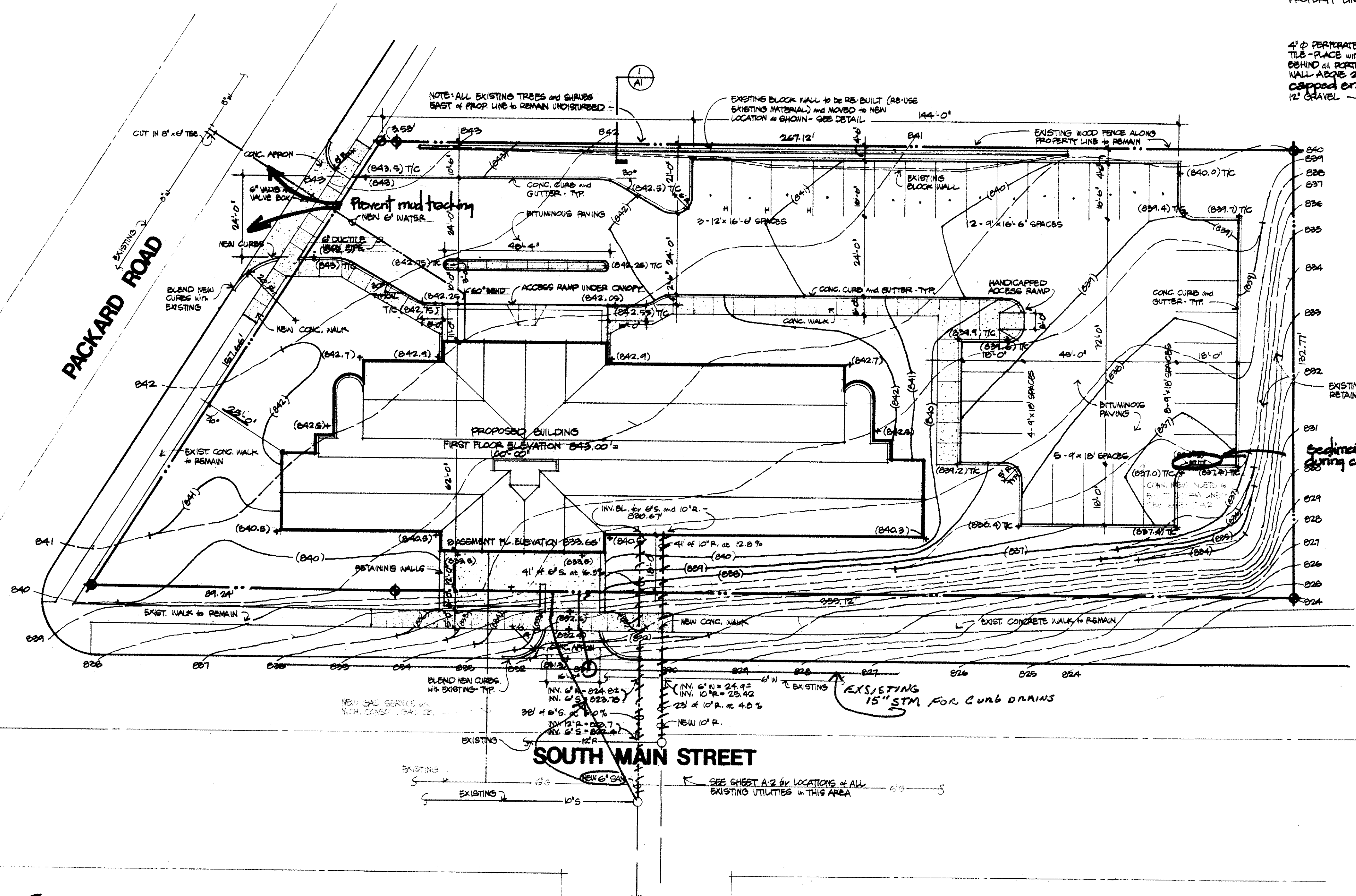
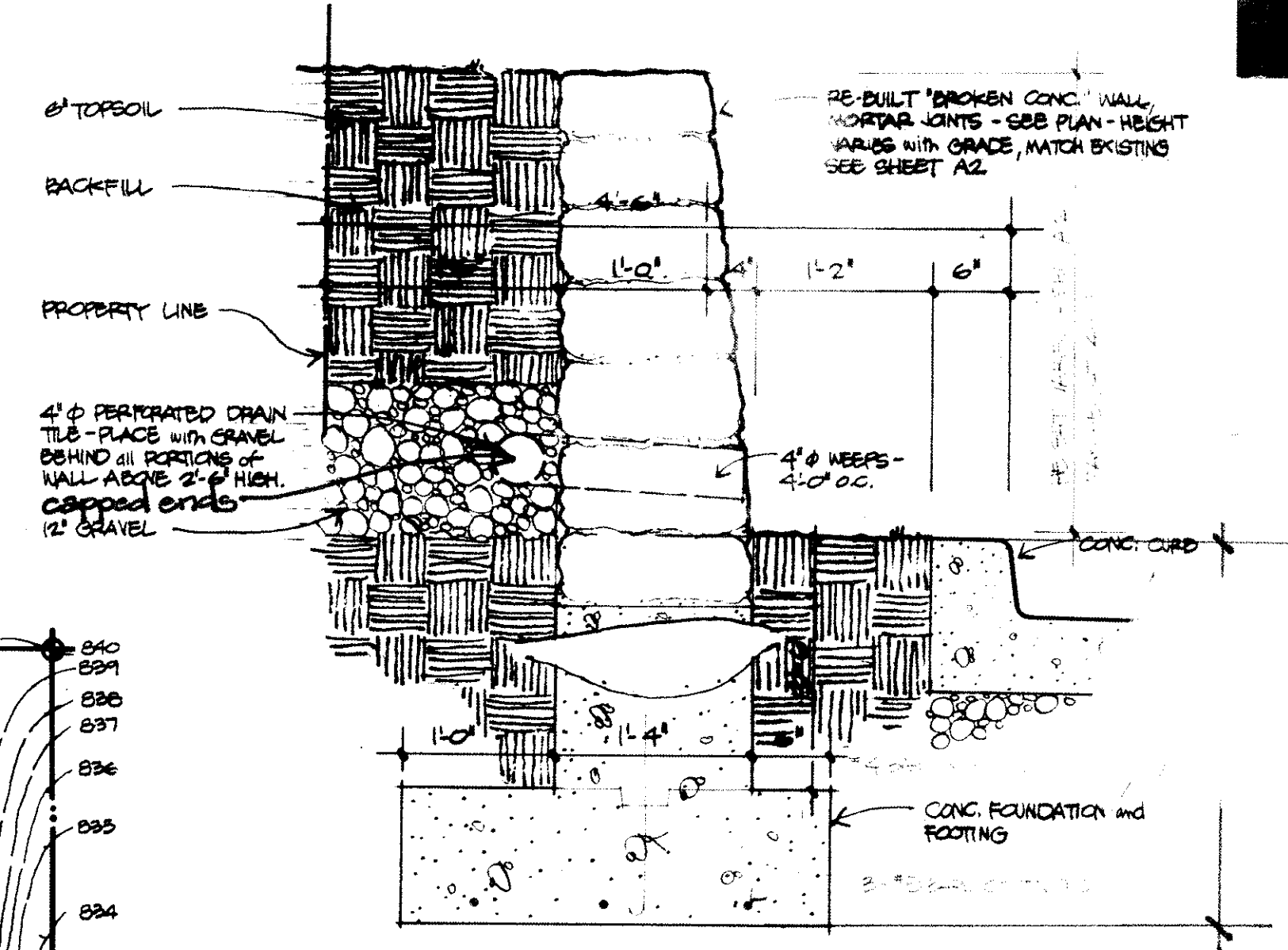


Herrmann & Holman, Inc formerly
COLVIN-ROBINSON-ASSOCIATES INC ARCHITECTS & PLANNERS 210 EAST HURON STREET ANN ARBOR, MICHIGAN 48104 (313) 662-4501
 A COMPONENT OF THE HERRMANN & HOLMAN PARTNERS, INC
 PROJECT 7909 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HOUSING FOR THE ELDERLY ANN ARBOR, MICHIGAN HUD PROGRAM RESERVATION NO. MICH-844
 ISSUED 1
A1

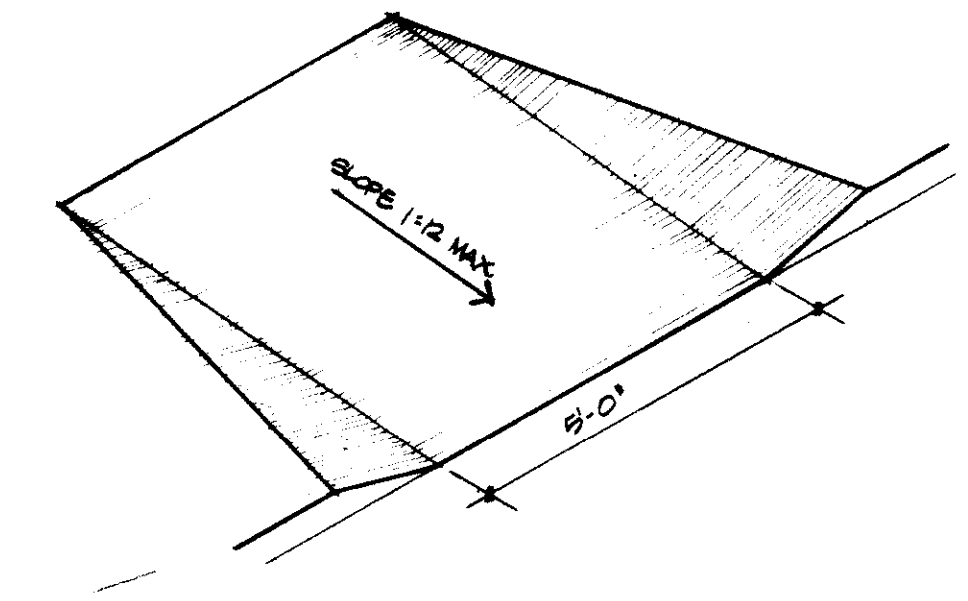
SITE PLAN
SCALE 1"=20'-0"



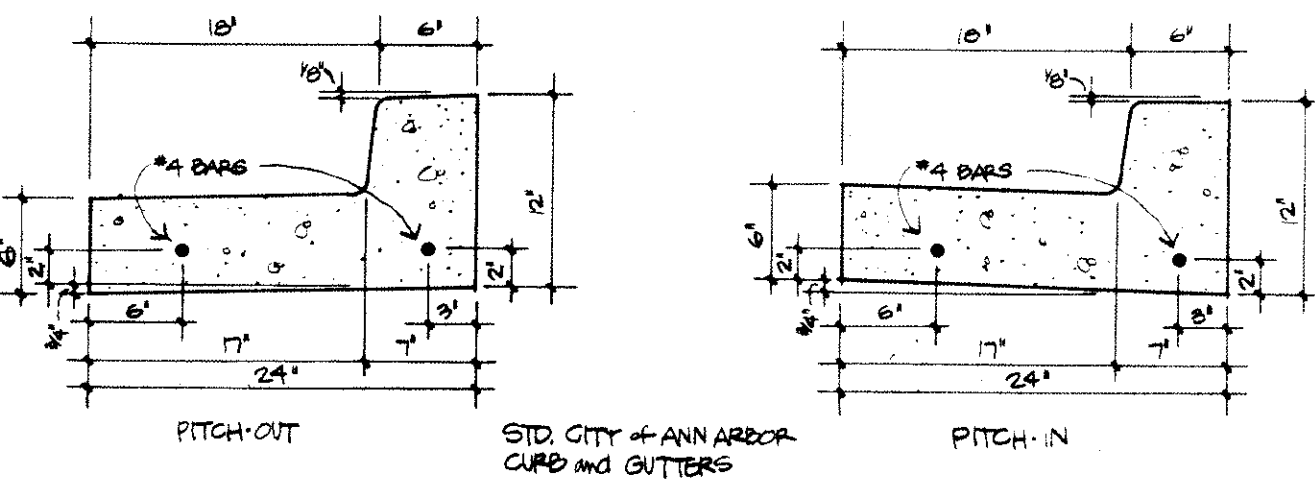
NOTES:
 SEE SHEET A2 FOR EXISTING UTILITIES AND INVERTS, BENCHMARKS, ADJACENT BUILDINGS, SOIL BORINGS, ETC.
 SEE SHEET L1 & LANDSCAPING PLANS
 SAN. SEWER TO BE C-700 EXTRA STRENGTH VIT CLAY PIPE
 STORM SEWER TO BE C-16 CLASS III REIN. CONC. PIPE



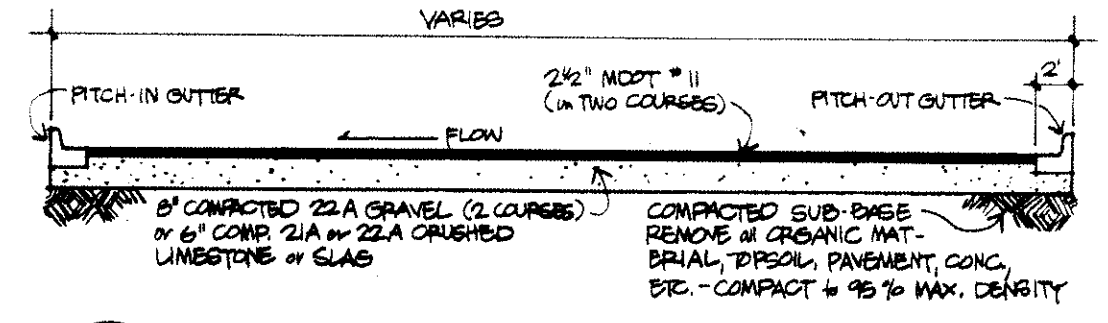
1 RETAINING WALL SECTION
SCALE 1"=1'-0"



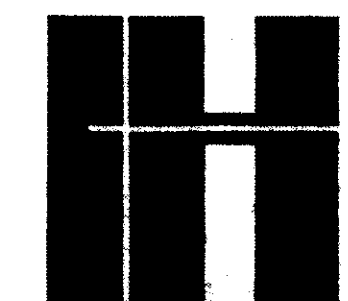
2 TYPICAL HANDICAPPED ACCESS RAMP
NO SCALE



3 CONCRETE CURB AND CUTTER
SCALE 1"=1'-0"

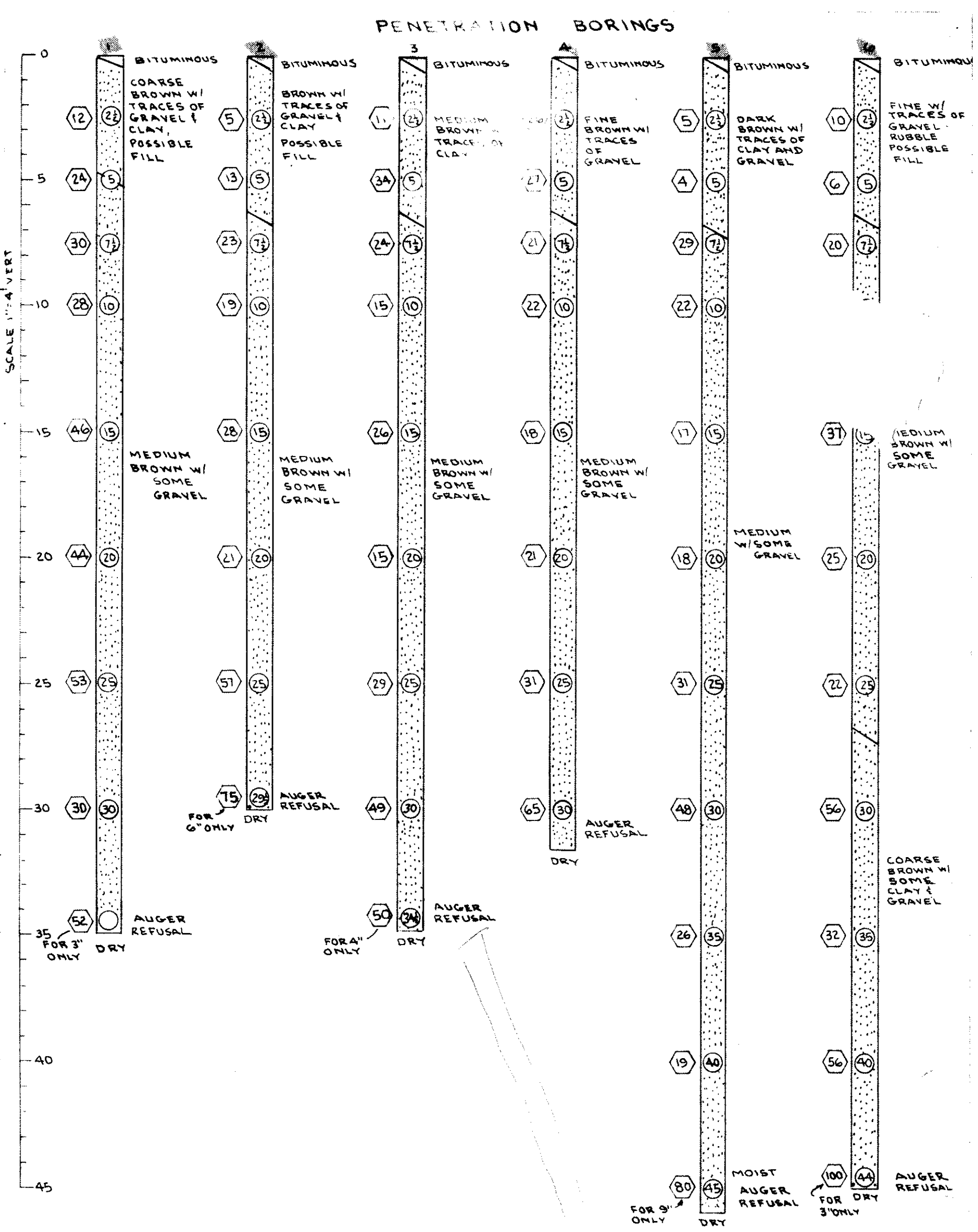
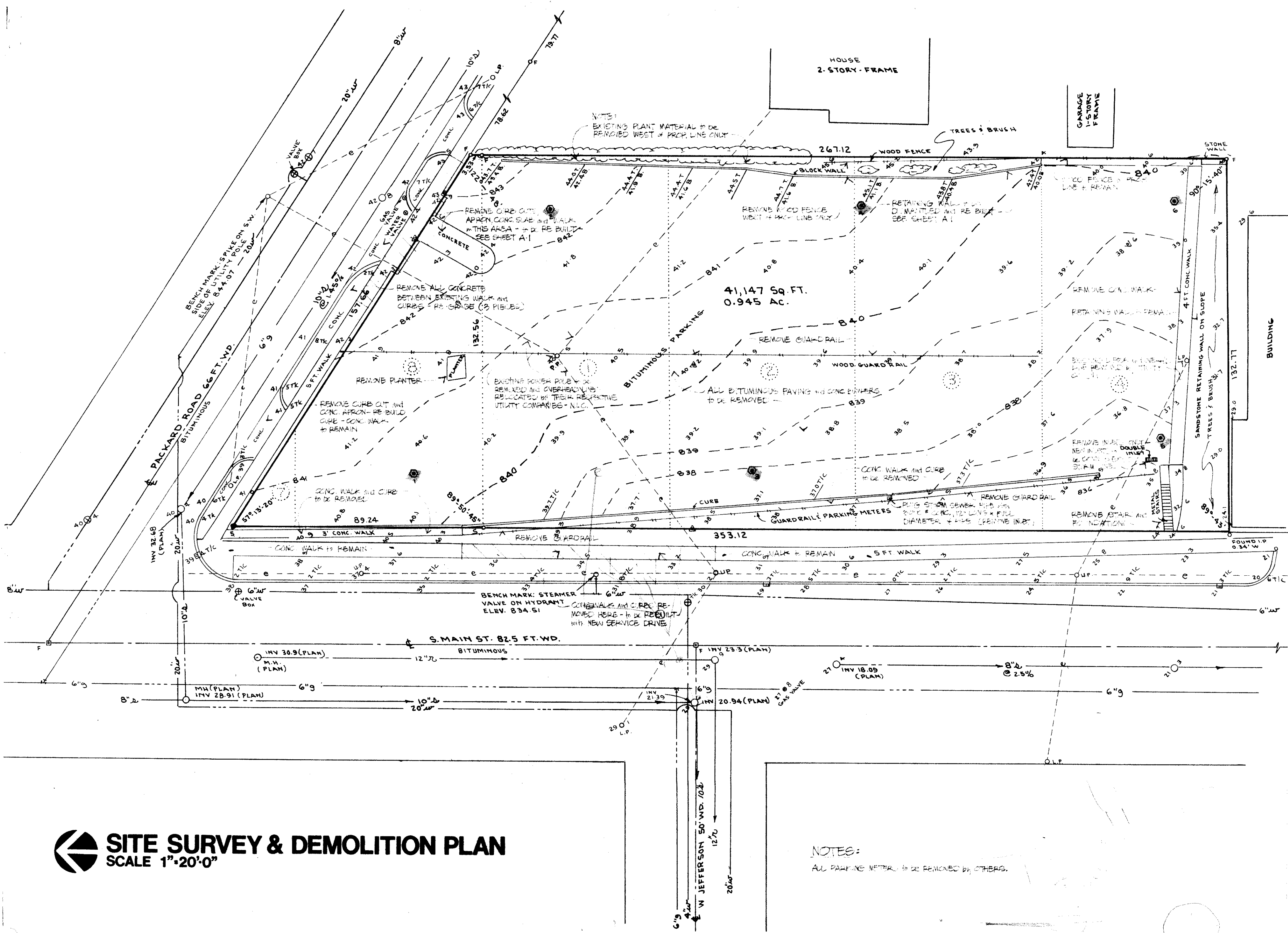


4 TYPICAL PAVEMENT SECTION
NO SCALE



COLVIN-ROBINSON-ASSOCIATES INC ARCHITECTS & PLANNERS 210 EAST HURON STREET ANN ARBOR, MICHIGAN 48104 (313) 662-4501 • A COMPONENT OF THE HERRMANN & HOLMAN PARTNERSHIP
 PROJECT #09 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HOUSING FOR THE ELDERLY ANN ARBOR, MICHIGAN HUD PROGRAM RESERVATION NO. MICH 646
 CONSULTANT: ATWELL-HICKS INC CIVIL ENGINEERS
 10 NORTH FIRST STREET ANN ARBOR, MICHIGAN 48106 (313)

SITE SURVEY & DEMOLITION PLAN



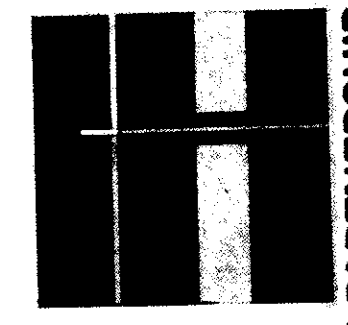
- LEGEND**
- SAND
 - SAMPLE NUMBER
 - APPROXIMATE LOCATION OF PENETRATION BORING
 - NUMBER OF BLOWS FOR PENETRATION OF 1 FT OF 2" O.D. SAMPLER W/ 140# HAMMER, W/ 30" DROP
 - UTILITY POLE
 - P.P. POWER POLE
 - L.P. LIGHT POLE
 - FENCE LINE
 - CRICK BASHIN
 - SPOT ELEVATION (ADD 800FT)
 - TOP OF CURB ELEV
 - TOP
 - BASE
 - OVERHEAD POWER LINE
 - EXISTING WATER LINE (VALVE)
 - EXISTING GAS LINE
 - EXISTING SANITARY SEWER
 - EXISTING STORM SEWER
 - IRON PIPE FOUND
 - CHISEL HOLE (LEADED) SET
 - COURSE LINE
 - TOP STATION
 - IRON PIPE SET
 - MONUMENT BOX FOUND

NOTE: NO UNDERGROUND EDISON OR TELEPHONE LINE ON RECORD PER PLAN AT THESE COMPANIES ON NOV. 6, 1978
 WATER MAIN SHOWN AS PER CITY UTILITY DEPARTMENT PLANS
 GAS MAIN SHOWN AS PER MICHIGAN CONSOLIDATED GAS CO. PLANS
 STORM & SANITARY SEWERS SHOWN AS PER FIELD LOCATIONS AND/OR CITY OF ANN ARBOR D.P.W. PLANS
 NOT ALL EXISTING PARKING LOT WOODEN FENCE, PARKING METERS, AND BUMPER BLOCKS ARE SHOWN

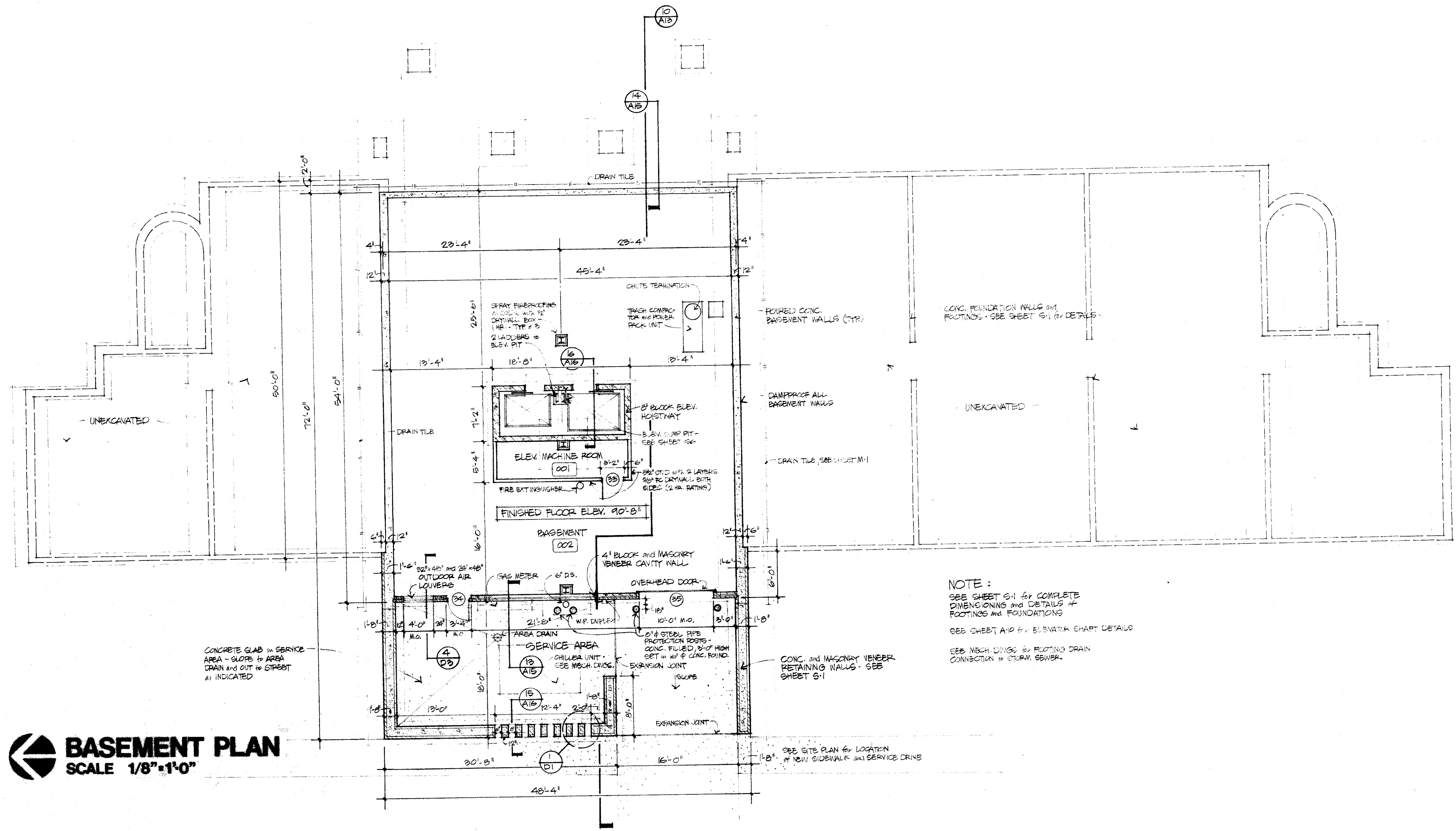
SITE SURVEY & DEMOLITION PLAN
 SCALE 1"=20'-0"

NOTES:
 ALL PARKING METERS TO BE REMOVED BY OTHERS.

