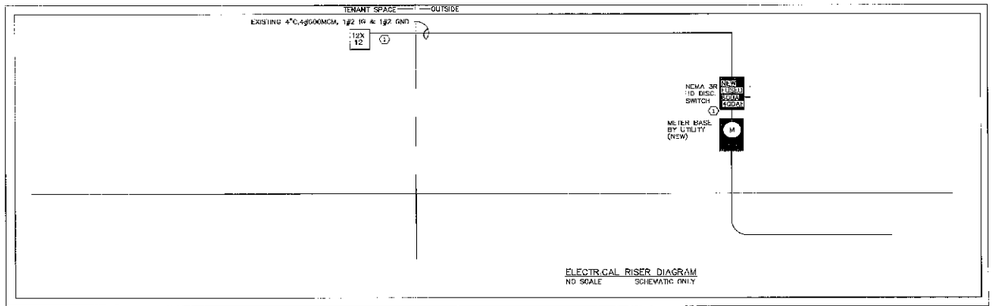
To Order Plans go to www.ldiline.com



ELECTRICAL RISER DIAGRAM
NO SCALE SCHEMATIC ONLY

ELECTRICAL SPECIFICATIONS & NOTES

GENERAL CONDITIONS:

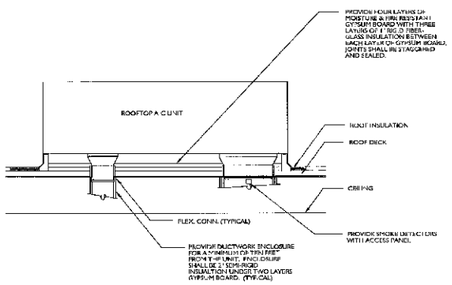
1. SUBSTITUTIONS:
   UNLESS REQUEST FOR SUBSTITUTIONS ARE PLACED IN WRITING ALL BID PROCESS WILL BE FOR THE EQUIPMENT AS SPECIFIED ON THESE DRAWINGS. A REQUEST FOR SUBSTITUTION, IN ORDER TO BE CONSIDERED, MUST INCLUDE THE FOLLOWING INFORMATION – PERFORMANCE DATA, TEST RESULTS, AND OTHER PROOF THAT THE SUBMITTED ITEM IS OF EQUAL QUALITY.
2. WORKMANSHIP:
   ENTIRE INSTALLATION SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANSHIP-LIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND BALANCED ACROSS ALL PHASES. ALSO, CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP TO BE FREE FROM DEFECTS FOR A PERIOD OF (ONE) 1 YEAR FROM THE DATE OF FINAL ACCEPTANCE. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITH NO ADDITIONAL CHARGE AND SHALL INCLUDE ALL MATERIALS DAMAGED BY SAID DEFECTS.
3. PERMITS, TESTS AND INSPECTIONS:
   ELECTRICAL CONTRACTOR SHALL APPLY FOR, SECURE AND PAY FOR ALL REQUIRED PERMITS, LICENSES, FEES AND REQUIRED TESTS AND INSPECTION FOR CODE COMPLIANCE.
4. CODES:
   ENTIRE INSTALLATION SHALL CONFORM TO N.E.C., STATE AND LOCAL ORDINANCES HAVING JURISDICTION AND MUST MEET ALL LANDLORD REQUIREMENTS.
5. CLEAN-UP:
   CONTRACTOR SHALL REMOVE ALL SURPLUS MATERIALS (EXCEPT FOR EXTRA LAMPS) FROM THE PREMISES AT THE COMPLETION OF JOB. GENERAL CONTRACTOR SHALL NOTIFY OWNER (FRANCHISEE) FOR DISPOSITION SHOULD ANY EXCESS "TENANT SUPPLIED MATERIALS" REMAIN.

METHOD AND MATERIALS:

1. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE NOTED ON THE DRAWINGS AND SHALL BEAR THE UNDERWRITERS AND UNION LABELS AS APPLICABLE.
2. ALL WIRES SHALL BE IN CONDUIT CONSTRUCTED EITHER OF GALVANIZED STEEL RIGID HEAVY WALL, WALLED, OR ELECTRO-METALLIC TUBING (EMT) WITH WATERTIGHT FITTINGS. FLEXIBLE CONDUIT (4' MAX) MAY BE USED IF APPROVED BY LOCAL CODES AND ONLY WHERE PERMITTED BY LANDLORD. UNDER NO CIRCUMSTANCES IS ROMEX OR BX TO BE USED. CONDUIT SHALL CONFORM TO THE FOLLOWING GUIDELINES:
   A. CONCEALED IN CEILINGS OR PARTITIONS – EMT
   B. CONCEALED IN CONCRETE SLAB – EMT
   C. UNDERGROUND OR BELOW SLAB – IMC OR RIGID GALVANIZED STEEL
   D. EXTERIOR – RIGID GALVANIZED STEEL
3. EXCEPT WHERE OTHERWISE NOTED, WIRE SHALL BE COPPER 600 VOLT, INSULATED THRU 1000MCM. BRANCH CIRCUIT WIRE WITH SIZES LARGER THAN NO. 4 SHALL BE TYPE THW.
4. NYLON PULL WIRES SHALL BE INSTALLED IN EMPTY CONDUIT AS REQUIRED.
5. NEW ELECTRICAL PANELBOARDS SHALL BE THREE PHASE, FOUR WIRE DISTRIBUTION TYPE. ALL BREAKERS SHALL BE "BOLT-ON", THERMAL MAGNETIC TYPE, APPROVED FOR SWITCH DUTY AND MARKED "SWD". CIRCUIT BREAKERS AND PANELBOARDS SHALL BE MFG. BY "SQUARE-D" OR APPROVED EQUAL.
6. SAFETY SWITCHES:
   SAFETY SWITCHES SHALL BE PROVIDED AS SHOWN OR AS REQUESTED. THEY SHALL BE HEAVY DUTY, METAL ENCASED EXTERNALLY OPERATED OF SUCH TYPE AND SIZE NECESSARY TO INSPECT THE LOAD FOR WHICH THEY ARE INTENDED. THE OPERATING MECHANISM SHALL BE DESIGNED TO BE LOCKED IN EITHER THE "ON" OR "OFF" POSITION. ANY SAFETY SWITCH REQUIRED TO BE WATERPROOF SHALL CONFORM TO NEMA 1W, HARDEST.
7. BONDING SHALL BE PROVIDED AS PER ARTICLE 250-72 OF THE N.E.C. WHERE NECESSARY TO ENSURE ELECTRICAL CONTINUITY AND THE CAPACITY TO CONDUCT SAFELY THE FAULT CURRENT LIKELY TO BE IMPOSED.
8. ALL MAJOR COMPONENTS NOT CARRYING CURRENT SHALL BE GROUNDED, FOLLOWING BUT LIMITED TO:
   - SECONDARY FEEDERS AND EQUIPMENT ENCLOSURES
   - JUNCTION BOXES, GROUND TRAYSHS
   - OUTLET BOXES, AND HOUSINGS
9. THE HIGH VOLTAGE LINES TO THE HVAC EQUIPMENT TO BE INCLUDED. "TENANT" CONTRACTOR SHALL CONNECT LOW VOLTAGE (24V) LINES TO THE THERMOSTAT(S) AND OTHER LOW VOLTAGE HVAC EQUIPMENT AS REQUIRED.
10. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT ELECTRICAL REQUIREMENTS AND EXTENT OF WORK WITH LOCAL PHONE COMPANY FOR TELEPHONE SYSTEM INSTALLATION.
11. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE THE TENANT AND THE LANDLORD WITH "AS BUILT" PLANS.

DRAWING NOTES

1. EXISTING SWITCH, FEEDERS AND PANELS "NOT" TO REMAIN AS INDICATED ON PLAN TO BE REMOVED. INSTALL NEW PULL BOX INDICATED IN SINGLE LINE DIAGRAM. ALL EXISTING FEEDERS, CONDUITS, BOXES, METERS AND BUSSING ARE TO REMAIN. ALL EXISTING PANELS AND BRANCH CIRCUIT BREAKERS ARE TO BE REMOVED.
2. EXISTING 2" CONDUIT FOR TELEPHONE SERVICE FROM SITE TELEPHONE CABINET UNDER EXISTING PARKING AREA TO REMAIN.
3. EXISTING ROOFTOP HVAC EQUIPMENT AS INDICATED ON PLAN AND IN SCHEDULE. SEE DETAIL THIS SHEET FOR DATA AND QUICK REF INFORMATION. EXISTING DISCONNECT SWITCH FOR POWER AND CIRCUIT TO PANEL "NOP" TO REMAIN.
4. EXISTING GAS PIPING ON ROOF, AS INDICATED FROM METER TO EACH ROOFTOP UNIT TO BE REMOVED. INSTALL NEW GAS PIPING TO RTU'S AS "ERECTED".
5. EXISTING 4" SANITARY TO REMAIN. SLAB LEAVE-OUTS TO REMAIN.
6. EXISTING 1-1/2" DOMESTIC WATER STUB TO BE REPLACED WITH 2".
7. EXISTING 6" FIRE LINE TO REMAIN. RISER AND ALARM DEVICES TO REMAIN.
8. INSTALL 1" CONDUIT FROM INDOOR PANEL AHU4 UNDER SLAB TO SPECIFIED HPT FOR FUTURE TENANT CONNECTIONS.

