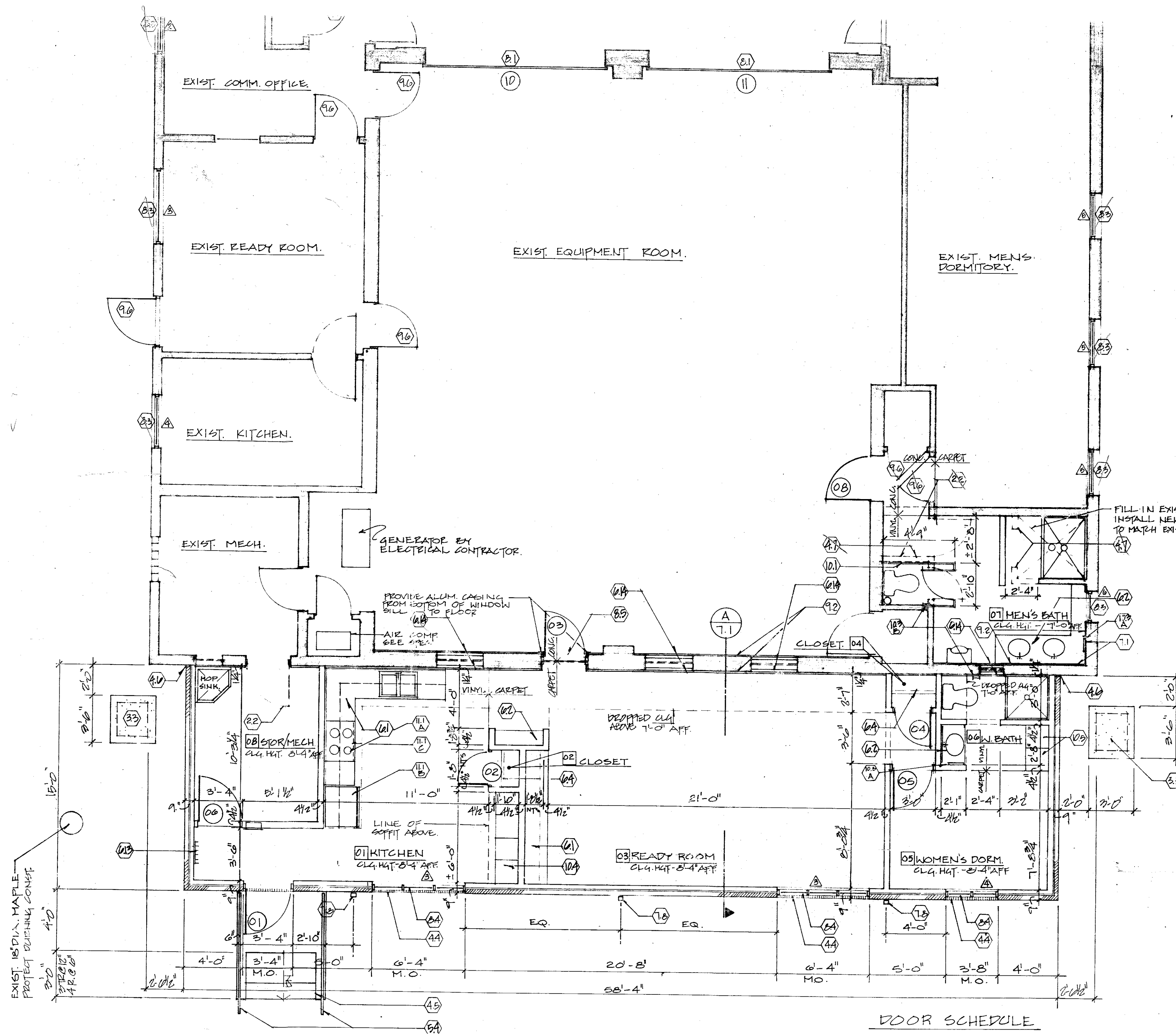
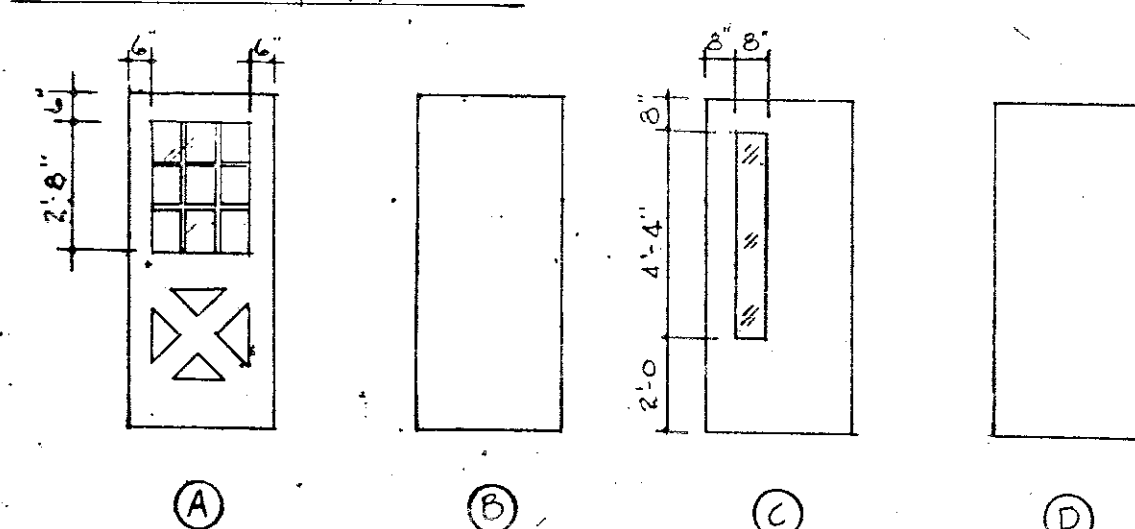


FIRST FLOOR PLAN
SCALE - 1/4" = 1'-0"

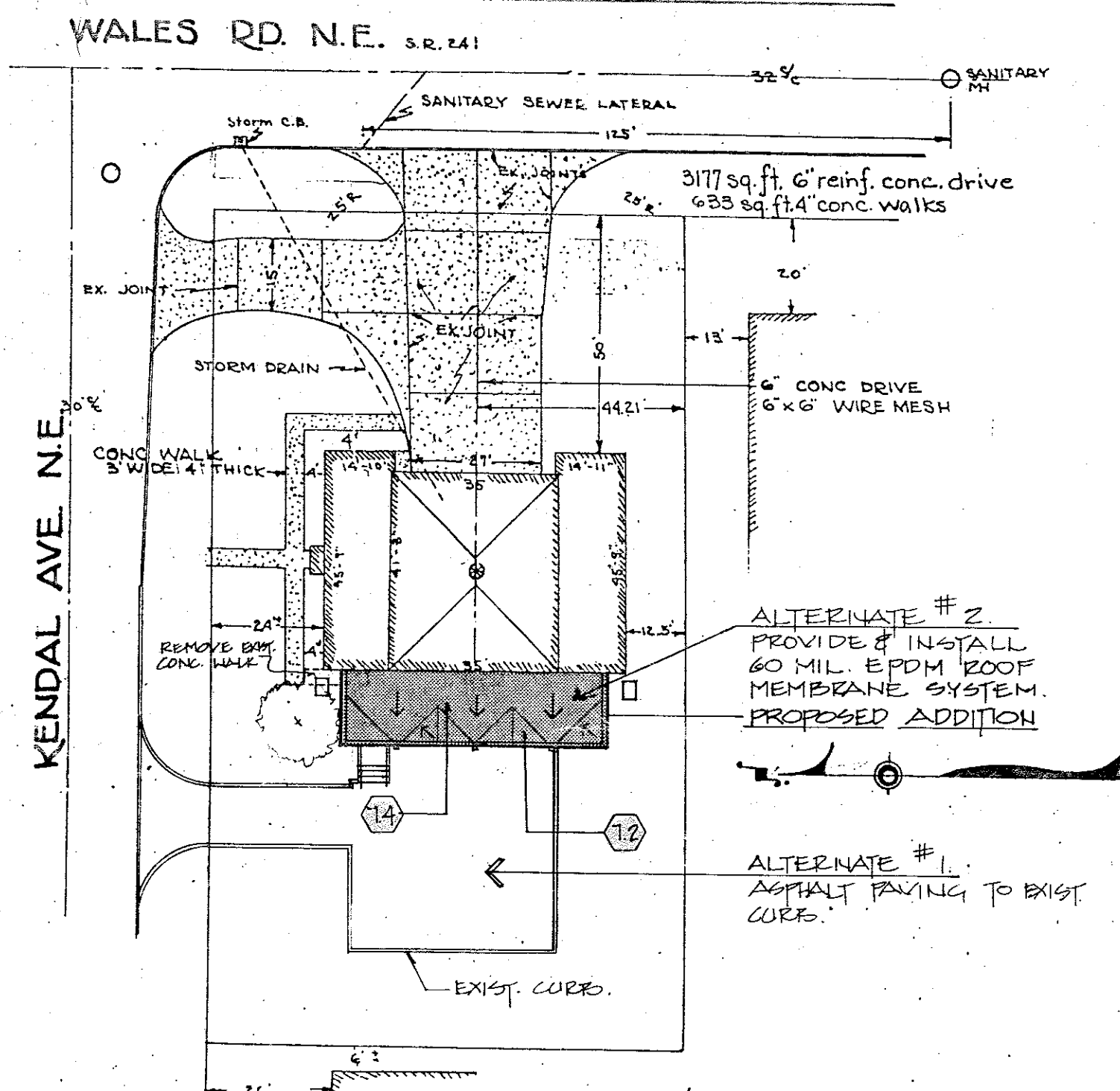
DOOR TYPES



* PROVIDE 2 ROWS OF GLASS LITES

DOOR SCHEDULE

I.D.	SIZE	TYPE	MAT.	CONST.	FRAME	GLASS	HARDWARE
01	3'-0" X 7'-0"	A	METAL	INSUL	METAL (PAINTED)	INSUL	a
02	1'-4" X 7'-0"	D	BKCH. HOLLOW	METAL			b
03	3'-0" X 7'-0"	C	BKCH. SOLID	METAL		1/4" TEMP.	d
04	2'-6" X 7'-0"	D	BKCH. HOLLOW	METAL			b
05	2'-8" X 7'-0"	D	BKCH. HOLLOW	METAL			c
06	3'-0" X 7'-0"	B	METAL	HOLLOW	METAL		e
07	NOT USED						
08	3'-0" X 6'-8"	C	BKCH. SOLID	METAL		1/4" TEMP.	d
10	12'-0" X 12'-0"	*	METAL	INSUL	CHANNEL (PAINTED)	INSUL.	-
11	12'-0" X 12'-0"	* aa	METAL	INSUL	CHANNEL (PAINTED)	INSUL.	-



PLAT PLAN / ROOF PLAN
SCALE 1/8" = 3'-0"