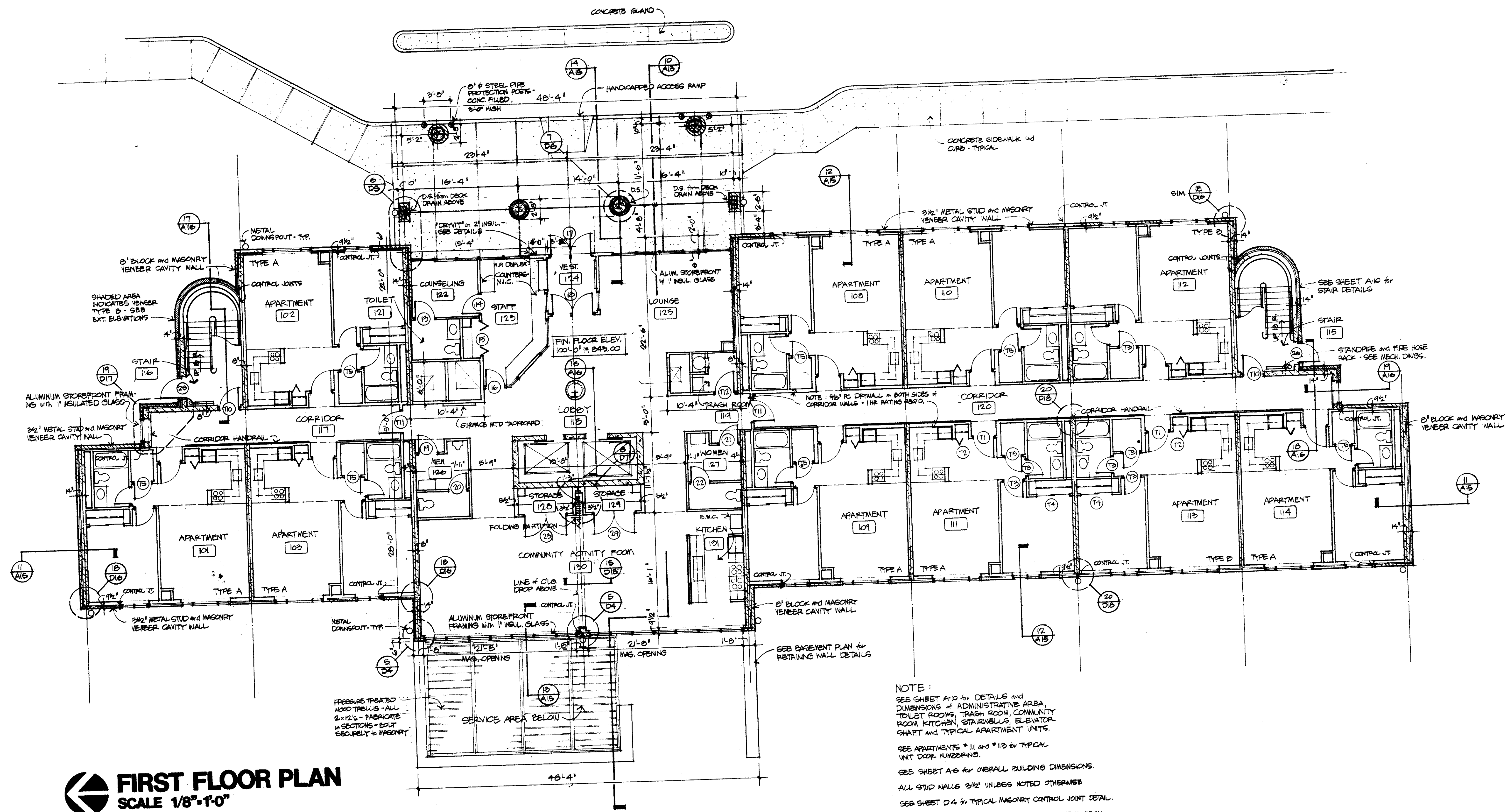
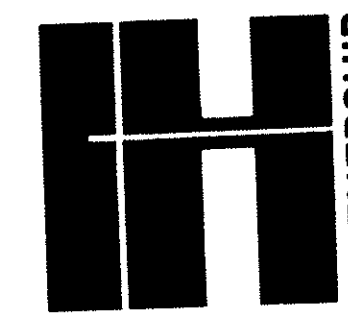
CLIENT COLVIN-ROBINSON ASSOC.	SECTION TOWN SOUTH-RANGE EAST	ATWELL-HICKS, INC.
PROPERTY AND TOPOGRAPHICAL SURVEY OF LOTS 1,2,3,4 BLOCK 5 SOUTH-RANGE 4 EAST & PART OF LOTS 7 & 8 BLOCK 4 SOUTH-RANGE 4 EAST	CITY OF ANN ARBOR WASHTENAW COUNTY, MICHIGAN	CIVIL ENGINEERS, SURVEYORS, PLANNERS ANN ARBOR 313-994-4000
	SCALE 1 INCH = 20 FEET DIMENSIONS IN FEET	DR. C.P.M. CH. J.L.G. DATE: MAY 7, 1978
		BOOK: P.T., 203-76 JOB: 32704
		119-76



BASEMENT PLAN
SCALE 1/8"=1'-0"

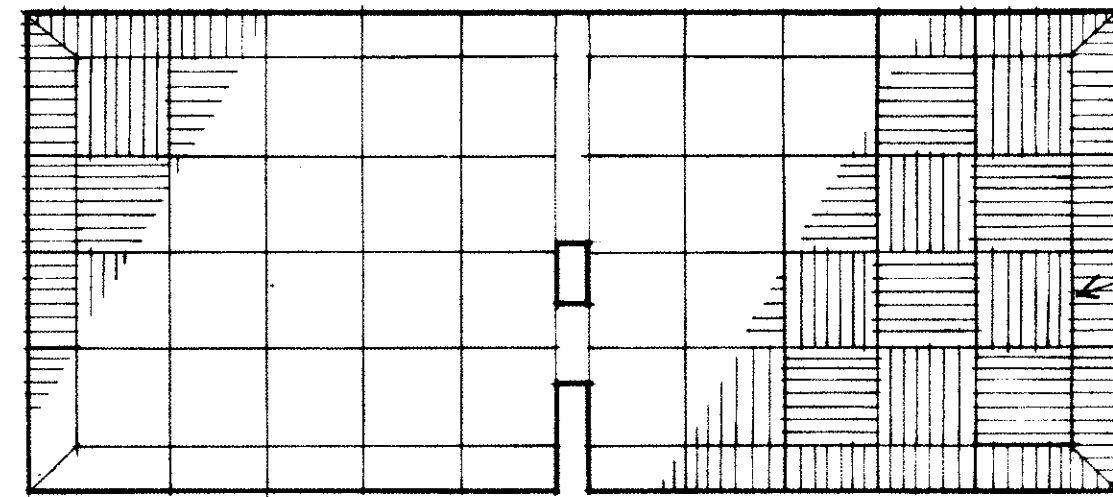
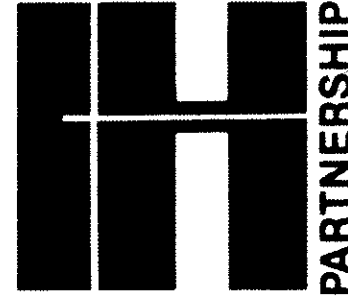


NOTE:
SEE SHEET S-1 FOR COMPLETE DIMENSIONING AND DETAILS OF FOOTINGS AND FOUNDATIONS
SEE SHEET A-10 FOR ELEVATION CHART DETAILS
SEE MICH. DRGS. FOR FLOODING DRAIN CONNECTION TO STORM SEWER.



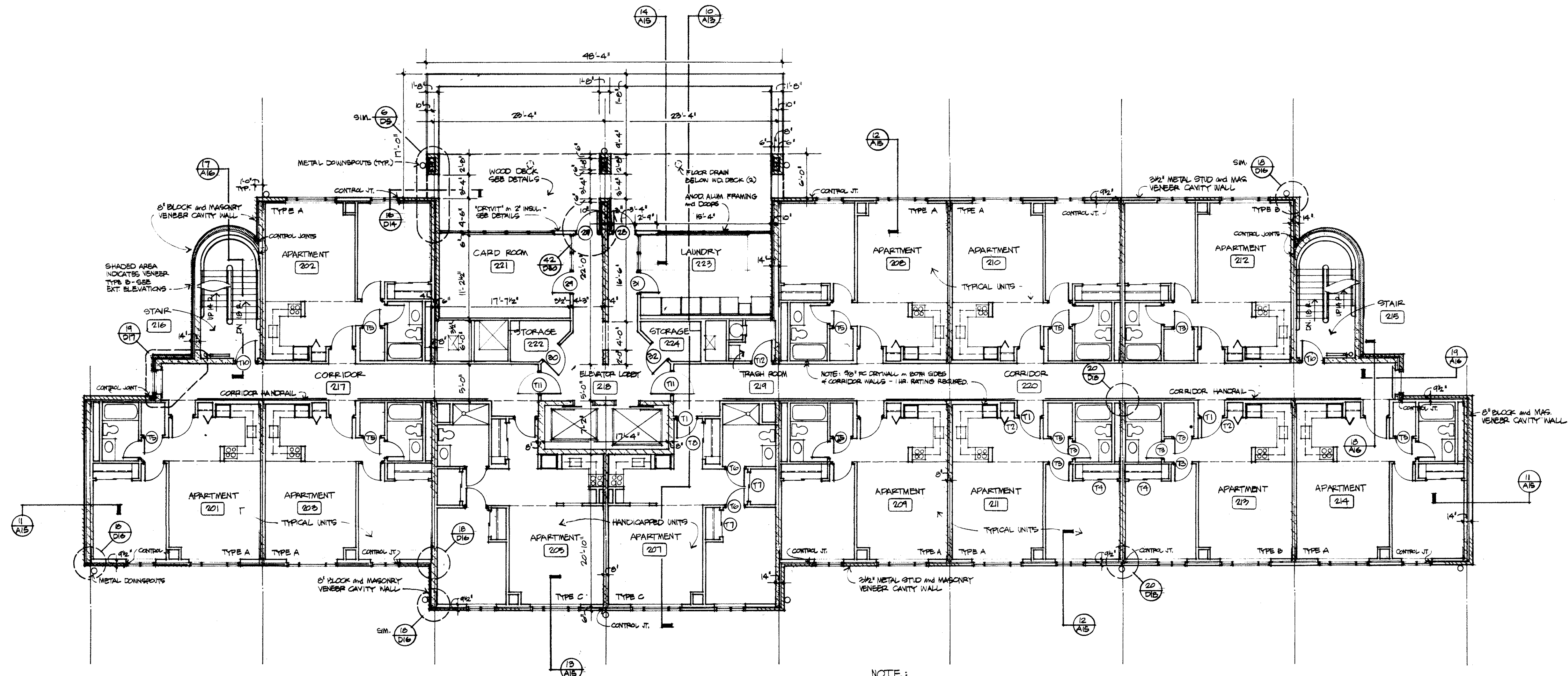
FIRST FLOOR PLAN
 SCALE 1/8"=1'-0"

NOTE:
 SEE SHEET A-10 FOR DETAILS AND DIMENSIONS OF ADMINISTRATIVE AREA, TOILET ROOMS, TRASH ROOM, COMMUNITY ROOM, KITCHEN, STAIRWELLS, ELEVATOR SHAFT AND TYPICAL APARTMENT UNITS.
 SEE APARTMENTS # 111 AND # 113 FOR TYPICAL UNIT FLOOR NUMBERING.
 SEE SHEET A-6 FOR OVERALL BUILDING DIMENSIONS.
 ALL STUD WALLS 3/4" UNLESS NOTED OTHERWISE.
 SEE SHEET D-4 FOR TYPICAL MASONRY CONTROL JOINT DETAIL.
 CORRIDOR WALL STUDS AND CRYSTALLS TO EXTEND UP TO DECK ABOVE - ALL OTHER WALLS EXTEND TO CROPPED CEILING ONLY (PROVIDE BRACING TO REB.D.)



WOOD DECK LAYOUT

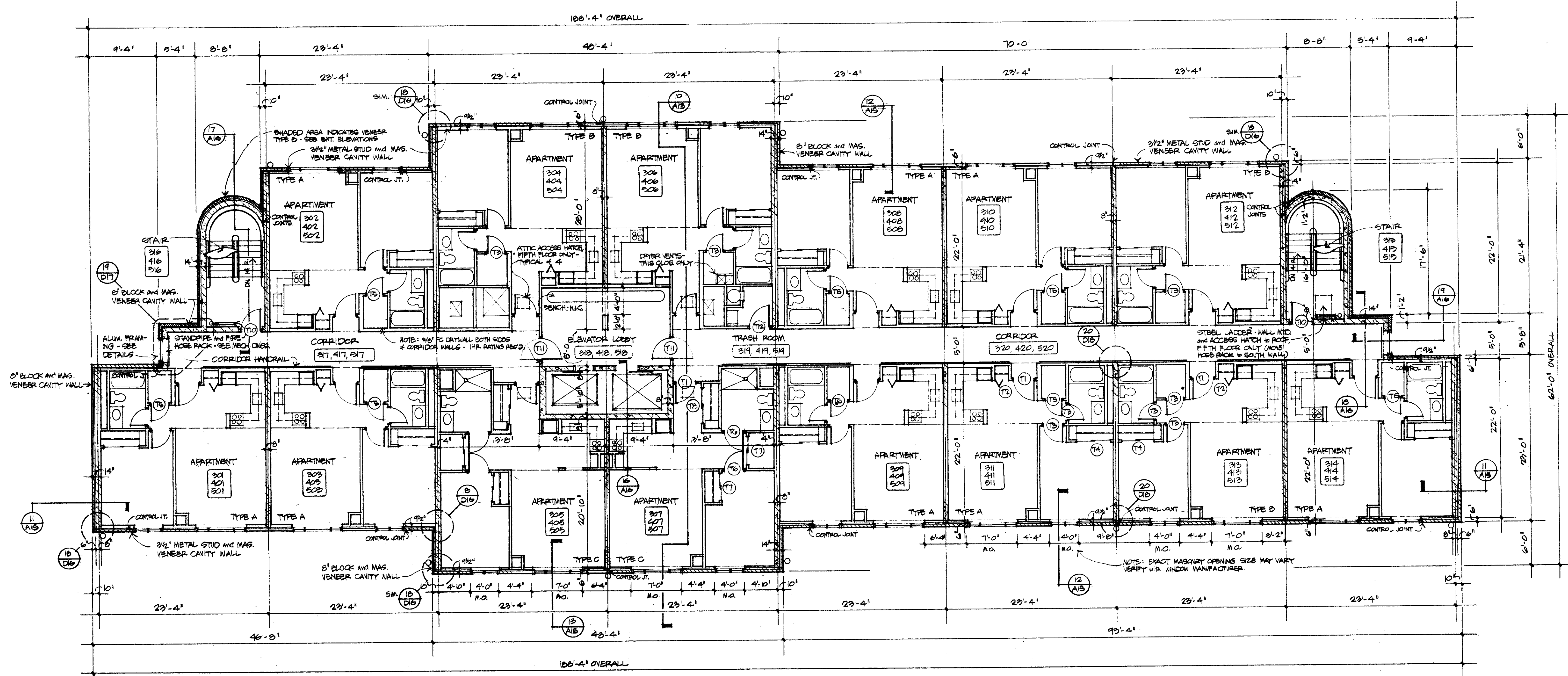
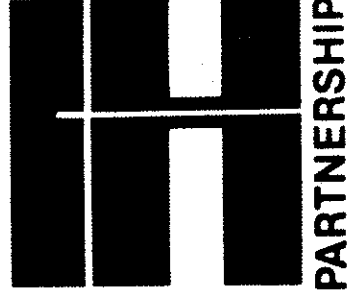
WOOD DECK TO BE BUILT IN 4" x 4" SECTIONS, LAYOUT AS SHOWN. SEE SECTION 14/A-15 FOR DETAILS. SECTIONS INSTALLED "LOOSE" (TO BE REMOVABLE), WOOD TO BE PRESSURE TREATED.



NOTE:
 SEE SHEET A10 FOR DETAILS AND DIMENSIONS OF TRASH ROOM, STAIRWELLS, ELEVATOR SHAFT, LAUNDRY ROOM AND TYPICAL APARTMENT UNITS.
 SEE SHEET A16 FOR OVERALL BUILDING DIMENSIONS
 SEE APT. 211 AND 219 FOR TYPICAL UNIT DOOR NUMBERING
 SEE APT. 207 FOR HANDICAPPED UNIT DOOR NUMBERING
 ALL STUD WALLS 5/8" UNLESS NOTED OTHERWISE
 SEE SHEET D-4 FOR TYPICAL CONTROL JOINT DETAILS
 CORRIDOR WALL BRIDS AND DRYWALL TO EXTEND TO DECK ABOVE - ALL OTHER WALLS EXTEND TO DROPPED CEILING ONLY (PROVIDE BRACING AS REQ'D)

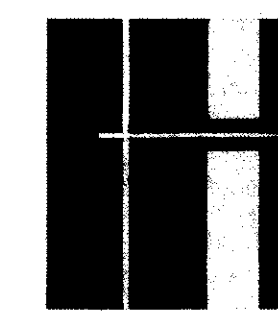
SECOND FLOOR PLAN
 SCALE 1/8"=1'-0"

SECOND FLOOR PLAN

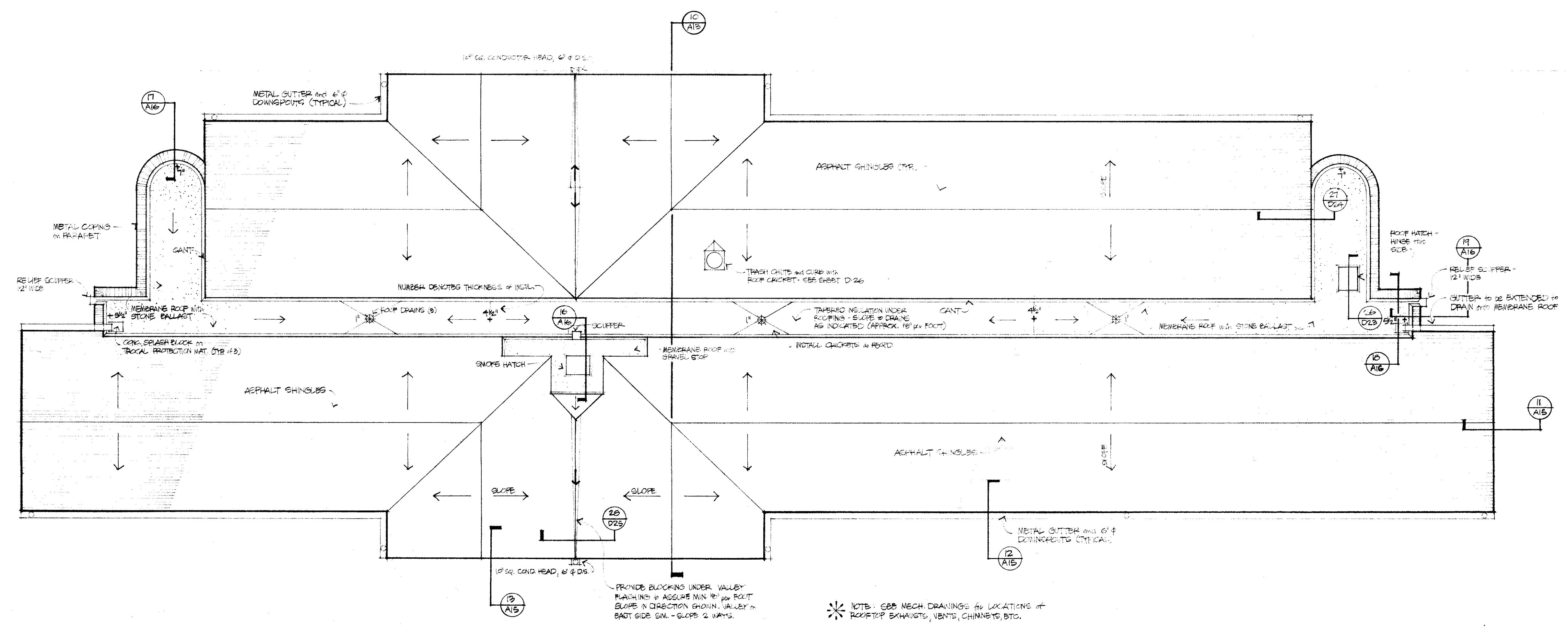


TYPICAL FLOOR PLAN [3,4,5]
SCALE 1/8"=1'-0"

NOTE:
 SEE SHEET A10 FOR DETAILS AND DIMENSIONS OF TRASH ROOM, STAIRWELLS, ELEVATOR SHAFT AND TYPICAL APARTMENT UNITS.
 SEE APT. 301 AND 302 FOR TYPICAL UNIT DOOR NUMBERING
 SEE APT. 307 FOR HANDICAPPED UNIT DOOR NUMBERING
 ALL STUD WALLS 2 1/2" UNLESS NOTED OTHERWISE
 SEE SHEET D-4 FOR TYPICAL CONTROL JOINT DETAILS
 CORRIDOR WALL STUDS AND DRYPWALL TO EXTEND UP TO DECK ABOVE - ALL OTHER WALLS EXTEND TO CEILING ONLY (PROVIDE BRACING & REGRD.)
 NOTE: EXACT WINDOW OPENING SIZE MAY VARY VERIFY WITH WINDOW MANUFACTURER.



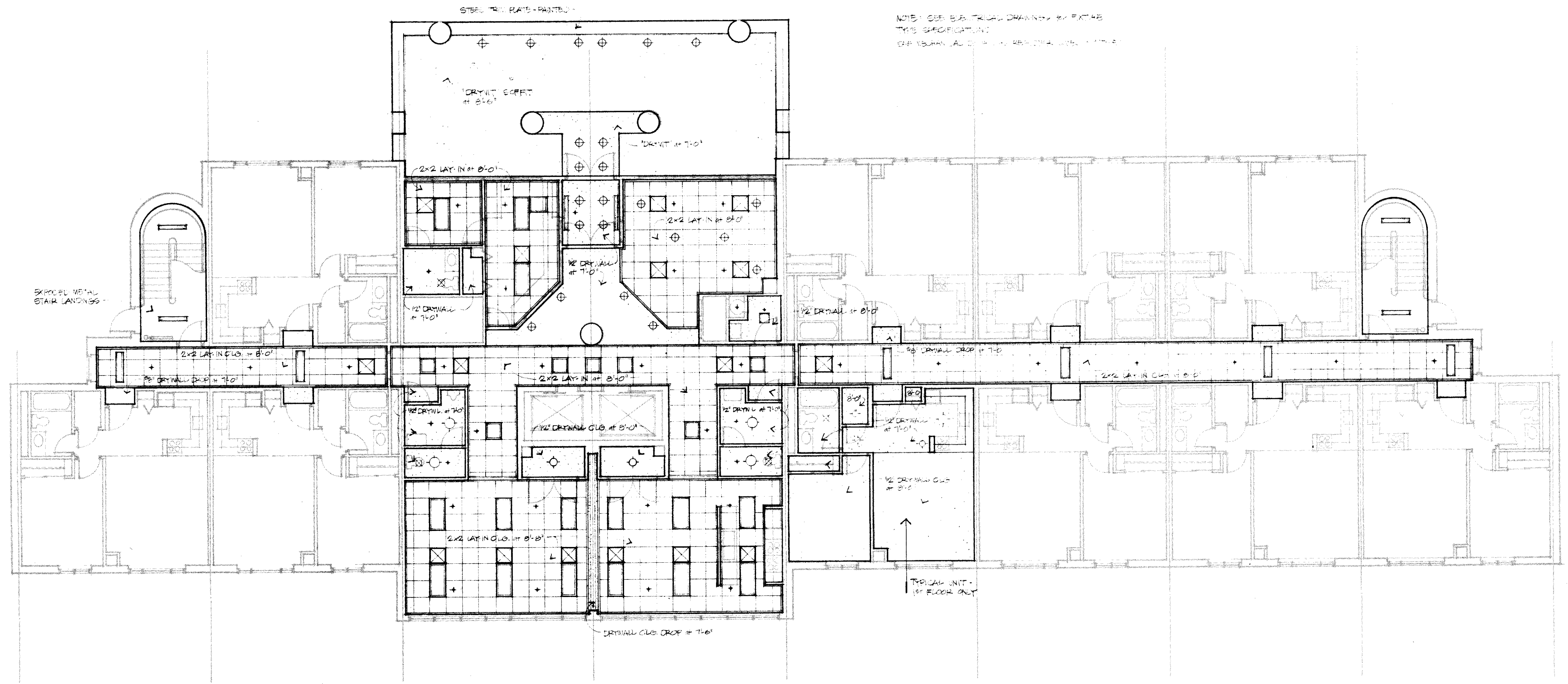
ROOF PLAN
 SCALE 1/8"=1'-0"



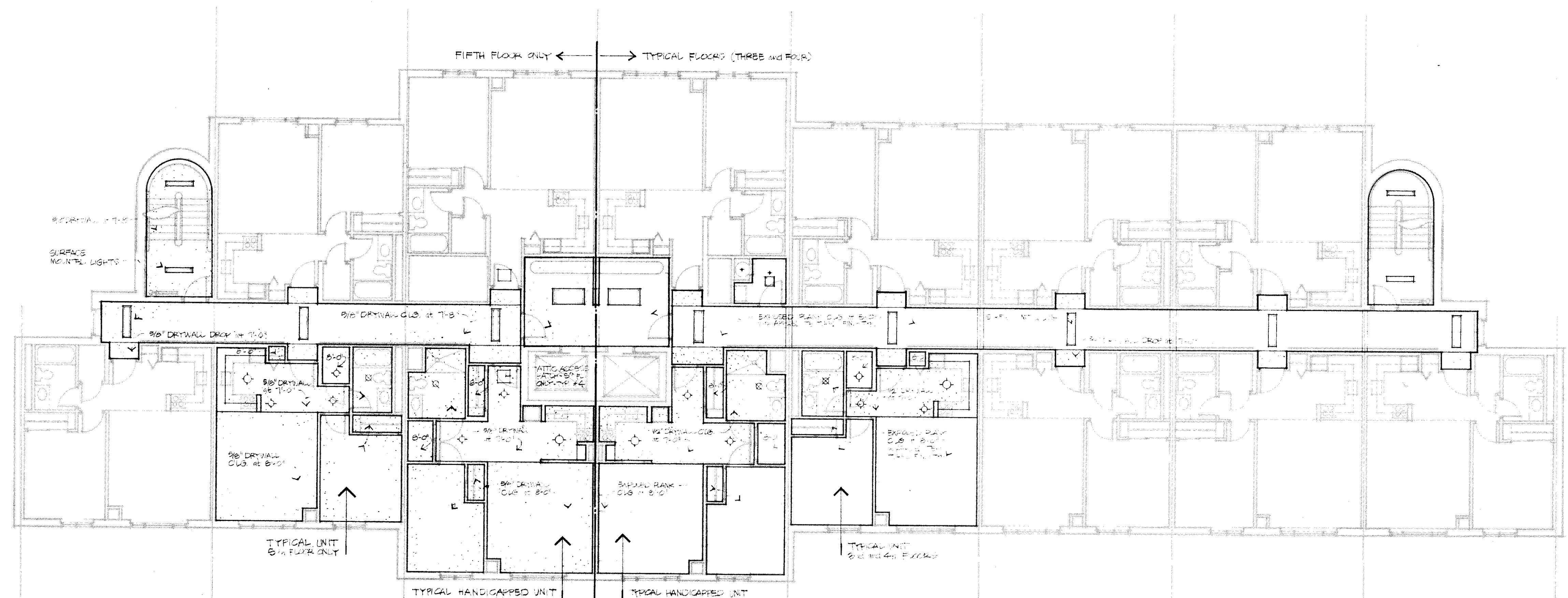
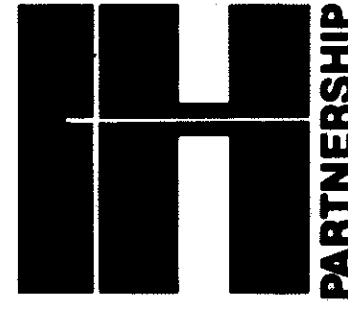


FIRST FLOOR REFLECTED CEILING PLAN

- LEGEND**
- RECESSED 2x4 FLUORESCENT FIXTURE
 - RECESSED 4x4 SURFACE WITH 4x4 FLUORESCENT FIXTURE
 - SURFACE WITH FLUORESCENT FIXTURE
 - RECESSED INCANDESCENT DOWNLIGHT
 - SURFACE WITH INCANDESCENT PENDANT HEADS
 - EXHAUST FAN
 - SUPPLY AIR REGISTER
 - SURFACE WITH VALANCE LIGHT

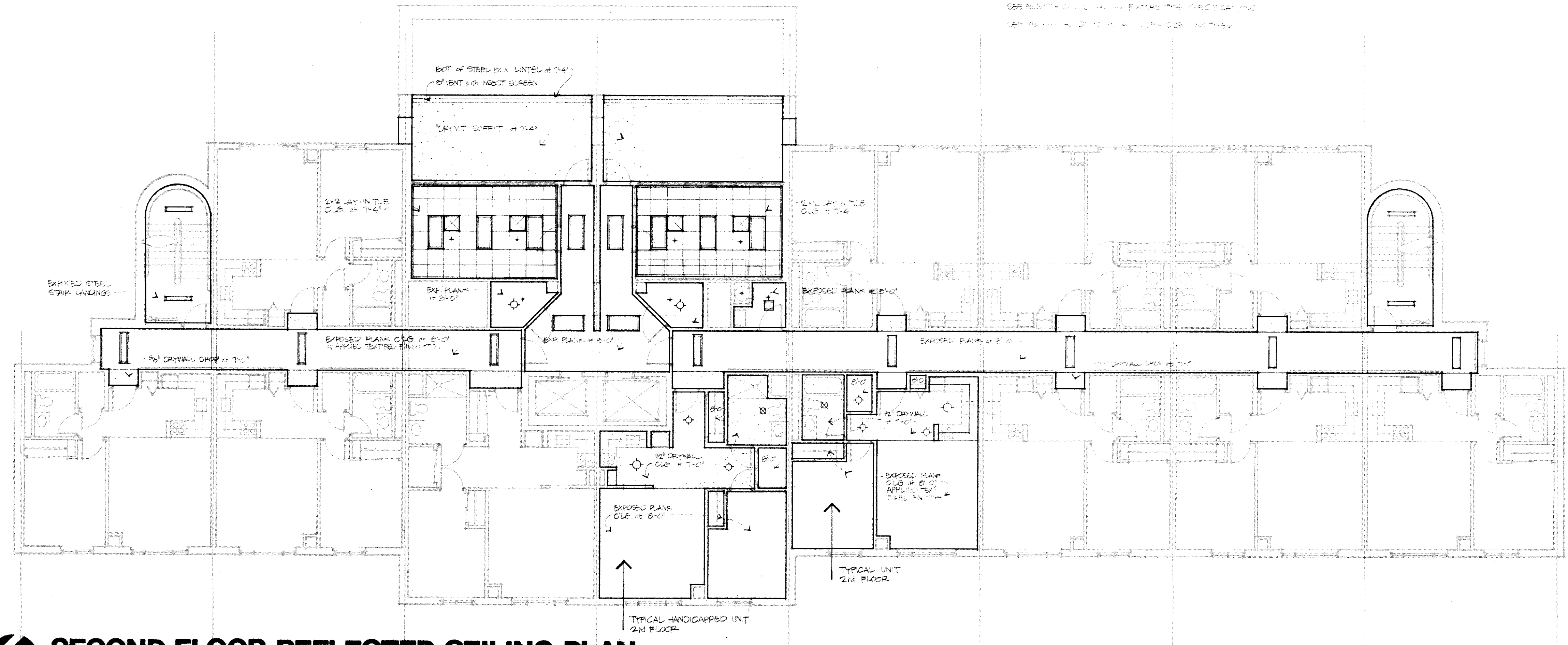


FIRST FLOOR REFLECTED CEILING PLAN
 SCALE 1/8"=1'-0"

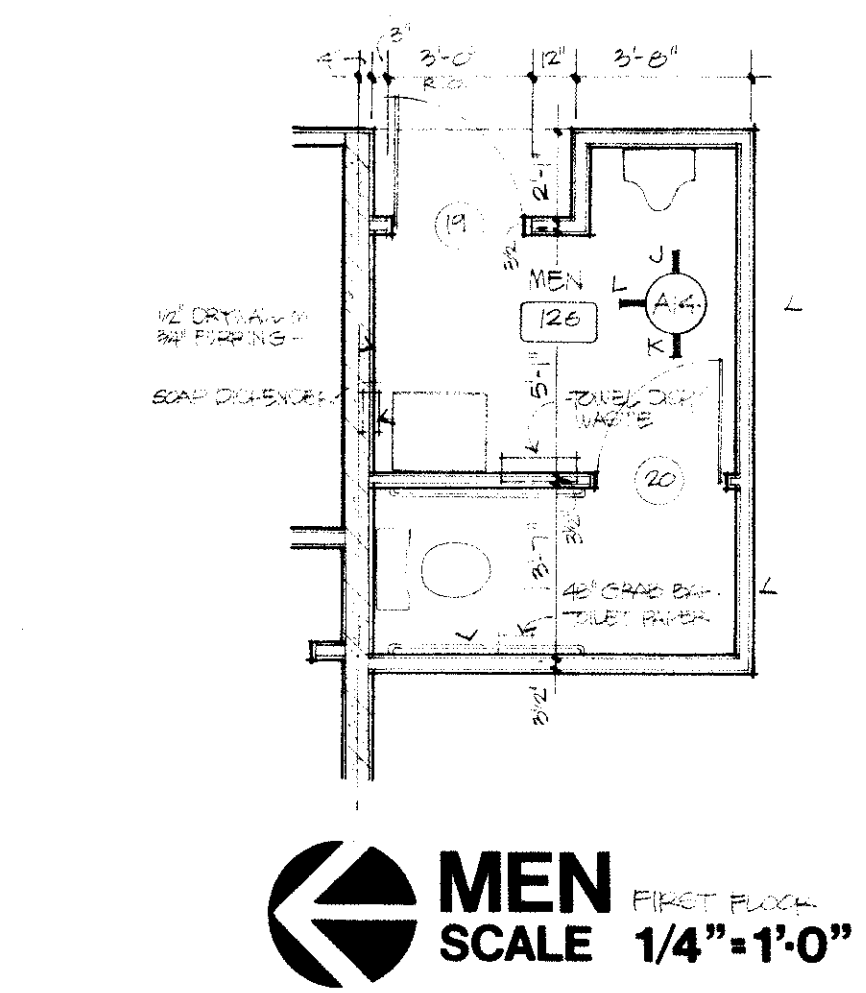
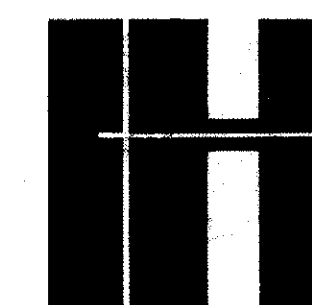


TYPICAL FLOOR REFLECTED CEILING PLAN
 SCALE 1/8"=1'-0"