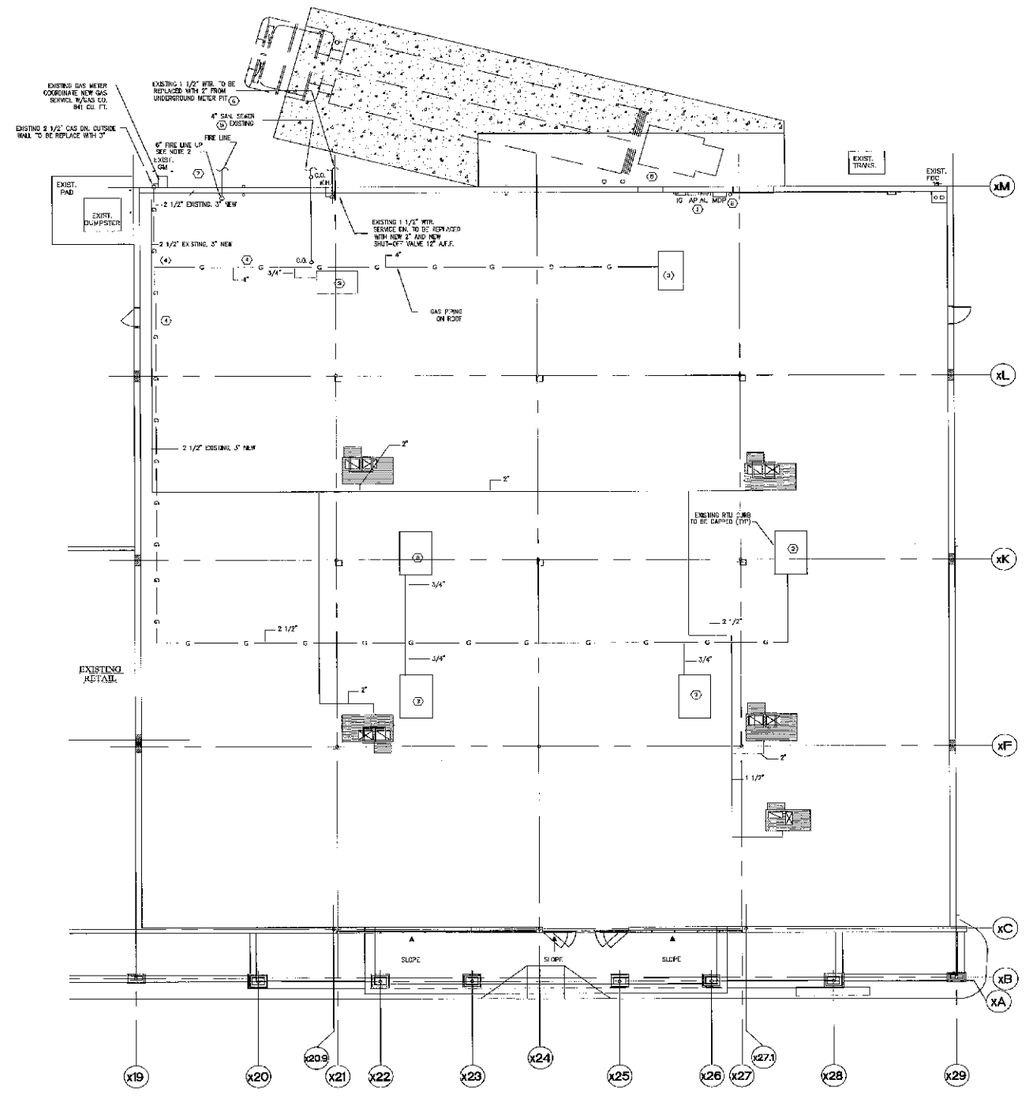


1/M2 DETAIL
ROOFTOP UNIT
NOT TO SCALE

AIR CONDITIONING UNIT SCHEDULE – ROOF TOP – GAS HEAT

SYM	SUPPLY FAN			COOLING 85/57F%		HEATING GAS		ELECTRICAL			OPER. WT.	REMARKS
	CFM	ESP	HP	TOTAL MBH	SENS MBH	INPUT MBH	OUTPT MBH	MCA	MOCP	VLTS. PHS.		
RG30	1700	.9	1.0	50.3	39.0	71	58.9	3.5	1	460V 3 Ø	992	MANUFR. TRANE MODEL TCH036E CARRIER MODEL 1,2,3,4,5,6,7,8,9
RG100	4200	1.6	2.0	120	91	134	112	4.6	2	460V 3 Ø	1660	MANUFR. TRANE MODEL YCD130 CARRIER MODEL 1,2,4,5,6,7,8,9
RG125	5300	1.0	3.0	150	115	331	83	4.6	2	460V 3 Ø	1660	MANUFR. TRANE MODEL YCD150 CARRIER MODEL 1,2,4,5,6,7,8,9

NOTES: 1) RECTAB CURB, 2) DISCONNECT, 3) ROOM TH ERMOSTAT, 4) 7-DAY PROGRAM CLOCK, 5) O.A. DAMPER SET TO 10%, 6) SOLENOID VALVE, 7) FILTERS, 8) TRAPPED COND. DRAIN, 9) H.I.I UNIT AIR SHORTS DIRECTLY TO UNENERGIZE UNIT, 10) INSULATED WEATHER PROOF HOUSING



1 MEP UP-FIT PLANS
SCALE: N.T.S.

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GRANGER BID SET
PROJECT NO. 704-730-0300

Renovation to
Valley Corners
Shopping Center

PRINCIPAL IN CHARGE
FRANK GOPPOLD, AIA
PROJECT MANAGER
MICHAEL SMITH

NO.	REMARKS	DATE
1	REVISION #1 TENANT COORDINATION	05-09-07

121.8742.02

05/11/07