KEY NOTES

- 2.1 EXISTING CONSTRUCTION TO REMAIN
- 2.2 EXISTING CONSTRUCTION TO BE REMOVED
- 3.3 PRECAST CONC. EQUIP. PAD BY RESPECTIVE CONTRACTOR.
- 4.4 BRICK ROWLOCK SILL
- 4.5 STAIR - BRICK VENEER OVER 4" CMU AT STILES, STAIR TREAD AND RISERS TO BE CONCRETE
- 4.6 1/2" EXPANSION JOINT
- 4.7 REMOVE EXISTING CONCRETE BLOCK TO 8" BELOW FINISH FLOOR. PATCH CONCRETE SLAB TO MATCH EXISTING
- 5.4 1-1/2" DIAMETER GALVANIZED STEEL PIPE HANDRAIL 3'-0" H. PAINTED
- 6.1 CASEWORK (SEE DRAWING 9.1)
- 6.2 PLASTIC LAMINATE COUNTERTOP, NOSING AND BACK SPLASHES @ 30" AFF
- 6.4 FIXED 3/4" PLYWOOD SHELF AND COAT ROD (PAINTED)
- 6.13 WOOD PEG COAT RACK - 6 PEGS MINIMUM
- 6.14 INFILL EXISTING WINDOW OPENING WITH 2 X 4 WOOD FRAMING 12" O.C. (INSULATE OPENING WITH 3-1/2" FOIL FACED INSULATION)
- 7.2 TAPERED ROOF INSULATION. SEE WALL SECTION (DRAWING 7.1)
- 7.8 SCUPPERS AND DOWNSPOUT TO MATCH EXISTING. REPAIR ALL EXISTING DOWNSPOUTS AND SCUPPERS TO PROPER WORKING CONDITION
- 7.4 BUILD UP ROOF SYSTEM
- 8.1 REMOVE EXISTING OVERHEAD GARAGE DOORS AND HARDWARE AS REQUIRED. INSTALL NEW OVERHEAD GARAGE DOORS AND ASSOCIATED EQUIPMENT/HARDWARE AS SPECIFIED
- 8.2 REMOVE EXISTING DOOR AND FRAME. INSTALL NEW DOOR, FRAME AND HARDWARE AS REQUIRED. (SEE DOOR SCHEDULE)
- 8.3 REMOVE EXISTING WINDOW UNIT. INSTALL NEW VINYL CLAD WOOD (INSULATED) WINDOW UNIT IN EXISTING OPENING. PROVIDE WOOD BLOCKING AS REQUIRED. CAULK AND SEAL REPAIR EXISTING SILL, JAMB & HEAD AS REQUIRED. INSTALL NEW (INSULATED) VINYL CLAD WOOD WINDOW UNIT IN NEW OPENING. COORDINATE WINDOW SIZE AND LOCATION WITH GENERAL CONTRACTOR PROVIDE 3/4" OAK WINDOW SILL
- 9.2 1/2" GYPSUM DRYWALL OVER 1 X 3 WOOD FURRING AT 16" O.C. (HOLD OFF FLOOR TO BOTTOM OF WINDOW SILL AT EXIST. EQUIP. PAD SIDE)
- 10.1 METAL TOILET PARTITIONS
- 10.3 TOILET ROOM ACCESSORIES
- A. TOWEL DISPENSER - (1) PER BATH
- B. TOILET PAPER DISPENSER - (1) PER BATH
- 10.4 FOOD LOCKERS - (12) 1'-6" X 2'-0" X 1'-6" WITH 9" ADJUSTABLE SHELF, PLASTIC LAMINATE, LOCKABLE, NUMBERED 1.D. (SEE SHEET 9.1)
- 11.1 KITCHEN EQUIPMENT BY OWNER
- A. STOVE/RANGE 30"
- B. REFRIGERATOR 36"
- C. Exhaust hood - 30"
- 12.6 WOMEN'S DORM LOCKERS SEE DWG. 9.1 FOR DETAILS
- 9.6 PAINT EXIST. DOOR & TRIM.

INDEX TO DRAWINGS

- 4.1 FLOOR PLAN/SITE PLAN
- 5.1 BUILDING ELEVATIONS
- 7.1 WALL SECTIONS
- 9.1 INTERIOR ELEVATIONS
- M-1 MECHANICAL
- E-1 ELECTRICAL
- SP-1 SPECIFICATIONS
- SP-2 SPECIFICATIONS
- SP-3 SPECIFICATIONS

CITY OF MASSILLON
FIRE STATION 3
385 WALES ROAD N.E.
MASSILLON OHIO



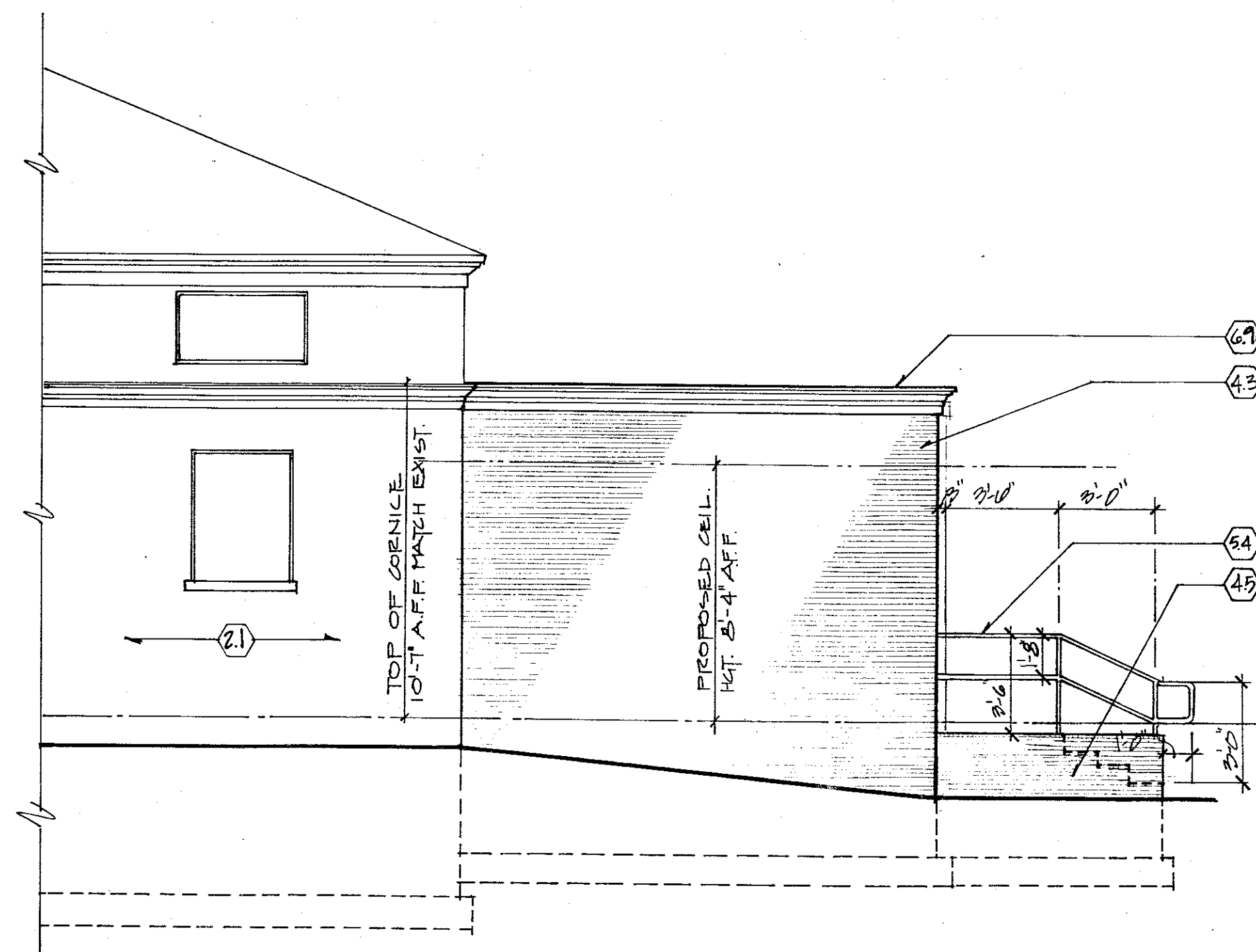
HARRIS DAY ARCHITECTS

INCORPORATED
3821 WALES ROAD N.W.
MASSILLON, OHIO 44646
PHONE: 216-837-4248

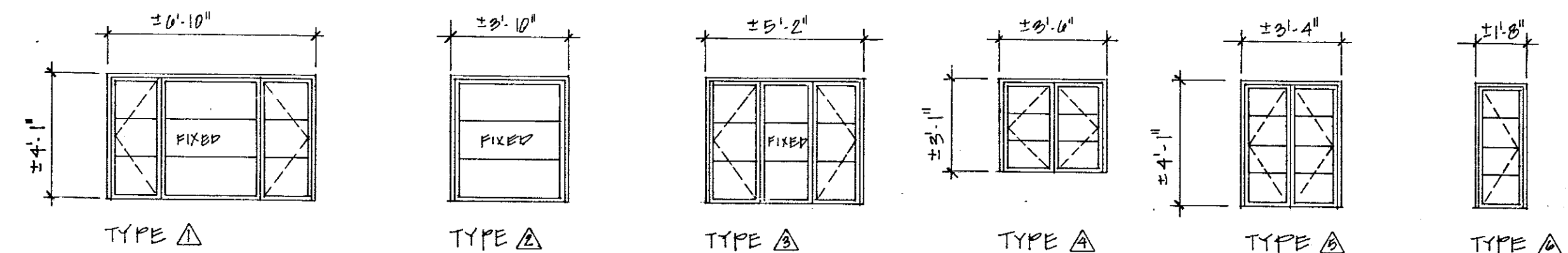
REVISIONS:

JOB NO: 2945 FIRE
DATE: FEB 5, 1990
OWN: JPP
CKD: BTT

4.1



NORTH ELEVATION
SCALE - 1/4" = 1'-0"
(SOUTH ELEV. SIMILAR)



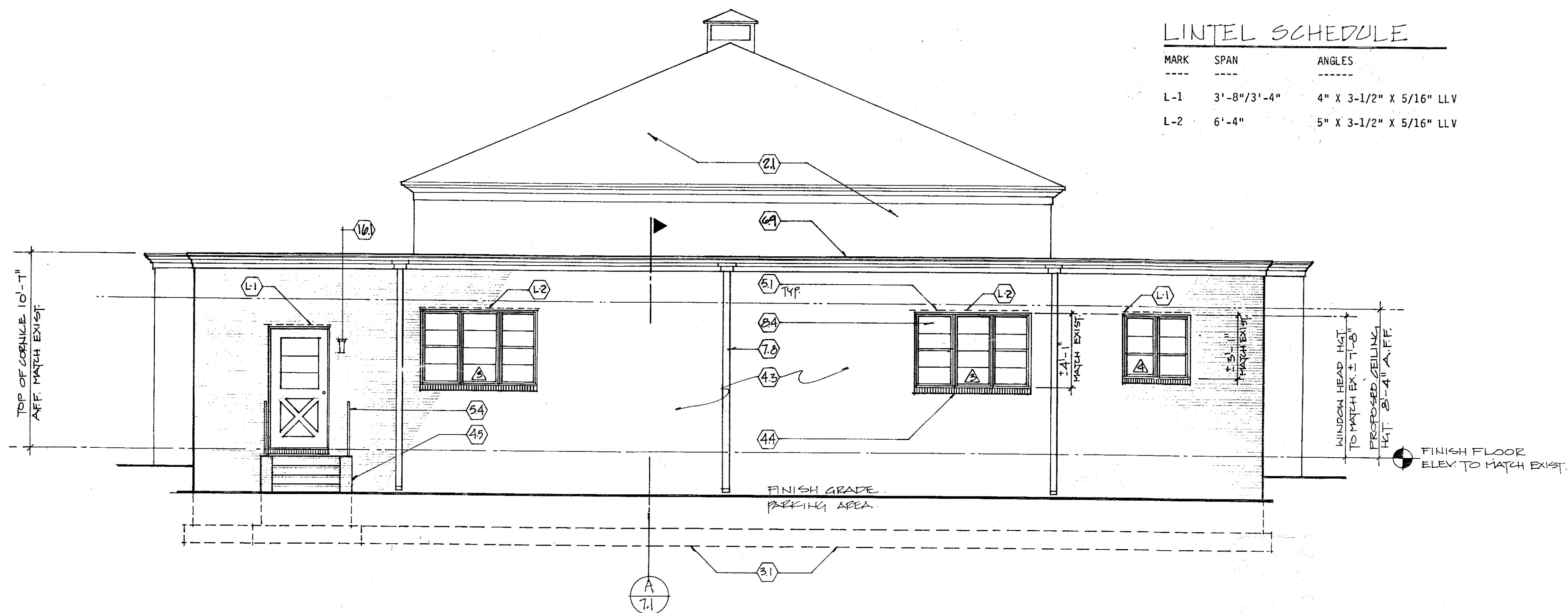
WINDOW SCHEDULE
1/4" = 1'-0"

NOTES:

- CONTRACTOR VERIFY ALL DIMENSIONS AND WINDOW CONFIGURATIONS IN FIELD.
- SEE PLAN, SHT. 4.1, FOR WINDOW TYPE LOCATION.
- CONTRACTOR TO SELECT STANDARD WINDOW UNIT THAT BEST FITS INTO THE EXIST. OPENINGS PROVIDE BLOCKING AS REQUIRED.