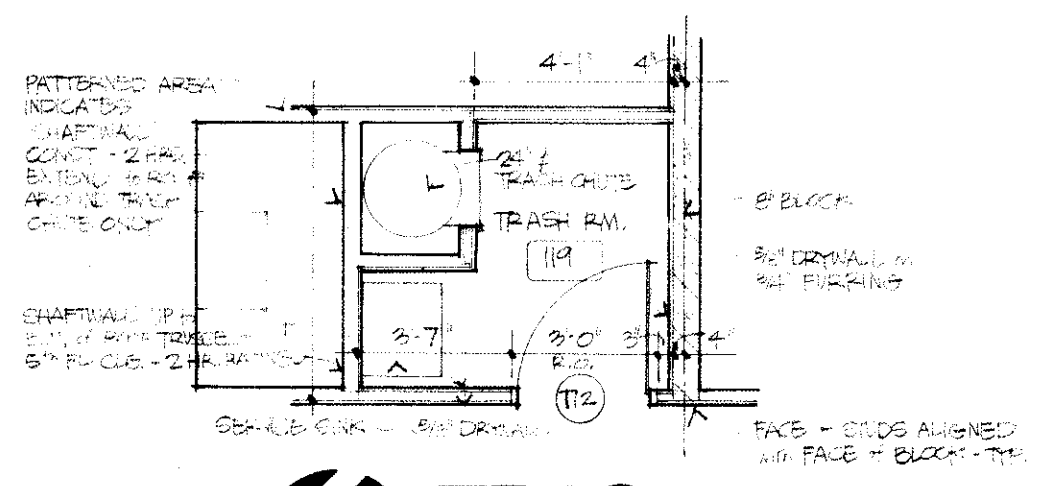
NOTES:
 1. SEE REFLECTED CEILING PLAN FOR GENERAL
 2. SEE REFLECTED CEILING PLAN FOR EXPOSED PLANK REFLECTED CEILING
 3. SEE REFLECTED CEILING PLAN FOR EXPOSED PLANK REFLECTED CEILING



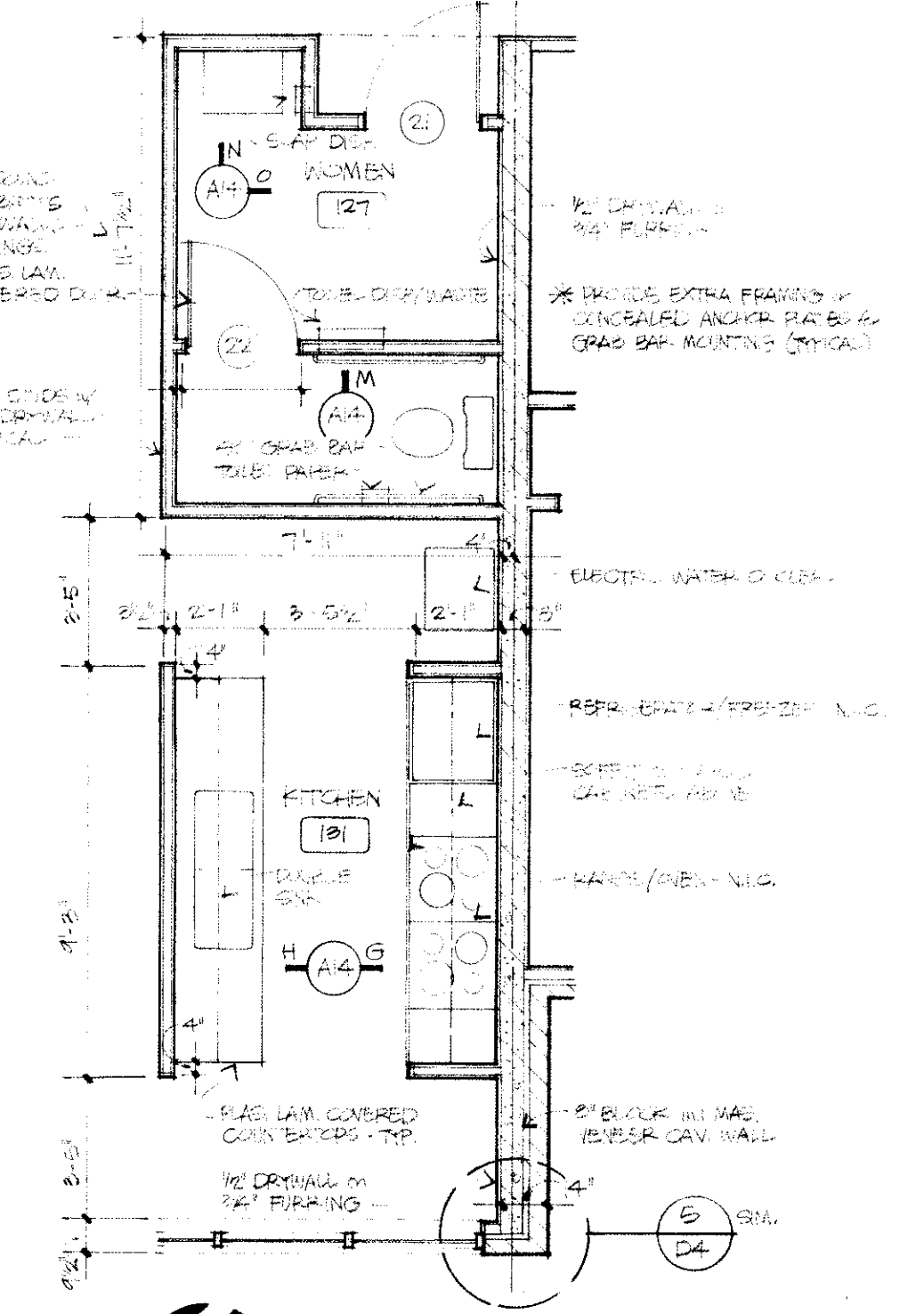
SECOND FLOOR REFLECTED CEILING PLAN
 SCALE 1/8"=1'-0"



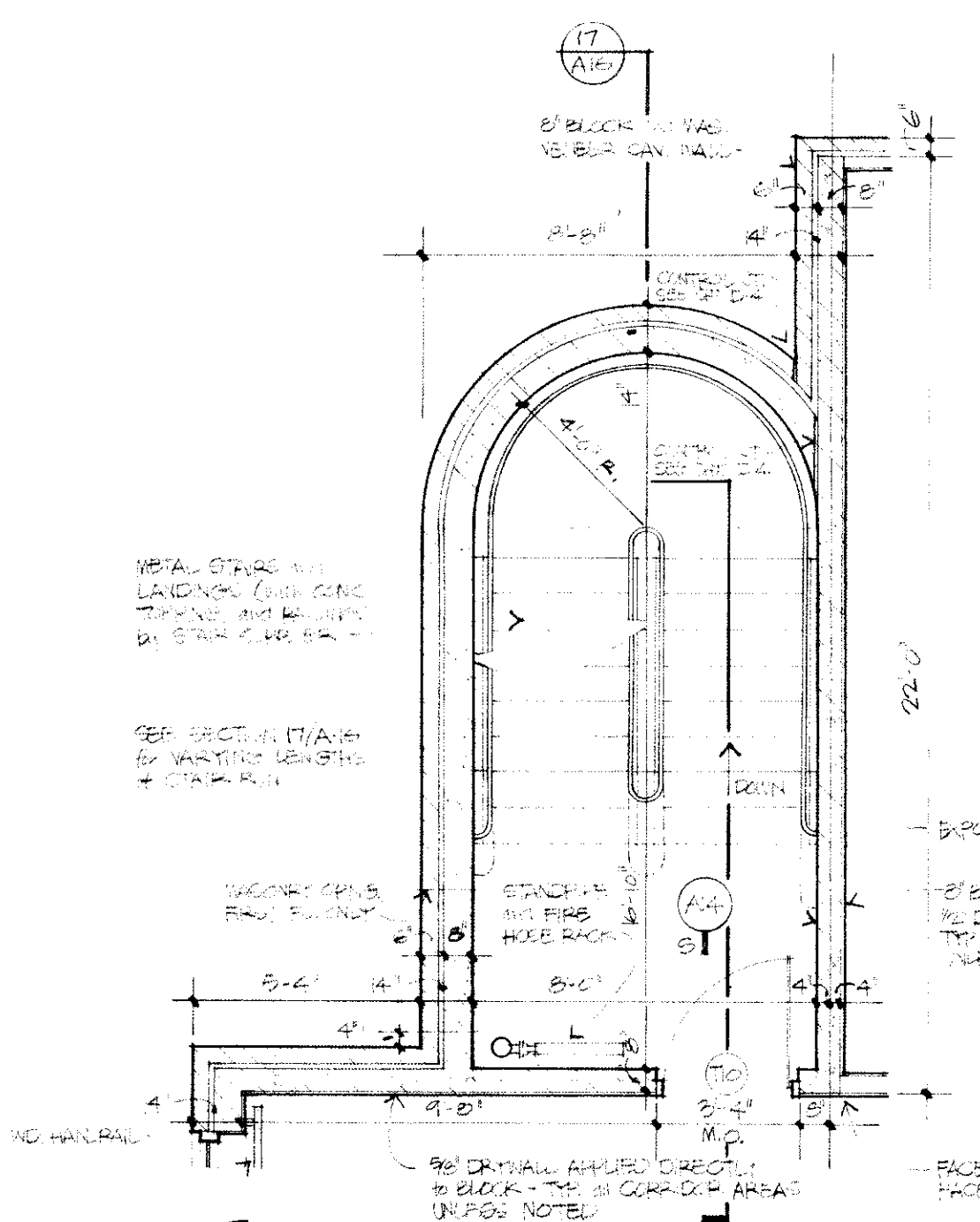
MEN
SCALE 1/4"=1'-0"



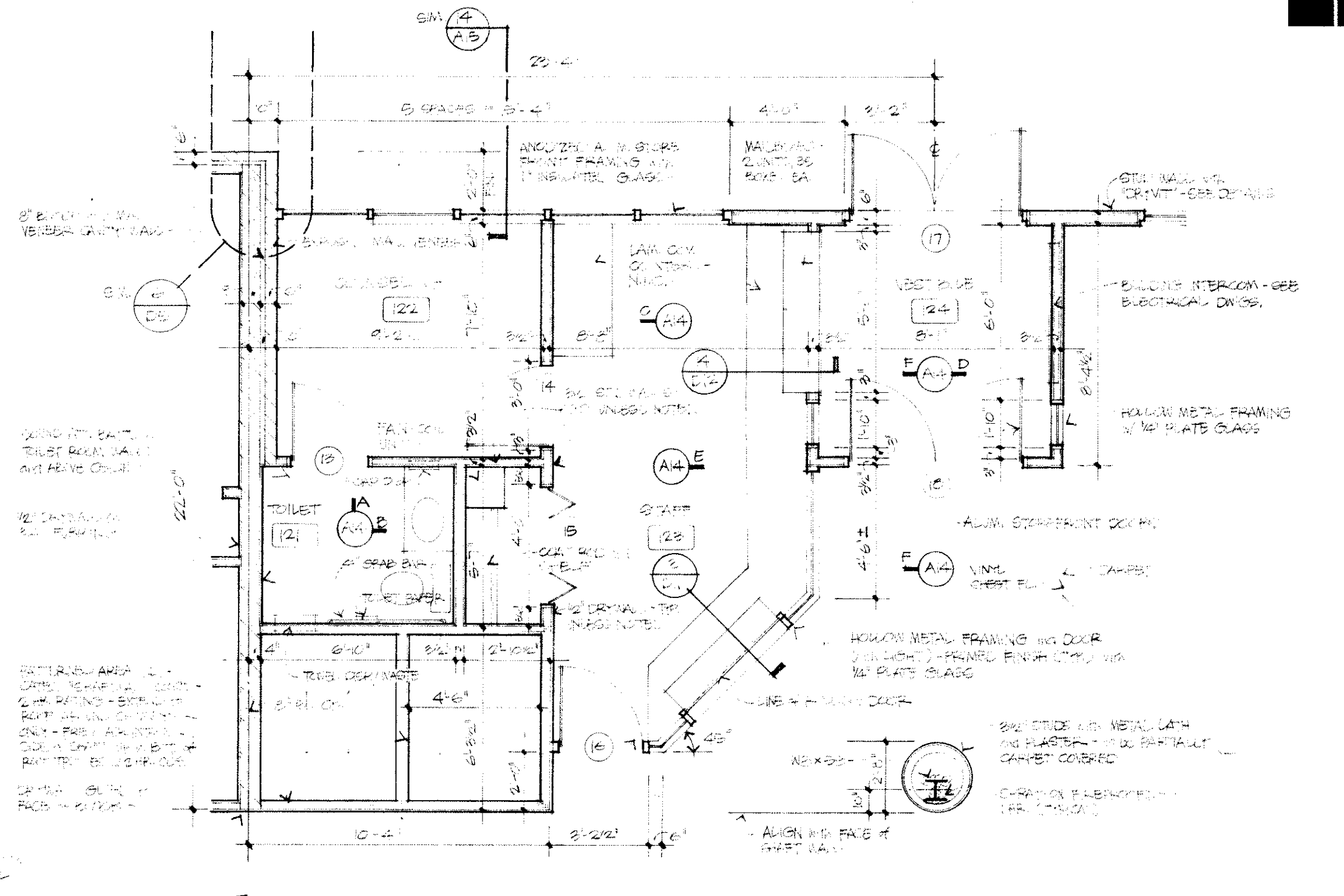
TRASH RM.
SCALE 1/4"=1'-0"



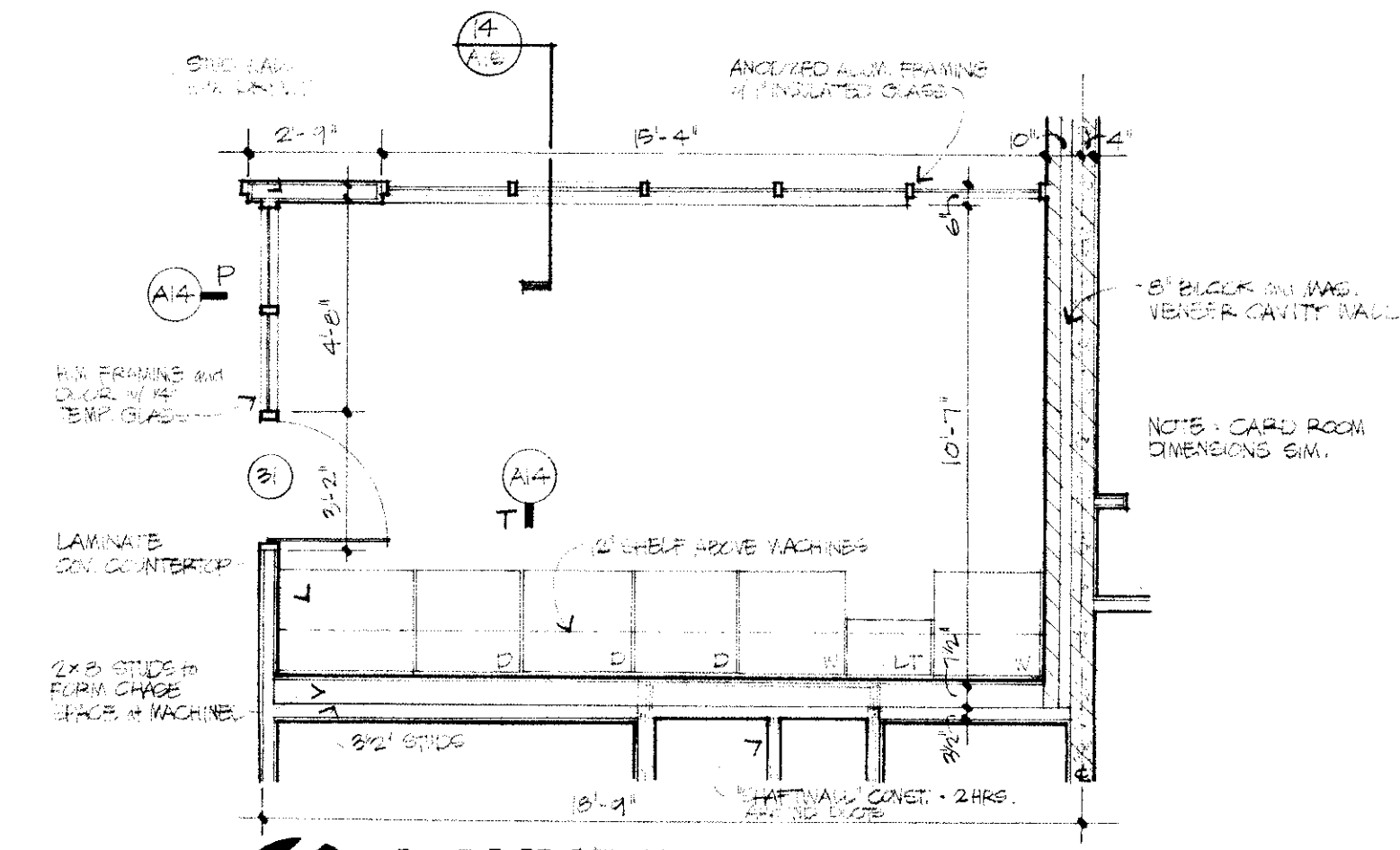
WOMEN/KIT.
SCALE 1/4"=1'-0"



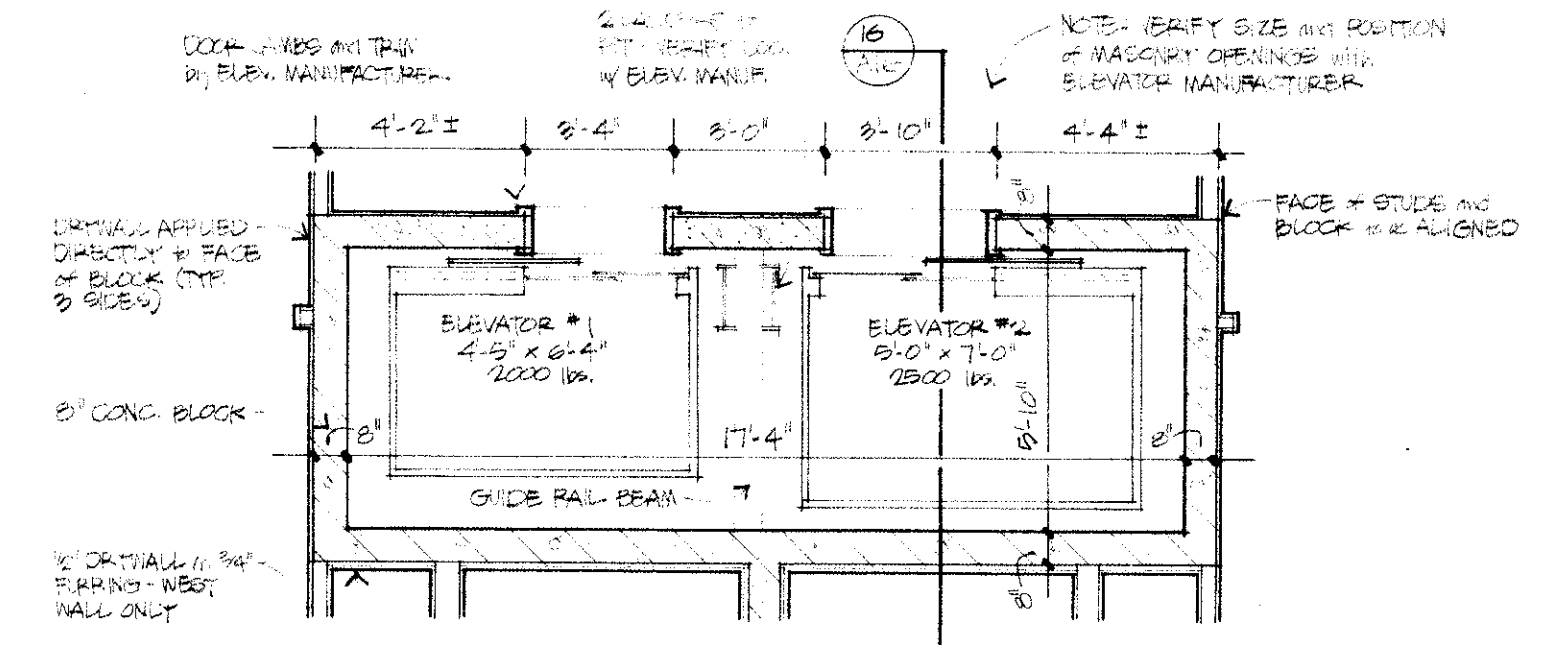
STAIRWELL
SCALE 1/4"=1'-0"



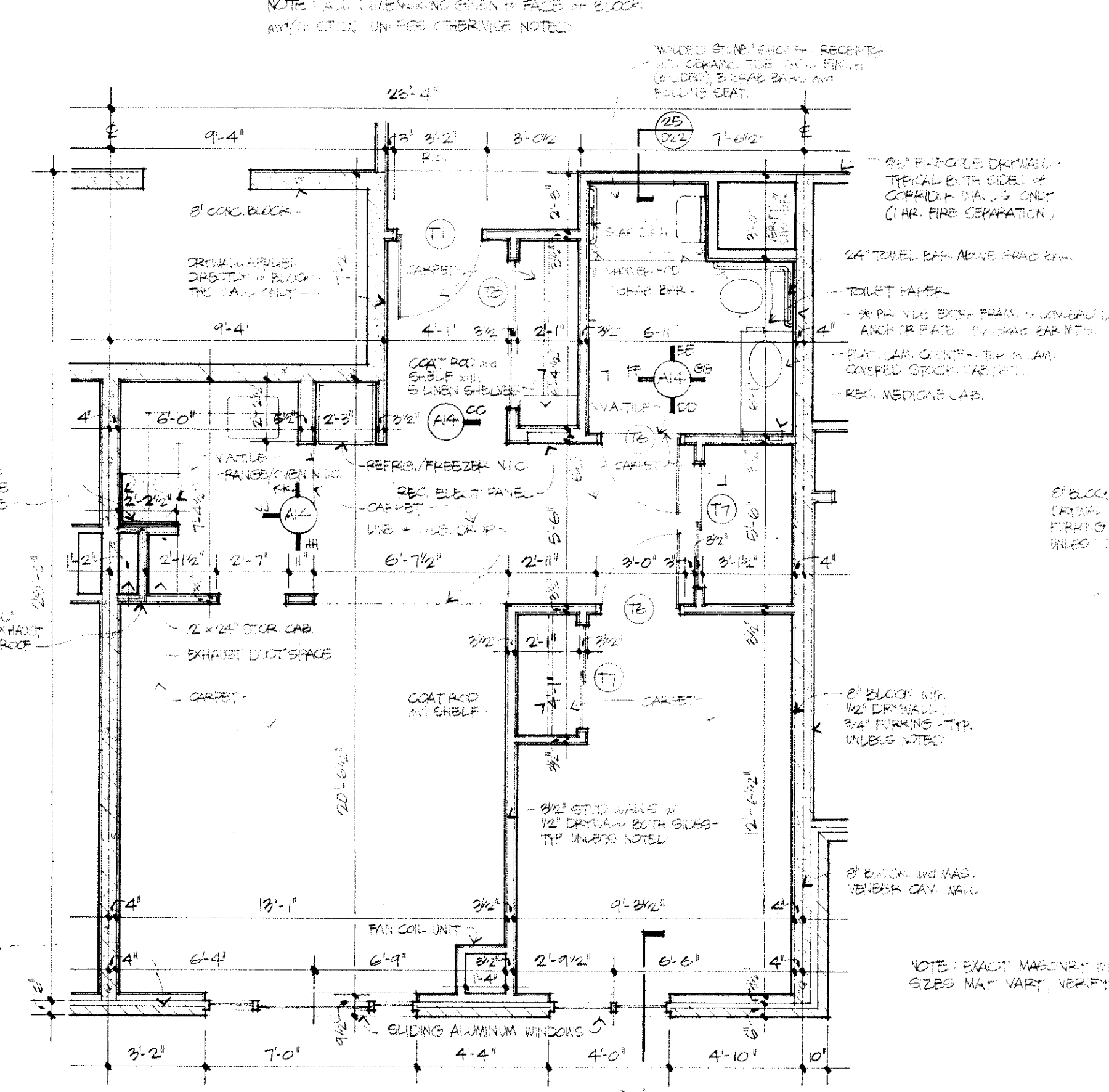
ADMINISTRATIVE AREA
SCALE 1/4"=1'-0"



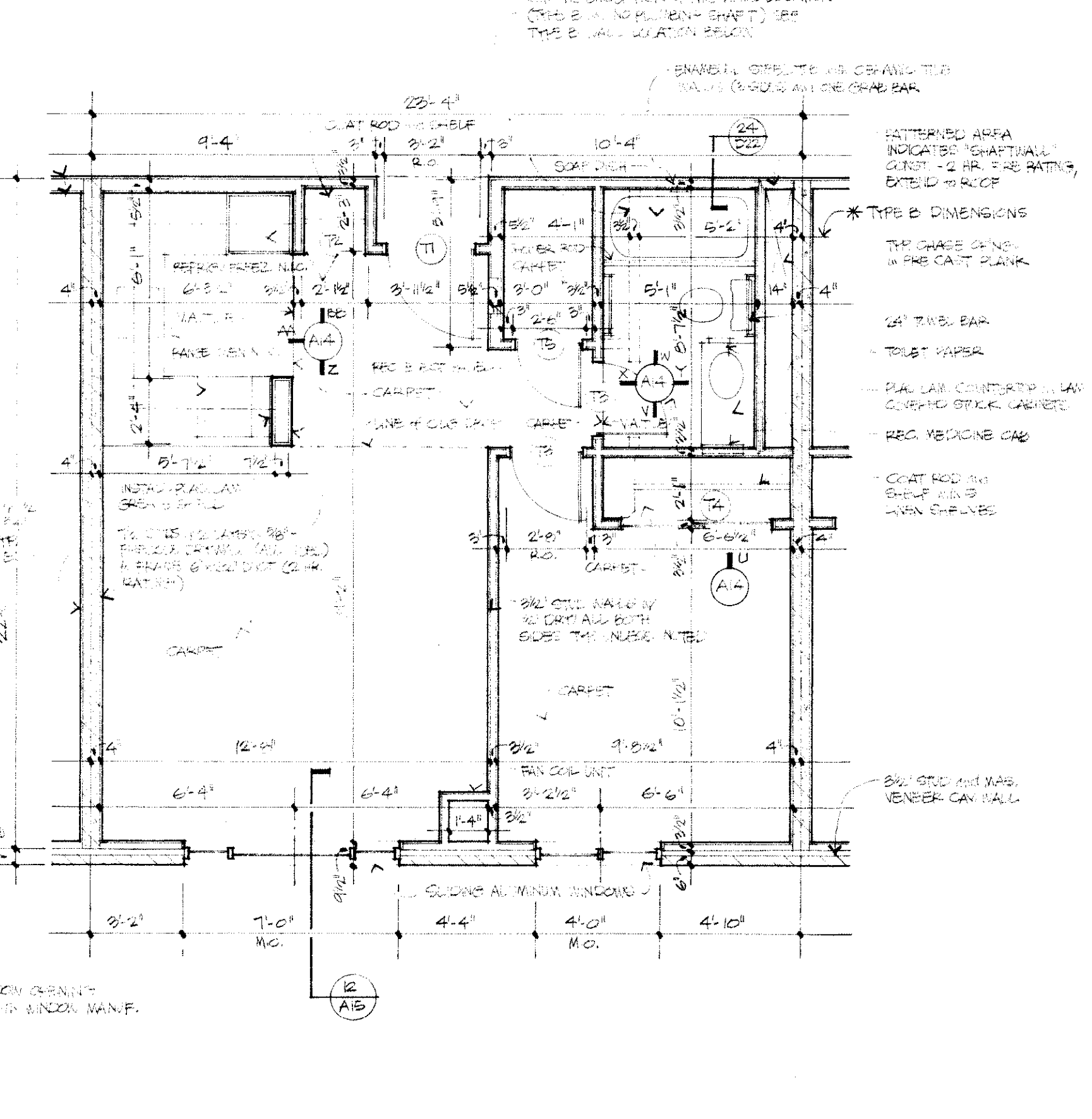
LAUNDRY
SCALE 1/4"=1'-0"



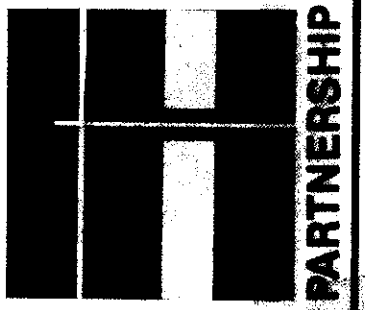
ELEVATOR SHAFT
SCALE 1/4"=1'-0"



HANDICAPPED UNIT - C
SCALE 1/4"=1'-0"

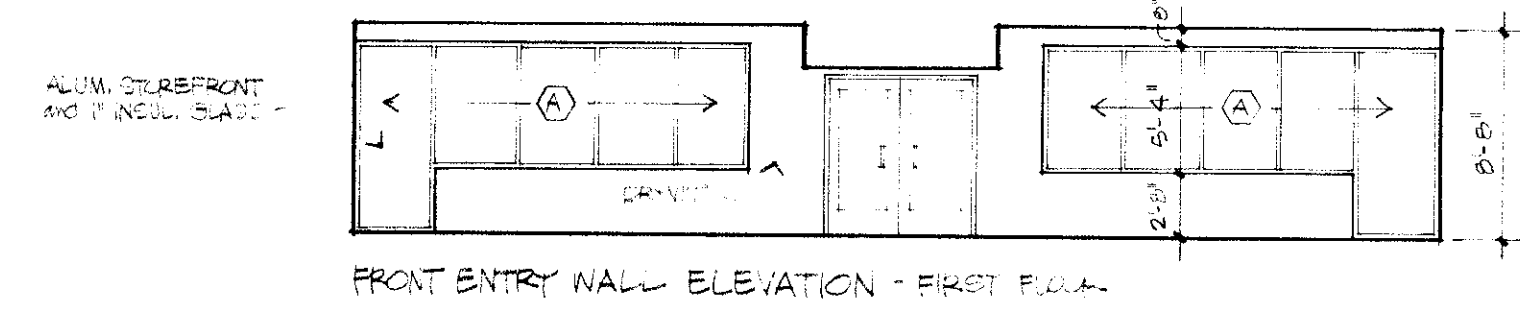
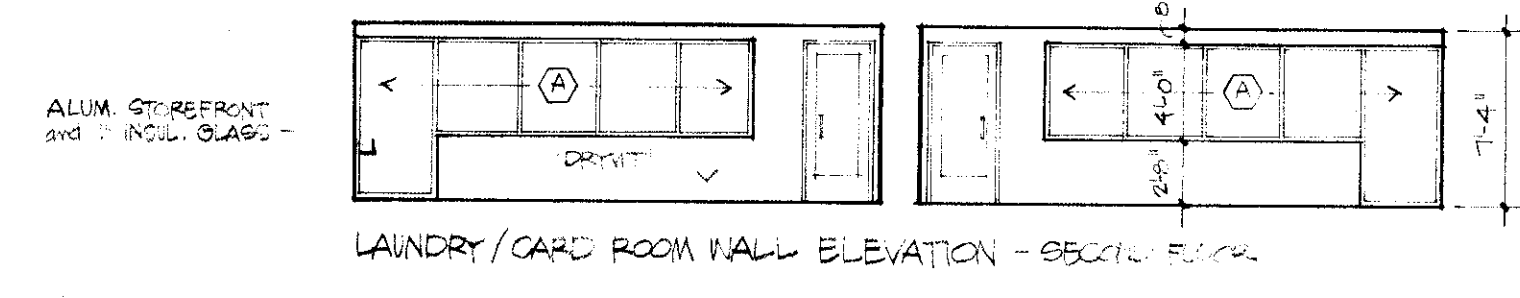


TYPICAL UNIT - A and B
SCALE 1/4"=1'-0"

