

FOUNDATION NOTES

- ALL CONCRETE WORK SHALL CONFORM WITH THE LATEST RECOMMENDATIONS AND SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE LOCAL BUILDING CODES.
- ALL CONCRETE SHALL BE NORMAL WEIGHT HAVING A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS WITH THE FOLLOWING REQUIREMENTS:
AGGREGATE - ASTM C33, 1" MAXIMUM SIZE
WATER - POTABLE WITH A MAXIMUM WATER CEMENT RATIO OF 0.55.
SLUMP = 3" TO 5"
ADMITTANCE - USE AIR ENTRAINING AGENT CONFORMING TO ASTM C260 WITH 4-6% TOTAL AIR. USE WATER REDUCER AGENT CONFORMING TO ASTM C494 IN ALL CONCRETE. CALCIUM CHLORIDE SHALL NOT BE USED.
DESIGN MIX - SUBMIT A CURRENT (MAXIMUM 18 MONTHS OLD) DESIGN MIX OF THE EXACT SAME MIX TO BE USED ON THE PROJECT, WITH 28 DAY COMPRESSIVE STRENGTH TESTS, TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING CONSTRUCTION.
- ALL REINFORCING STEEL SHALL CONFORM WITH ASTM A615, GRADE 60 EXCEPT STIRRUPS AND TIES TO BE GRADE 40.
- REINFORCEMENT SHALL BE SECURELY TIED IN ITS PROPER PLACE BEFORE AND DURING POURING OPERATIONS USING APPROVED CHAINS AND SPACERS AS REQUIRED. NO BARS SHALL BE CUT OR OMITTED IN THE FIELD WITHOUT THE APPROVAL OF THE ENGINEER. USE PLASTIC TIPPED ACCESSORIES IN CONCRETE EXPOSED TO WEATHER, WATER OR VIB.
- WHERE CONTINUOUS BARS ARE CALLED FOR, INDICATED OR REQUIRED THEY SHALL BE RUN CONTINUOUS THROUGH THE ENTIRE LENGTH OF THE WALLS AND LAPPED AT NECESSARY MINIMUM AT SPICES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- THE CONCRETE CONTRACTOR SHALL INSTALL (OR GIVE OTHER TRADES AN OPPORTUNITY TO INSTALL) ALL ANCHORS, BOLTS, PLATES, WALLETS, SLOTS, CHISELS, PIPE SEEVERS, ETC., AS REQUIRED BY OTHER TRADES. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE SETTING SCREENS AND FORMS. FORM RELEASE OIL TO BE AN APPROVED NON-TOXIC LIQUID.
- FOOTINGS SHALL REST ON SUITABLE UNDISTURBED SOIL OR COMPACTED GRANULAR FILL HAVING A MINIMUM BEARING CAPACITY OF 3000 PSF. ELEVATIONS OF BOTTOM OF FOOTINGS ARE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE SETTING SCREENS AND FORMS. FORM RELEASE OIL TO BE AN APPROVED NON-TOXIC LIQUID. ON OTHER POOR BEARING CONDITIONS.
- FOUNDATION WALLS SHALL BE FURRED IN ALTERNATE LENGTHS, EACH FOUR NOT TO EXCEED APPROXIMATELY 35 FEET IN LENGTH. CONSTRUCTION JOINTS SHALL BE PLACED AT POINTS OF MINIMUM SHEAR. NO HORIZONTAL JOINTS SHALL BE PERMITTED EXCEPT AS SHOWN ON PLANS. AND 90°F. REPAID DRYING MUST BE PREVENTED.
- CURING
A) HORIZONTAL SURFACES SHALL BE KEPT CONTINUOUSLY MOIST FOR A MINIMUM OF SEVEN DAYS.
B) VERTICAL SURFACES SHALL RECEIVE 2 COATS (ONE AT TIME OF STRIPPING AND ANOTHER 3 DAYS LATER) OF AN APPROVED NON-TOXIC CURING COMPOUND.
- ALL FOUNDATION WALLS SHALL BE ADEQUATELY BANCED TO WITHSTAND EARTH AND CONSTRUCTION LOAD PRESSURES. WALLS MUST BE AT LEAST SEVEN DAYS OLD BEFORE BACKFILLING.
- BACKFILLING AGAINST FOUNDATION WALLS SHALL BE DONE BY PLACING SINGLE ONE-SIDE LEVEL LAYERS ON BOTH SIDES OF THE WALL SUCH THAT THE DIFFERENCE BETWEEN ONE SIDE AND THE OTHER DOES NOT EXCEED 24 INCHES.
- CONTRACTOR TO DESIGN, FURNISH AND INSTALL ALL TEMPORARY SHEETING, SHORING AND BRACING NECESSARY TO SAFELY COMPLETE THE CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE THE NECESSARY EQUIPMENT AND CONTINUOUSLY DEWATER THE SITE TO FACILITATE CONSTRUCTION AND SAFE WORKING CONDITIONS.
- SHOP DRAWINGS (ONE REPRODUCIBLE PRINT AND TWO BLUE PRINTS) PREPARED IN ACCORDANCE WITH ACI STANDARDS WILL BE REQUIRED FROM THE CONTRACTOR FOR REINFORCING STEEL PRIOR TO CONSTRUCTION.
- THE OWNER WILL PERFORM STANDARD FIELD TESTING OF THE CONCRETE WORK.