LINTEL SCHEDULE

MARK	SPAN	ANGLES
L-1	3'-8 3/4"-4"	4" X 3-1/2" X 5/16" LLV
L-2	6'-4"	5" X 3-1/2" X 5/16" LLV

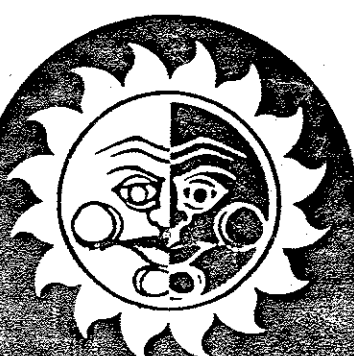


WEST ELEVATION
SCALE - 1/4" = 1'-0"

KEY NOTES

- 2.1 EXISTING CONSTRUCTION TO REMAIN
- 3.1 CONTINUOUS CONCRETE FOOTER WITH 2 - #4 CONTINUOUS REBAR
- 4.3 BRICK VENEER (MATCH EXISTING BRICK) - ATTACH TO CONCRETE BLOCK AND/OR WOOD STUDS AT 16" O.C. VERTICAL AND 24" O.C. HORIZONTAL
- 4.4 BRICK ROWLOCK SILL
- 4.5 STAIR - BRICK VENEER OVER 4" CMU AT SIDES. STAIR TREADS AND RISERS TO BE CONCRETE WITH 5" THROAT WITH 6 X 6 X 1.4 X 1.4 W/M AND BRICK VENEER
- 5.1 STEEL LINTEL (PAINTED). SEE SCHEDULE. WOOD FRAMING, HEADER (2) 2X10, 1-1/2" DIAMETER STEEL PIPE HANDRAIL 3'-6" H - PAINTED
- 5.4 WOOD FRAMED PARAPET AND CORNICE TO MATCH EXISTING
- 7.8 SCUPPERS AND DOWNSPOUT TO MATCH EXISTING. REPAIR ALL EXISTING DOWNSPOUT AND SCUPPERS TO PROPER WORKING CONDITION
- 8.4 INSTALL HEAL VINYL GLAD WOOD (HALL) WINDOW UNIT IN NEW OPENING. COORDINATE WINDOW SIZE AND LOCATION WITH GENERAL CONTRACTOR
- 16.1 LIGHT FIXTURE BY ELECTRICAL CONTRACTOR
- 16.2 SMOKE DETECTOR BY ELECTRICAL CONTRACTOR

CITY OF MASSILLON
FIRE STATION 3
955 WALES ROAD N.E.
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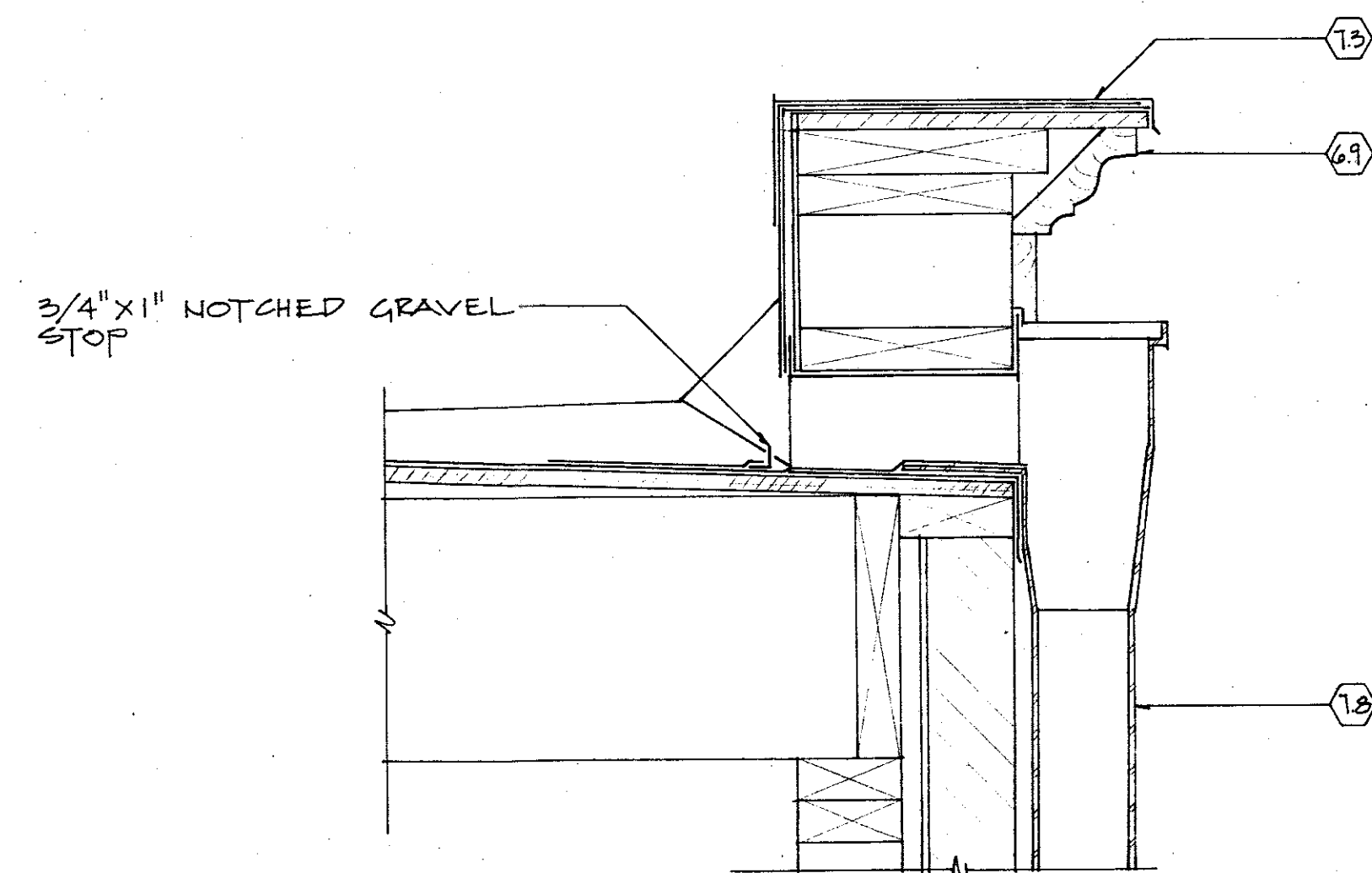


HARRIS DAY ARCHITECTS
INCORPORATED
3821 WALES ROAD N.W.
MASSILLON, OHIO 44646
PHONE: 216-837-4248

REVISIONS:

JOB NO. 8945 FIRE
DATE: FEB. 5, 1990
DWN. BY: J.P.P.
CKD. BY:

5.1

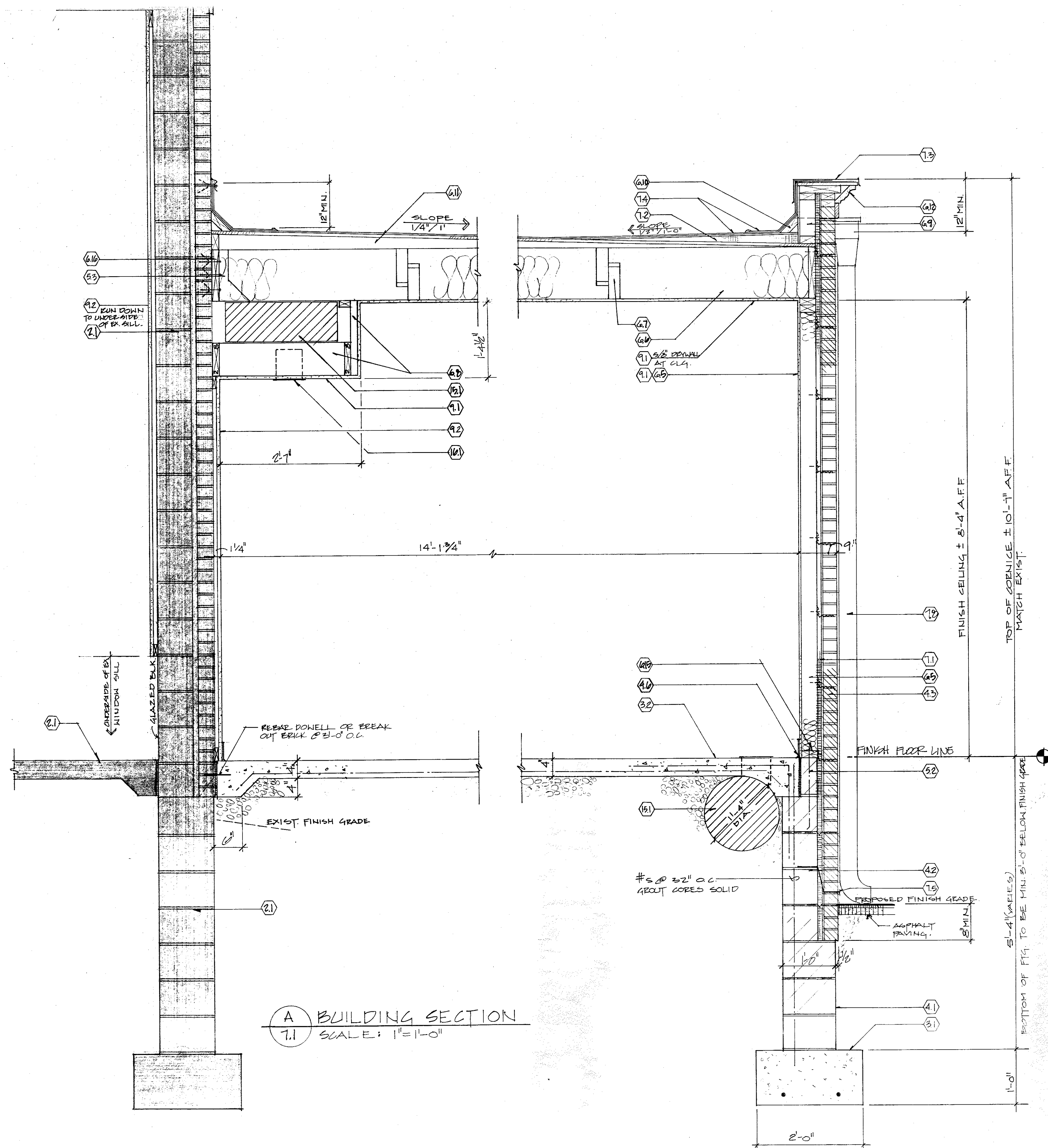


NOTE:
SCUPPER AND CORNICE DETAILS
TO MATCH EXIST. CONSTRUCTION.

DETAIL @ SCUPPER
NTS.

KEYNOTES.