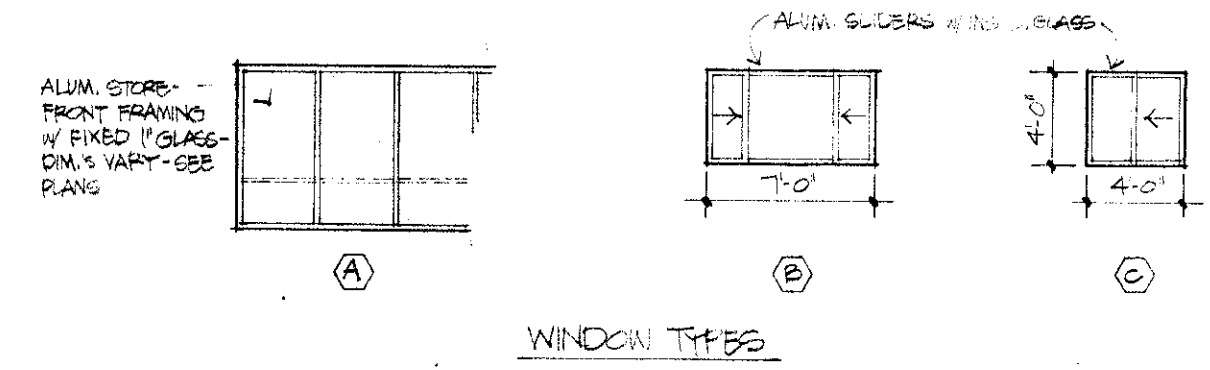


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PROJECT 2000 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HOUSING FOR THE ELDERLY ANN ARBOR, MICHIGAN HUD PROGRAM RESERVATION NO. MICH 846
ISSUED 11/80 REVISED 8/81

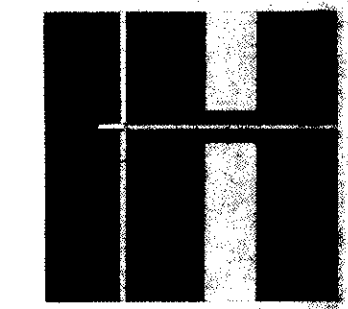
EAST ELEVATION



EAST ELEVATION
SCALE 1/8"=1'-0"

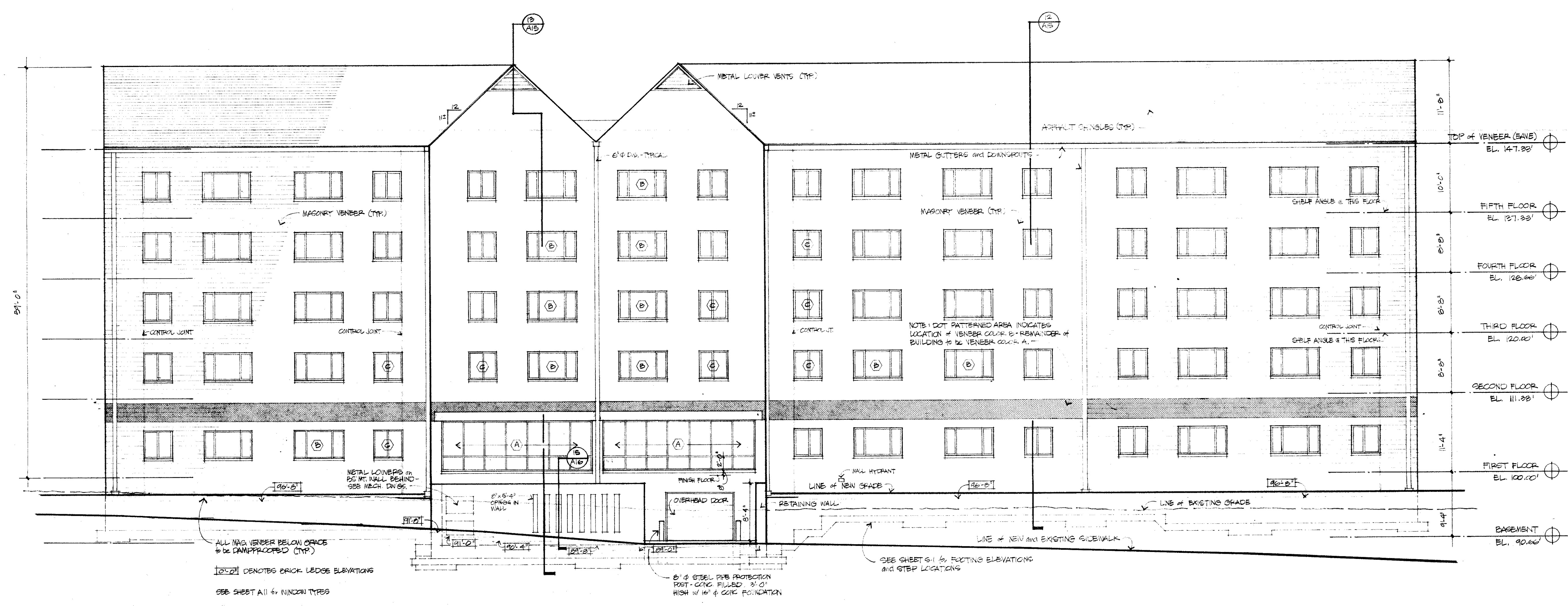


□ DENOTES BRICK LEDGE ELEVATIONS

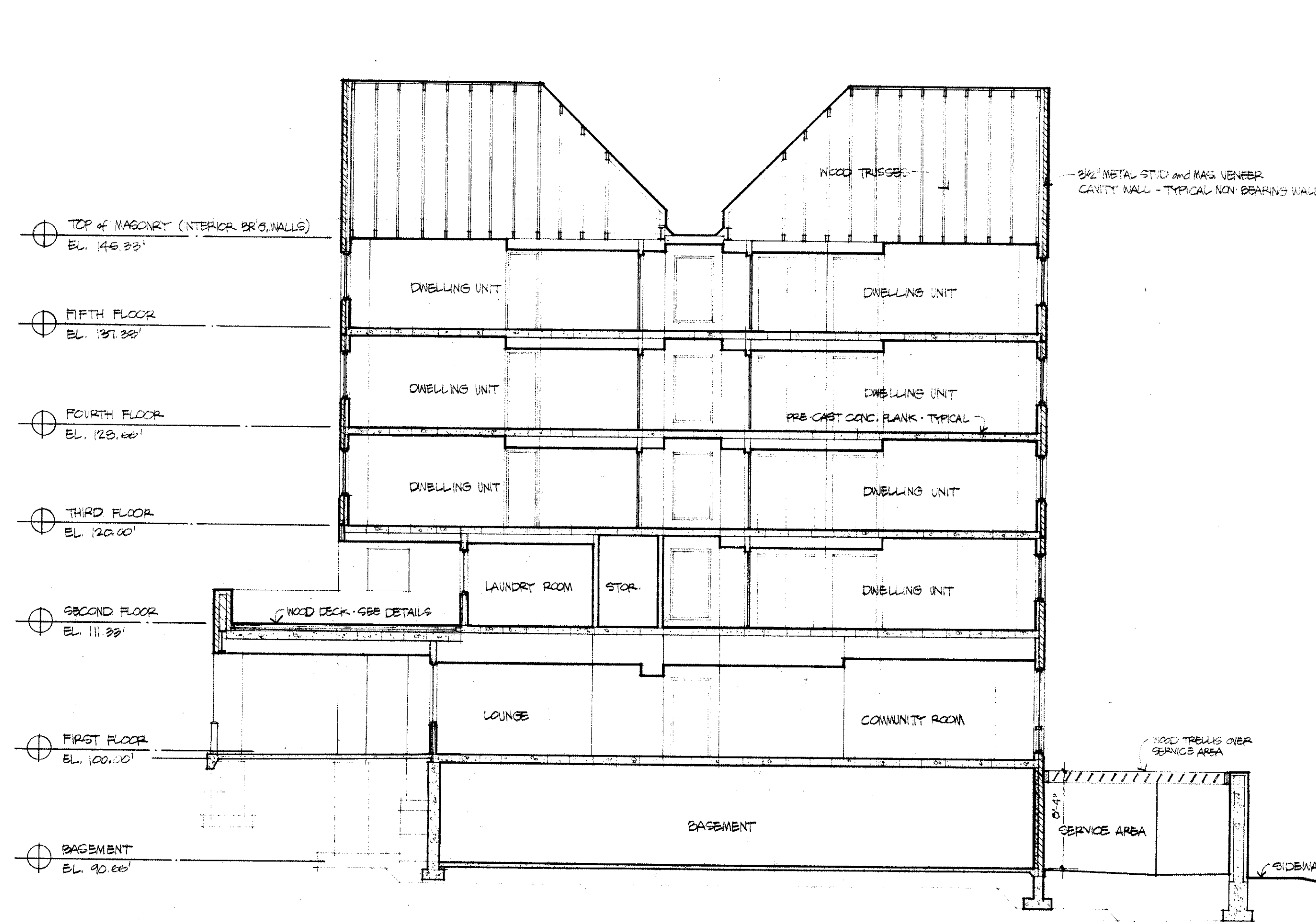
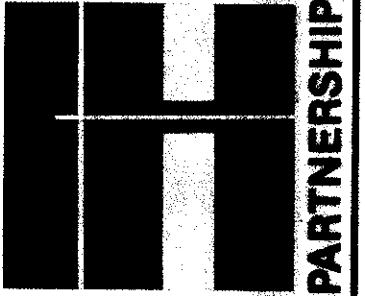


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 PROJECT 7808 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HOUSING FOR THE ELDERLY ANN ARBOR, MICHIGAN HUD PROGRAM RESERVATION NO. MCH 646
 SIGNED 7/17/80 REVISED

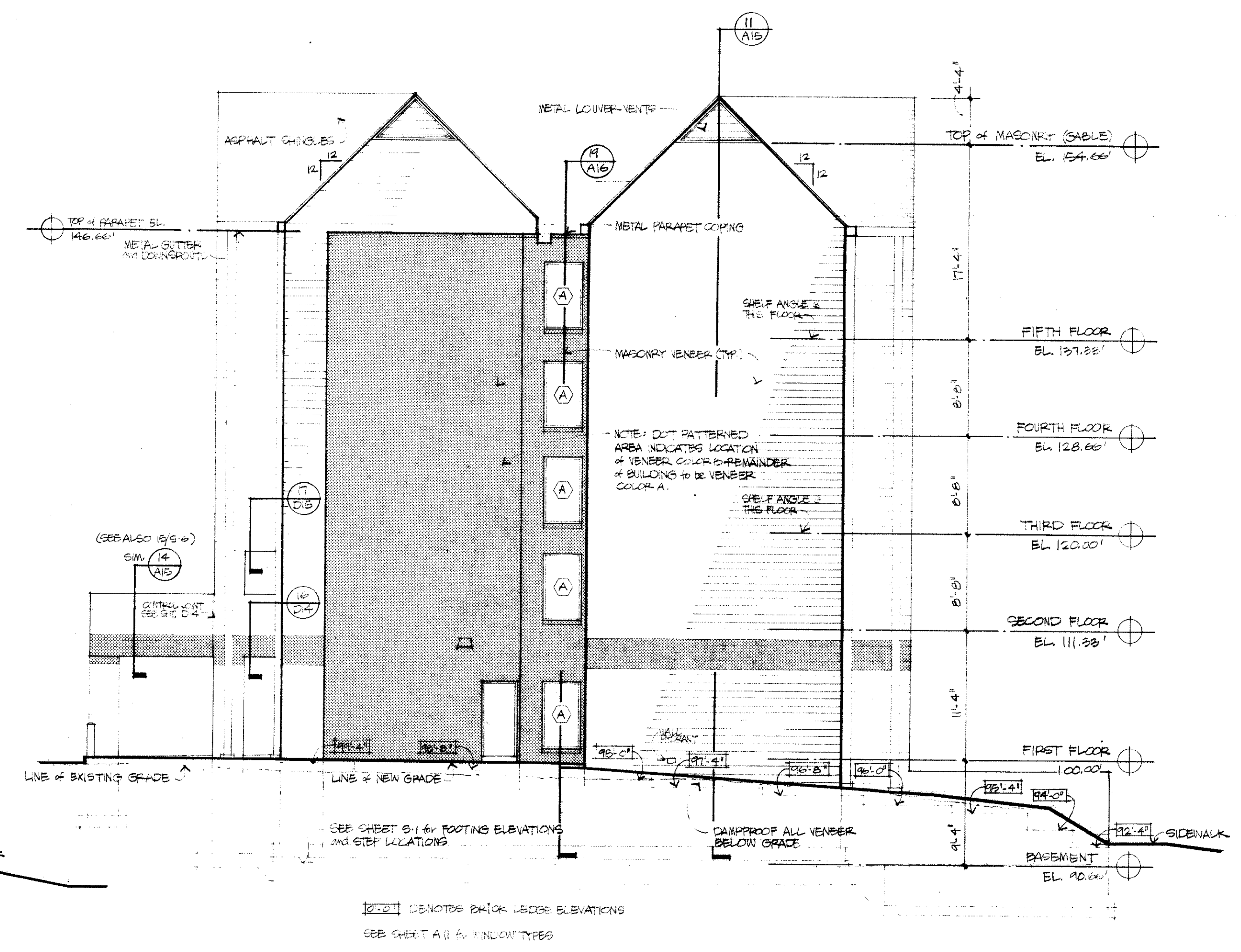
WEST ELEVATION



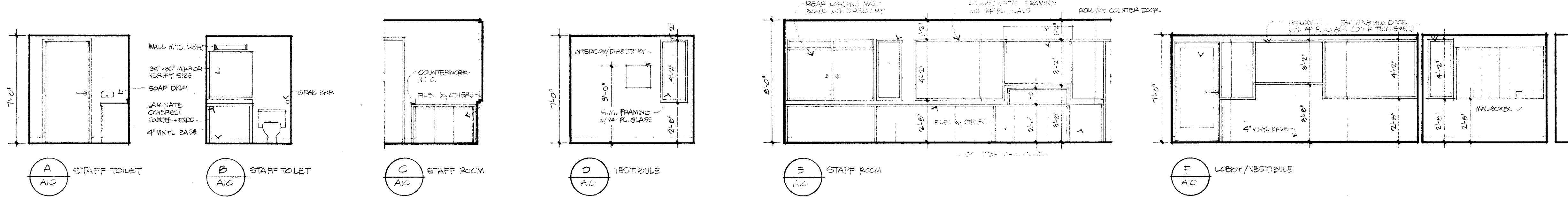
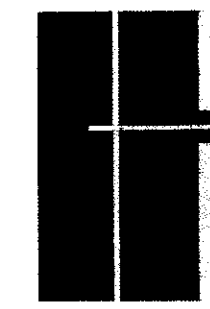
WEST ELEVATION
 SCALE 1/8"=1'-0"



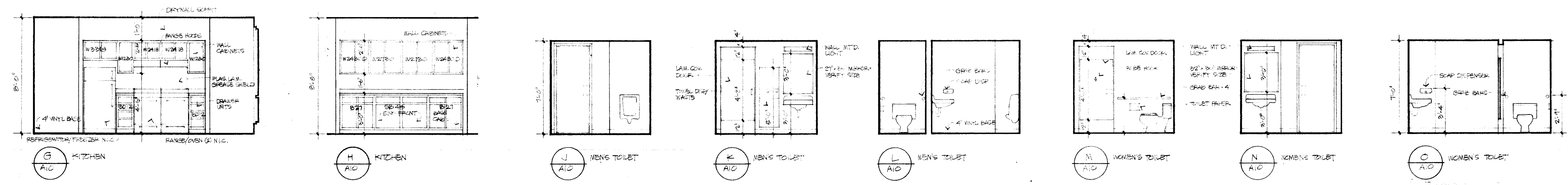
10
 AS-7
BUILDING SECTION
 SCALE 1/8"=1'-0"



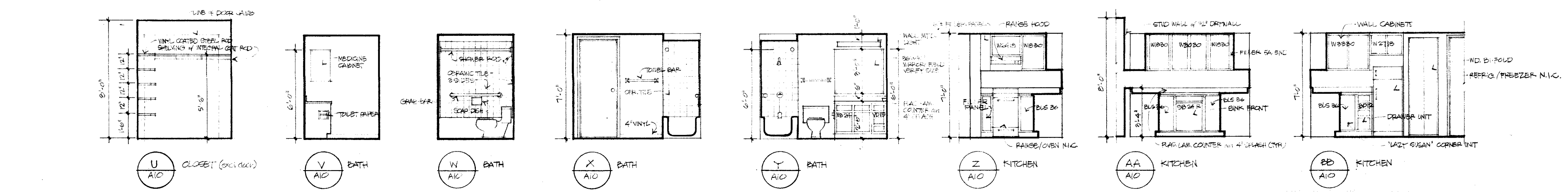
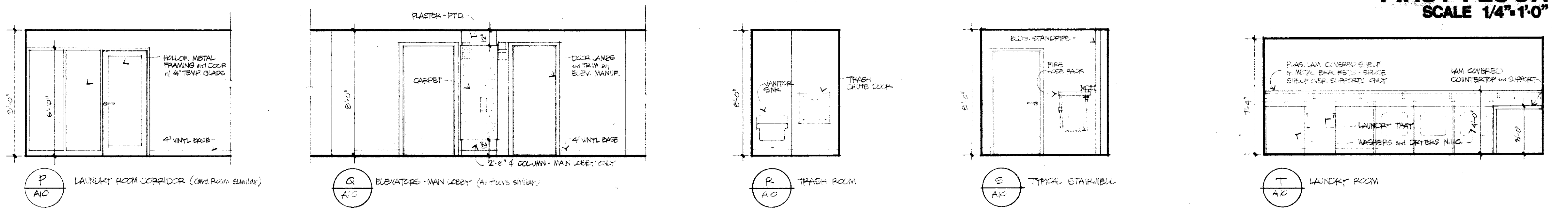
NORTH ELEVATION
 SCALE 1/8"=1'-0"



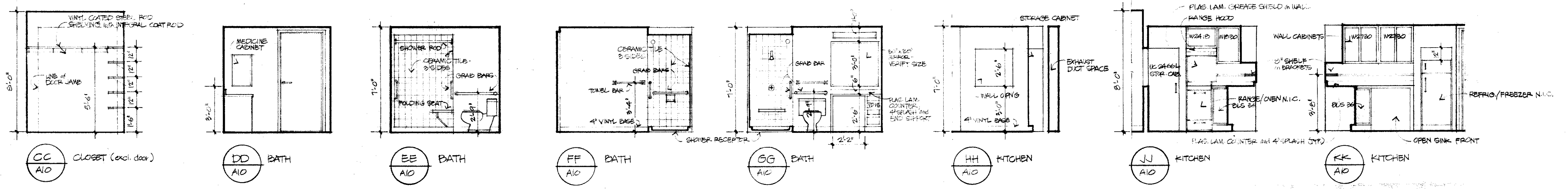
FIRST FLOOR
SCALE 1/4"=1'-0"



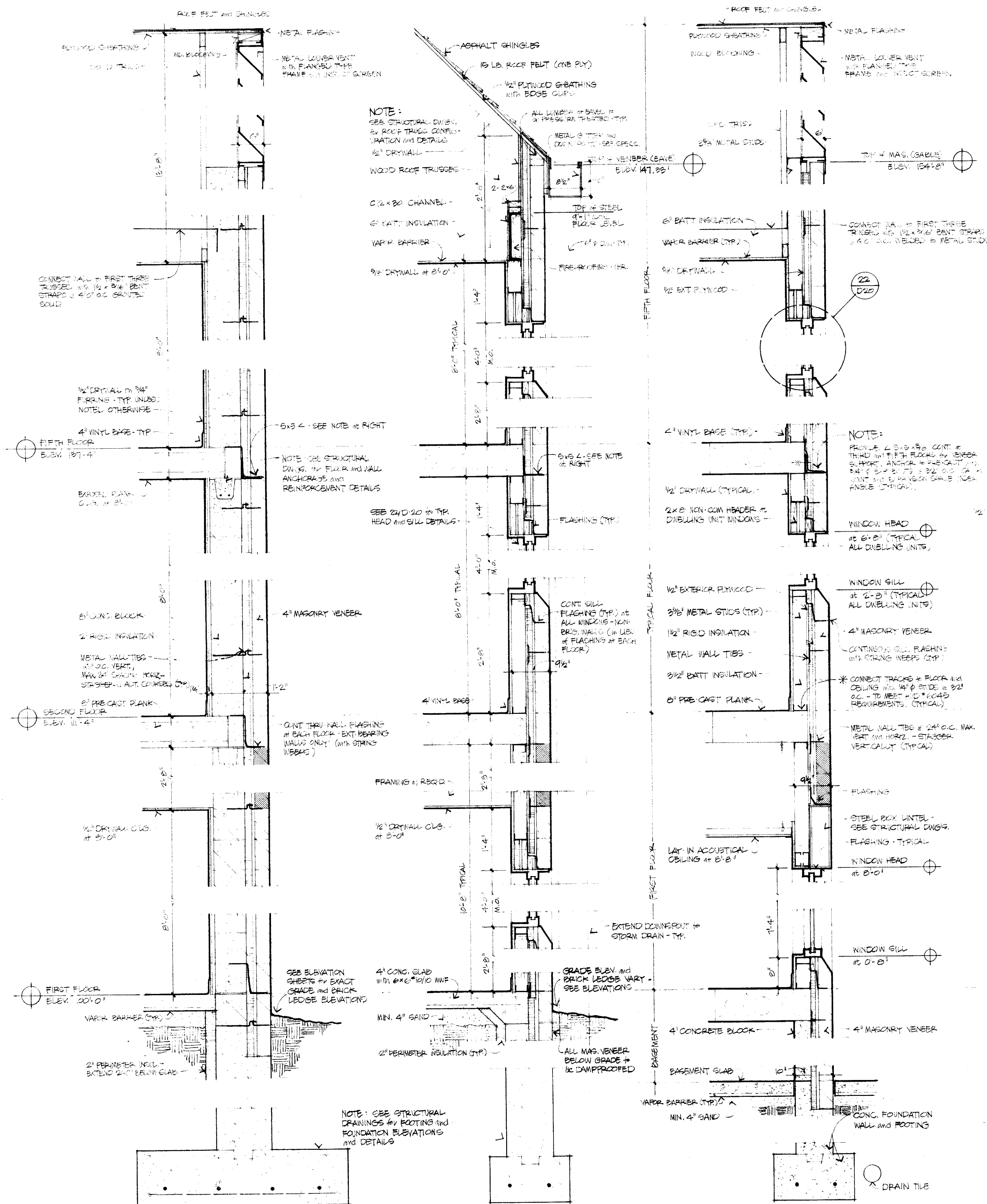
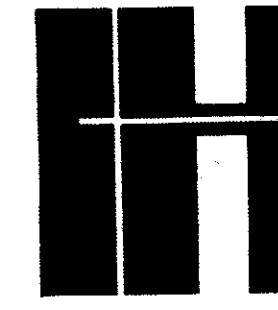
FIRST FLOOR
SCALE 1/4"=1'-0"



TYPICAL UNIT
SCALE 1/4"=1'-0"



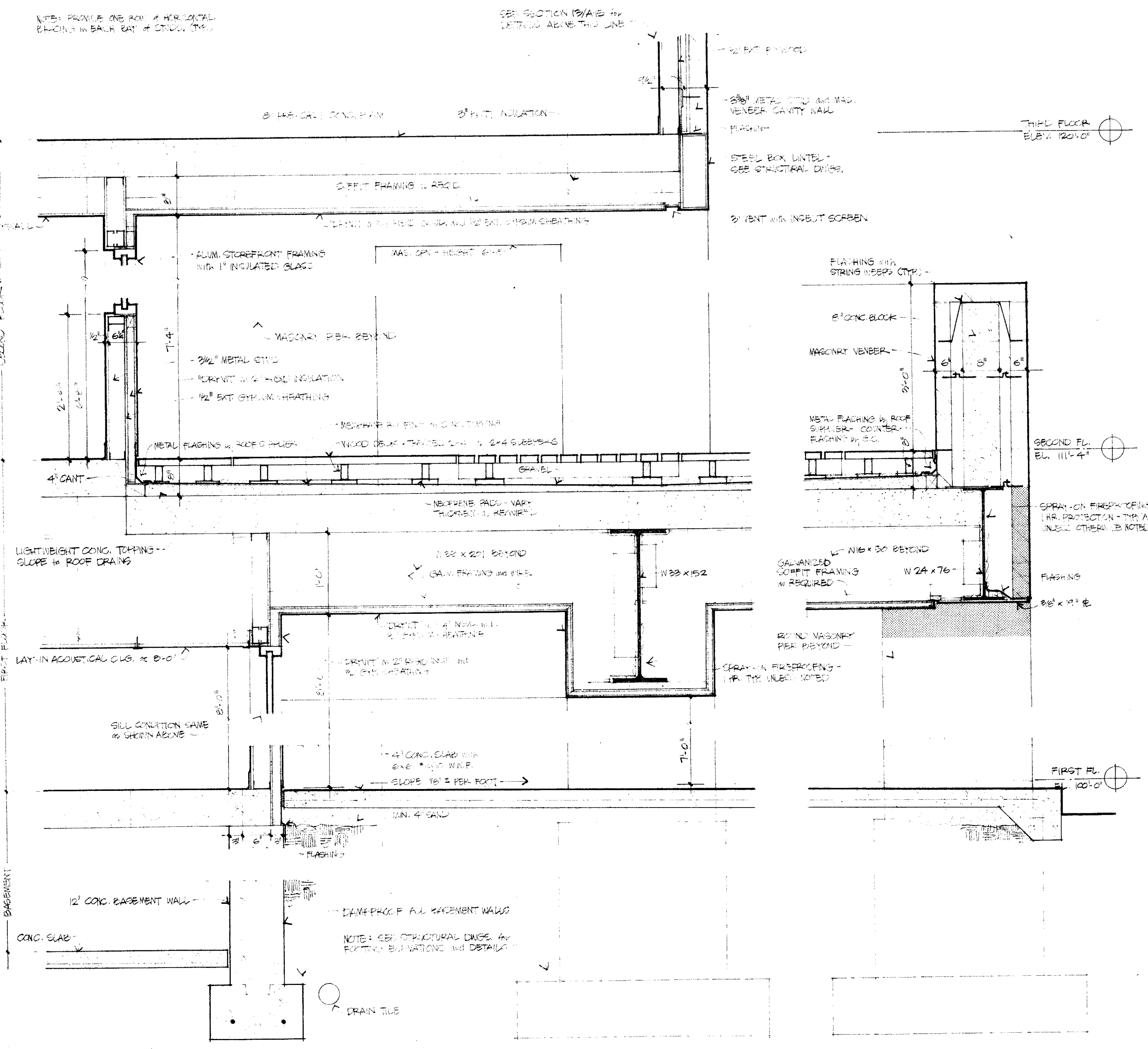
HANDICAPPED UNIT
SCALE 1/4"=1'-0"



11 WALL SECTION
 SCALE 3/4"=1'-0"

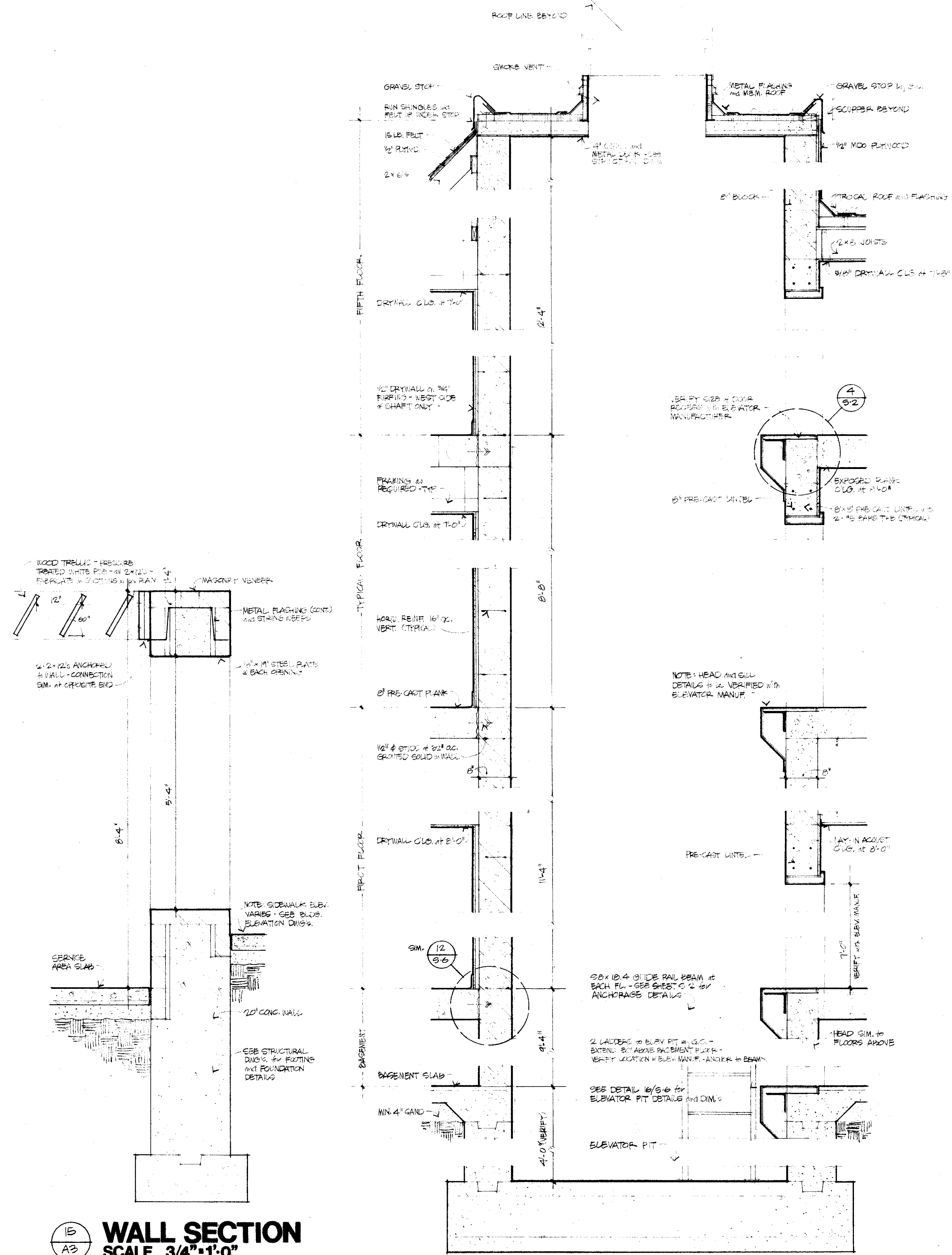
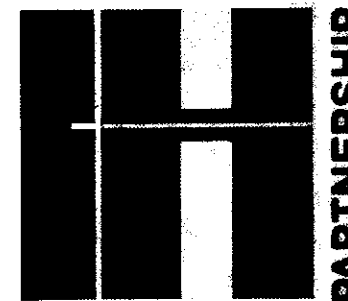
12 WALL SECTION
 SCALE 3/4"=1'-0"

