METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP

PHASE V ·· 1984 PROJECTS

BID PACKAGES: 2 THROUGH 6

WRIGHT / PORTEOUS & LOWE INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA

JOHN T. LEJASON
REGISTERED
No. 4041
STATE OF INDIANA
ARCHITECT

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WRIGHT PORTEOUS & LOWE INC.
ARCHITECTS ENGINEERS

METROPOLITAN SCHOOL DISTRICT
OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

TITLE SHEET

NO.	DATE	REVISIONS DESCRIPTION

COMM. NO. 8391
DATE 2-20-84
DRAWN BY
CHECKED BY

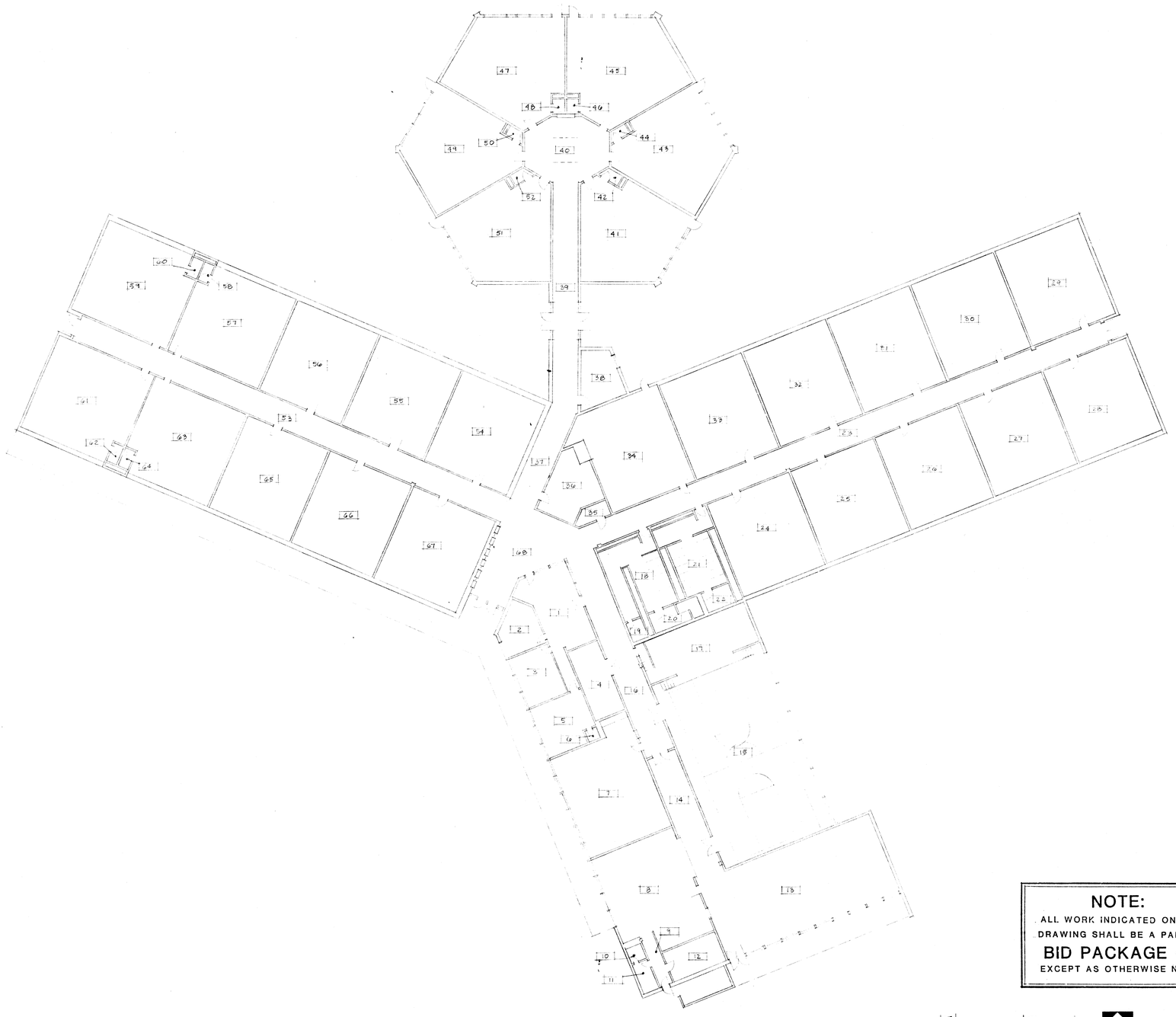
SET NO. 1

COVER

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR: CARPET EXIST. TO REMAIN	BASE: NEW 4" VINYL
1	OFFICE	X	
2	PRINCIPAL	X	
3	TEACHERS	X	
4	STORAGE	X	
5	NURSE	X	
6	CLOSET	X	
7	LIBRARY	X	
8	KITCHEN	X	
9	PASSAGE	X	
10	TOILET	X	
11	COAT ROOM	X	
12	STORAGE	X	
13	DINING	X	
14	CORRIDOR	X	
15	ASSEMBLY	X	
16	CORRIDOR	X	
17	STAGE	X	