- | | |
|---|--|
| 3.1 CONTINUOUS CONCRETE FOOTER WITH 2 - #4 CONTINUOUS REBAR | 7.1 3/4" SHEATHING INSULATION R = 3.75 OVER 2 X 4 STUD WALL WITH CORNER BRACING |
| 3.2 4" CONCRETE SLAB WITH 6 X 6 #10/#10 W/M OVER 6 MIL VAPOR BARRIER OVER 6" COMPACTED GRAVEL BASE | 7.2 TAPERED ROOF INSULATION. SLOPE 1/2" PER 1'-0" |
| 4.1 12" CONCRETE BLOCK WALL WITH REINFORCED CORES. VERTICAL #5 AT 2'-8" O.C. HORIZONTAL (TRUSS TYPE) 1'-4" O.C. | 7.3 ALUMINUM CAP FLASHING. MATCH EXISTING |
| 4.2 8" CONCRETE BLOCK WALL WITH REINFORCED CORES. VERTICAL #5 AT 2'-8" O.C. HORIZONTAL (TRUSS TYPE) 1'-4" O.C. | 7.4 BUILT-UP ROOF SYSTEM THROUGH WALL FLASHING. PROVIDE WEEP HOLES AT 4'-0" O.C. |
| 4.3 BRICK VENEER (MATCH EXISTING BRICK) - ATTACH TO CONCRETE BLOCK AND/OR WOOD STUDS AT 16" O.C. VERTICAL AND 24" O.C. HORIZONTAL | 7.5 1-1/2" FOUNDATION WALL INSULATION (R = 7.5 COMPREHENSIVE STRENGTH 40 PSI) |
| 4.6 1/2" EXPANSION JOINT | 7.6 SCUPPERS AND DOWNSPOUT TO MATCH EXISTING. REPAIR ALL EXISTING DOWNSPOUT AND SCUPPERS TO PROPER WORKING CONDITION |
| 5.2 1/2" DIAMETER X 16" ANCHOR BOLT WITH 4" HOOK 4'-0" O.C. GROUT CORES SOLID-OR PROVIDE STRAP ANCHOR | 9.1 1/2" GYPSUM DRYWALL |
| 5.3 METAL JOIST HANGER | 9.2 1/2" GYPSUM DRYWALL OVER 1 X 3 WOOD FURRING AT 16" O.C. ENTIRE WIDTH OF EQUIP. ROOM. DUCTWORK BY MECHANICAL CONTRACTOR |
| 6.5 2 X 4 STUD WALL AT 16" O.C. WITH CORNER BRACING 3-1/2" KRAFT FACED INSULATION (R = 11-1/2) | 16.1 LIGHT FIXTURE BY ELECTRICAL CONTRACTOR |
| 6.6 2 X 12 ROOF RAFTERS AT 24" O.C. WITH FOIL FACED INSULATION 12" (R = 36). "VAPOR BARRIER REQUIRED". TAPE ALL JOINTS IN FOIL FACE | |
| 6.7 1 X 3 WOOD CROSS BRACING AT 1/3 SPANS | |
| 6.8 2 X 2 SOFFIT FRAMING AT 24" O.C. COORDINATE WITH MECHANICAL AND ELECTRICAL CONTRACTOR | |
| 6.9 WOOD FRAMED PARAPET AND CORNICE TO MATCH EXISTING | |
| 6.10 2 X 6 CANT. BLOCK | |
| 6.11 3/4" CDX PLYWOOD SHEATHING OVER 2 X 4 SLOPE MEMBER, 4" AT EXISTING WALL TO 0" AT NEW OUTSIDE WALL | |
| 6.12 WOOD FRAMED CORNICE. DETAILS TO MATCH EXISTING | |
| 6.15 WOLMANIZED WOOD SILL PLATE | |
| 6.16 2X12 LEDGER BOLTED TO WALL WITH (2) 3/4" Ø EXPANSION BOLTS 24" O.C. (SPACED BOLTS) | |



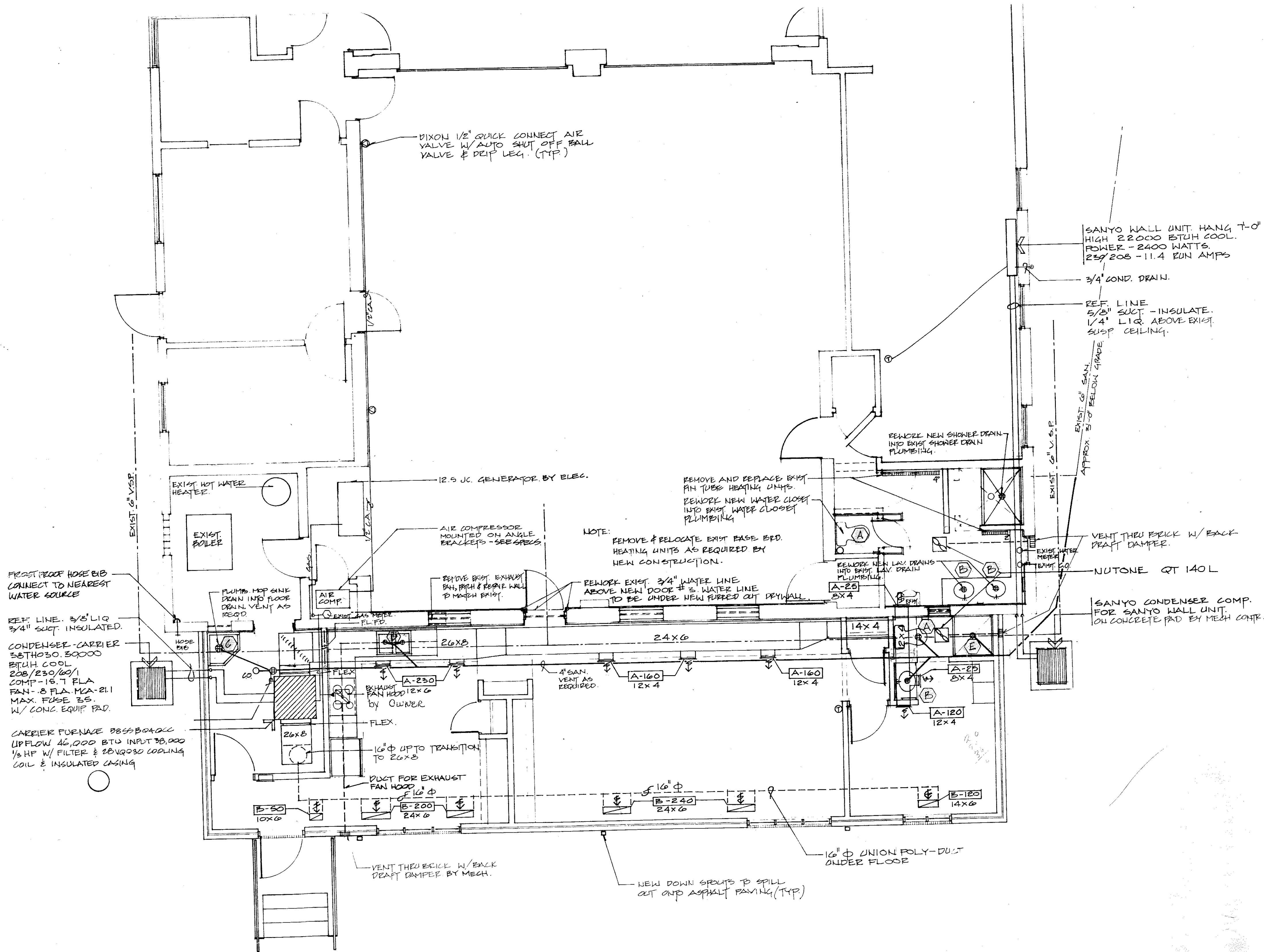
CITY OF MASSILLON
FIRE STATION 3
955 WALES ROAD N.E.
MASSILLON OHIO



REVISIONS:

JOB NO. 8945 FIRE
DATE: FEB. 5, 1990.
DWN. BY: JFP
CKD. BY:

7.1



PLUMBING FIXTURE SCHEDULE

SYM	DESCRIPTION	PIPING CONNECTIONS				MOUNTING HEIGHT
		HW	CW	TRAP	WASTE	
A	AMERICAN STANDARD #2108.408 18" HIGH ELONGATED "CADET" VITREOUS CHINA WATER CLOSET WITH COUPLED TANK, OPEN FRONT SEAT AND SUPPLY WITH STOP.	-	1/2"	INT	3"	FLOOR SET
B	AMERICAN STANDARD #0475.279 20" X 17" COUNTERTOP "AQUALYN" VITREOUS CHINA LAVATORY WITH CHICAGO #74GA-B12 FAUCET WITH POP-UP WASTE, SUPPLIES WITH STOPS, ADJ. "P" TRAP AND WALL HANGER. INSULATE HOT WATER SUPPLY AND WASTE PIPE EXPOSED BELOW FIXTURE WITH 1/2" ARMSTRONG ARMAFLEX INSULATION.	1/2"	1/2"	1-1/4"	2"	COUNTER
C	FIAT #MSB-2424 24" X 24" MOP SERVICE BASIN OF MOLDED STONE WITH CHICAGO #897 FAUCET	1/2"	1/2"	3"	3"	FITTING 36"
D	ELKAY #LR-2918 29" X 18" X 7-1/2" DEEP DOUBLE BOWL STAINLESS STEEL SINK WITH DELTA #100 SINGLE LEVER FAUCET, SUPPLIES WITH STOPS, ADJ. "P" TRAP, CRUMB CUP STRAINER IN LEFT BOWL AND DELTA #333	1/2"	1/2"	1-1/4"	3"	COUNTER
E	KOHLER K-1597 "CANLON" 48" FIBERGLASS REINFORCED PLASTIC SHOWER COVE, FAUCET AND SHOWER HEAD K-7226-T, DRAIN K-9132 CHROME FINISH. PROVIDE AND INSTALL HEAVY DUTY SHOWER ROD AND CURTAIN.	1/2"	1/2"	1-1/4"	3"	AS REQUIRED BY MANUFACTURER
FD #1	REMOVABLE STAINLESS STEEL STRAINER PLATE ON HUB OF 3" WASTE.	-	-	3"	3"	FLOOR

NOTES: CONNECT ALL REQUIRED HOT AND COLD WATER PIPING TO NEAREST AVAILABLE EXIST. PLUMB. SYSTEM.
CONNECT ALL GAS FIRED EQUIPMENT & APPL. TO NEAREST EXIST. GAS LINE.

LOUVER SCHEDULE

I.D.	MFG.	MODEL
A	LIMA	SERIES 100WH
B	LIMA	SERIES 35

MECHANICAL/PLUMBING PLAN
1/4" = 1'-0"

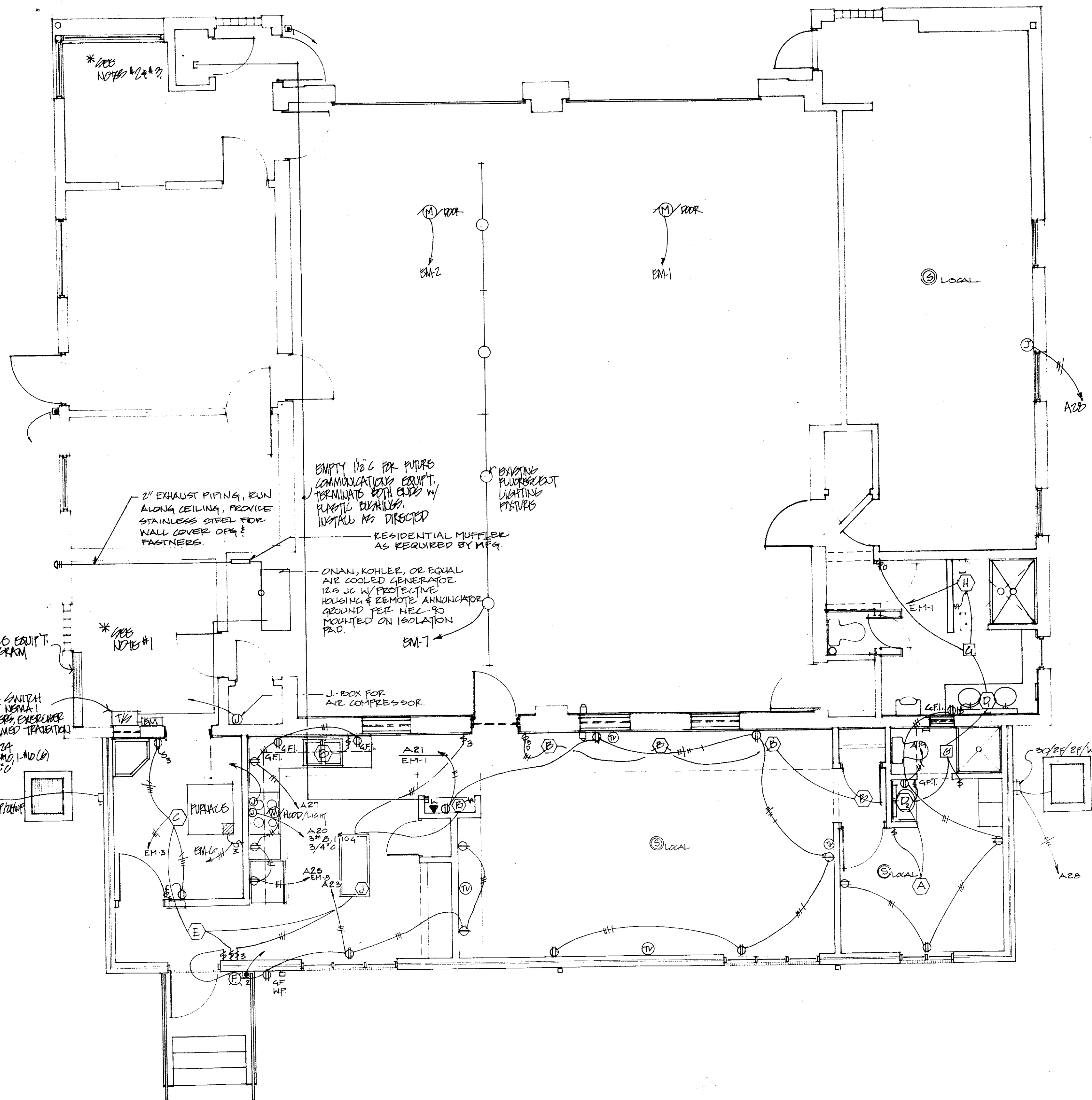
CITY OF MASSILLON
FIRE STATION 3
955 WALES ROAD N.E.
MASSILLON OHIO