13 WALL SECTION
 SCALE 3/4"=1'-0"



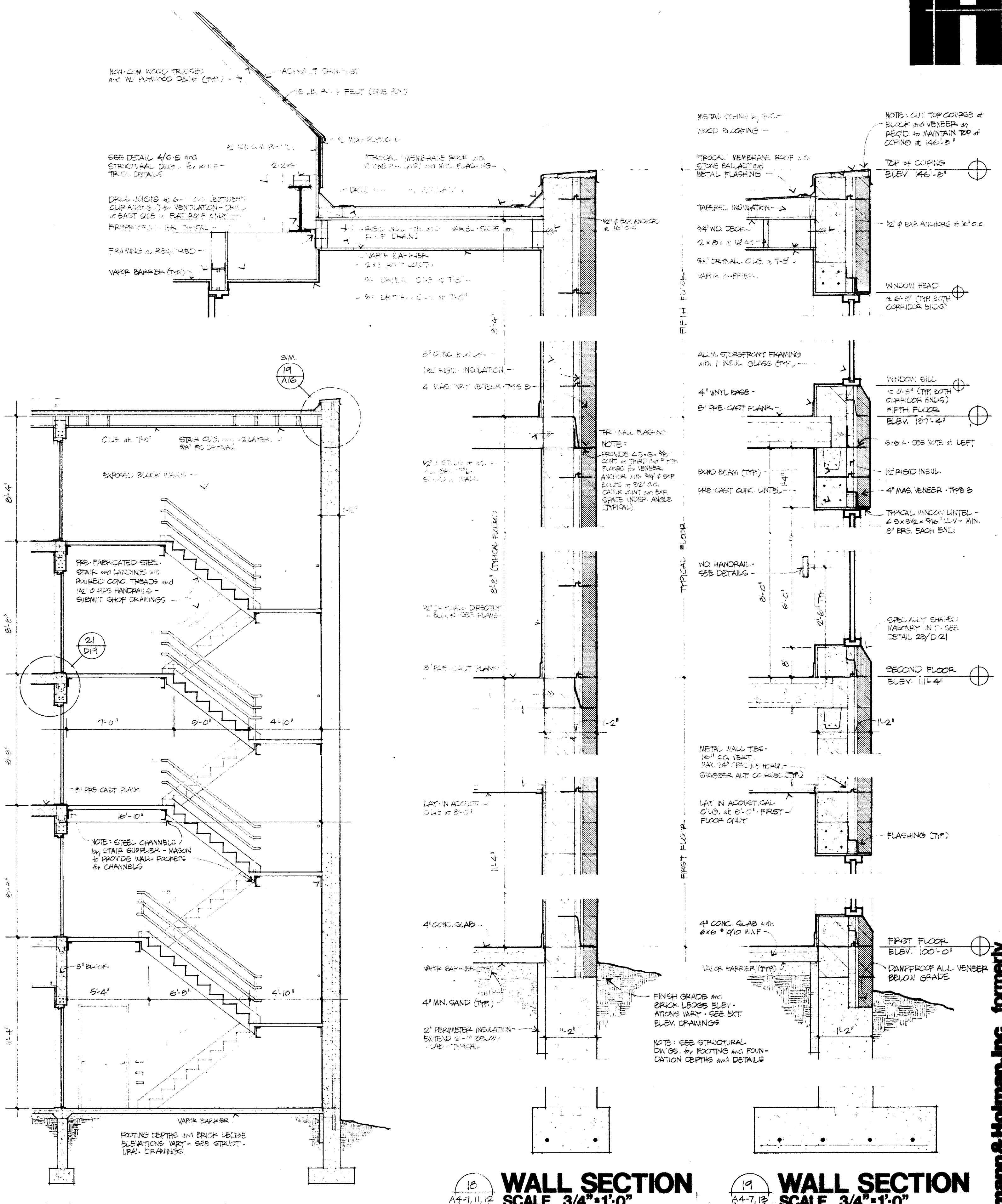
14 WALL SECTION
 SCALE 3/4"=1'-0"

WALL SECTIONS



15 WALL SECTION SCALE 3/4"=1'-0"

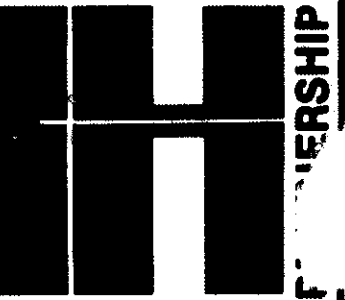
16 SECTION SCALE 3/4"=1'-0"



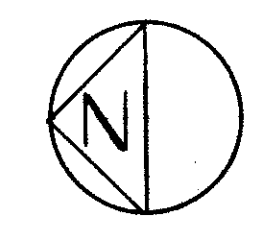
17 STAIR SECTION SCALE 3/4"=1'-0"

18 WALL SECTION SCALE 3/4"=1'-0"

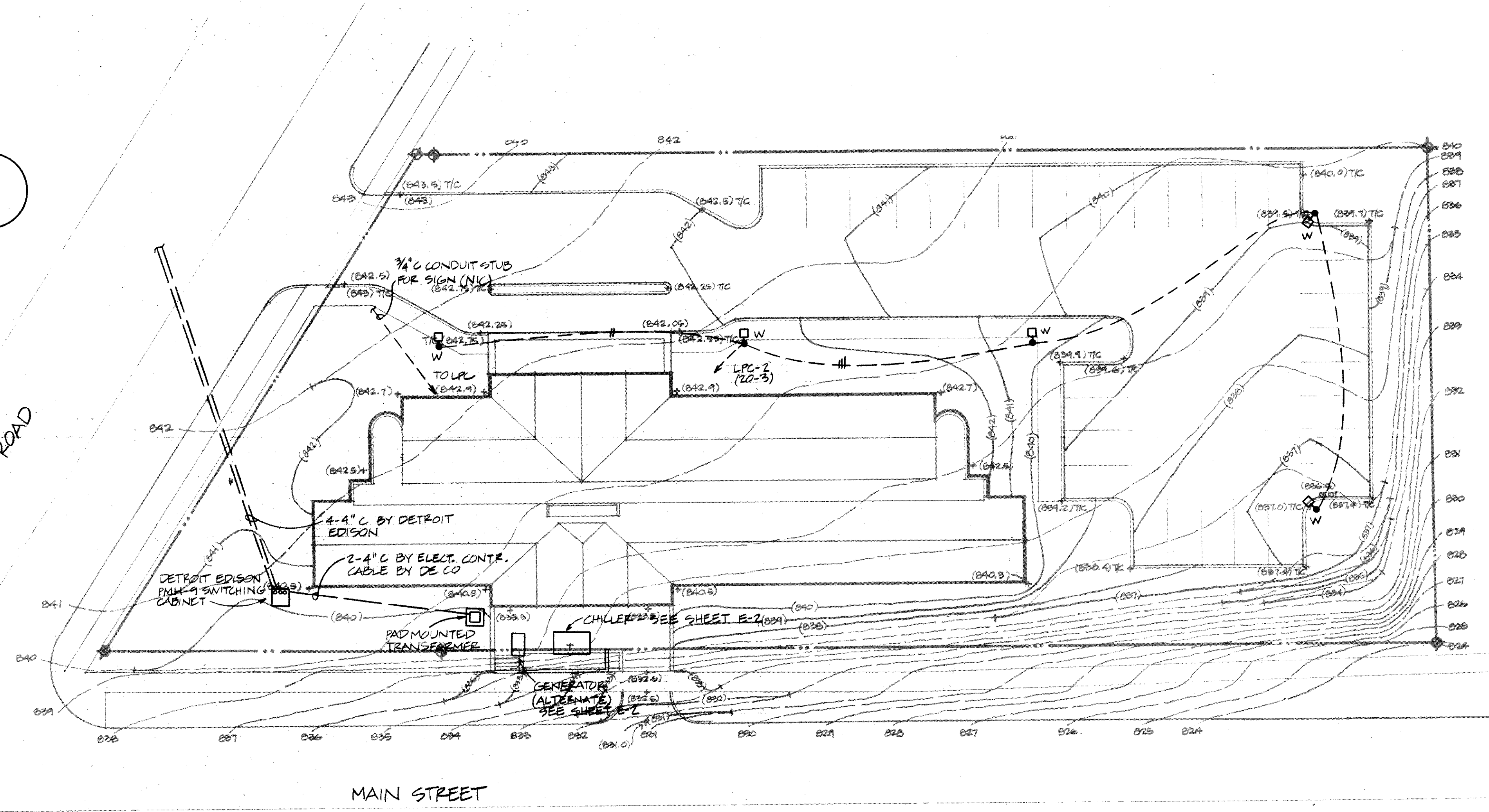
19 WALL SECTION SCALE 3/4"=1'-0"



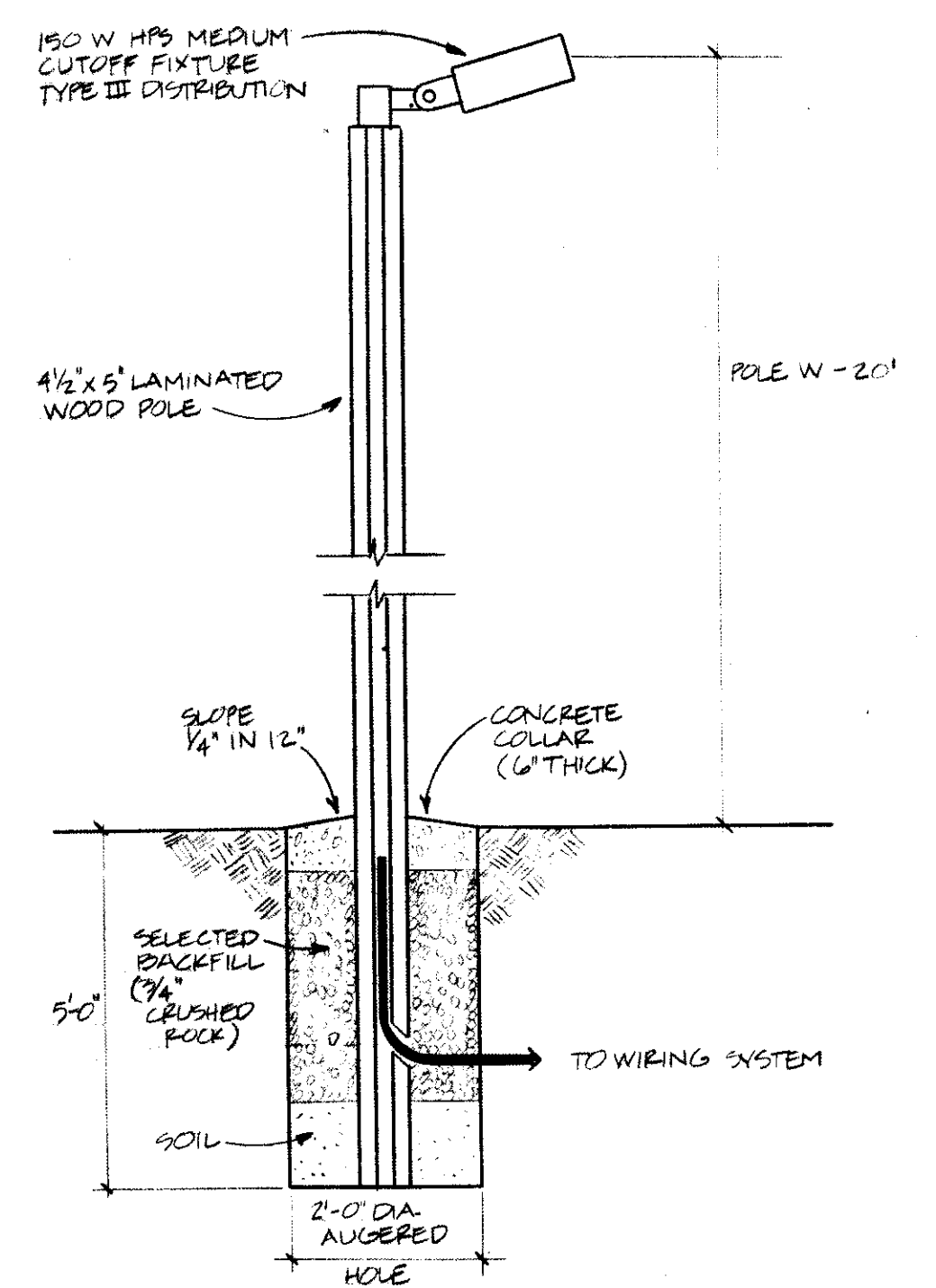
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 PROJECT 700 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HOUSING FOR THE ELDERLY ANN ARBOR, MICHIGAN
 CONSULTANT: NEIL ADAMS INC ELECTRICAL ENGINEERS 2731 MANCHESTER ANN ARBOR, MICHIGAN 48104 (313) 971-5343
 REVISION 11/82



PACKARD ROAD



ELECTRICAL SITE PLAN
 SCALE 1" = 20'

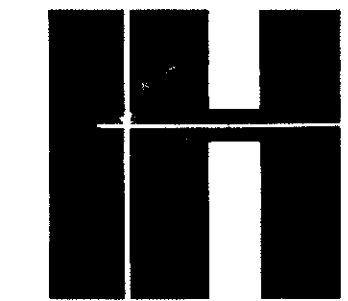


SITE LIGHTING DETAIL
 NO SCALE

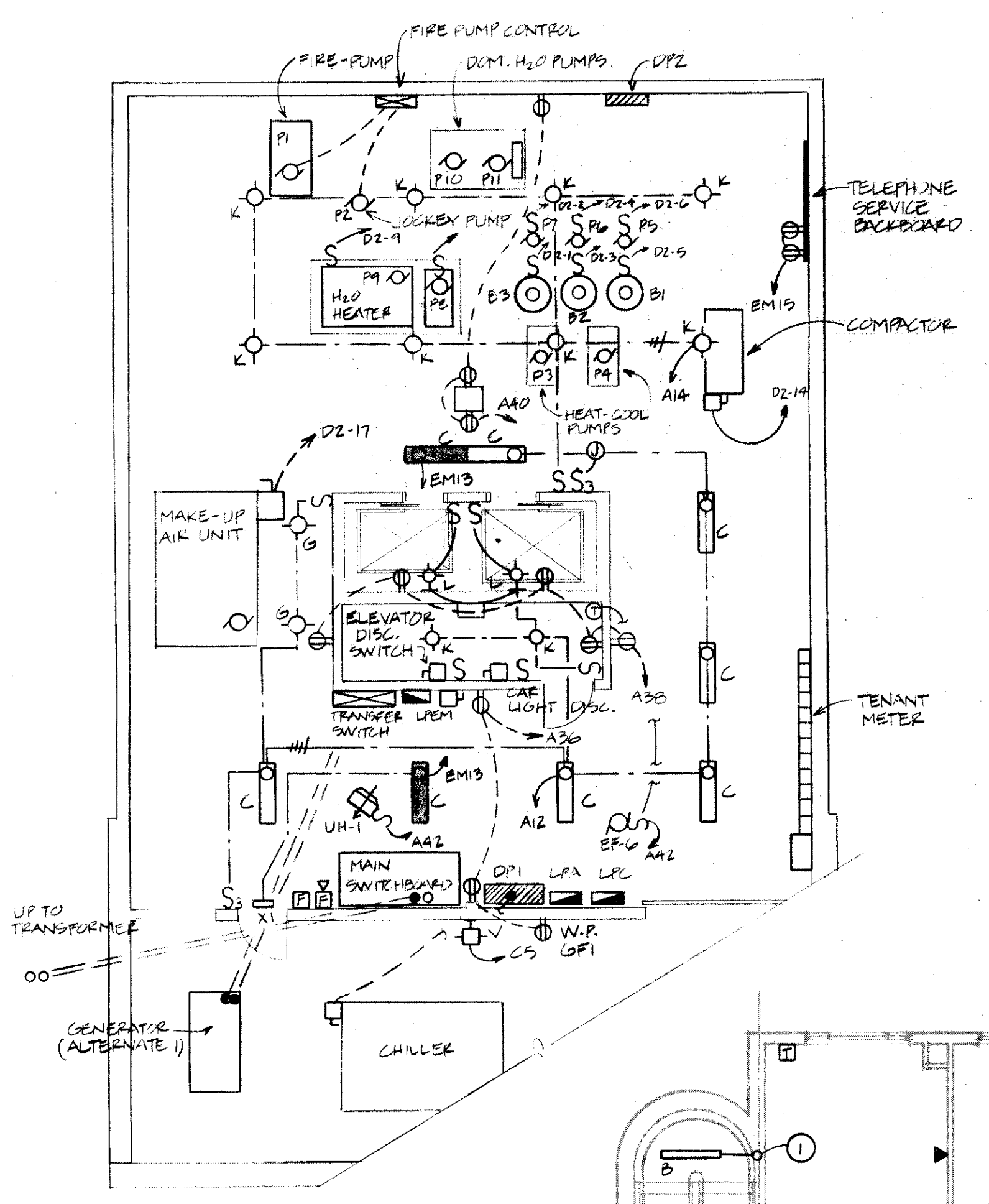
ELECTRICAL SYMBOLS

- | | | | |
|--|--|--|--|
| | FLUORESCENT FIXTURE - NIGHT LIGHT NOT SWITCHED | | DISCONNECT SWITCH |
| | INCANDESCENT FIXTURE | | MAGNETIC STARTER |
| | INCANDESCENT WALL BRACKET | | COMBINATION MAGNETIC STARTER |
| | EXIT LIGHT - TYPE & ARROW INDICATED | | MOTOR |
| | LIGHTING PANEL | | MOTOR CONTROL STATION |
| | POWER PANEL | | THERMOSTAT |
| | DUPLEX RECEPTACLE | | TELEPHONE |
| | DUPLEX WEATHERPROOF | | TELEVISION OUTLET |
| | DUPLEX FLOOR MOUNTED | | DOOR INTERCOM STATION |
| | CLOCK HANGER RECEPTACLE | | EMERGENCY CALL PULL STATION |
| | FLOOR STUB FOR EQUIPMENT | | JUNCTION BOX |
| | UNIT VENTILATOR | | FIRE ALARM STATION |
| | ELECTRIC BASEBOARD | | FIRE ALARM HORN |
| | DRYER RECEPTACLE | | SMOKE DETECTOR |
| | RANGE RECEPTACLE | | HEAT DETECTOR |
| | ELECTRIC WATER COOLER | | MAGNETIC DOOR HOLDER |
| | SWITCH | | RESIDENCE SMOKE DETECTOR/ALARM |
| | SWITCH - TWO POLE | | EMERGENCY LIGHTING UNIT. NUMERAL INDICATES NUMBER OF LAMPS MOUNTED ON UNIT |
| | SWITCH - THREE WAY | | TIME CLOCK |
| | SWITCH - FOUR WAY | | EXHAUST FAN |
| | DIMMER SWITCH | | PHOTOELECTRIC CONTROL |
| | LOW VOLTAGE CONTROL SWITCH | | CONTACTOR |

ELECTRICAL SITE PLAN



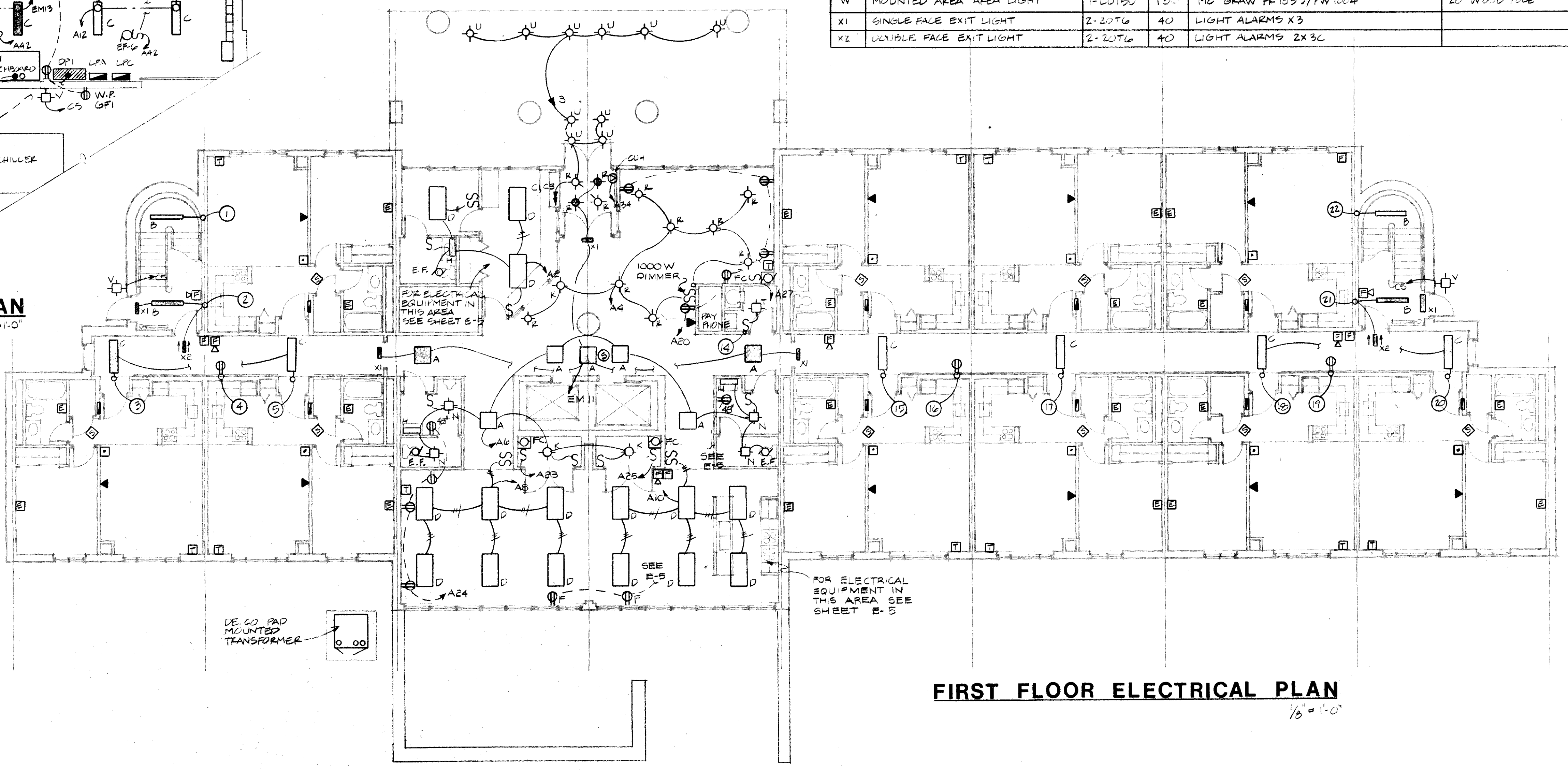
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 CONSULTANT: NEIL ADAMS INC ELECTRICAL ENGINEERS 2731 MANCHESTER ANN ARBOR, MICHIGAN 48104 (313) 971-4343
 ISSUED 1-1988 REVISED
ELECTRICAL BASEMENT/FIRST FLOOR PLANS



BASEMENT ELECTRICAL PLAN
 1/8" = 1'-0"

LIGHTING FIXTURE SCHEDULE

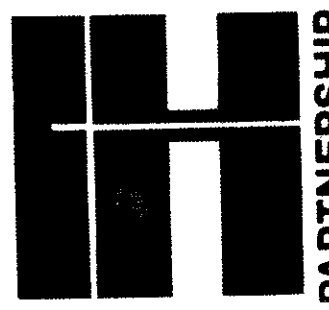
type	brief description	lamps	fixture watts	manufacturer & catalog number	remarks
A	2'x2' RECESSED FLUORESCENT	2-FA0T12	76	LITHONIA 2G52U40A12 or METALUX 2G52U4	
B	1'x4' SURFACE FLUORESCENT	1-FA0WM	40	LITHONIA CB140A	
C	1'x4' SURFACE FLUORESCENT	2-FA0WM	80	LITHONIA VC240A	
D	2'x4' RECESSED FLUORESCENT	4-FA0WM	160	LITHONIA 2G5440A12 or METALUX 2G5440A	
E	2'x4' SURFACE FLUORESCENT	-FA0WM	80	LITHONIA 2M240MA12 or METALUX 2MR240A	
F	UNDER CABINET FLUORESCENT	1-F20T12	24	PROGRESS P1007 or ROBERT UC-20-LT9	
G	PRC. KEYLESS LAMPHOLDER	1-19" A21	150	CIRCLE F 210-0	
H	WALL MOUNTED FLUORESCENT	2-F20T12	48	DAYRITE A9220W	
J	WALL MTD. INCANDESCENT	1-19" R40	150	HALO 231E	
K	RLM INCANDESCENT	1-150 A21	150	APPLETON 652314	
L	INC. WALL BRACKET	1-100A19	100	APPLETON OBNW-206	ELEVATOR PIT
M	OVER MIRROR WALL BRACKET	4-100A19	240	KICHLER K735B or SEAGULL 4455-15	
N	SURFACE INC. DRUM	2-60A19	120	HALO H2710 or SEAGULL T7610-33	
P	SURFACE INC. DRUM	3-60A19	180	HALO H2716 or SEAGULL T7614-33	
Q	THRU WALL INCANDESCENT	1-75A19	75	HALO H2920	
R	RECESSED INCANDESCENT ROUND	1-100A19	100	HALO H7-416	
T	SURFACE INC. SQUARE	2-60A19	120	ACME DUNBAR 401LL	
U	RECESSED HID ROUND	1-10" B23	120	M- PHILBEN 27M 2232 FF	
V	WALL MOUNTED AREA LIGHT	1-LU75	100	MC GRAW PH193W	
W	MOUNTED AREA AREA LIGHT	1-LU150	150	MC GRAW PH193S/PW1004	20' WOOD POLE
X1	SINGLE FACE EXIT LIGHT	2-20T6	40	LIGHT ALARMS X3	
X2	DOUBLE FACE EXIT LIGHT	2-20T6	40	LIGHT ALARMS 2X3C	



FIRST FLOOR ELECTRICAL PLAN
 1/8" = 1'-0"

DE CO PAD MOUNTED TRANSFORMER

FOR ELECTRICAL EQUIPMENT IN THIS AREA SEE SHEET E-5



DISTRIBUTION PANEL SCHEDULE

circuit no.	switch/breaker rating	load description	connected load kva
MAIN SWITCHBOARD 1600A, MLO: 120/208V THREE PHASE, FOUR WIRE			
1	600A, 3P	TENANT METERS	220.0
2	600A, 3P	DISTRIBUTION PANEL DP-1	176.5
3	200A, 3P	DISTRIBUTION PANEL DP-2	38.5
4	600A, 3P	FIRE PUMP	44.0
5	300A, 3P	EMERGENCY SERVICE	35.3
TOTAL			

DP-1 600A MAIN LUGS 120/208V, 3Ø, 4W

1	150A, 3P	LIGHTING PANEL LPA	29.3
2	150A, 3P	LIGHTING PANEL LPB	25.4
3	60A, 3P	LIGHTING PANEL LPC	5.4
4	50A, 2P	RANGE	9.0
5	50A, 2P	RANGE	9.0
6	400A, 3P	AIR COOLED CHILLER	96.4
7	30A, 3P	IRRIGATION SYSTEM	2.0
8			
9	3P SPACE		
10	3P SPACE		
TOTAL			176.5

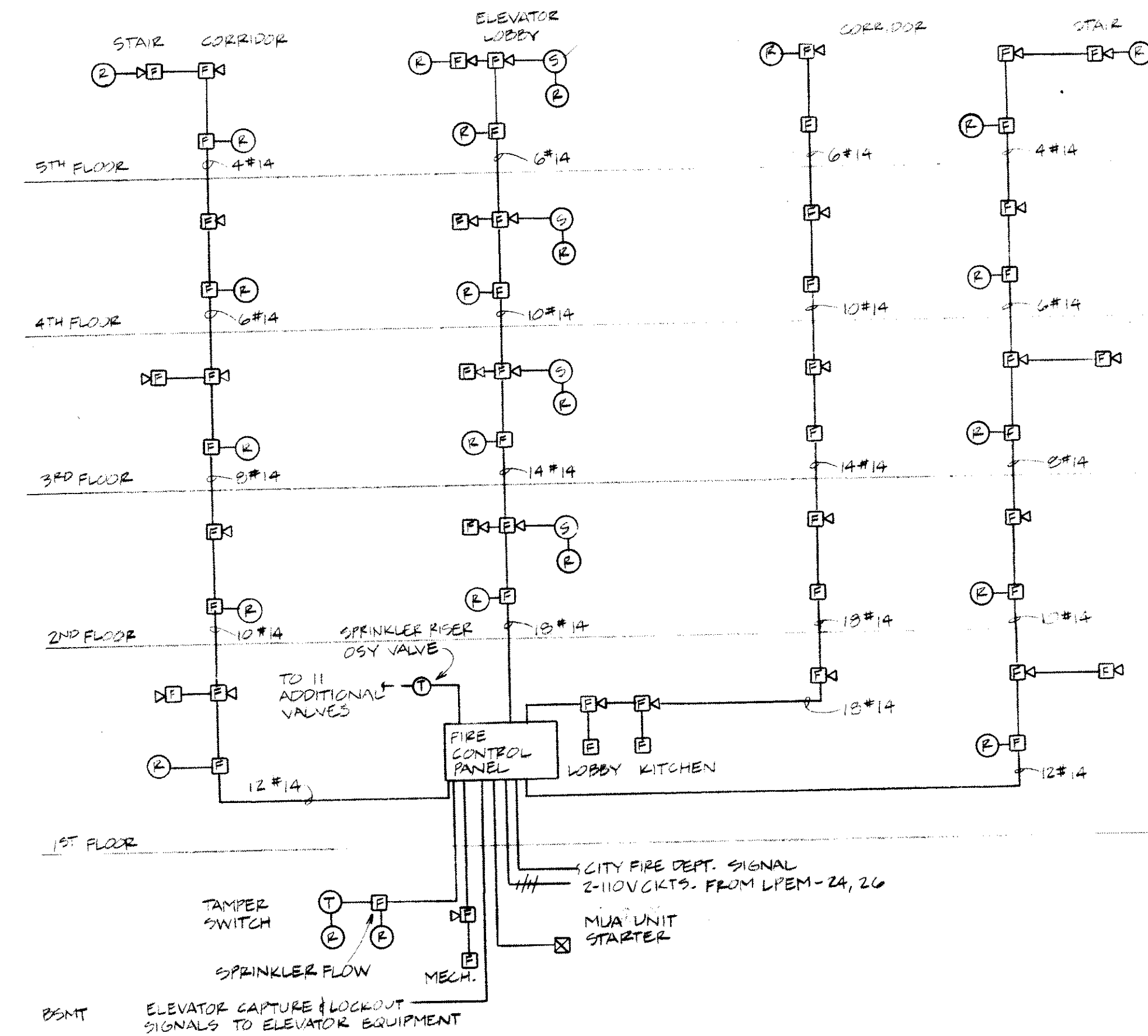
DP-2 200A MAIN LUGS 120/208V, 3Ø, 4W

1	20A, 1P	BOILER 1	1.0
2	"	CIRC. PUMP P5	.6
3	"	BOILER 2	1.0
4	"	CIRC. PUMP P6	.6
5	"	BOILER 3	1.0
6	"	CIRC. PUMP P7	.6
7	"	TEMP. CONTROL	.4
8	"	TEMP. CONTROL	.4
9	"	WATER HEATER P7	0.5
10	"	H.W. RETURN PUMP P8	.6
11	"	SPARE	
12	"	SPARE	
13	40A, 3P	DOM. WATER PUMPS	7.9
14	30A, 3P	COMPACTOR	7.0
15	35A, 3P, SIZE 1	H/C PUMP P3 *	6.3
16	35A, 3P, SIZE 1	H/C PUMP P4 *	6.3
17	30A, 3P	MAKE-UP AIR UNIT	4.0
18	3P SPACE		
19	3P SPACE		
20	3P SPACE		
TOTAL			38.5

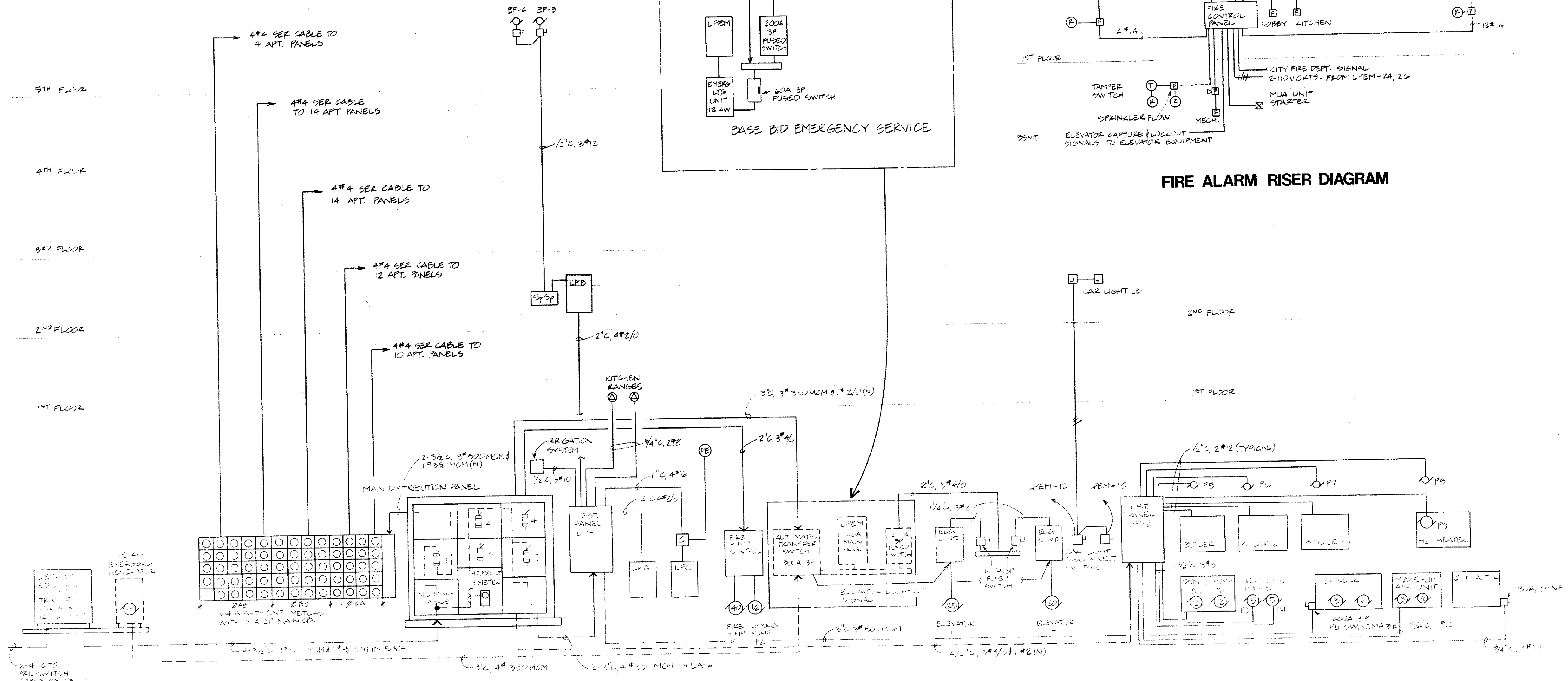
* COMBINATION STARTER WITH "HAND-OFF-AUTO" SELECTOR SWITCH AND PILOT LIGHT MOUNTED ON COVER.

