Q. AT ALL INDIRECT WASTE DRAINS, MAINTAIN AIR GAP AS REQUIRED BY CODE.
- R. INSTALL SLEEVES FOR ALL PIPES WHICH PASS THROUGH WALLS, FLOORS, AND CEILINGS, WHERE PIPES ARE TO BE INSULATED, THE SLEEVE SHALL BE LARGE ENOUGH TO ACCOMMODATE INSULATION. SLEEVES SHALL BE FLUSH WITH FINISHED SURFACES AT BOTH ENDS, ON FINISHED SURFACES IN EXPOSED AREAS PROVIDE ESCUTCHEONS COMPATIBLE WITH FINISH.
2. INSTALLATION
- 2.01 GENERAL
- T. ALL WORK WHICH REQUIRES DISRUPTION OF THE ROOFING SHALL BE DONE BY A CONTRACTOR CERTIFIED BY THE ROOFING MANUFACTURER AS REQUIRED TO MAINTAIN ANY EXISTING ROOF WARRANTIES.
- U. EXTERIOR INSTALLATIONS TO BE WEATHER PROOF IN ALL RESPECTS.
- V. EXTERIOR MATERIALS AND EQUIPMENT SHALL BE PAINTED TO PREVENT CORROSION, COLOR PER ARCHITECT.
- W. COORDINATE THE PLUMBING WORK WITH ALL OTHER AFFECTED WORK AND THE CONSTRUCTION SCHEDULE.
- X. REAM PIPE AND TUBE ENDS. REMOVE BURRS, REBEVEL FLANGES, FERROUS END PIPE.
- Y. REMOVE SCALE AND FOREIGN MATERIAL FROM INSIDE AND OUTSIDE BEFORE ASSEMBLY.
- Z. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES AND UNIONS.
- AA. COORDINATION WITH THE WORK OF OTHER TRADES IS REQUIRED. PROVIDE OFFSETS IN PIPING SYSTEMS OR MINOR DEVIATIONS TO THE INDICATED PIPE ROUTING TO ACCOMMODATE THE PLUMBING WORK WITH THE WORK OF ALL OTHER TRADES AND THE GENERAL BUILDING CONDITIONS.
- AB. NO DOMESTIC WATER PIPING SHALL BE INSTALLED IN UNHEATED SPACES.
- AC. PRIOR TO DISCONNECTING AND CONNECTING NEW WORK TO EXISTING SYSTEMS, THE PLUMBING CONTRACTOR SHALL NOTIFY THE PROPERTY MANAGER AND OFFER A PROPOSED SCHEDULE OF WORK. ESR WILL AUTHORIZE CONNECTIONS AND COORDINATE NECESSARY SHUT DOWNS. DISCONNECTS AS REQUIRED. SHUT DOWNS AND DRAIN DOWNS MAY BE PERFORMED BY THE PLUMBING CONTRACTOR ONLY AFTER RECEIVING ESR AUTHORIZATION, AND SHOULD BE PERFORMED UNDER SUPERVISION OF ESR PERSONNEL. THREE (3) DAYS ADVANCE NOTICE TO THE PROPERTY MANAGER IS REQUIRED.
- AD. THE PLUMBING CONTRACTOR IS ADVISED THAT DUE TO THE NATURE OF OPERATIONS AND TESTING REQUIREMENTS, CONNECTIONS TO EXISTING SYSTEMS MAY HAVE TO BE MADE AFTER REGULAR WORKING HOURS. THE PROPERTY MANAGER WILL ADVISE THE PLUMBING CONTRACTOR OF THE TIME CONSTRAINTS UPON RECEIPT AND APPROVAL OF THE PLUMBING CONTRACTOR'S REQUEST FOR SHUT DOWN AND CONNECTION TO EXISTING SYSTEMS.
- AE. WHEN CONNECTING TO EXISTING STACKS AND RISERS, PROVISION IS TO BE MADE FOR FUTURE CONNECTIONS BY PROVIDING CAPPED AND VALVED OUTLETS ON DOMESTIC WATER RISERS AND PLUGGED OUTLETS ON THE SANITARY AND VENT STACKS.
- AF. CITIZENS ABOVE CEILING STANDARD HEIGHT FOR ALL EQUIPMENT AND SUPPLY DUCTWORK SHALL BE SET AT 12" TO BOTTOM ABOVE CEILING. ADDITIONALLY, EQUIPMENT SHALL NOT BE INSTALLED ABOVE ANY CEILING HIGHER THAN 11'6". EQUIPMENT REFERS TO ANY AND ALL HVAC, PLUMBING, ELECTRICAL AND/OR ANY ITEMS THAT SERVICEABLE OR REQUIRES SERVICE, TESTING OR MAINTENANCE.
- 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.
3. 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, THE 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.
- J. ALL EQUIPMENT WILL BE FACTORY TESTED.
- I. 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. WATER SUPPLY SYSTEM SHALL BE TESTED AND PROVED TIGHT UNDER WATER PRESSURE NOT LESS THAN THE WORKING PRESSURE.
- b. FOR PIPING SYSTEM OTHER THAN PLASTIC, BY AN AIR TEST OF NOT LESS THAN 50PSI.
- c. THIS PRESSURE SHALL BE HELD FOR NOT LESS THAN 15 MINUTES. THE REQUIRED TEST SHALL BE PERFORMED IN ACCORDANCE WITH IPC, SECTION 107.
- 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 OILN 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.