HARRIS DAY
ARCHITECTS
INCORPORATED
3821 WALES ROAD N.W.
MASSILLON, OHIO 44646
PHONE: 216-837-4246

REVISIONS:
Δ REVISED 15. MAR. 90

JOB NO. 8945 FIRE
DATE: FEB. 6, 1990.
OWN BY: J.F.P.
CKD BY:

M-1

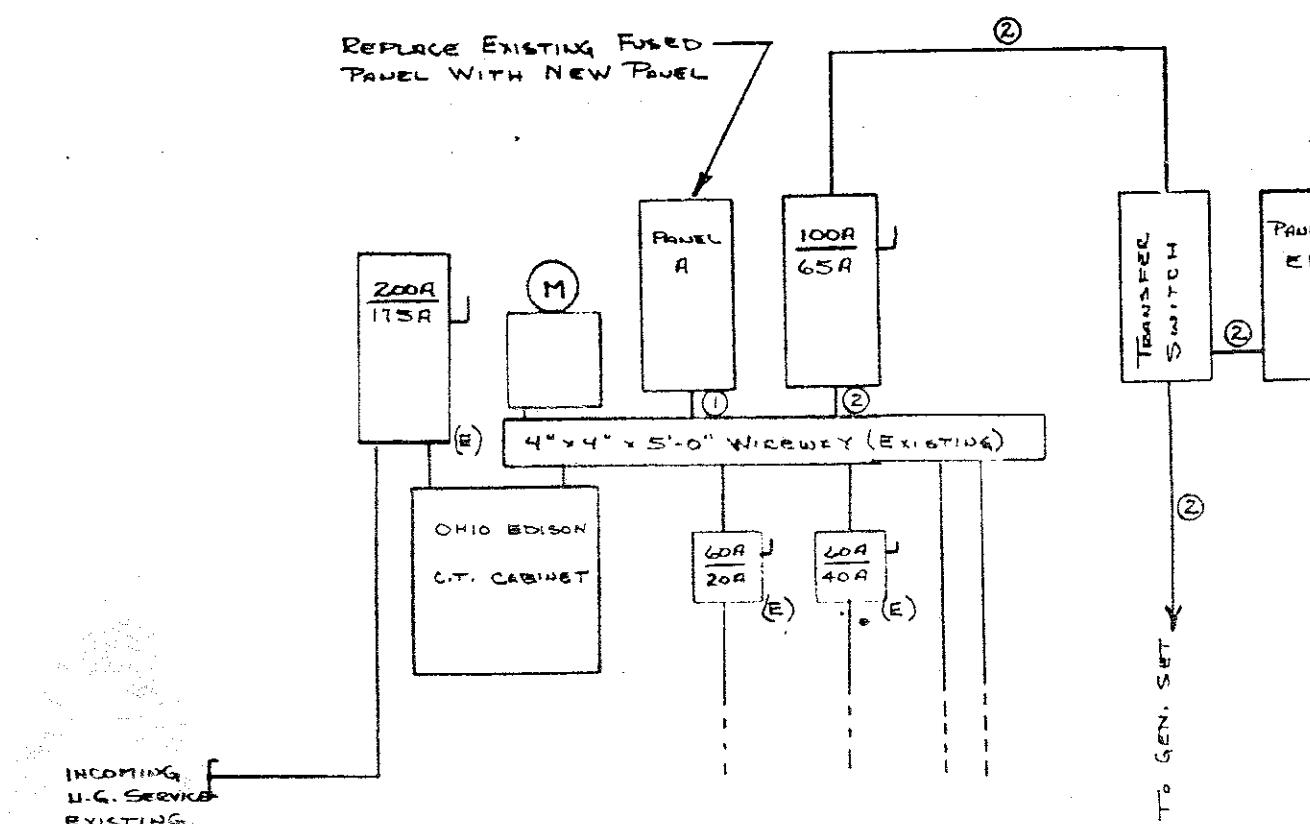


ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
S	Toggle Switch, Single Pole, 20 Amp, 120-277 Volt Hubbell #1221 or equal. Small letter subscript (if used) indicates fixtures switched. Mount at 48" A.F.F.
S ₃	Toggle Switch, Three Way, 20 Amp, 120-277 Volt, Hubbell #1223 or equal. Mount at 48" A.F.F.
f	Toggle Switch, Manual Motor, Allen-Bradley #600-TAX216, 1 Pole, with neon pilot light and overload heater.
⊕	Receptacle, duplex grounding, 20 Amp, 125 Volt in two (2) gang box. Two (2) - Hubbell #5362 or equal. Mount at 48" A.F.F.
⊕	Receptacle, ground fault interrupter, 20 Amp, 125 Volt, Hubbell #GF5362 or equal. Mount at 44" A.F.F. WP denotes weatherproof cover and mounting at 18" above finish grade.
⊕	Combination switch and receptacle, Hubbell # 1221 and # 5362 in single box. Mount at 48" A.F.F.
⊕	Safety Switch, Heavy Duty, size as shown on drawing. WP denotes weatherproof NEMA 3R.
⊕	Branch Circuit, short slash indicates phase or switch leg, long slash indicates neutral, opposite slash indicates equipment grounding conductor and arrow indicates homerun. Dashed line indicates underground circuit.
⊕	Television outlet, 3/4" conduit run to new mechanical room.
⊕	Alarm bell to match existing and wired to present alarm system.
⊕	Telephone outlet, run 3/4" conduit to new mechanical room.
⊕	Junction box sized as required, subscript denotes use.
⊕	Motor, furnished by others, wired by E.C.
⊕	Smoke detector, ERK #1839AC1 or equal, 120 volt wired to emergency panel.
⊕	DIMMER SWITCH.
⊕	DOOR BELL PUSHBUTTON
⊕	DOOR BELL CHIME

FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	LAMP
A	PROGRESS #P3528 LARGE DRUM INCAND-ESCENT SURFACE MOUNTED	2-60A19
B	PROGRESS #P6735-21/P11-TG RECESSED WALL WASHER WITH ALZAK REFLECTOR. MOUNT AS DIRECTED.	1-60A19
C	PORCELAIN KEYLESS	1-100A19
D1	KEYSTONE #SA240-A WALL MOUNTED FLUORESCENT, MOUNT AS DIRECTED.	2-F40WW
D2	KEYSTONE #SA220-A WALL MOUNTED FLUORESCENT, MOUNT AS DIRECTED.	2-F20WW
E	PROGRESS #P3524 SMALL DRUM INCAND-ESCENT SURFACE MOUNTED.	1-60A19
F	PROGRESS #P5695 WALL MOUNTED INCAND-ESCENT WITH LEXAN GLOBE.	1-60A19
G	NUTONE #140SL COMBINATION EXHAUST FAN, LIGHT AND NIGHT LIGHT. # SWPH.	1-60A19 1-7.5A
H	PROGRESS #P6916 RECESSED INCAND-ESCENT SHOWER LIGHT.	1-60A19
I	NUTONE #675 P SQUARE POLYMERIC FAN/LIGHT & SWITCH.	1-60A19
EM-1	NUTONE LL-6100, 3/4" X 10" DUCTED, TWO SPEED PLUG IN MOTOR, TSW LIGHT W/ REMOVABLE LENS, PERMANENT GREENE FILTER, ENAMEL FINISH.	
EM-2	NUTONE LB-12 CONTROL - SOUNDS TWO NOTES FOR FRONT & SIDE DOORS AND ONE NOTE FOR BACK DOOR TRANSFORMER - NUTONE 1017-16V, PUSH BUTTONS NUTONE PB-111N (LIGHTED)	
J	PROGRESS P 7210, P1222 FLUORESCENT LIGHT FIXTURE	4-40W T-8



- 1-1/2 THW, 1 # 4 (G) 2" C
- 3-#3 THW, 1 # 4 (G) 1 1/2" C

POWER RISER DIAGRAM
NO SCALE

PANEL	TYPE	MTG	VOLT-AGE	PHASE	WIRE	MAIN BUS	BRANCH BUS	REMARKS
A	RO	S	120/240	1	3	150	20	1 20
							20	2 1
							50	2 1
EM	RO	S	120/240	1	3	100	20	1 20

CONSTRUCTION NOTES:

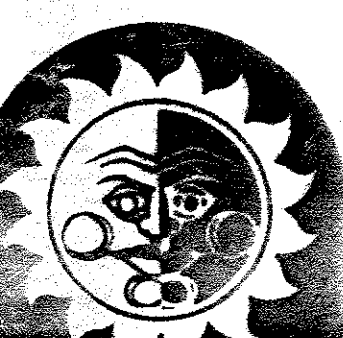
1. TRANSFER POWER FOR EXISTING BOILER TO EMERGENCY POWER PANEL (EM-8).
2. TRANSFER POWER FOR COMMUNICATION AND ALARM EQUIPMENT TO EMERGENCY POWER PANEL (EM-10).
3. TRANSFER LIGHT CIRCUIT TO EMERGENCY POWER PANEL (EM-5).

SEE ARCHITECTURAL DETAILS FOR EXACT LOCATIONS AND DIMENSIONS OF EQUIPMENT, FIXTURES, OPENINGS AND OUTLETS

NOTE:
CAREFULLY COORDINATE ALL WORK WITH MECHANICAL AND PLUMBING CONTRACTORS TO AVOID CONFLICT WITH DUCTS, PIPING AND OTHER EQUIPMENT

LIGHTING/POWER PLAN
SCALE - 1/4" = 1'-0"

CITY OF MASSILLON
FIRE STATION 3
955 WALES ROAD N.E.
MASSILLON OHIO



HARRIS DAY
ARCHITECTS

INCORPORATED
3821 WALES ROAD N.W.
MASSILLON, OHIO 44646
PHONE: 216-837-4248

REVISIONS
Δ REVISED 15. MAR 90

JOB NO: 8945 FIRE
DATE: FEB 5, 1990
OWN BY: JRF
CKD BY:

E-1

1. GENERAL CONDITIONS: SEE BID PACKAGE

2. SITE WORK:

Contractor shall provide necessary labor, materials, and equipment to perform all site work shown as specified in these documents.

- a. Excavate, fill, and regrade site to finish grades as directed. Slope all lawn areas and paving away from building. Contractor shall spot elevations at critical points as directed by Architect prior to starting grading. Provide fences, barricades, and/or lights around all open trenches, excavations, and other hazards as required.

- b. The General Contractor shall provide 4" topsoil evenly spread over all lawn areas disrupted/ damaged during construction and reseed as follows:

- 1) Loosen, fine grade, rework, rake, and remove all debris and stones larger than 3/4".
- 2) Fertilize with 12-12-12 turf food at a rate of 20 pounds per 1000 square feet.