GRANULAR FILL UNDER SLABS & FOOTINGS

- PRIOR TO PLACING GRANULAR FILL ALL ORGANIC MATERIAL, TOPSOIL, DEBRIS AND ANY OTHER DELETERIOUS MATERIAL SHALL BE REMOVED.
- GRANULAR FILL SHALL BE AN APPROVED, WELL GRADED BANK RUN OR CRUSHER RUN GRAVEL MEETING THE REQUIREMENTS OF THE FOLLOWING TABLE:
SIEVE DESIGNATION % PASSING
No. 4 100
No. 10 100
No. 20 100
4-8 4-8
- THE MATERIAL SHALL BE PLACED IN MAXIMUM 8" LIFTS AND COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557, MODIFIED PROCTOR.
- THE OWNER WILL TAKE DENSITY TESTS ON THE COMPACTED FILL. IF THE MATERIAL TESTS LESS THAN 95%, CORRECTIVE ACTION AND ADDITIONAL TESTING WILL BE REQUIRED. THE ADDITIONAL TESTING AND CORRECTIVE ACTION WILL BE PAID FOR BY THE CONTRACTOR.
- MATERIALS SHALL BE PLACED IN SUCH A WAY AS NOT TO DAMAGE CONCRETE FOUNDATIONS AND FOOTINGS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, FROM A TESTING FIRM APPROVED BY THE ENGINEER, A SIEVE ANALYSIS AND A LABORATORY MOISTURE DENSITY TEST OF THE PROPOSED GRANULAR FILL. THE PROCEDURE SHALL BE REPEATED UNTIL A MATERIAL MEETING THE SPECIFICATIONS IS PROVIDED.

STRUCTURAL NOTES

- ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE "SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" OF THE A.I.S.C. AND TO THE REQUIREMENTS OF THE LOCAL BUILDING CODES.
- ALL WELDING SHALL CONFORM TO THE "STRUCTURAL WELDING CODE - AWS/AAS D1.1" OF THE AMERICAN WELDING SOCIETY.
- STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING:
STRUCTURAL SHAPES
ASTM A572, Fy = 36,000 PSI
ASTM A325
ASTM A325
ASTM A300, GRADE B, Fy = 46,000 PSI
STRUCTURAL TUBING
ASTM A500, GRADE B, Fy = 46,000 PSI
- ALL SHOP CONNECTIONS SHALL BE BOLTED OR WELDED. ALL FIELD CONNECTIONS SHALL BE BOLTED EXCEPT WHERE WELDING IS SPECIFICALLY CALLED FOR. BOLTS SHALL BE 3/4" MINIMUM WITH OPEN HOLES 1/16" LARGER, SPECIFIC FOR COLUMN END PLATES WHICH ARE 3/16" LARGER AND COLUMN BASE PLATES WHICH ARE 5/16" LARGER. CONNECTIONS NOT DETAILED SHALL BE DESIGNED FOR THE LOADS INDICATED ON THE DRAWINGS OR THOSE GIVEN IN THE UNIFORM LOAD TABLES, WHICHEVER IS GREATER.
- ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED (MINIMUM 2 MILS DRY FILM THICKNESS) WITH AN APPROVED IRON INHIBITIVE PRIME PAINT. STEEL SHALL BE THOROUGHLY CLEANED PRIOR TO PAINTING. FIELD TOUCH UP WITH THE SAME PAINT WILL BE REQUIRED.
- THE STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE ALL NECESSARY CUTTING AND BRACING REQUIRED TO ERECT AND HOLD THE STEEL FRAME PLUMB AND SQUARE UNTIL THE PERMANENT BRACING AND SUPPORT DETAILS ARE INSTALLED.
- THERE WILL BE NO FIELD BURNING, CUTTING OR OTHER ALTERATIONS OF STRUCTURAL STEEL WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (ONE REPRODUCIBLE PRINT AND TWO BLUE PRINTS) TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION FOR THE STRUCTURAL STEEL.