TD BANK

NOTICE:

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT FROM KORNBLAU & BERNARD ASSOCIATES, INC. NO SURETY SUCH A DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT. KORNBLAU & BERNARD ASSOCIATES, INC. ASSUME NO RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

382 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217

WWW.NY-ENGINEERS.COM

P-001

NOTICE:

DRAWINGS & INFORMATION ENCLOSED WITHIN SHALL NOT BE
DUPLICATED AND/OR COPIED WITHOUT DIRECT WRITTEN CONSENT
FROM ADRENALINE & RISERVOY ASSOCIATES, INC. SHOULD SUCH A
DUPLICATION BE MADE WITHOUT REQUIRED WRITTEN CONSENT,
ADRENALINE & RISERVOY ASSOCIATES, INC. ASSUME NO
RESPONSIBILITY AS TO THE INTENT/USAGE OF THE DRAWINGS.

NEARBY ENGINEERS

382 NE 191ST STREET, SUITE 49674
MIAMI, FL 33179
(646) 878-9217

WWW.NY-ENGINEERS.COM

GENERAL NOTES

- CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
- PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTOR, CLEANOUTS & SHUT-OFF VALVES AS REQUIRED.
- PATCH AND REPAIR EXISTING DEMISING WALLS AS NECESSARY TO MAINTAIN THE REQUIRED FIRE RATING.

PLUMBING PLAN KEY NOTES #

- EXISTING WATER CLOSET WITH EXISTING SANITARY, VENT, WATER PIPING WITH ASSOCIATED ACCESSORIES AND FITTINGS TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION OF PIPING AND FIXTURE PRIOR TO BID. REPLACE IF REQUIRED.
- EXISTING LAVATORY WITH EXISTING SANITARY, VENT, WATER PIPING WITH ASSOCIATED ACCESSORIES AND FITTINGS TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION OF PIPING AND FIXTURE PRIOR TO BID. REPLACE IF REQUIRED.
- ANY UNUSED PLUMBING FIXTURE PIPING MUST BE COMPLETELY REMOVED OR CAPPED. DO NOT ABANDON IN PLACE.

1 PLUMBING FLOOR PLAN
3/16" = 1'-0"

PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	SERVICES				TRAP	REMARKS
		S/W	V	CW	HW		
EX.WH	WATER CLOSET	E	E	E	E	E	EXISTING TO REMAIN.
EX.LAV	LAVATORY	E	E	E	E	E	EXISTING TO REMAIN.
NOTE: CONTRACTOR TO COORDINATE WITH ARCHITECTURAL DRAWING FOR ALL PLUMBING FIXTURES SPECIFICATIONS AND MOUNTING HEIGHT INSTALLATION.							

SHEET NAME

PLUMBING FLOOR
PLANS AND
SCHEDULE

SHEET DESIGNATION

P-100