- 3) Seed shall be 20% Park Kentucky Bluegrass, 30% Glade Kentucky Bluegrass, 30% Baron Kentucky Bluegrass, and 20% Pennlawn Red Fescue at 4 pounds per 1000 square feet.

- 4) Mulch all lawn areas with clean straw mulch at 2-1/2 tons per acre.

c. Asphalt Paving "ALTERNATES-1"

- 1) Regrade and shape existing stone base for complete drainage of the paved area. Provide State Spec 304 gravel as required.

- 2) Prime coat - MC-30 (State Spec 408)

- 3) 2-1/2" binder course (State Spec 301)

- 4) 1" surface course (State Spec 404)

- 5) If paving Alternate is not chosen, Base Bid requires regrading and repairs to existing parking after construction to return area to existing condition.

d. SOIL TREATMENT SOLUTION: Provide soil treatment for termite control.

- 1) Use an emulsible concentrate insecticide for dilution with water, specially formulated to prevent infestation by termites. Fuel oil will not be permitted as a diluent. Provide a working solution of one of the following chemical elements and concentrations.

- 2) Execution: Remove foreign matter which could decrease effectiveness of treatment on areas to be treated. Loosen, rake and level soil to be treated, except previously compacted areas under slab and foundations. Toxicants may be applied before placement of compacted fill under slabs, if recommended by toxicant manufacturer.

Apply one gallon of chemical solution per 10 sq. ft. as an overall treatment under slab and attached slab areas where fill is soil or unwashed gravel. Apply 1-1/2 gallons of chemical solution to areas where fill is washed gravel or other course absorbent material.

3. CONCRETE:

- a. Furnish all labor, materials and services to complete all concrete work as indicated and/or specified, generally consisting of:

b. MATERIALS:

- 1) Water: fit to drink.

- 2) Cement: Portland cement shall conform to the Standard Specifications of the ASTM C150. Type as required.

- 3) Aggregates: Conform to ASTM C-33.

4) Reinforcing:

- (a) Reinforcing steel to be grade 60 ASTM A615.

- (b) Mesh: welded wire fabric, ASTM A-185.

- (c) All reinforcing shall be free of scales, foreign coating or rust which reduce bond.

- 5) Provide air entraining admixtures for exterior concrete to produce a total entrained air content in the concrete of between 5% and 7% by volume of the concrete as determined by direct measurement or by ASTM C-260.

- 6) Joint Sealant: Sonneborn Sonotread.

- 7) Curing and Hardening: Sonneborn Kure-N-Seal or Master Builders MasterSeal.

- 8) Granular Fill: No. 6 washed gravel.

c. EXECUTION:

- 1) All concrete shall be ready-mixed. ASTM C-94, latest edition.

(a) Compressive strength:

- Foundations - 3000 PSI
Interior Slabs - 3500 PSI
Exterior - 4000 PSI

- (b) Mix: Minimum 5-1/2 sack. For exterior concrete. Six sack mix.

2) Reinforcement

- (a) Reinforcement for slabs shall be supported by solid concrete masonry blocking at proper height.

- (b) Wire fabric reinforcing shall be 6" x 6" x 10/10 WWF in all slabs on grade, and sidewalks.

3) Placing Concrete

- (a) Where possible, the concrete shall be deposited continuously from the time work is started until the concrete is brought to the finish surface. Work shall be carried on with sufficient rapidity to insure bonding of successive layers.

- (b) Deposit no partially hardened concrete. Avoid "cold" joints but if they occur, treat as bonded construction joints.

- (c) Do not allow concrete to flow horizontally in excess of 5 feet.

- (d) Water accumulated during placing must be removed. Do not place concrete in such accumulations.

- (e) Lay no concrete against frozen soil. Provide adequate protection against frost action during freezing weather.

- (f) Place no concrete for foundations on backfilled or otherwise disturbed soil. All soil bottoms for slabs and footings shall be approved by the Architect before placing concrete.

4) Curing and Protection

- (a) Protect all concrete work against injury from the elements and defacement of any nature during construction operations.

- (b) Furnish and apply sealer and hardener to all concrete after it has dried sufficiently in accordance with the manufacturer's specifications. All concrete that is to remain exposed shall receive a second coat at completion of job after the floor has been thoroughly cleaned.

5) Expansion Joints and Control Joints:

- (a) Install corkboard expansion joints at all exterior slabs and slabs abutting interior column piers and exterior walls.

- (b) Control joints of the floor slab shall be located in a square pattern not to exceed 2.5 times the concrete depth (in feet) in either dimension. Depth of sawcut control joints shall be a minimum of 1/4 the concrete depth, but in no case less than 1" deep.

Cutting shall be completed before shrinkage stresses have developed sufficiently to induce cracking.

6) Finishes:

- (a) All interior slabs shall receive a smooth steel trowel finish.

- (b) Exterior shall have broom finish.

4. MASONRY:

Contractor shall provide necessary labor, materials, and equipment to lay up masonry as shown or specified in these documents. All work shall be laid plumb, true and square with filled joints.

- a. Mortar shall be freshly prepared and uniformly mixed in the ratio by volumes of 1 part cement, 1/2 part lime putty, 4-1/2 parts sand, and shall conform to A.S.T.M. Specification 270, properly tooled as directed.

- b. Masonry units shall be sound, dry, clean, and free from cracks. Concrete block shall be grade A units conforming to A.S.T.M. designation C-90.

- c. Clean all exposed brick of mortar, splatter, drippings, etc. Provide final wash.

d. Face Brick:

- 1) Building field brick, soldier and rowlock courses: (To match existing brick veneer).

- e. Core Grout: ASTM C-404 coarse grout, 3000 psi.

- f. Wall Flashing: 3 oz., Kraft faced, copper.

- g. Place galvanized metal ties at 2'-0" o.c. horizontally and 1'-4" o.c. vertically.

- h. Weep Holes: Plastic or aluminum straws at 4'-0" o/c horizontally.

- i. Foundation Wall Insulation: Dow Styrofoam Thermadry Type 1250, 1.5" thick. Install in accordance with manufacturer's specs.

- j. Steel Lintels: ASTM 36 with shop coat of paint.

5. METALS: NOT USED

6. CARPENTRY:

Contractor shall provide all labor, materials, and equipment to frame up, sheath, and trim out building as shown or specified in these documents

a. Rough Carpentry Materials:

- 1) Framing Lumber, blocking, grounds shall be No. 2 construction grade or better common L.L. Southern Pine, Douglas Fir, or Western Hemlock

- 2) Rough bucks, curbs, cants, nailers, and furring - No. 3 common White Pine. All members in contact with masonry and concrete below, or used in conjunction with roofing, flashing and waterproofing shall be pressure treated with water-borne preservatives complying with AWPI-LF-2

- 4) Roof Sheathing: 3/4" CDX Plywood glued and nailed.

- b. Finish Carpentry Materials: All finished work to be executed by trained journeymen and shall be filled, sanded smooth, and ready for painter

- 1) Interior Wood Trim: Oak unless noted otherwise. (stain and clear finish).

- (a) Door and Window Trim: Mahoney or Schneider S-54 casing, 9/16 x 2-1/4. Top, bottom and sides (miter corners)

2) Shelving:

- (a) Exposed or open shelves. 3/4" particle board or Plywood with hardwood nose. (paint)

- 3) Counter Tops: Plastic laminate adhered to 3/4" particle board with 4" back and side splashes. Wilson Art, Formica or Nevamar.

6. CARPENTRY CONT.

- 4) Cabinets: LSI, Inc., Capitol Equipment or approved equal base and wall cabinets, plastic laminate finish. Provide necessary filler strips, finished end panels, and hardware as required.

5) Exterior Trims:

- (a) Wood cornice trim to be smooth Redwood to match existing. (Paint)

7. THERMAL & MOISTURE PROTECTION:

Contractor shall provide all labor, materials, and equipment to install insulation, roof, and waterproofing as detailed or specified in these documents.

a. Foundation Insulation: See Division 4

- b. Provide 1/4" Dow Styrofoam Sill Seal under all wood sill plates where exterior walls meet masonry foundations.

- c. Floor Vapor Barrier: 6 mil polyethylene

- d. Sheathing Insulation: 3/4" Dow Styrofoam Square Edge Wall Insulation.

- e. Batt Insulation: Kraft or foil faced fiberglass Thickness as noted.

- f. Scuppers and Round Downspouts: To be Copper to match existing.

- g. All Caulking: Tremco, Sonneborn, or DAP.

- h. Acoustical Sealants: Tremco acoustical sealant or equal applied at perimeter of drywall and electrical devices.

- i. Sealants: One (1) part Dow Corning Silicone 780 or equal. Match adjacent material colors.

- j. Flashing: .027" Zinc alloy or 28 ga. Terne coated S.S.

k. 4-ply Built-up Roofing System:

Owens-Corning or Manville 4-ply asphalt BUR system (Manville 461C). All roofing plys to be fiberglass reinforced felts. Roof insulation shall be 3/4" mineral board, all boards mechanically attached. Provide mineral surfaced modified bitumen cap sheet and install in strict compliance with manufacturer's specifications for 15 year warranty. Roofing Contractor shall maintain the roof systems against all leaks or defects for the initial 2 years.

1. EDPM Roofing System "ALTERNATE-2"

- 1) Firestone or approved equal fully adhered 15 year warranty Prem 1000 Class FMI-90 installed in strict compliance with manufacturer's specifications. Roofing Contractor shall maintain the roof system against all leaks or defects for the initial 2 years.

8. DOORS, WINDOWS AND GLASS:

Contractor shall supply and install all doors, windows, and glazing as detailed, scheduled, and/or specified

- a. Doors: All doors to be equipped with hardware, shall be sealed, top, bottom and all sides, as defined in Section 9 and shall be operating snug and smoothly

- (1) Exterior Doors: Pease HF 92

- (2) Interior doors select premium grade birch, flush except where noted.

- b. Replacement and New Windows: All windows to be caulked and weather-stripped, sealed on all edges and surfaces.

- (1) Anderson Corporation, vinyl clad wood insulated window or approved equal.

- (a) Applications of wood windows on project includes individual units set in conventional wall construction, and units set into existing masonry openings.

Contractor to select standard window unit that best fits into existing window openings. Provide blocking as required. Contractor selection of units to be approved by Architect. See drawing 4.1 and 5.1 for additional details.

- (b) Window units shall meet the following minimum requirements.

- 1) Vinyl clad insulated wood casement window.

- 2) High performance double-pane insulated glass.

- 3) Weatherstripping

- 4) Extension jambs as required.

- 5) Divided light grilles, match existing window configuration

- 6) Removable aluminum insect screen.

- 7) Corrosion-resistant hardware.

- c. Hollow Metal Frames: 16 ga. steel with concealed reinforcing and anchors. Designated frames to have UL Label.

- d. Plate Glass Mirrors: Unframed,

- One (1) 2'-8" x 2'-6" and
One (1) 5'-0" x 2'-6"

e. Hardware:

- (1) Four (4) copies of a complete hardware schedule showing hand, location, size, thickness and style of door: shall be submitted to the Architect before ordering any hardware.

- (2) All locks to be keyed and masterkeyed as directed by the Architect.

- (3) Materials: (See Door Schedule)
Schlage: "D" Series locksets and cylinders, "Orbit" design, Bright Brass.
Hager: Butts US 3
LCN: "4000" Series Closer
Ives: Stops US 3
Reese: Threshold

- a) 1-1/2 pair of butts
Closer
Lockset - Entrance lock
Dead Bolt with thumb latch
Weatherstripping
Threshold
Wall stop

- b) 1-1/2 pair of butts
Lockset - Passage latch

- c) 1-1/2 pair of butts
Lockset - Classroom lock
Wall stop

- d) 1-1/2 pair of butts
Closer
Brass Push Plate - (only)
Wall stop

f. Sectional Overhead Doors.

- (1) Provide each sectional overhead door as a complete unit produced by one manufacturer, including frames, sections, brackets, guides, tracks, counterbalance mechanisms, hardware, operators

and installation accessories, to suit openings and headroom allowable.

(2) Sectional Overhead Door.

- a) Wayne Dalton Door Co. "Thermospan 150 Door" with (2) rows of D.S.B. Lites Model 400 or approved equal.