BIFOLD DOOR NOTES

- HORIZONTAL BIFOLD DOOR SHALL BE FINISHED AND INSTALLED BY THE OWNER.
- THE DOOR SHALL BE MANUFACTURED BY WILSON INDUSTRIAL DOORS, INC., WAUKESHA, WISCONSIN. DOORS OF EQUAL QUALITY BY ALTERNATE MANUFACTURERS WILL BE CONSIDERED BY THE OWNER AND THE ENGINEER, BUT THE SUBSTITUTION MUST HAVE WRITTEN APPROVAL OF THE OWNER PRIOR TO RECEIPT OF BIDS. SUGGESTED ALTERNATE MANUFACTURERS ARE FLEETING STEEL COMPANY AND ROSSER DOORS, INC. DESIGN DETAILS ON THESE PLANS ARE FOR A WILSON DOOR. SHOULD AN ALTERNATE MANUFACTURER BE ACCEPTED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REVISION OF THE DRAWINGS AND DETAILS TO ACCOMMODATE THE ALTERNATE DOOR. REVISIONS MUST HAVE THE APPROVAL OF THE ENGINEER.
- THE DOOR SHALL BE PROVIDED WITH THE COLD WEATHER PACKAGE AND AUTOMATIC LOCKS. THE DOOR MUST BE FABRICATED SO THAT IT WILL ACCEPT METAL SIDING THE FULL HEIGHT OF THE DOOR ON THE EXTERIOR AND INTERIOR WITHOUT FIELD APPLIED STUDS OR GIRTS.
- INSTALLATION OF THE BIFOLD DOOR SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTION MANUAL, AND SHALL BE SUPERVISED BY A REPRESENTATIVE OF THE MANUFACTURER. ONE COPY OF THE MANUAL SHALL BE FURNISHED TO THE OWNER AND ONE TO THE ENGINEER PRIOR TO CONSTRUCTION.
- DOOR INSULATION SHALL BE 5" RUL-ON-REINFORCED, FOIL-BACKED, FIBERGLASS INSULATION.
- METAL SIDING SHALL BE 7/8" DEEP, .032" ALUMINUM WITH A BAKED ENAMEL FINISH. SIDING SHALL BE MANUFACTURED BY RETNOLUX METALS COMPANY OR APPROVED EQUAL. SIDING COLOR SHALL BE AS DETERMINED BY OWNER. SIDING BY ALTERNATE MANUFACTURERS WILL BE CONSIDERED, BUT THE SUBSTITUTION MUST HAVE WRITTEN APPROVAL OF THE ENGINEER. SIDING CONFIGURATION SHALL BE AS SHOWN:

- PROVIDE 3 EXTRA 10'-0" LONG SHEETS FOR OWNER'S FUTURE USE.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (5 COPIES) TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION FOR THE FOLLOWING ITEMS:
BIFOLD DOOR
INSULATION
METAL SIDING
ELECTRICAL ITEMS

DESIGN LOADS:

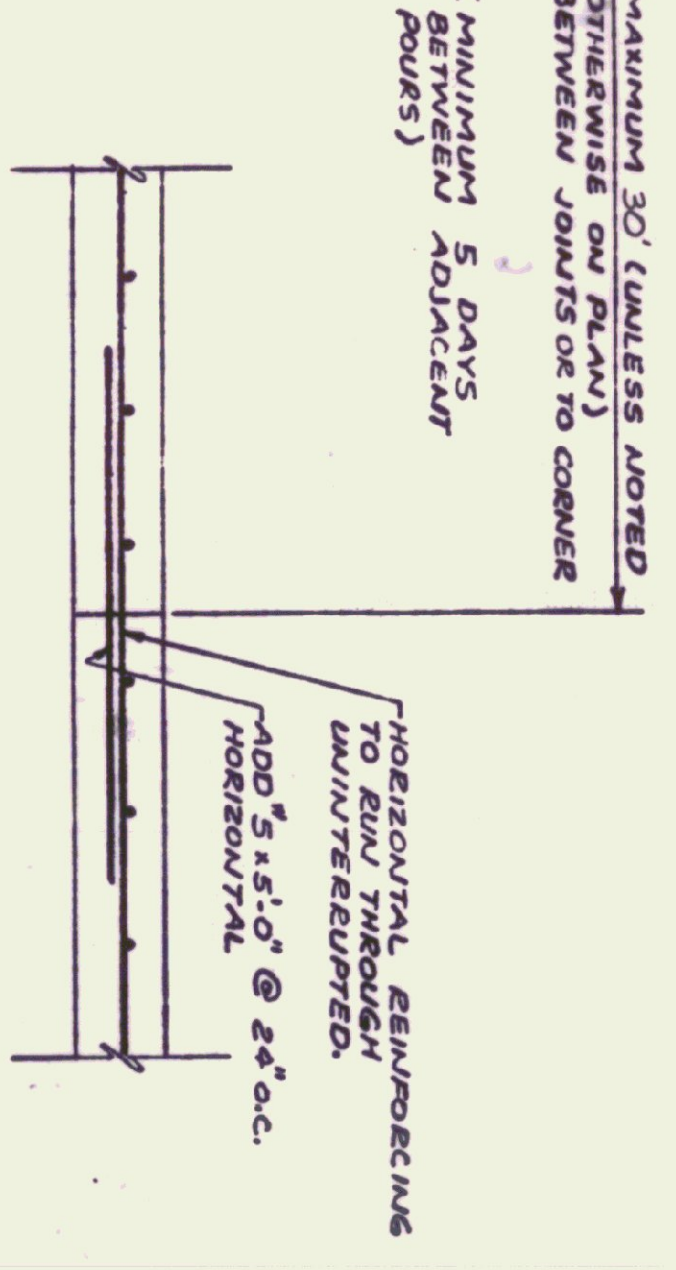
HEIGHT OF DOOR FRAME	2950 LBS.
HEIGHT OF SIDING AND INSULATION	2319 LBS. (2 PSF MAXIMUM)
TOTAL	5269 LBS.