18	BOYS TOILET	X	
19	MENS TOILET	X	
20	DRESSING SHOWER	X	
21	GIRLS TOILET	X	
22	WOMENS TOILET	X	
23	CORRIDOR	X	
24	CLASSROOM	X	X
25	CLASSROOM	X	X
26	CLASSROOM	X	X
27	CLASSROOM	X	X
28	CLASSROOM	X	X
29	CLASSROOM	X	X
30	CLASSROOM	X	X
31	CLASSROOM	X	X
32	CLASSROOM	X	X
33	CLASSROOM	X	X
34	BOILER ROOM	X	
35	JANITOR	X	
36	STORAGE	X	
37	CORRIDOR	X	
38	ART/MUSIC/WORK RM	X	
39	CORRIDOR	X	
40	LOBBY	X	
41	CLASSROOM	X	X
42	TOILET	X	
43	CLASSROOM	X	X
44	TOILET	X	
45	CLASSROOM	X	X
46	TOILET	X	
47	CLASSROOM	X	X
48	TOILET	X	
49	CLASSROOM	X	X
50	TOILET	X	
51	CLASSROOM	X	X
52	TOILET	X	
53	CORRIDOR	X	
54	CLASSROOM	X	X
55	CLASSROOM	X	X
56	CLASSROOM	X	X
57	CLASSROOM	X	X
58	TOILET	X	
59	CLASSROOM	X	X
60	TOILET	X	
61	CLASSROOM	X	X
62	TOILET	X	
63	CLASSROOM	X	X
64	TOILET	X	
65	CLASSROOM	X	X
66	CLASSROOM	X	X
67	CLASSROOM	X	X
68	LOBBY	X	

NORTH
WEST EAST
SOUTH



NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #2
EXCEPT AS OTHERWISE NOTED