- (3) Sectional Overhead Door to include, but not limited to the following components.

- a) Manual Door Operators

- b) Electronic Door Operation

- 1) Commercial Radio Controller

- 2) Electric Door Operation

- 3) Remote Control Station

- 4) Automatic Reversing Control

- c) Heavy-Duty, rust resistant hardware

- d) Weather seals

- (4) Track as required for height and width of door. Provide all brackets necessary for proper support of the track.

- (5) Install door complete in strict accordance with manufacturer's specifications and instructions. Provide all necessary blocking, supports, etc. for the complete installation of the door, tracks and door openers.

9. FINISHES:

Contractor shall provide all material and labor to finish interior rooms and building exterior, as shown noted, scheduled, or specified in these documents All materials shall be installed in a good workmanship manner in strict accordance with written manufacturer's recommendations.

- a. Sheet Vinyl: Armstrong Classic Corlon "Seagate"

- b. Resilient Base: 4" high Armstrong, vinyl, .080 gauge

c. Carpet:

1. Description of Work:

Extent of carpet work is shown on the drawings, finish schedule and by specifications, and is defined to include carpet accessories.

2. General:

- a) Color or colors shall be selected from successful vendor's samples. Vendor shall be responsible for field measurements to determine exact yardage.

- b) Carpeting shall meet or exceed the following specifications.

Pile Fiber Contents 100% Amow Marquessa
Lana Continuous
Filament. Olefin
(Air Entangled)

Pile Weight 28 oz. per square
yard

Pile Height 5/32"

Stitches Per Inch 11 (11 Rows Per Inch)

Primary Backing Polypropylene
(Moisture Barrier)

Total Weight 65.7 oz. per sq. yd.

Flame spread 75 or less, "Class C"

- c) Adhesive: Henry's 356 multi-purpose latex or approved equal.

- d) Seam Adhesive: Robert's Carpet Seam Adhesive No. 41-4015.

3. Installation:

- a) Install carpet per accepted practices for a direct cement to floor.

- b) Comply with manufacturer's instructions and recommendations for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doors, center seams under doors; do not place seams in traffic direction at doorways.

- c) Extend carpet under open-bottomed obstructions and under removable flanges and furnishings, and into alcoves and closets of each space.

CITY OF MASSILLON
FIRE STATION 3
955 WALES ROAD N.E.
MASSILLON OHIO



HARRIS DAY
ARCHITECTS

INCORPORATED
3821 WALES ROAD N.W.
MASSILLON, OHIO 44646
PHONE: 216-837-4248

REVISIONS:

JOB NO: 8945 FREE
DATE: FEB. 5, 1990
OWN. BY:
CKD. BY:

SP-1

9. FINISHES; CARPET: con't.

- d) Provide cut-outs where required, and bind cut edges properly where not concealed by protective edge guards or overlapping flanges.
- e) Install carpet edge guard where edge of carpet is exposed; anchor guards to substrate.
- f) Carpet improperly installed shall be replaced at no cost to the Owner.
- d. Drywall:
- All drywall shall be Fire Code, (thickness as noted on drawings) taped, filled and sanded smooth. Install drywall sound walls with acoustical sealant as recommended by manufacturer and detailed in the drawings.
- e. All painting shall be of the highest quality workmanship, free of runs and sags, with straight cuts
1. New Drywall: One Coat Glidden 5111 Primer.
Two Coats Glidden Latex 4100
 2. Painted Metal Door and Frames:
Two Coats Glidden 6900 acrylic
 3. Existing Plaster Walls and Ceilings:
Lightly sand and wipe surfaces
One coat Glidden Glid-Guard acrylic Epoxy
 4. Stained Wood Doors and Window Sash:
One Stain Coat: Glidden Wood Master
Two Coats satin finish urethane
Note: See Sheet 4.1 for existing doors to be painted.
 - f. Plastic Laminate: Wilson Art, Formica, or Nevamar. Colors to be selected from manufacturer's standard colors.

g. Ceiling Tile:

1. Acoustic tile ceiling system shall be 2' x 2' suspended aluminum grid system with 24" x 24" x 5/8" lay-in ceiling panels, Armstrong Ceramaguard No. 601B.

10. SPECIALTY ITEMS:

- Contractor shall provide all labor and materials to install the specialty items, shown, noted, or specified these documents.
- a. Fire Fighting Device:
10 lb. dry chemical Fire Class ABC, semi recessed J. L. Industries, Ambassador, steel cabinet or equal.
 - b. Toilet Room Accessories:
(by Bradley or equal) Typical at all toilets. Locate as shown or directed.
1) One (1) C-Fold paper holder 250-15 stainless steel Satin finish.
2) One (1) toilet tissue holder 5084 stainless steel Satin finish.
 - c. Metal toilet partitions:
Sanymetal, Normandie style, baked enamel finish or equal.
 - d. Bulletin Board:
Natural cork, seamless sheet, 1/4" thick with washable vinyl finish for writing surface, complete with trim, as furnished and installed by Educational Equipment Corp. of Ohio, Kent, Ohio.
 - e. Extruded Aluminum Letters: (Alternate 3)
1) Furnish 12" x 2-1/4" stroke x 1" D individual extruded aluminum letters. Provide letter style "Helvetica Medium".
2) Aluminum gauge to be per manufacturer's recommendation for size indicated. Provide manufacturer's standard white finish on letters and number standard.
3) Building sign to be secured to existing brick veneer. Locate on the existing east elevation, south end. Mounting height shall be as directed by the Architect.

4) Building sign to be read as follows:

MASSILLON
FIRE STATION 3
(Logo "3" to be Helvetica Medium
30" H x 5-5/8" stroke x 4" D)
SECTION 15 - MECHANICAL (PLUMBING AND HVAC)

1. General Requirements:

- a. Work under this Section to include all labor, material, transportation, tools and equipment necessary to install, test and guarantee a complete Mechanical System, as specified and shown on Drawings. Work shall consist, in general, of the following:
PLUMBING:
Sanitary system within building
Potable cold and hot water systems with building
Gas systems within building
Potable hot water heating components
Plumbing fixtures
Compressed air system
HVAC:
Heating system for building
Ventilating systems for building
Air conditioning system for building
- b. GENERAL CONDITIONS:
General Conditions of the Contract apply to all work of this Division.
Inspect proposed construction site prior to bidding to become thoroughly acquainted with conditions affecting Contract. Submittal of Bid is considered evidence of site inspection having been performed. No allowance to be made for lack of knowledge concerning such conditions after Bid is submitted.
Obtain and include costs of all permits and licenses required for execution of Contract. (Plumbing and HVAC).

c. DRAWINGS AND SPECIFICATIONS:

Drawings indicate size and approximate location of various parts of work and are to be used as general guide for installation.
Drawings and Specifications to be considered cooperative and anything appearing in Specifications, but not on Drawings, or vice versa, to be considered part of the Contract and to be executed.

Errors or omissions discovered by Contractors prior to Bid opening to be called to attention of Architect without delay.

Where the word "provide" is used in these Specifications, it shall be construed to mean the furnishing of all necessary labor and material to install the equipment and/or system.

Where cutting and patching cannot be avoided, execute carefully to avoid injury to any part of building structure. Remove as little material as possible. In no case cut reinforcing or structural steel without specific permission.

Coordinate all trenching, underground piping, underground insulation and backfilling with General Contractor and completely execute prior to pouring of floor slabs.

Each Contractor and Sub-Contractor shall do all excavating of any materials encountered, as shown or as necessary for the installation of underground sewers, drains and equipment in his Contract. Provide and maintain bracing, shoring or sheathing necessary to support the walls of excavations. Backfill as required free of large stones or rocks, properly compacted.

2. PLUMBING:

a. WATER DISTRIBUTION PIPING:

Provide 120 F. hot water and cold water distribution piping as required, including following features.

Make necessary connections to all fixtures and equipment requiring hot or cold water service with valves.

Conceal pipe wherever possible or as directed by Architect.

Provide for demolition of existing and proper disposal of same for all existing fixtures, piping to be removed.

b. PIPE AND PIPE FITTINGS:

PLUMBING PIPING MATERIALS: Piping furnished under this Contract to be as follows:

SERVICE	OUTSIDE BUILDING	INSIDE ABOVE GROUND SLAB	INSIDE BELOW GROUND SLAB
120 F. hot water	-	a	-
Cold water	-	a	-
Sanitary	-	b	b
Vent	-	c	b
Gas	-	d	d

INDEX:

- 1) Type L seamless copper pipe with 95-5 connections.
- 2) Underground to be ABS Schedule 40, plastic pipe with fittings to match, per ASTM D-2661; or PVC Schedule 40, plastic pipe with fittings to match, per ASTM D-2655.
- 3) ABS Schedule 40, plastic pipe with fittings to match.
- 4) Schedule 40 black steel continuous weld pipe, 2 1/2" and larger to have weld joints; 2" and smaller to have threaded joints.
- 5) Approved plastic as per local gas company recommendations.
- 6) Outside below grade to be PVC SDR 35 sewer pipe with fittings to match, per ASTM D-3034, and inside above and below grade to be PVC DWV pipe with fittings to match, per ASTM D-2665.
- 7) Type K seamless copper pipe with 95-5 connections.

c. PLUMBING FIXTURES:

Provide plumbing fixtures shown on Drawings and listed in Fixture Schedule as manufactured by American Standard, Eljer, Kohler or Crane.

d. GAS PIPING:

Complete connections to all gas burning equipment with approved individual service valves.

e. INSULATION:

Insulate all plumbing components and piping specified below. Apply only over clean, dry metal.

Potable Cold Water and 120 F. Hot Water

Insulate cold water and hot water lines with 3/8" FR/elastomeric thermal insulation, using identical material at fittings with all seams adhered with 520 adhesive. FR/elastomeric thermal insulation must be labeled "Fire Retardant".

15. MECHANICAL: con't.

- f. VALVES:
Manufacturers Jenkins, Hammond, Nibco, Waleworth, ball type 2" and smaller.
- g. TESTS AND INSPECTIONS:
Test all hot and cold water piping at not less than 125 psig. Test soil and waste piping as required by local inspection authority. Test gas piping in accordance with requirements of Gas Utility Company.
Provide all tools and equipment required for testing and make all temporary required connections. Promptly repair any defects developed during testing and repeat test to prove installation tight. No caulking of screwed joints, cracks or holes permitted. Repair leaks if required in screwed joints by replacing defective pipe, fittings, or both, with new material.
- h. COMPRESSED AIR SYSTEM:
As detailed on drawings, provide the following:
1) Quincy, Ingersoll Rand, Craftsman, Air Power of Ohio or equal Air Compressor, two-stage, two cylinder, pressure lubricated, air cooled, horizontal tank mounted, 30 gallon receiver tank, complete with safety valve, tank drain, shut-off valve and motor starter with built-in thermal overload protection and belt guard.
.Air Compressor, Provide 120 PSI.
.Motor starter to be capable of making starts as frequently as required by automatic control system.
.Provide metal nameplate on motor, indicating full identification of manufacturer, ratings, characteristics, construction, special features and similar information.

SYSTEM CATEGORIES

Supply air	a, b
Return air	none

DUCT INSULATION INDEX

Round Ducts - External Insulation:

1 1/2" type IV Fiberglass wrapping with reinforced facing of foil laminate vapor barrier, having 0.5 perm rating, U.L. labeled with #25 flame spread and 50 smoke rating.

Rectangular Distribution Ducts - External:

1 1/2" Type IV Fiberglass wrapping with reinforced facing of foil laminate vapor barrier, having 0.5 perm rating, U.L. labeled with #25 flame spread and 50.0 flare-door staples.

c. SHEET METAL:

All ductwork shall be in compliance with NFPA Pamphlet 90A - 1974 Edition - and 90B - 1973 Edition - and all other applicable Codes.

Provide under floor Union Poly-duct PVC coated. Back fill free of large stones and rock. Slope to fabricated polysteel plenum in Mechanical Room.