ELECTRICAL NOTES

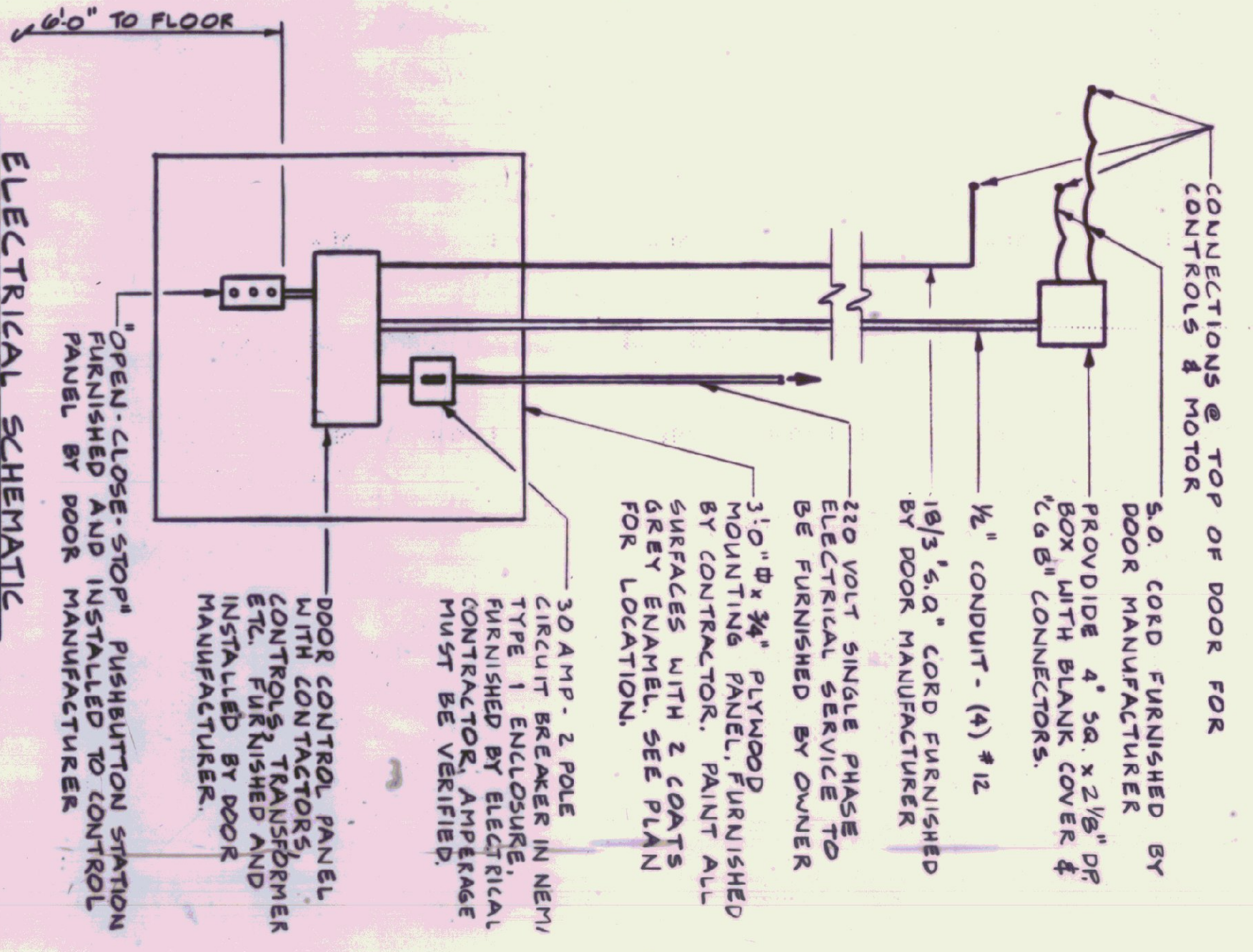
- ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, LATEST EDITION, AND ALL STATE AND LOCAL CODES AND REGULATIONS.
- ALL ELECTRICAL CONTROL AND POWER WIRING SHALL BE INSTALLED UNDER THE DIRECT SUPERVISION OF THE MANUFACTURER'S REPRESENTATIVE.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PERMITS AND SHALL PAY ALL INSPECTION FEES. THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE OWNER A CERTIFICATE OF INSPECTION UPON COMPLETION OF THE PROJECT.
- ALL CONDUIT SHALL BE "BENT" WITH STEEL SET-SCREW COUPLINGS.
- ALL WIRE SHALL BE COPPER - THINW INSULATION.
- ALL S.O. CORD SHALL BE FINISHED BY THE DOOR MANUFACTURER. ALL CONNECTIONS ON THE DOOR, TO MOTORS AND TO MOTORS, SHALL BE INSTALLED AT THE FACTORY, WITH LEADS BEING OBTAINED FOR CONNECTIONS TO REMOTE CONTROLS AS SHOWN ON "ELECTRICAL SCHEMATIC" ON THESE DRAWINGS.

SAFETY AND PROTECTION

- CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE THE NECESSARY PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO:
1. ALL EMPLOYEES ON THE WORK AND OTHER PERSONS WHO MAY BE AFFECTED THEREBY.
2. ALL THE WORK AND ALL MATERIALS OR EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE ON OR OFF THE SITE, AND
3. OTHER PROPERTY AT THE SITE OR ADJACENT THERETO, INCLUDING TREES, SHRUBS, LAKES, WALKS, PARKWAYS, ROADS, STRUCTURES AND UTILITIES NOT DESIGNATED FOR REMOVAL, RELOCATION OR REPLACEMENT IN THE COURSE OF CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR TO PROTECT THEM FROM DAMAGE, INJURY OR LOSS; AND SHALL ERCT AND MAINTAIN ALL NECESSARY SAFEGUARDS FOR SUCH SAFETY AND PROTECTION. CONTRACTOR SHALL NOTIFY OWNERS OF ADJACENT PROPERTY AND UTILITIES WHEN EXECUTION OF THE WORK MAY AFFECT THEM.
- CONTRACTOR'S DUTIES AND RESPONSIBILITIES FOR THE SAFETY AND PROTECTION OF THE WORK SHALL CONTINUE UNTIL SUCH TIME AS ALL THE WORK IS COMPLETED.



WALL CONSTRUCTION JOINT



ELECTRICAL SCHEMATIC

SCALE = 3/4" = 1'-0"

No.	DATE	REVISION
1	4-21-87	NO CHANGES

Lawes Consulting Engineers, Inc.
Route 2A Williston, Vermont 05495



HANGAR DOOR
FRANKLIN COUNTY STATE AIRPORT
HIGHGATE, VERMONT

STANDARD NOTES AND DETAILS

DRAMA	PROJ. No.
Soma	B6/14
CHECKED	DATE
SKC/owd	1/26/87