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

NORTH

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

CRESTVIEW
ELEMENTARY SCHOOL BID PACKAGE #2

FLOOR PLAN
ROOM FINISH SCHEDULE

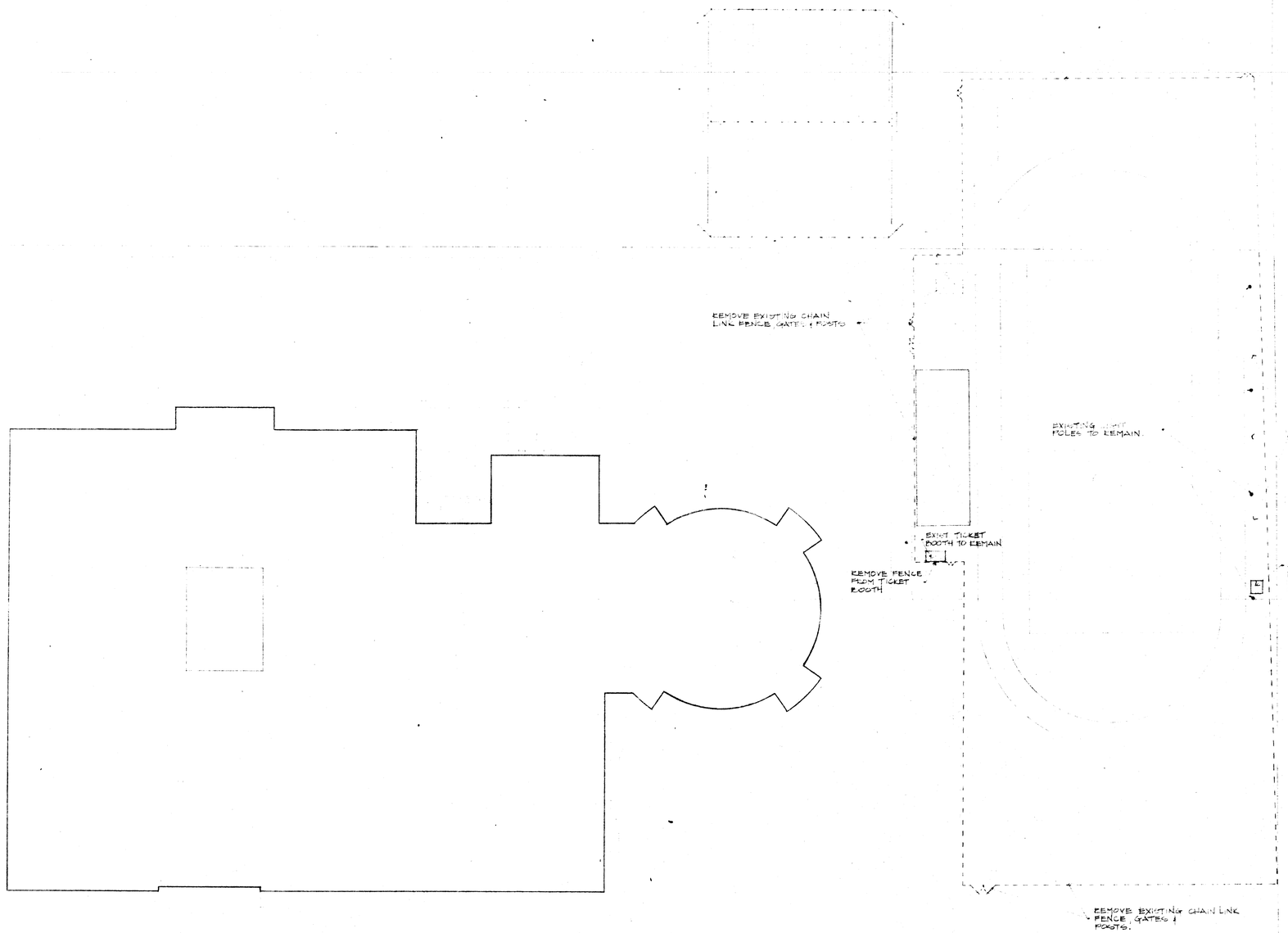
METROPOLITAN SCHOOL DISTRICT
OF LAWRENCE TOWNSHIP
PHASE X - 1984 PROJECTS BID PACKAGE 2 THRU 6

REVISIONS	
NO. DATE	DESCRIPTION

COMM. NO.	8551
DATE	3-29-84
DRAWN BY	G.C.
CHECKED BY	E.F.H.

JOHN T. LARSON REGISTERED No. 4041 STATE OF INDIANA ARCHITECT
CERTIFIED BY

SHEET
A2.01
OF



DEMOLITION SITE PLAN

SCALE: 1" : 50'-0"

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #3
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

LAWRENCE CENTRAL HIGH SCHOOL/ BID PACKAGE #3

DEMOLITION SITE PLAN

METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE II - 1984 PROJECTS BID PACKAGE 2 THRU 6