Fabricate in accordance with STANDARD PRACTICE IN SHEET METAL WORK, published by National Association of Sheet Metal Contractors.

d. FIRE DAMPERS:

Provide fusible link fire dampers, NFPA approved, in all ducts passing through equipment room.

e. LOUVERS, DIFFUSERS, REGISTERS, GRILLES AND SPECIALTIES:

Provide devices shown on Mechanical Plan as manufactured by Barber Colman, Anemostat, Titus or Tuttle, Bailey and Lima, with the following features:

- 1) Sponge rubber or neoprene gaskets for airtight joints.
- 2) Opposed blade, tight closing, tamper-proof volume dampers where called for in Schedule.
- 3) Plaster frames or cores except where exposed ductwork.
- 4) Prime coat, baked-on factory finish of color selected by Architect.

All Branch or zone low velocity supply and return ducts to have manual balancing dampers.

f. EXHAUST FANS:

Provide Nutone QT 140 L exhaust fans shown on Drawings complete with switch, duct and through wall vent.

g. AIR-COLLED CONDENSING UNIT:

Provide unit as specified on Drawings #M-1.

Five (5) year warranty on refrigeration compressor. If compressor fails in the first five years, a new one shall be furnished free of charge. Installation labor not included.

Unit to have automatic devices to permit operation and automatic start-up at outside ambient temperature of 30 F.

h. WARM AIR FURNACE:

Provide Carrier, Lennox or Bryant warm air furnace shown on Schedules.

Condensing type furnace, 90% efficiency or higher.

i. TEMPERATURE CONTROL:

Unit manufacturer to provide thermostat to have automatic heat or cooling. Sub-base to have fan switch for on-off-automatic operation. With switch in "on" position, the fan shall run continuously and either gas furnace or refrigeration unit shall operate to control. In the "automatic" position, the fan shall cycle with heat or cooling to maintain thermostat setting. All control wiring the responsibility of Mechanical Contractor. Provide smoke detector in return air to turn off air handler if smoke is detected.

j. TESTING:

Place into operation all other moving parts including fans, exhausters, controls, etc. Assure lubrication of all moving parts.

Measure air velocities; temperatures and pressures with an Anemotherm instrument, manufactured by The Anemostat Corporation and submit letter to Architect that system has been balanced and working properly.

Section 16 - ELECTRICAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions, Division 1 Specifications and other applicable portions of the balance of the divisions in this specification shall apply to work of this section.

SCOPE OF WORK AND GENERAL REQUIREMENTS:

The work includes furnishing all labor, equipment, tools, supplies, materials and services necessary for and incidental to, a complete electrical system as shown on the Drawings and specified herein.

All labor, material and equipment not specifically mentioned herein or shown on the plans, but incidental to, or required for, the complete installation and proper operation shall be furnished as if called for in drawings and specifications.

The Electrical Contractor shall coordinate his work with that of the various other trades to allow for an orderly and neat installation of the work of all trades.

The Architect reserves the right to effect minor changes in the location of fixtures, outlets and equipment, up to the time of rough-in without additional cost.

Prior to submitting his Bid, the Contractor shall visit the project site and carefully examine and familiarize himself with all conditions affecting this work. Submission of a Bid shall be indication of his knowledge of all such conditions. No additional payment will be allowed for errors or omissions resulting from lack of knowledge of existing conditions.

Drawings and Specifications shall be considered supplementary to one another and any material or labor called for in one shall be furnished even though not specifically mentioned in both.

The electrical drawings are schematic and are intended to show the approximate location of the fixtures, outlets and equipment. Dimensions, where given in figures on the drawings, shall take precedence over those scaled and shall be field verified.

CODES, PERMITS AND FEES

All material shall be new and shall bear certification of Underwriters Laboratories (UL) where such labels or stamps are customary, required or specified.

All work and material shall be in compliance with the latest edition of the National Electrical Code (NECA-70), as interpreted by the local inspection authority having jurisdiction, as well as all local, state and federal ordinances, rules and regulations. In the event any portion of the installation shown or specified fail to meet these requirements, it shall be brought to the attention of the Architect at the time of the bidding. Upon submitting his Bid, the Contractor shall be held responsible for all costs incurred for providing additional work required due to these codes.

The Electrical Contractor shall obtain and pay for all permits required for the completion of the work. Upon completion, furnish to the Architect, a certificate of final inspection and approval from the inspection authorities having jurisdiction.

GUARANTEE

Contractor shall furnish the Owner with a written guarantee to remedy all defects in workmanship and materials at no cost for a period of one year after final acceptance.

Cost of power consumed shall be paid by the General Contractor.

RECORD DRAWINGS:

The Architect will furnish an extra set on which the Contractor shall record all deviations and/or changes from contract drawings and specifications. All such deviations and/or changes shall be noted in red pencil.

After completion of the job, this set of drawings shall be delivered to the Architect in good condition as a permanent record of the installation as actually constructed.

EQUIPMENT IDENTIFICATION:

Provide nameplates on all major equipment. Equipment which shall have nameplates includes, but is not limited to, the following:

Panelboards
Contactors/Motor starters
Time clocks
Safety Switches

Nameplates shall be laminated phenolic with a black surface and white core, unless specified different. Minimum size is 1"x3"x1/16". Lettering shall include name of equipment, specific unit number, voltage, and other instruction as required. Nameplates to be fastened with temperature resistant, pressure sensitive adhesive.

CITY OF MASSILLON
FIRE STATION 3
955 WALES ROAD N.E.
MASSILLON OHIO



HARRIS DAY
ARCHITECTS

INCORPORATED
3821 WALES ROAD N.W.
MASSILLON, OHIO 44645
PHONE: 216-837-4248

REVISIONS:

JOB NO. 8945 FIRE
DATE: FEB 5, 1990
DWN BY:
CKD BY:

SP-2

16. ELECTRICAL CON'T.

OPERATING INSTRUCTIONS:

At completion of the project and prior to final payment, instruct the Owner's personnel in the proper operation of all equipment.

Contractor shall submit a complete set of data consisting of all approved equipment submittal drawings, operating instructions, parts lists, maintenance and service manuals, etc. for all equipment installed under this Contract. Data shall be neatly assembled in a three ring binder with alphabetically arranged index tabs. This shall be provided prior to requesting final payment.

SPECIFIED PRODUCTS

Where material or equipment is specified by performance data only, any material or equipment meeting the specified data may be bid.

Where one brand is specified, that product must be bid as Base Bid. Where more than one brand name is specified, that product named first is whose dimensions and performance characteristics were used in the design. Any product so named may be bid as Base Bid, however should building changes be required because of differing dimensions or performance characteristics of that product, the additional cost must be included in the Bid. In such case, submit complete drawings resolving necessary changes.

SHOP DRAWINGS:

Shop drawings shall be submitted for all items listed or as called for in the General Conditions of the contract:

Panelboards
Light fixtures
Starters
Connectors
Generator
Transfer Switch

WORKMANSHIP

The entire electrical system shall be made in a neat and workmanlike manner and shall reflect the best recommended practices.

In case of careless or incompetent work, the Architect reserves the right to have the work done by others with the cost of same charged against this Contractor.

The premises shall at all times be kept clean of debris and waste materials caused by work herein specified.

3.

CUTTING AND PATCHING

Cutting and patching shall be kept to a minimum by anticipating and providing sleeves where required and by scheduling work to prevent cutting. Instruct General Contractor as to size and position of all wall chases, pipe shafts, etc. Openings around sleeves shall be sealed as directed.

In those cases where cutting and patching is required, execute carefully to avoid injury to any part of the building structure. Remove as little material as possible. In no case, shall reinforcing or structural steel be cut without specific written permission from the Architect.

RACEWAY SYSTEMS:

All raceway systems shall be installed in strict accordance with drawings, specifications, applicable codes and ordinances. Raceways shall be one of the following:

Galvanized rigid conduit (GRC)
Electric metallic tubing (EMT)
Flexible metal conduit
Metal wireway
Rigid plastic conduit (PVC)

Conduit smaller than 1/2" shall not be used. Conduit embedded in or under concrete shall be a minimum of 3/4". Other sizes as indicated on drawings or as required by NEC for number and size of conductors installed.

EMT may be used in interior partitions and above suspended ceilings as permitted by NEC. Maximum size is 2". Steel set screw fittings shall be used. Die cast fittings are not permitted. Connectors shall have insulated throats.

GRC shall be used above 2", exterior above grade and as required by NEC.

PVC may be used below grade and under concrete slab. Schedule 40 only.

Flexible metal conduit shall be used for all conduit connections to motors and to all other devices subject to vibration or movement. Liquidtight metal conduit shall be used when installed in damp or wet locations. A separate ground wire shall be installed in all flexible and liquidtight metal conduit.

GRC conduit shall be terminated with double locknut and plastic bushing.

4.

CONDUCTORS:

All conductors shall be stranded copper. Minimum size conductor shall be #12 unless otherwise noted on drawings or in the specifications.

Insulation for all conductors shall be rated for 600 volts. Type THWN insulation shall be used for sizes #12 through #6. Larger than #6 may be THW or THWN.

Splices shall be eliminated where possible but where necessary they shall be made in approved manner in approved junction box.

Splices in #10 or smaller wire shall be made with "Scotchlok" or equal connectors.

Splices in #8 or larger wires shall be made with approved mechanical connectors and covered with "Scotch fil" and "Scotch 33" or equal.

#10 or smaller wires shall be factory color coded. Larger than #10 shall be field color coded at each end and in each pull or junction box with colored phasing tape. Separate color for each phase and neutral shall be used consistently throughout the system.

ELECTRICAL SERVICE:

The existing electrical system service is underground 120/240 volt, 1 phase, 3 wire as supplied by the Ohio Edison Company.

GROUNDING:

The entire power and lighting system shall be permanently and effectively grounded in accordance with the latest edition of the NEC.

FUSES:

All fuses shall be Class R Fusetrans as manufactured by Busmann or equal.

SAFETY SWITCH:

Safety switches to be quick-make, quick-break type, heavy duty, horsepower rated. Size and type as shown on drawings.

5.

LOAD CENTERS:

Load centers shall be Square D type QO as indicated on Drawings. I.T.E., G.E. or Westinghouse are considered as equal.

Directory cards are to be accurately and neatly typewritten.

Provide lock-on/off devices on night light and other circuits so indicated.

WIRING DEVICES:

Switches, receptacles, plates plugs, etc. shall be heavy-duty specification grade as indicated on drawings or specified hereon.

All devices shall be brown unless otherwise noted with stainless steel covers.

LIGHT FIXTURES AND LAMPS:

Furnish and install complete with lamps all fixtures as shown on drawings.

All fixtures to be securely fastened to building structure by the Electrical Contractor.

Provide separate grounding conductor in flexible metal conduit between outlet box and fixture and ground fixtures with same.

Provide all plaster frames, canopies, endcaps, stems etc. as required for a complete installation.

All lamps used for temporary lighting during construction shall be replaced at the completion of the project prior to final acceptance.

TEMPERATURE CONTROL:

Temperature control wiring shall be by Electrical Contractor.

EXCAVATING:

Provide all excavation and backfill required for the installation of work under this Contract.

All exterior conduit to have a minimum cover of 30 inches.

All surfaces to be repaired to original condition.

Backfilling shall be with good clean earth in 6" layers carefully mechanically tamped as required.

Remove from the site and dispose of all excavated material not required or not suitable for backfill.

6.

16. ELECTRICAL CON'T.

GENERATOR:

Provide emergency generator, transfer switch and all associated equipment as shown on drawings and required for a complete installation.

Muffler to be rated for critical application.

Mechanical Contractor shall provide natural gas line to generator. Regulator, solenoid valve and shutoff valve shall be provide by the generator supplier.

Mount generator on isolation pad.

Start-up and instruction to Owner shall be provided by a factory trained manufacturer's representative.

CITY OF MASSILLON
FIRE STATION 3
955 WALES ROAD N.E.
MASSILLON OHIO



HARRIS DAY
ARCHITECTS

INCORPORATED
3821 WALES ROAD N.W.
MASSILLON, OHIO 44646
PHONE: 216-837-4248

REVISIONS:

JOB NO: 8945 FIRE
DATE: FEB 5, 1990
OWN. BY:
CKD. BY:

SP-3