BRANCH PANEL SCHEDULE

panel	main	20A, 1P	20A, 2P	20A, 3P	30A, 2P	30A, 3P	1P spaces
LPA	200A	40					2
LPB	200A	14					4
LPC	100A	5					4
LP5M	1000B	24					6

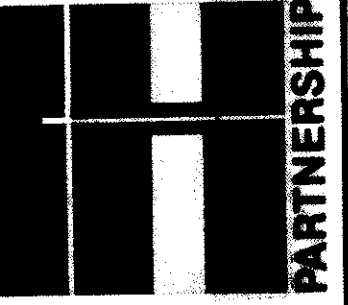


FIRE ALARM RISER DIAGRAM

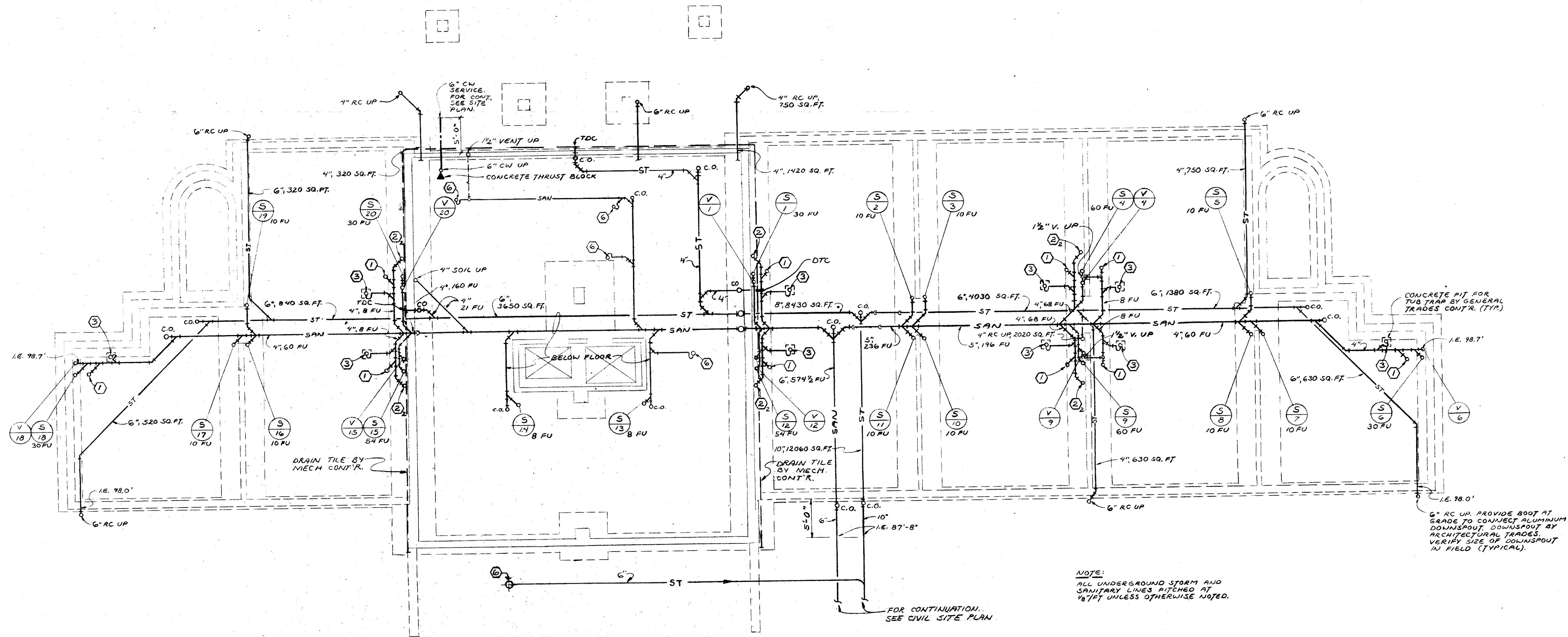


ELECTRICAL RISER DIAGRAM

(ALTERNATE #1 EMERGENCY SERVICE SHOWN)



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 PROJECT 700 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HOUSING FOR THE ELDERLY ANN ARBOR, MICHIGAN HUD PROGRAM RESERVATION NO. MICH 848
 CONSULTANT: PROFESSIONAL CONSULTANTS INC MECHANICAL ENGINEERS 18640 HAGGERTY ROAD LIVONIA MICHIGAN 48152 (313) 464-4411

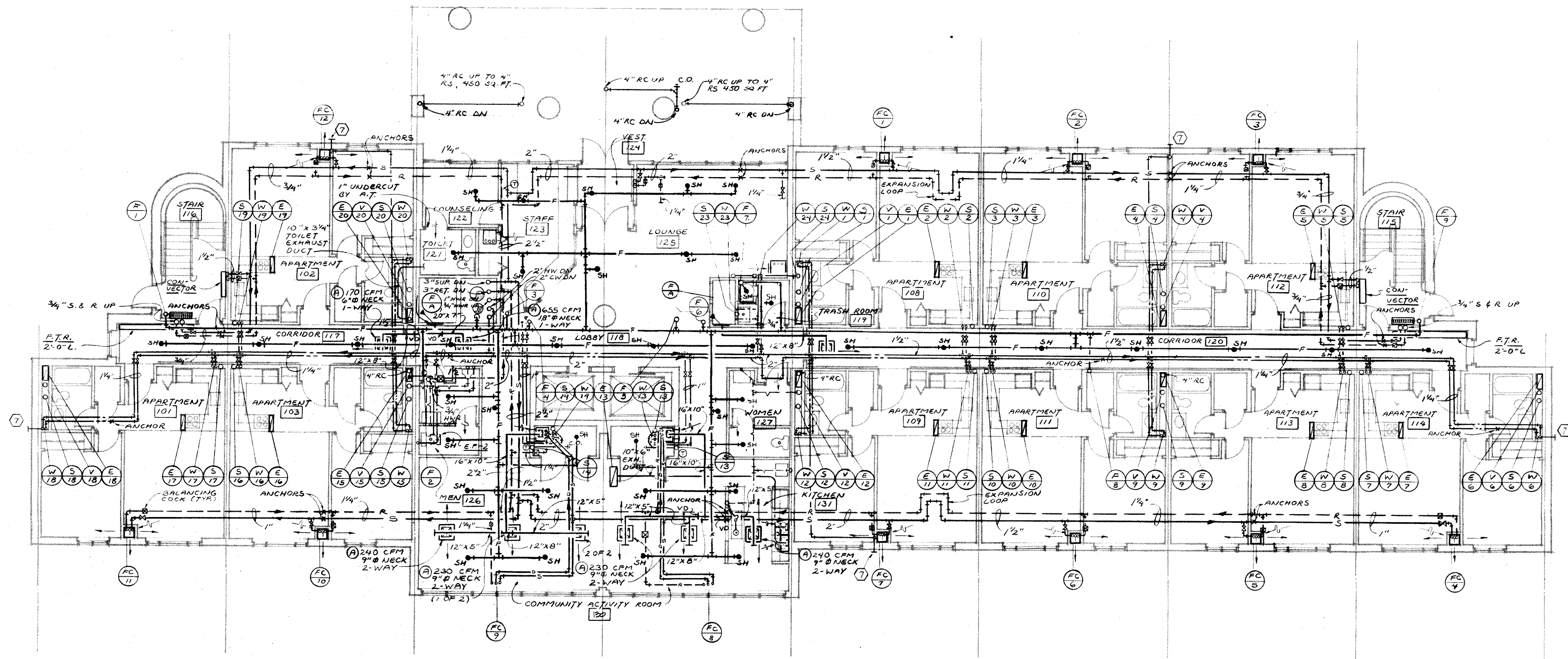
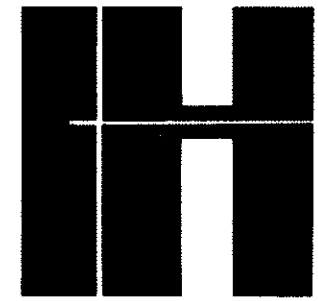


NOTE:
 ALL UNDERGROUND STORM AND
 SANITARY LINES PITCHED AT
 1/8" / FT UNLESS OTHERWISE NOTED.

6" RC UP PROVIDE BOOT AT
 GRADE TO CONNECT ALUMINUM
 DOWNSPOUT. DOWNSPOUT BY
 ARCHITECTURAL TRADES.
 VERIFY SIZE OF DOWNSPOUT
 IN FIELD (TYPICAL).

MECHANICAL FOUNDATION PLAN
 SCALE: 1/8" = 1'-0"

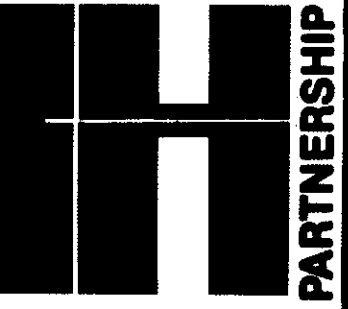




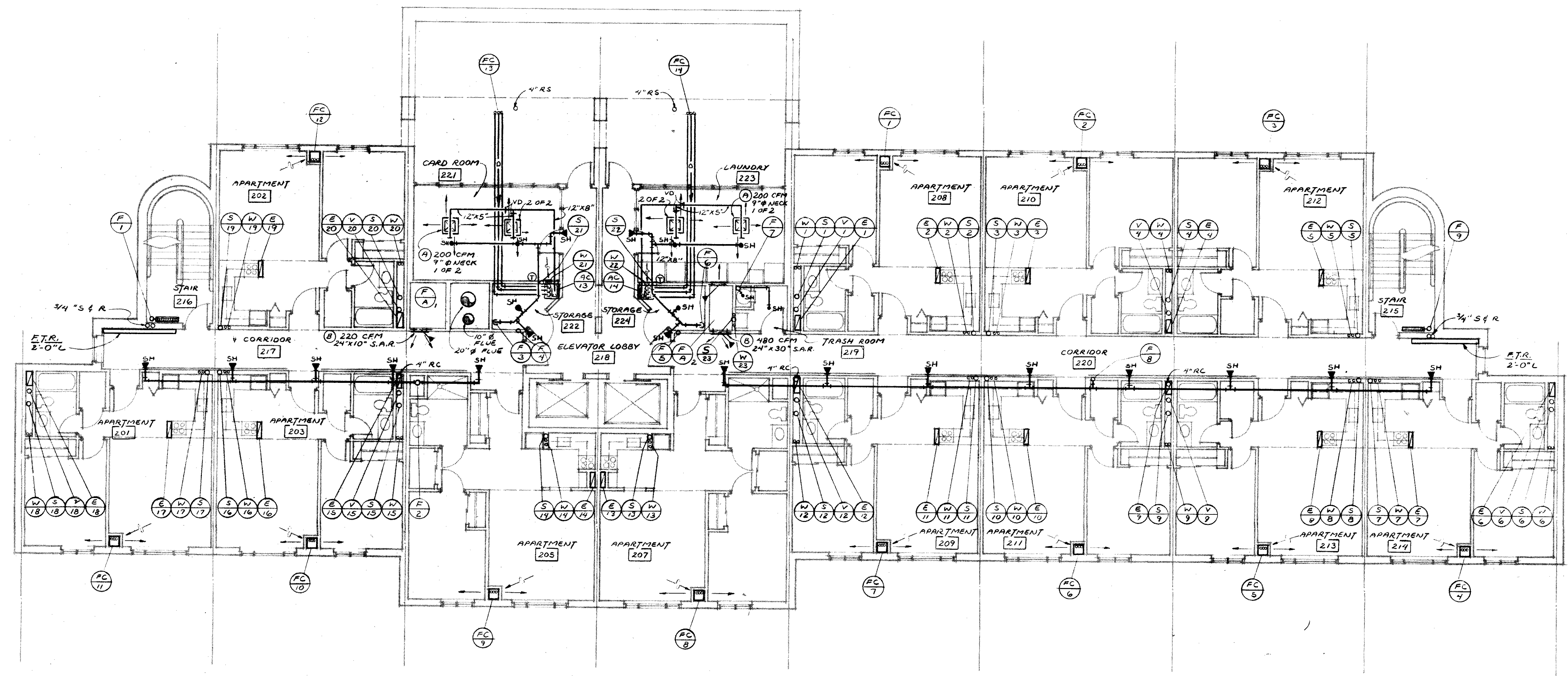
MECHANICAL FIRST FLOOR PLAN
 SCALE: 1/8" = 1'-0"

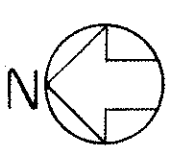
NOTES

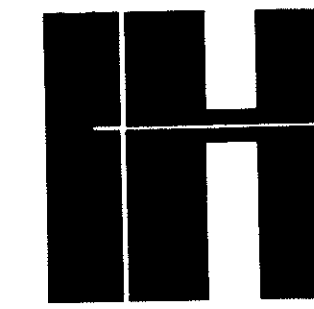
1. FURNISH AND INSTALL ON SUPPLY LINES SERVING FIN TUBE RADIATOR, CONVECTORS AND UNIT HEATERS AN ADJUSTABLE FLOW POSITION CONTROL VALVE SO THAT WHEN SYSTEM GOES TO COOLING MODE, FLOW TO THEM WILL BE SHUT OFF.
2. ALL SUPPLY REGISTERS IN CONJUNCTION WITH FAN COIL UNITS ARE 10"x6" UNLESS OTHERWISE INDICATED AND ARE FURNISHED BY THE SHEET METAL CONTRACTOR.
3. APARTMENT MAKE UP ENTERS APARTMENTS THROUGH CRACK AROUND CORRIDOR DOOR AND THRU APARTMENT CORRIDOR DOOR UNDERCUT.



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PROJECT 7609 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HOUSING FOR THE ELDERLY ANN ARBOR, MICHIGAN
ISSUED 7/1/80 REVISED
CONSULTANT: PROFESSIONAL CONSULTANTS INC MECHANICAL ENGINEERS 18640 HAGGERTY ROAD LIVONIA MICHIGAN 48152 (313) 494-4411



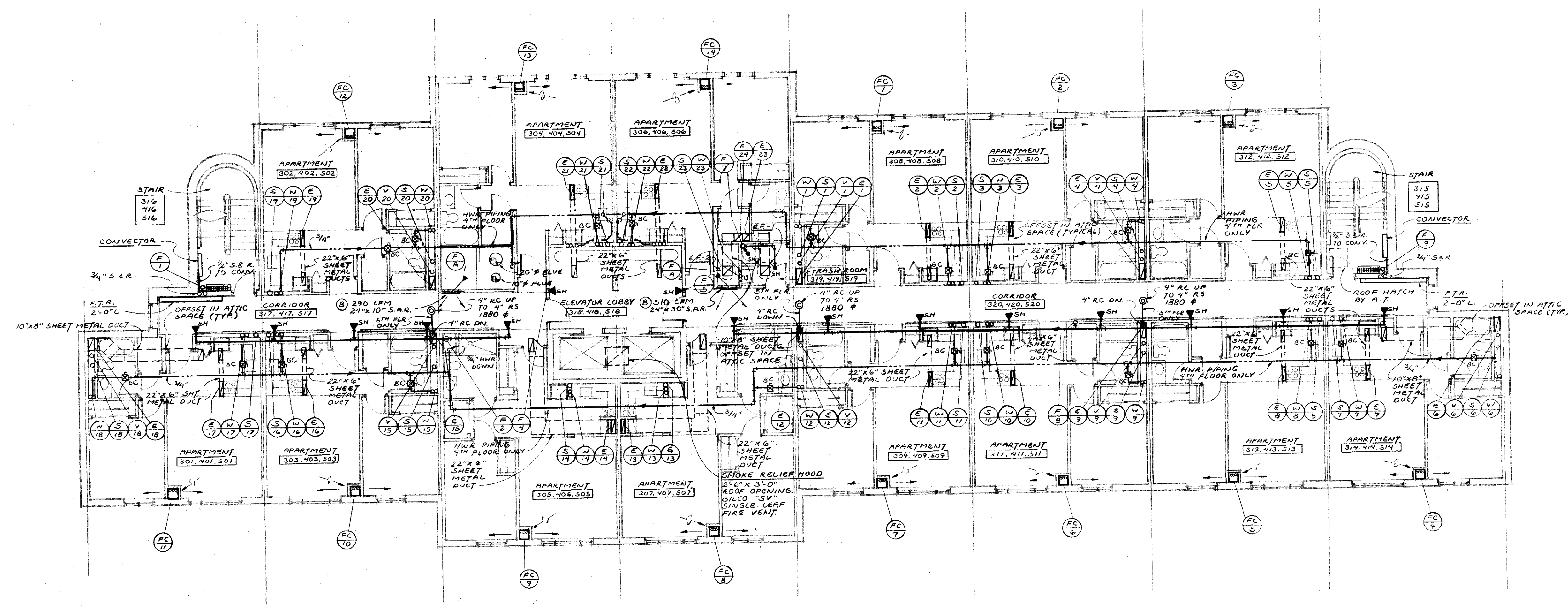
MECHANICAL SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0" 



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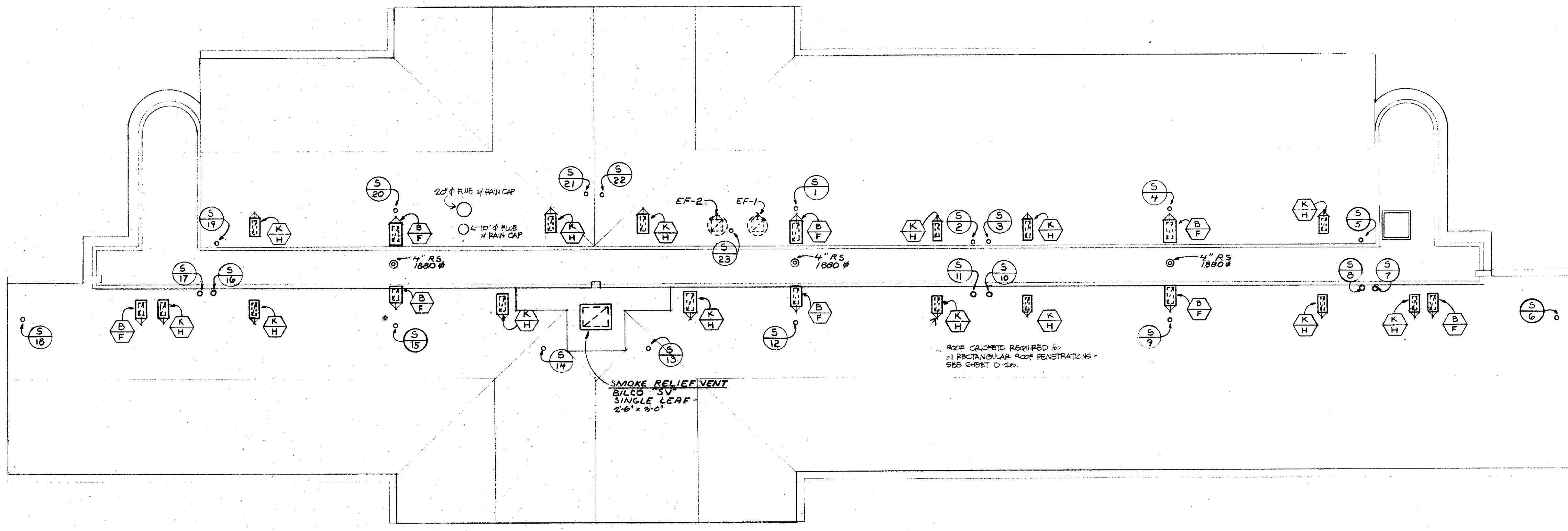
PROJECT 7008 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HOUSING FOR THE ELDERLY ANN ARBOR, MICHIGAN
 CONSULTANT: PROFESSIONAL CONSULTANTS INC MECHANICAL ENGINEERS 1840 HAGGERTY ROAD LIVONIA MICHIGAN 48152 (313) 464-4411

MECHANICAL TYPICAL FLOOR / 3,4,5 / PLAN

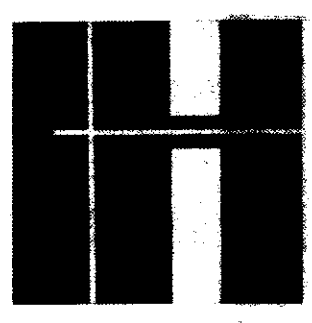


MECHANICAL THIRD, FOURTH & FIFTH FLOORS PLAN
 SCALE: 1/8" = 1'-0"



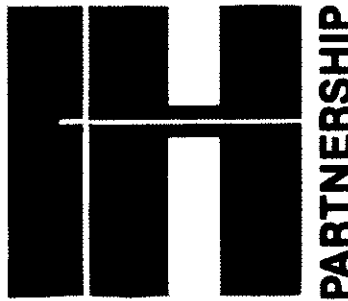


MECHANICAL ROOF PLAN
 SCALE: 1/8" = 1'-0" 

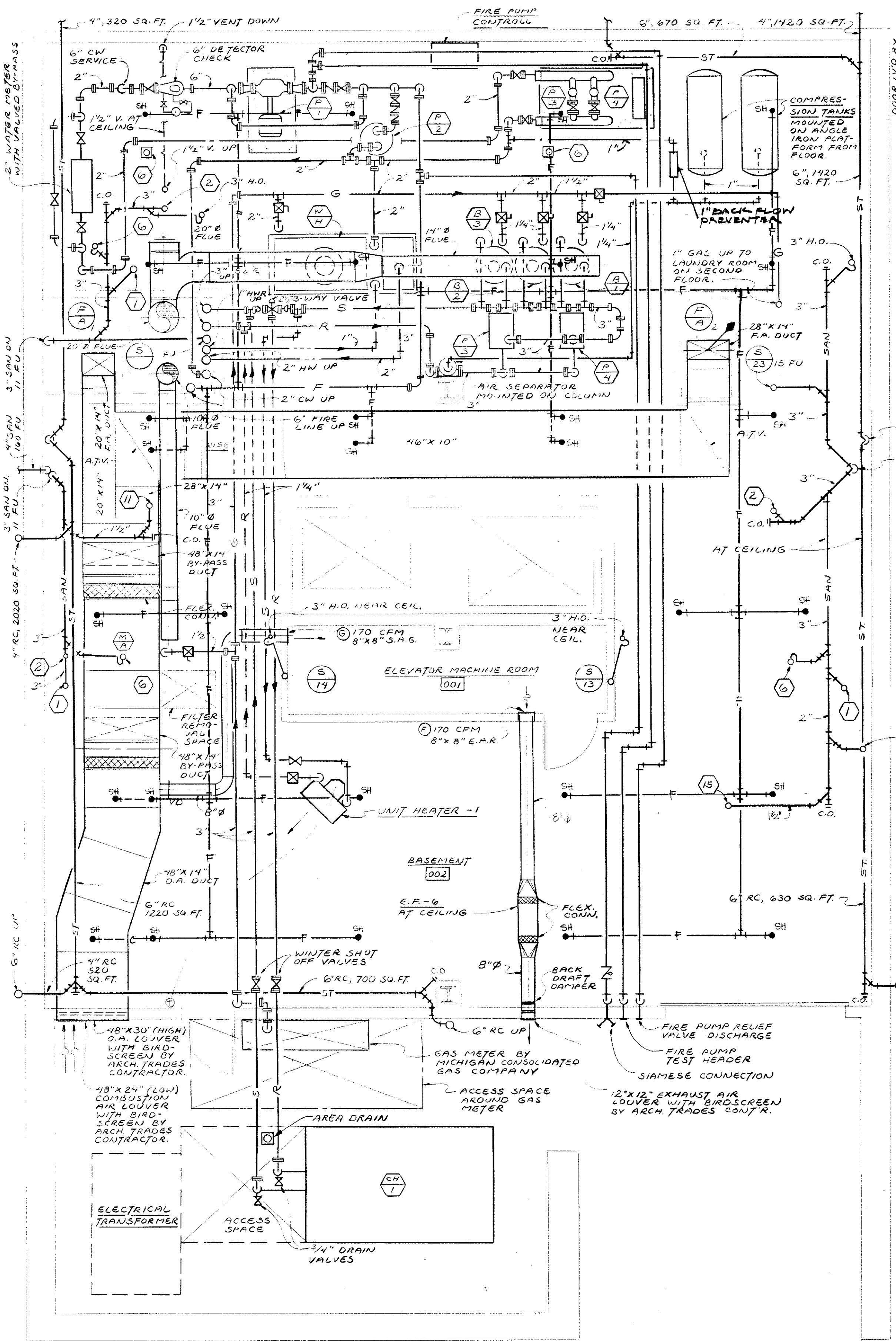


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 PROJECT 7009 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HOUSING FOR THE ELDERLY ANN ARBOR, MICHIGAN
 CONSULTANT: PROFESSIONAL CONSULTANTS INC MECHANICAL ENGINEERS 1860 HAGGERTY ROAD LYONIA MICHIGAN 48122 (313) 464-1171
 REVISION 3/11/80

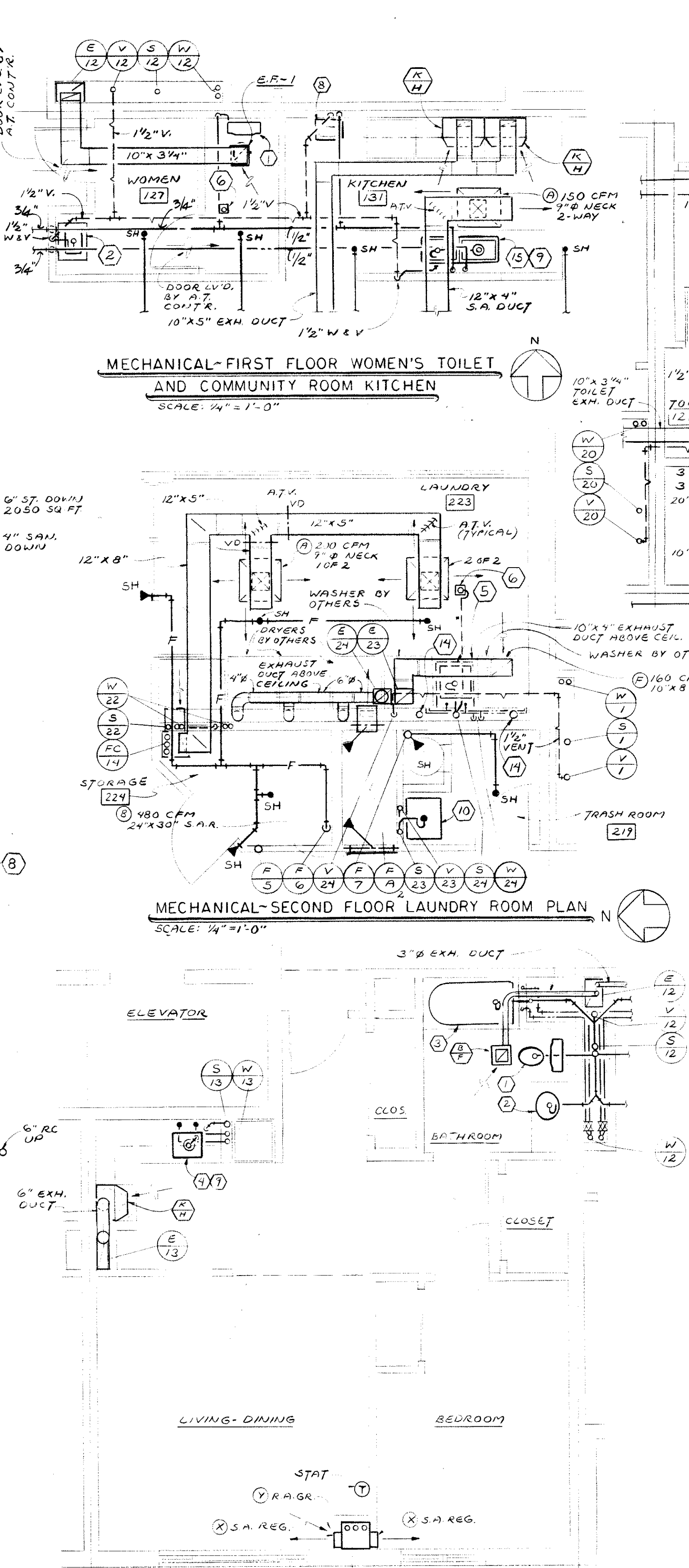
MECHANICAL ROOF PLAN



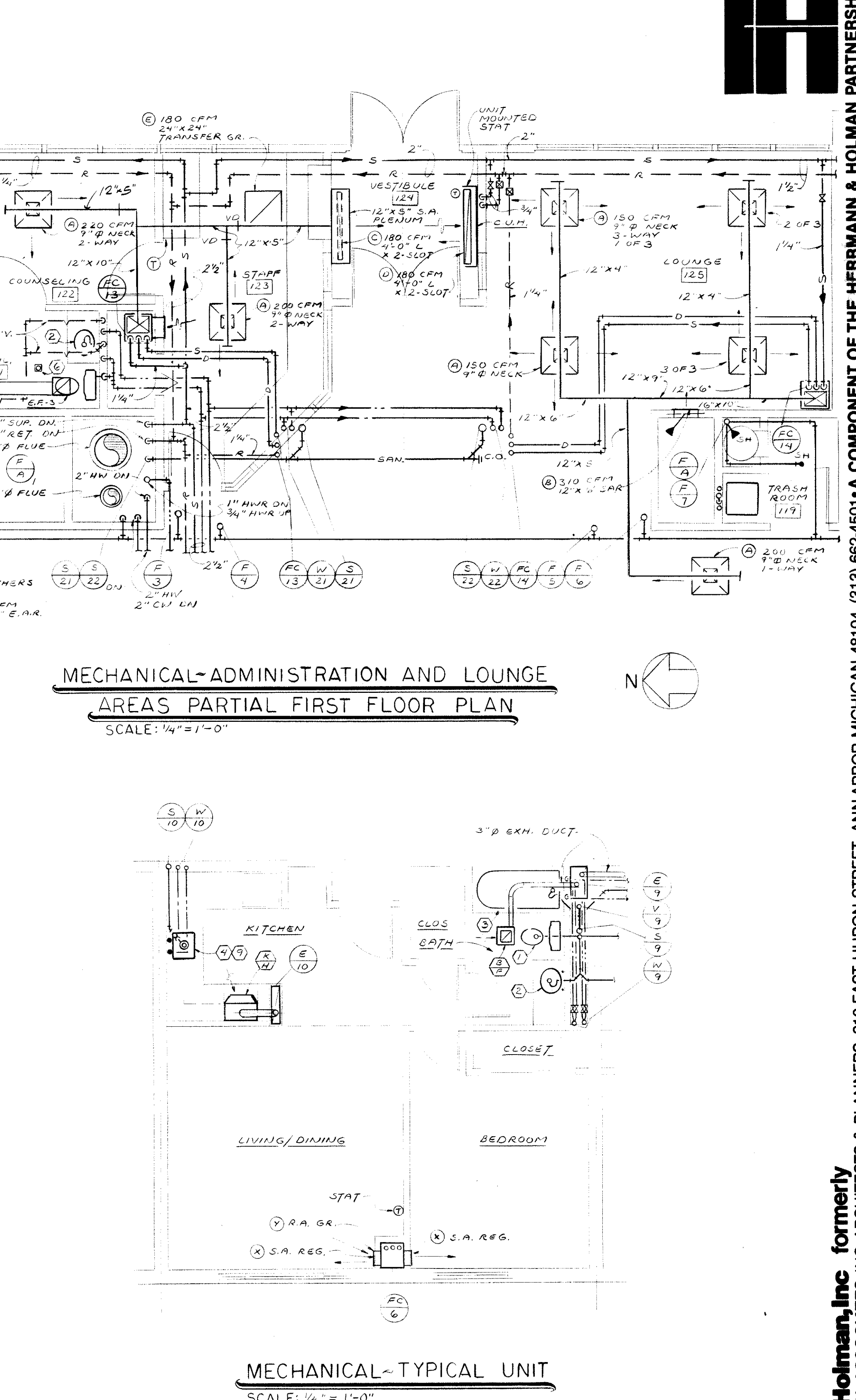
Herrmann & Holman, Inc formerly **Herrmann & Holman Partnership**
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 CONSULTANT: PROFESSIONAL CONSULTANTS INC MECHANICAL ENGINEERS 18540 HAGGERTY ROAD LIVONIA MICHIGAN 48152 (313) 464-4411



MECHANICAL-BASEMENT FLOOR PLAN
 SCALE: 1/4" = 1'-0"

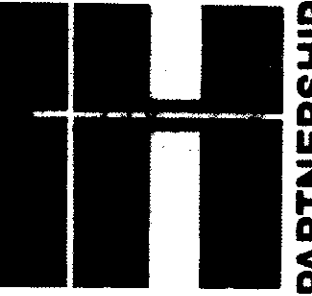


MECHANICAL-TYPICAL HANDICAPPED UNIT
 SCALE: 1/4" = 1'-0"

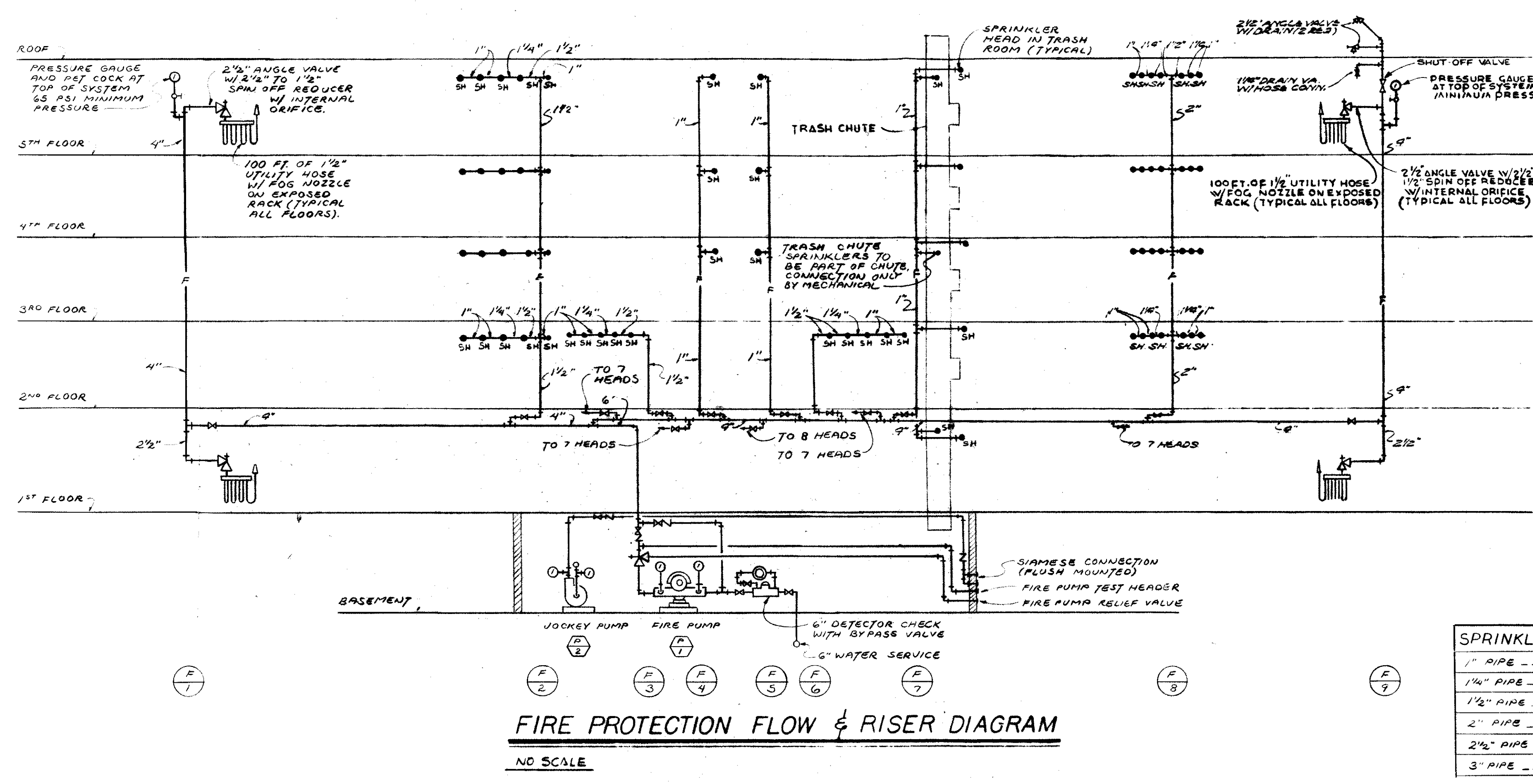
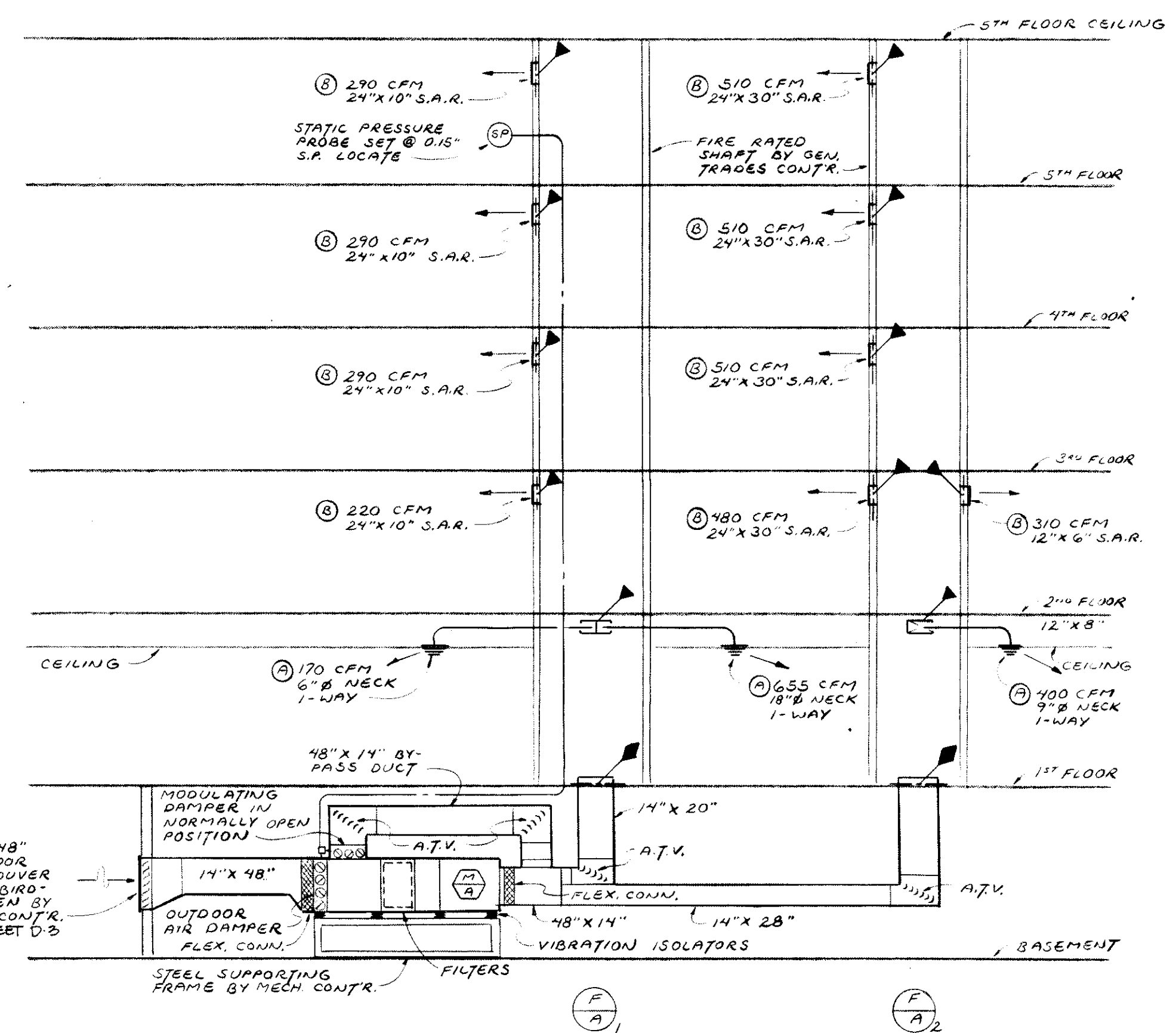
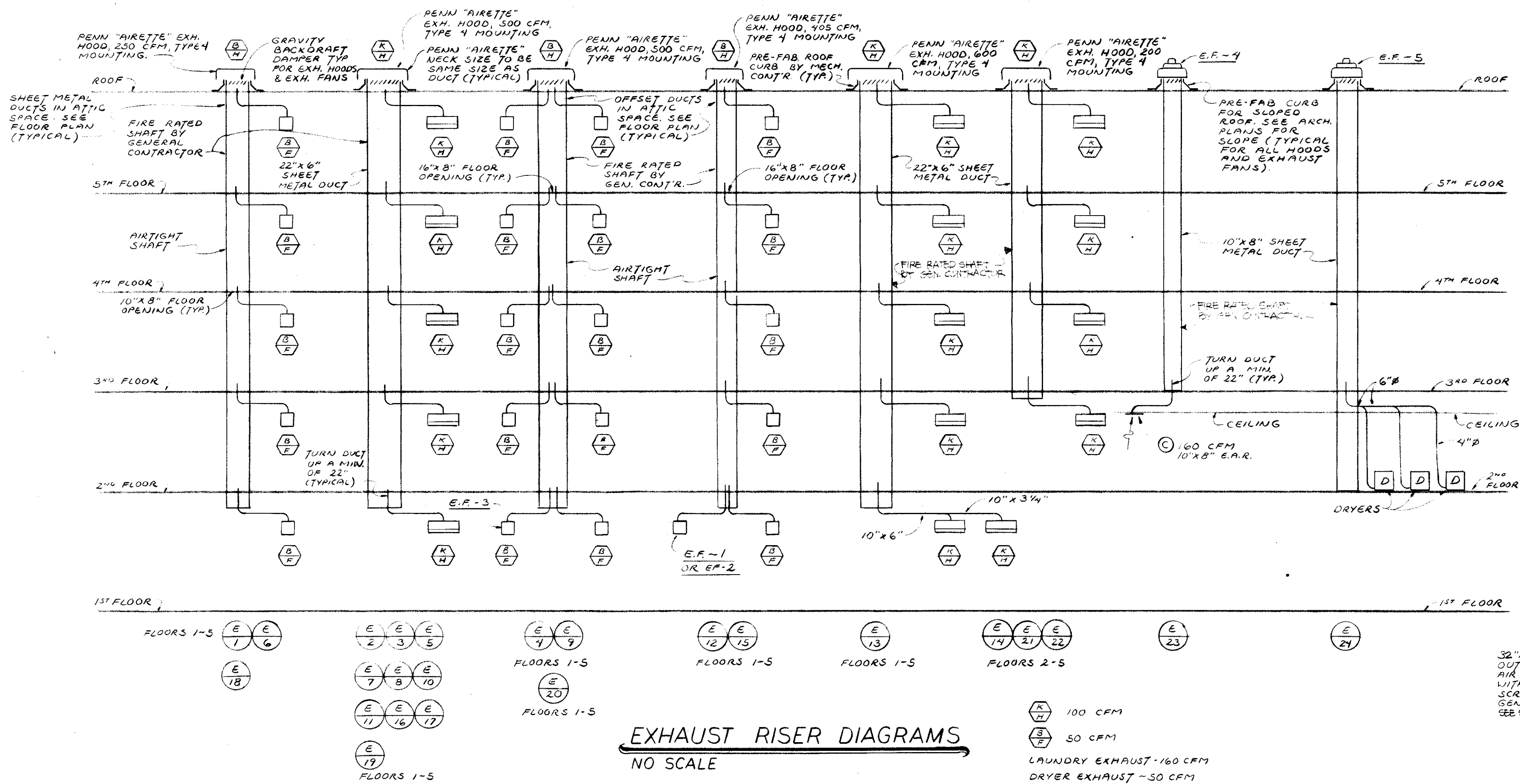


MECHANICAL-TYPICAL UNIT
 SCALE: 1/4" = 1'-0"

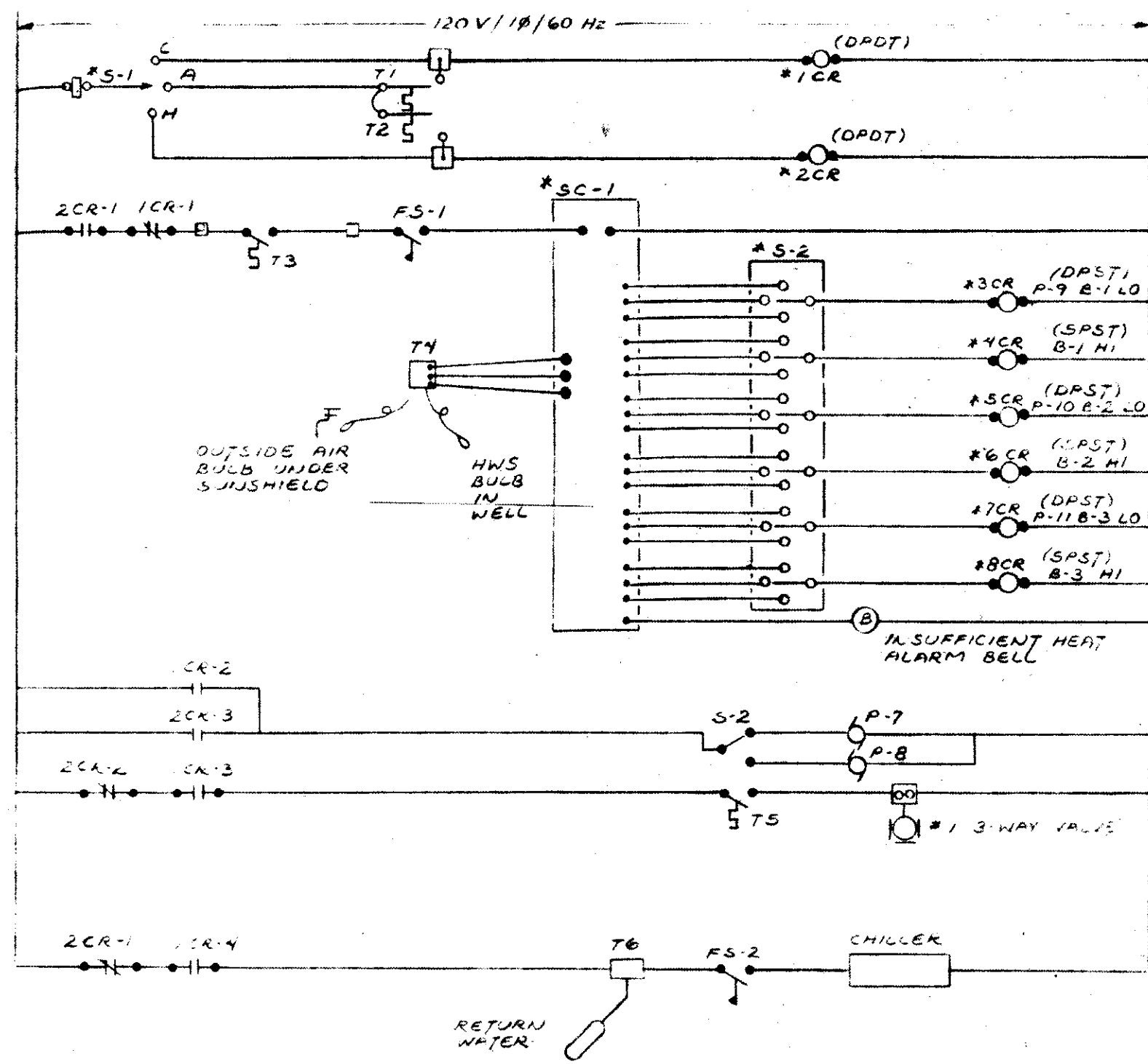
MECHANICAL BASEMENT & TYPICAL PLANS



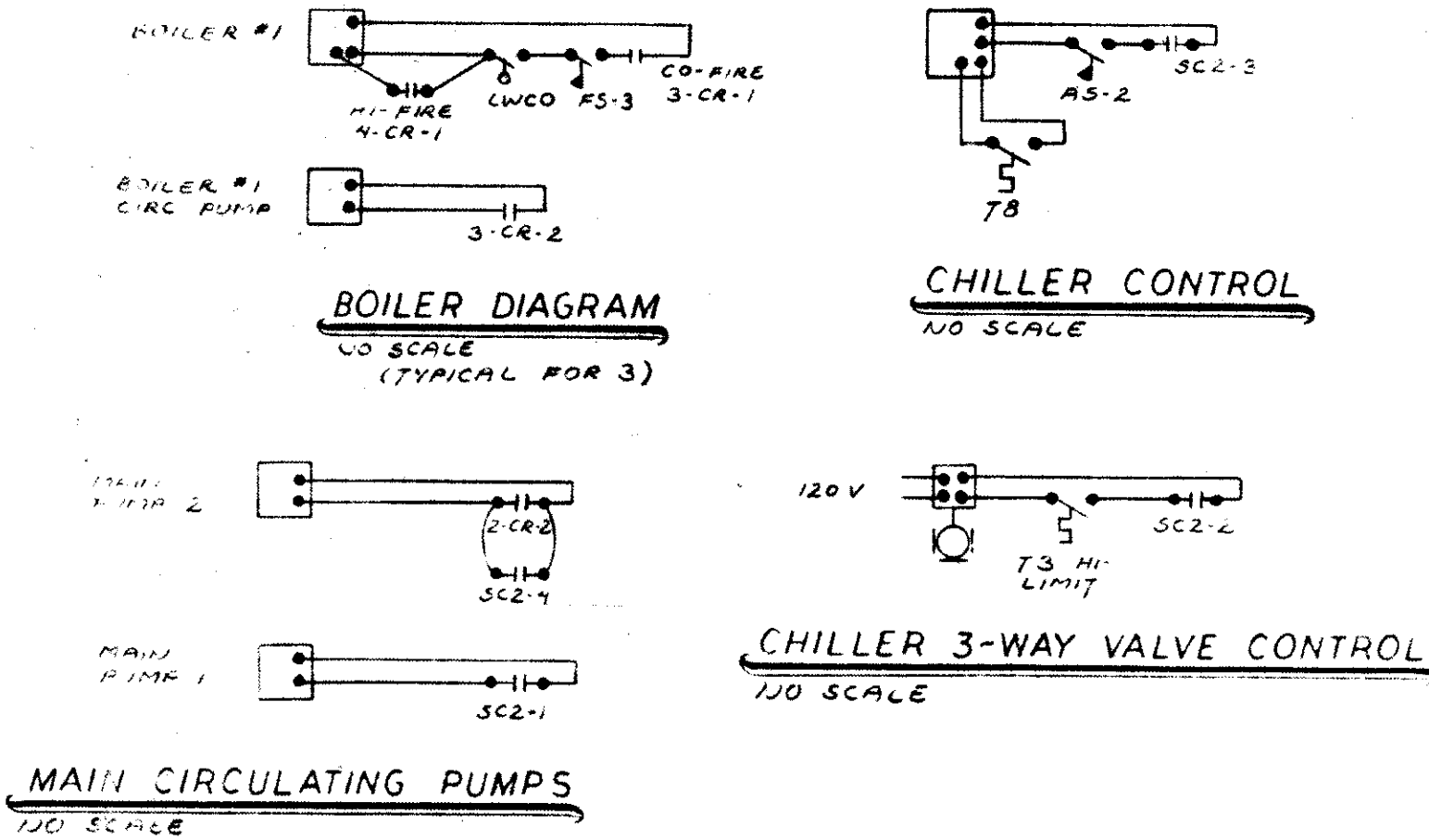
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 ISSUED 11/80 REVISED CONSULTANT: PROFESSIONAL CONSULTANTS INC MECHANICAL ENGINEERS 16540 HAGGERTY ROAD LIVONIA MICHIGAN 48152 (313) 464-4411



1" PIPE	2 SPRINKLERS
1 1/4" PIPE	3 SPRINKLERS
1 1/2" PIPE	5 SPRINKLERS
2" PIPE	10 SPRINKLERS
2 1/2" PIPE	30 SPRINKLERS
3" PIPE	60 SPRINKLERS



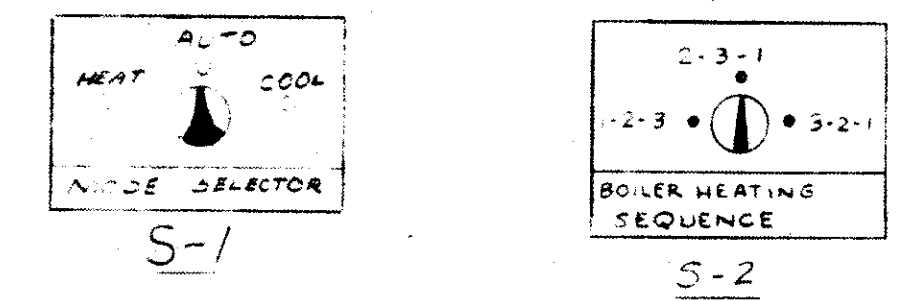
CONTROL DIAGRAM
NO SCALE



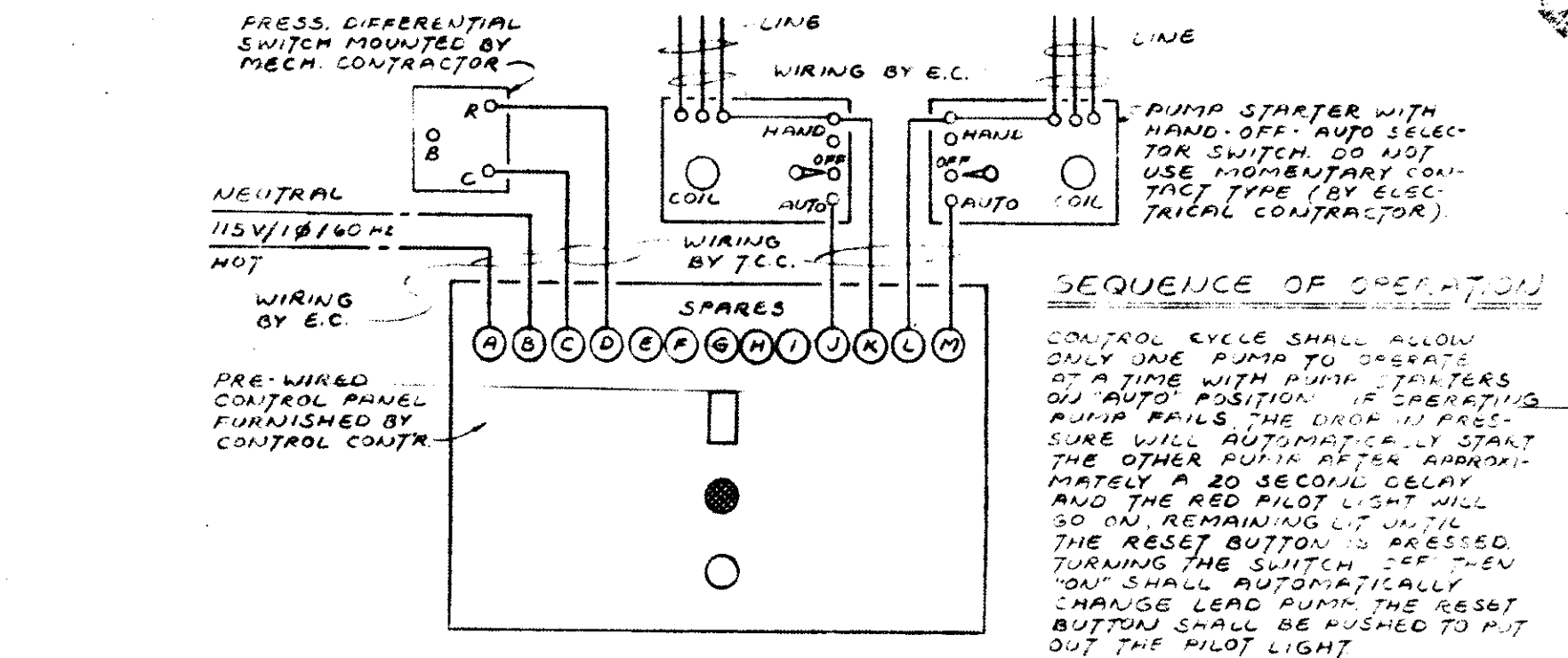
BOILER DIAGRAM
NO SCALE (TYPICAL FOR 3)

CHILLER CONTROL
NO SCALE

CHILLER 3-WAY VALVE CONTROL
NO SCALE



O.A. RESET SCHEDULE
O.A. TEMP: -10° to +70°
H.W. TEMP: 180° to 200°



MAIN BUILDING PUMP ALTERNATOR PANEL DIAGRAM
NO SCALE

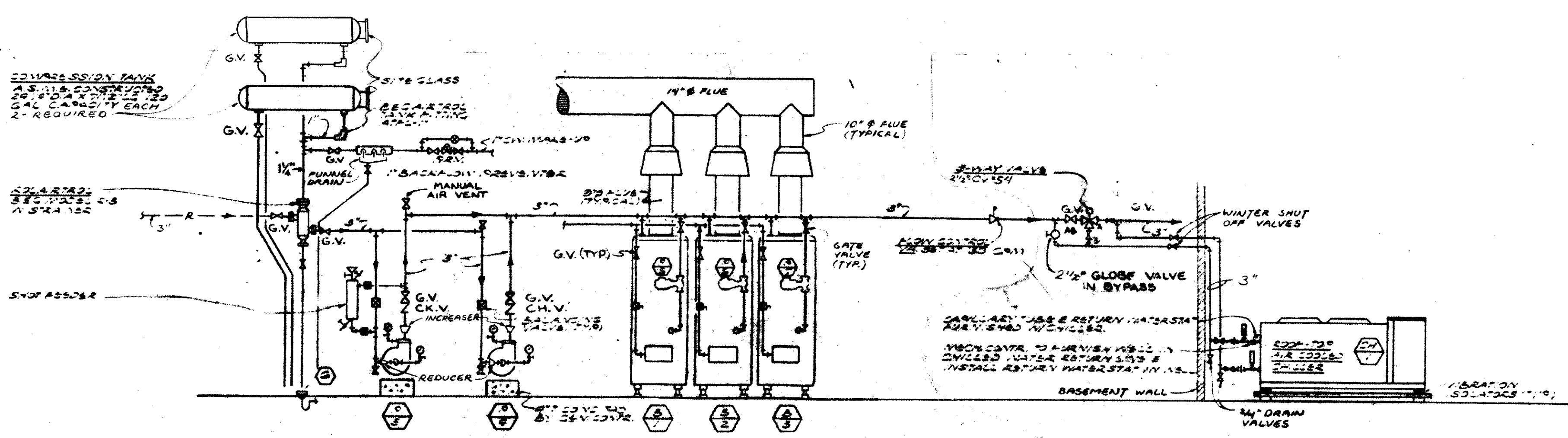
SEQUENCE OF OPERATION

SWITCH S-1 PROVIDES MANUAL OR AUTOMATIC MODE OF SELECTION. IN THE AUTOMATIC MODE, OUTDOOR AIR SENSORS T1 AND T2 DETERMINE HEATING OR COOLING MODE. SETPOINTS & DIFFERENTIAL SETTINGS OF T1 AND T2 MUST BE WIDE ENOUGH TO ALLOW SYSTEM TO BE OFF BETWEEN THE AUTOMATIC HEAT AND COOL SETPOINTS.

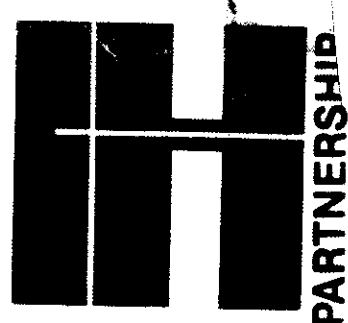
HEATING MODE:
CHILLER CIRCUITRY IS DEENERGIZED WHEN WATER TEMPERATURE IS ABOVE SETTING OF T3. HEATING SEQUENCE IS ENERGIZED SENSOR T4 WILL MAINTAIN HOT WATER SUPPLY TEMPERATURE BY CYCLING BOILERS IN SEQUENCE THRU SC-1 AS INDICATED T4 WILL BE RESET INVERSELY ACCORDING TO OUTDOOR TEMPERATURE. SWITCH S-2 WILL PROVIDE MANUAL ALTERNATION OF BOILER SEQUENCING SEQUENCE SC-1 TO HAVE MULTI RECYCLE RELAY TO PREVENT SIMULTANEOUS STARTING. MAIN PUMP #7 OR B IS STARTED WHEN THE HEATING MODE IS SELECTED.

COOLING MODE:
HEATING CIRCUITRY IS DEENERGIZED WHEN COOLING MODE IS SELECTED. SEQUENCE SC-2 IS ENERGIZED AND CONTROLLED BY SENSOR T7. WHEN COOLING IS REQUIRED SC-2 WILL ENERGIZE EITHER PUMP #7 OR #8 THEN 3 WAY VALVE WILL OPERATE CHILLER WHEN IN LIMIT START TO REDUCE TEMPERATURE CONTROL TO WHICH WATER IS PROVIDED THROUGH CO-2. CHILLER WILL BE PROVIDED BY UNIT MANUFACTURER CHANGE WATER MULTISTAGE TEMPERATURE CONTROLLER TO BE KEPT TO MINIMUM.

MAIN CIRCULATING PUMPS:
TO BE PROVIDED WITH AN AUTOMATIC FAILURE AND RESTART CIRCUITRY. ENERGIZED DURING THE HEATING MODE SUPPLIED BY PUMP SUPPLY SA.

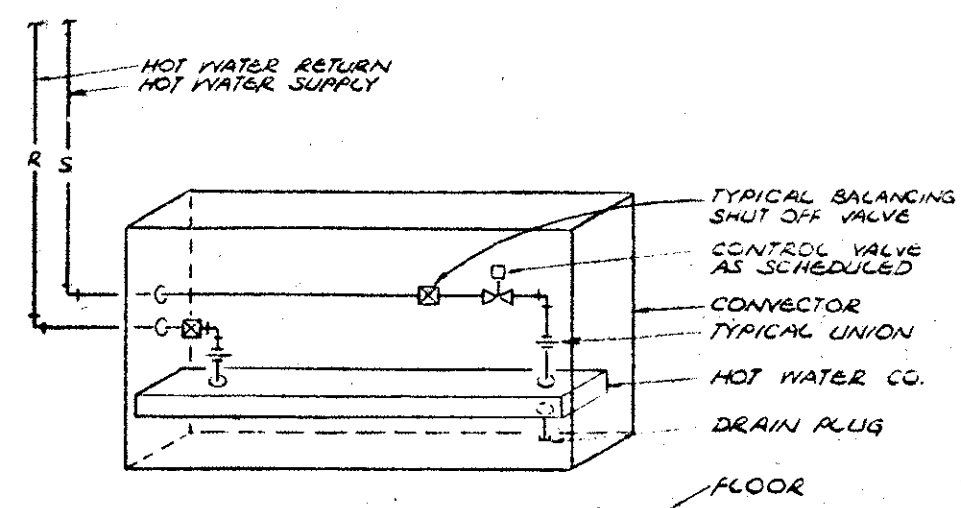


HOT AND CHILLED WATER PIPING DIAGRAM
NO SCALE



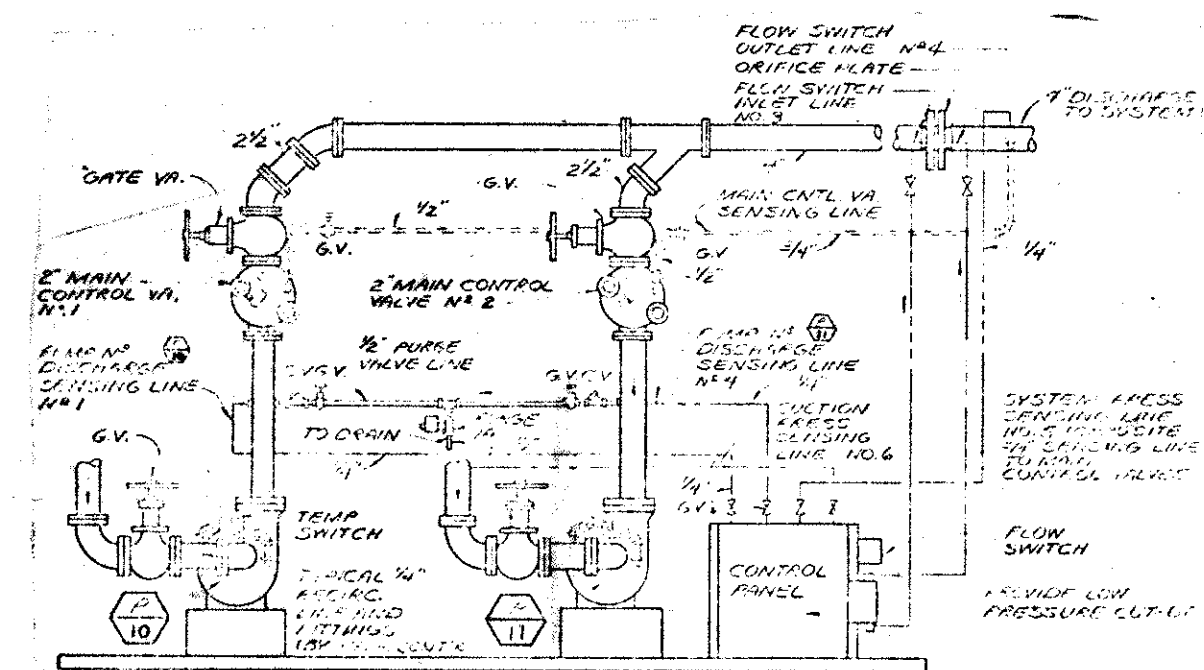
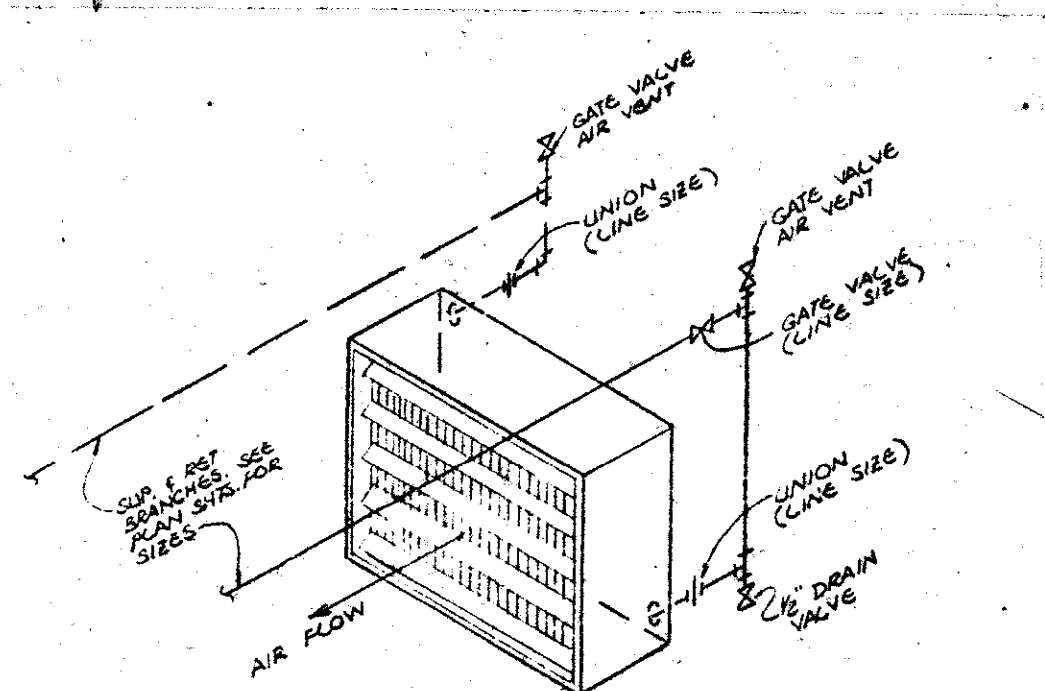
Herrmann & Holman, Inc. formerly COLVIN-ROBINSON-ASSOCIATES, INC. ARCHITECTS & PLANNERS 210 EAST HURON STREET ANN ARBOR, MICHIGAN 48104 (313) 662-4501 • A COMPONENT OF THE HERRMANN & HOLMAN PARTNERSHIP
 PROJECT 7909 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT FOR THE ELDERLY ANN ARBOR, MICHIGAN
 ISSUED 11/1962 REVISION CONSULTANT: PROFESSIONAL CONSULTANTS INC MECHANICAL ENGINEERS 18540 HAGGERTY ROAD LIVONIA MICHIGAN 48152 (313) 464-4411

PIPING, DETAILS



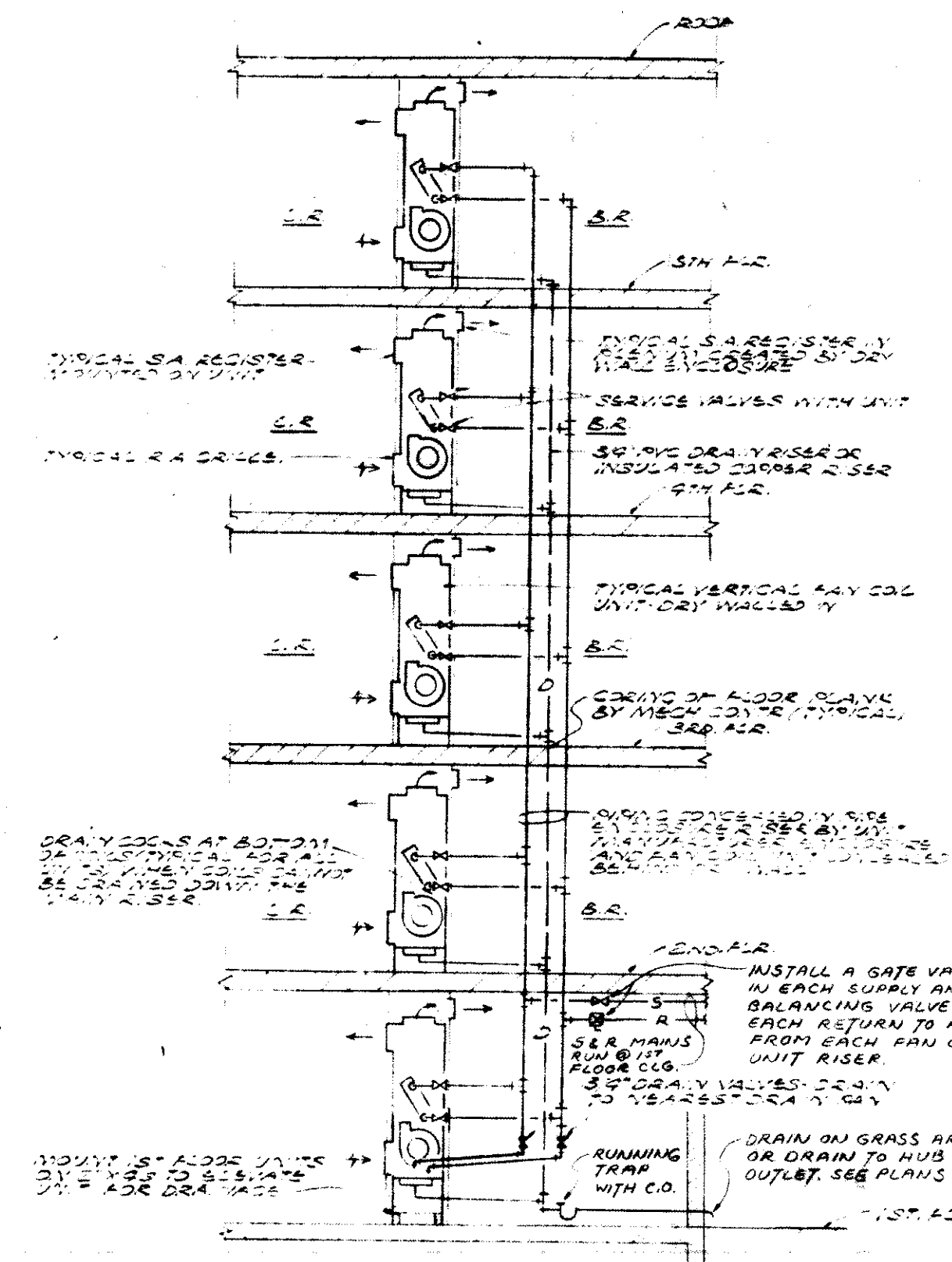
CONVECTOR PIPING DIAGRAM

NO SCALE



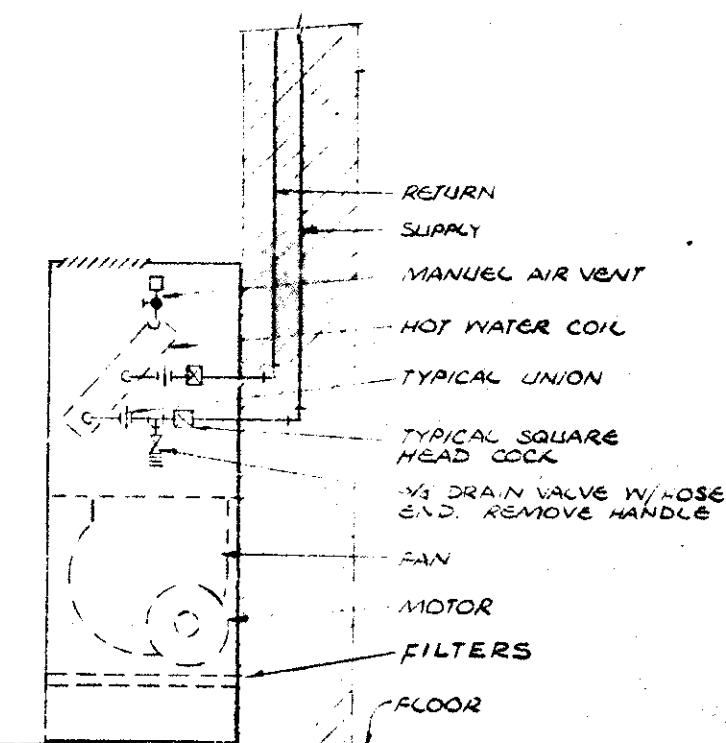
DOMESTIC WATER PUMP DETAIL

NO SCALE



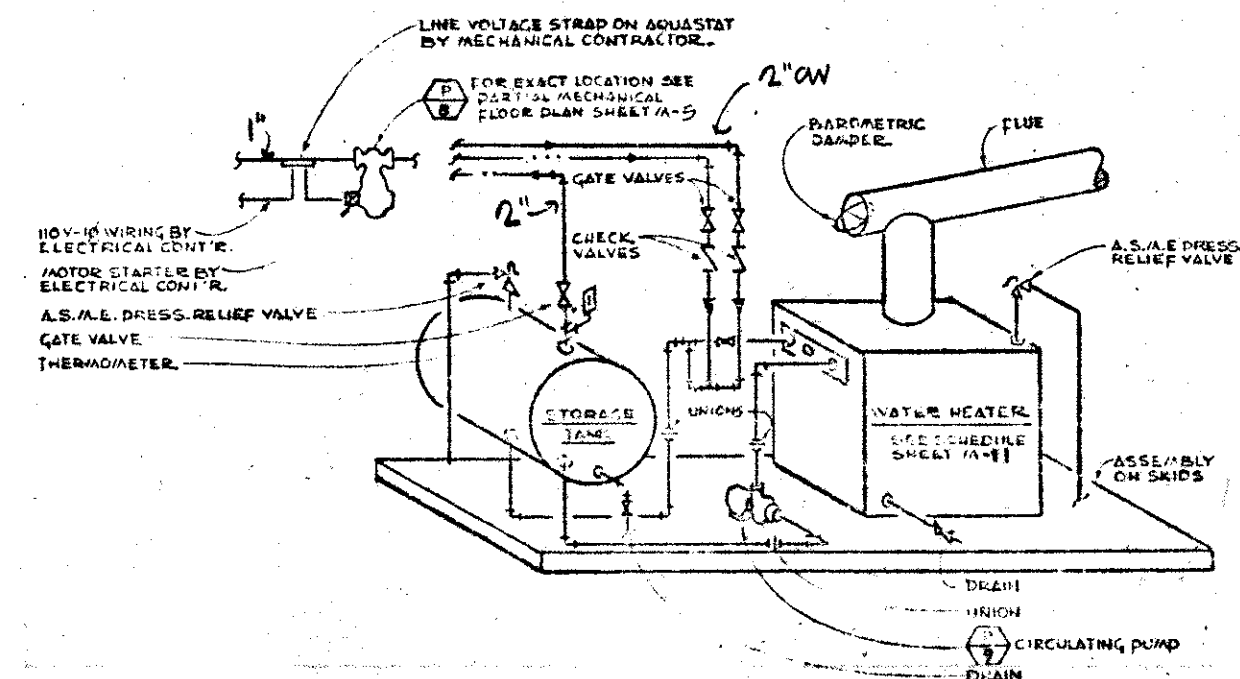
**COMPOSITE HEATING & COOLING
UNIT RISER DIAGRAM**

NO SCALE



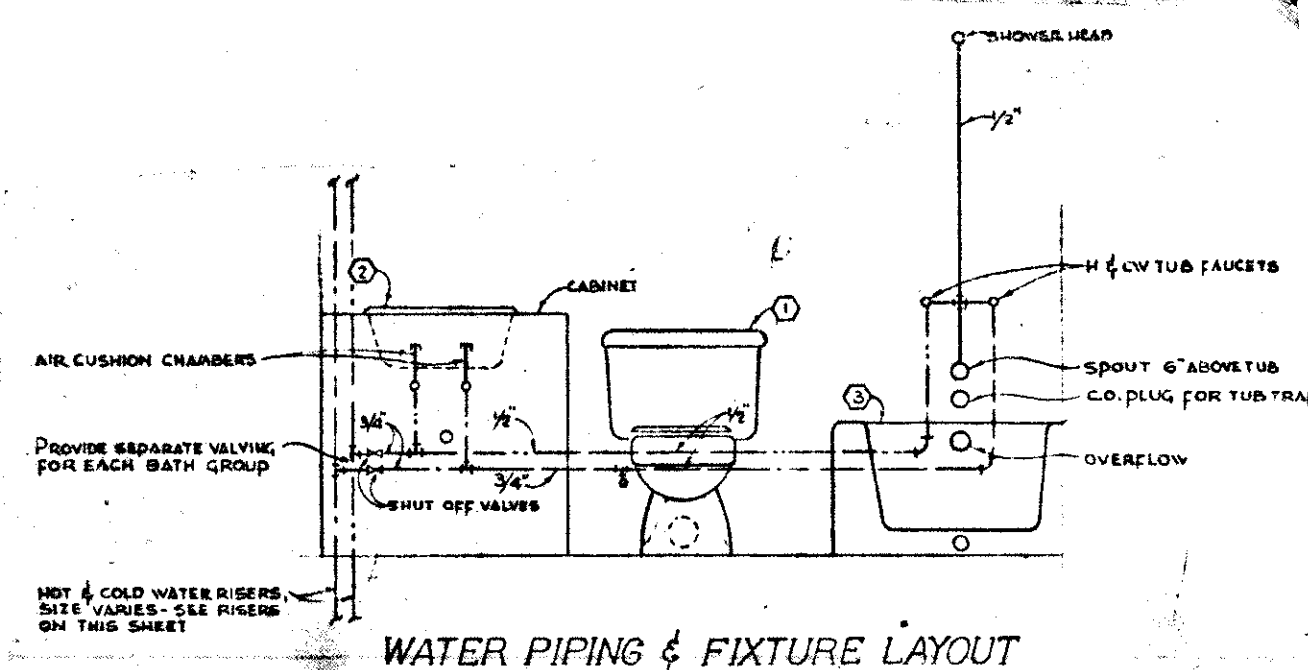
**WALL MOUNT CABINET UNIT
HEATER PIPING DIAGRAM**

NO SCALE



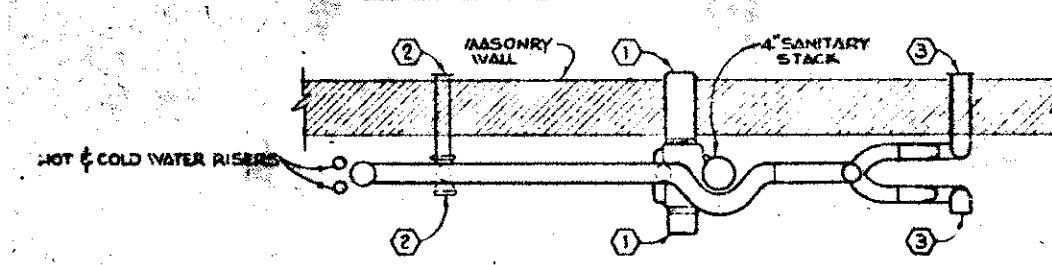
WATER HEATER PIPING DIAGRAM

NO SCALE



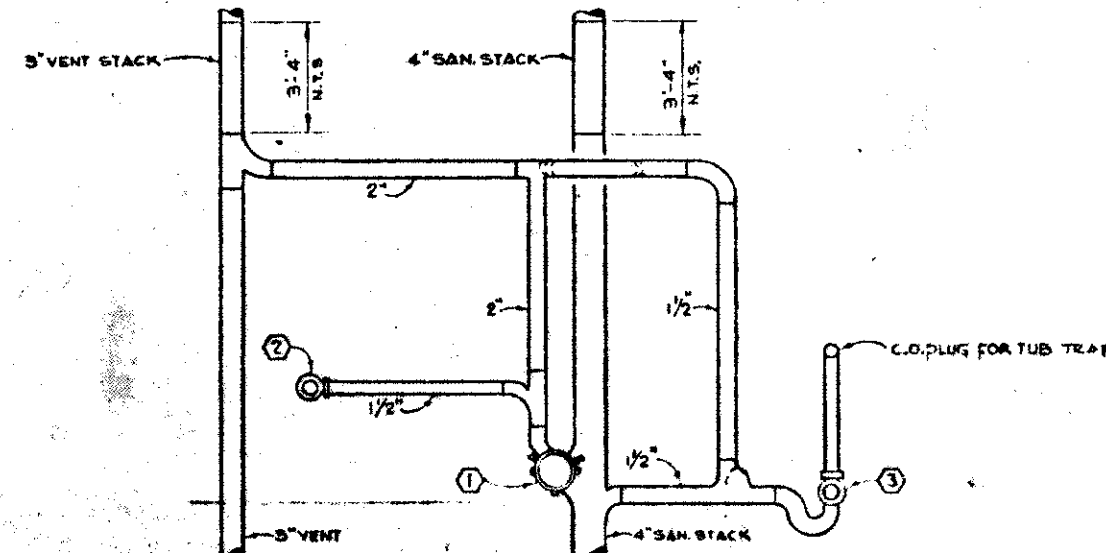
WATER PIPING & FIXTURE LAYOUT

NO SCALE



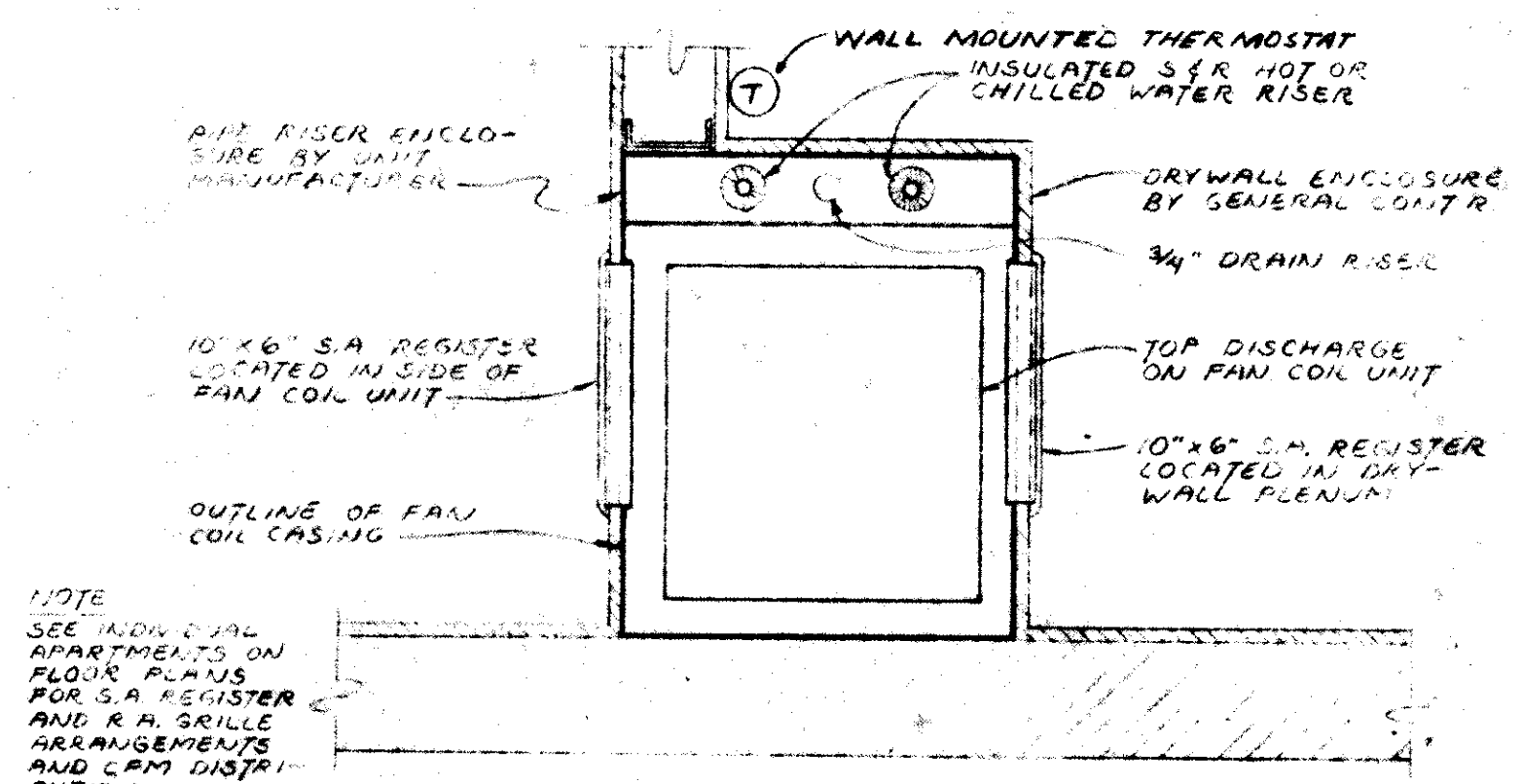
**SANITARY PIPING
PLAN VIEW**

NO SCALE



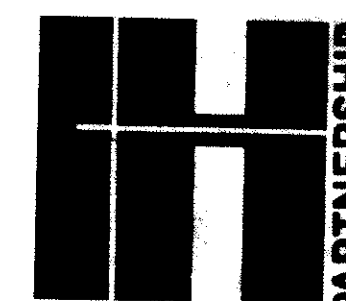
SANITARY PIPING

NO SCALE



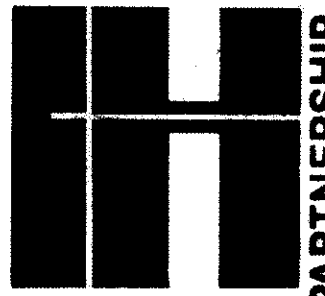
FAN COIL DETAIL

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



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 PROJECT 7009 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HOUSING FOR THE ELDERLY ANN ARBOR, MICHIGAN
 ISSUED 7-11-66 REVISION
 CONSULTANT: PROFESSIONAL CONSULTANTS INC. MECHANICAL ENGINEERS 18640 HAGGERTY ROAD LIVONIA MICHIGAN 48152 (313) 464-4411

99 PIPING DETAILS



SANITARY RISER AND PIPE SIZING SCHEDULE

FLOORS		S																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
THIRD THRU FIFTH	FIXTURES SERVED	BATH	KIT.	KIT.	D.BATH	KIT.	BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	BATH	KIT.	BATH	KIT.	KIT.	S.S.
	FIXTURE LOAD (F.U.)	6	2	2	12	2	6	2	2	12	2	2	12	2	2	12	2	2	6	2	6	2	2	3
	3 FLOORS x F.U.	18	6	6	36	6	18	6	6	36	6	6	36	6	6	36	6	6	18	6	18	6	6	9
SECOND	FIXTURES SERVED	BATH	KIT.	KIT.	D.BATH	KIT.	BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	BATH	KIT.	BATH	KIT.	KIT.	S.S.
	FIXTURE LOAD (F.U.)	6	2	2	12	2	6	2	2	12	2	2	12	2	2	12	2	2	6	2	6	2	2	3
	FIXTURE COUNT	24	8	8	48	8	24	8	8	48	8	8	48	8	8	48	8	8	24	8	24	8	8	12
FIRST	FIXTURES SERVED	BATH	KIT.	KIT.	D.BATH	KIT.	BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	BATH	~	~	BATH	KIT.	KIT.	BATH	KIT.	BATH	OFFSET AT FIRST FLOOR DOWN COMBINED	S.S.	
	FIXTURE LOAD (F.U.)	6	2	2	12	2	6	2	2	12	2	2	6	~	~	6	2	2	6	2	6	16	3	
	FIXTURE COUNT	30	10	10	60	10	30	10	10	60	10	10	54	8	8	54	10	10	30	10	30	16	15	
STACK	SANITARY PIPE SIZE	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	3"	3"	4"	4"	4"	4"	4"	4"	4"	3"	
	VENT PIPE SIZE	2 1/2"	~	~	2 1/2"	~	2 1/2"	~	~	2 1/2"	~	~	2 1/2"	~	~	2 1/2"	~	~	2 1/2"	~	2 1/2"	~	2"	
	SELF VENTING STACK	~	X	X	~	X	~	X	X	~	X	X	~	X	X	~	X	X	~	X	~	X	~	

DOMESTIC WATER RISER SCHEDULE

FLRS	W																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
5	1" CW	3/4" HW	1/2" CW	3/4" HW	1/2" CW	3/4" HW	1/2" CW	3/4" HW	1/2" CW	3/4" HW	1/2" CW	3/4" HW	1/2" CW	3/4" HW	1/2" CW	3/4" HW	1/2" CW	3/4" HW	1/2" CW	3/4" HW	1/2" CW	3/4" HW	1/2" CW	3/4" HW
4	1" CW	3/4" HW	3/4" CW	3/4" HW	1 1/4" CW	1" HW	1" CW	3/4" HW	3/4" CW	3/4" HW	1 1/4" CW	1" HW	1" CW	3/4" HW	3/4" CW	3/4" HW	1 1/4" CW	1" HW	1" CW	3/4" HW	3/4" CW	3/4" HW	1" CW	3/4" HW
3	1 1/4" CW	1 1/4" HW	3/4" CW	3/4" HW	3/4" CW	3/4" HW	1 1/4" CW	1 1/4" HW	3/4" CW	3/4" HW	3/4" CW	3/4" HW	1 1/4" CW	1 1/4" HW	3/4" CW	3/4" HW	3/4" CW	3/4" HW	1 1/4" CW	1 1/4" HW	3/4" CW	3/4" HW	1" CW	3/4" HW
2	1 1/4" CW	1 1/4" HW	1" CW	1" HW	1" CW	1" HW	1 1/4" CW	1 1/4" HW	1" CW	1" HW	1" CW	1" HW	1 1/4" CW	1 1/4" HW	1" CW	1" HW	1" CW	1" HW	1 1/4" CW	1 1/4" HW	1" CW	1" HW	1" CW	1" HW
1	1 1/4" CW	1 1/4" HW	1" CW	1" HW	1" CW	1" HW	1 1/4" CW	1 1/4" HW	1" CW	1" HW	1" CW	1" HW	1 1/4" CW	1 1/4" HW	1" CW	1" HW	1" CW	1" HW	1 1/4" CW	1 1/4" HW	1" CW	1" HW	1" CW	1" HW
SPACE SERVED																								
3 RD THRU 5 TH	BATH	KIT.	KIT.	D.BATH	KIT.	BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	BATH	KIT.	BATH	KIT.	KIT.	S.S.	
2 ND	BATH	KIT.	KIT.	D.BATH	KIT.	BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	BATH	KIT.	BATH	~	~	S.S.	
1 ST	BATH	KIT.	KIT.	D.BATH	KIT.	BATH	KIT.	KIT.	D.BATH	KIT.	KIT.	BATH	~	~	BATH	KIT.	KIT.	BATH	KIT.	BATH			S.S.	