REVISIONS		
NO.	DATE	DESCRIPTION

CONK. NO. 8522.1
DATE 3-21-84
DRAWN BY
CHECKED BY

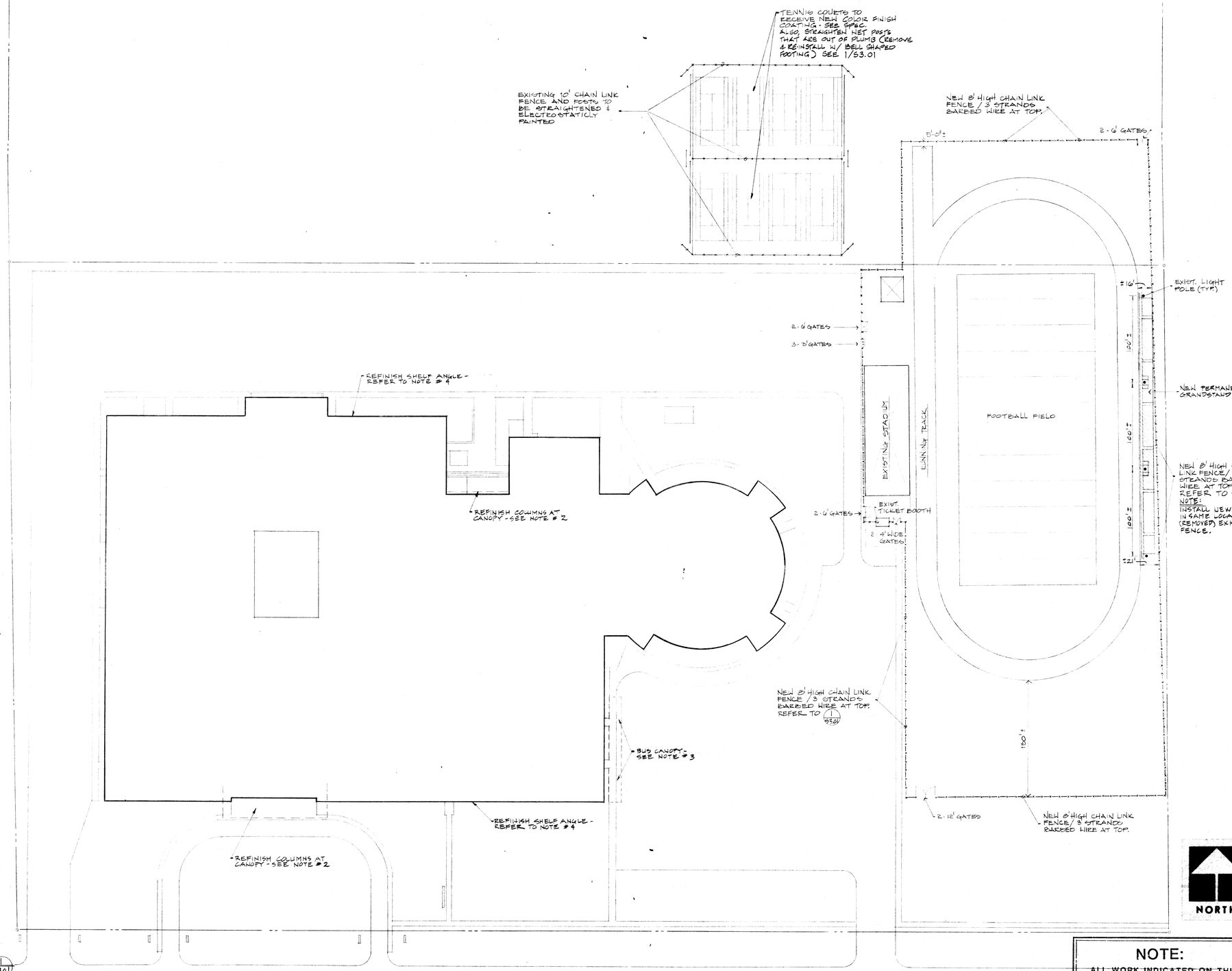
SHEET D3.01
OF

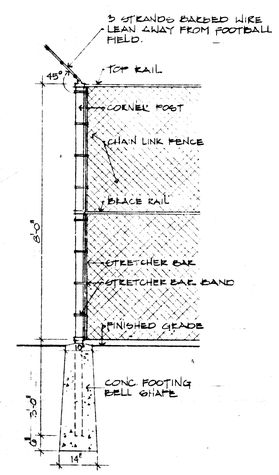
NOTES:

1. TRANSLUCENT PANELS AT GYMNASIUM PERIMETER TO BE REPLACED. REFER TO SHEET S3.02 FOR PANEL LOCATIONS. (ALTERNATE III-1)
2. EXTERIOR STEEL COLUMNS AT FRONT AND REAR ENTRANCE CANOPIES TO BE CLEANED AND REPAINTED (EPS-1).
3. METAL BUS CANOPY COLUMNS (OFF), FASCIA AND BEAMS TO BE CLEANED AND REPAINTED (EPS-1).
4. EXPOSED PORTION OF SHELF ANGLES AT BASE OF LIMESTONE PANELS AROUND PERIMETER OF BUILDING TO BE CLEANED AND REPAINTED (EPS-1).

ALL CONTRACTORS CAUTION:

UNDERGROUND ELEC. FROM STADIUM TO SCOREBOARD, SCHOOL TO STADIUM, FROM STADIUM TO EACH (8) BALL FIELD LIGHT POLES, UNDER STADIUM, TELEPHONE SERVICE FROM SCHOOL TO STADIUM & UNDER STADIUM.
UNDERGROUND WATER LINES & BALL FIELD SPRINKLER SYSTEM.
UNDERGROUND DRAINAGE SEWERS.
UNDERGROUND SANITARY SEWERS.





CHAIN LINK FENCE
NO SCALE
S3.01

SITE PLAN
SCALE: 1" = 50'-0"

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #3
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA
ARCHITECTS/ENGINEERS

LAWRENCE CENTRAL HIGH SCHOOL BID PACKAGE #3

SITE PLAN

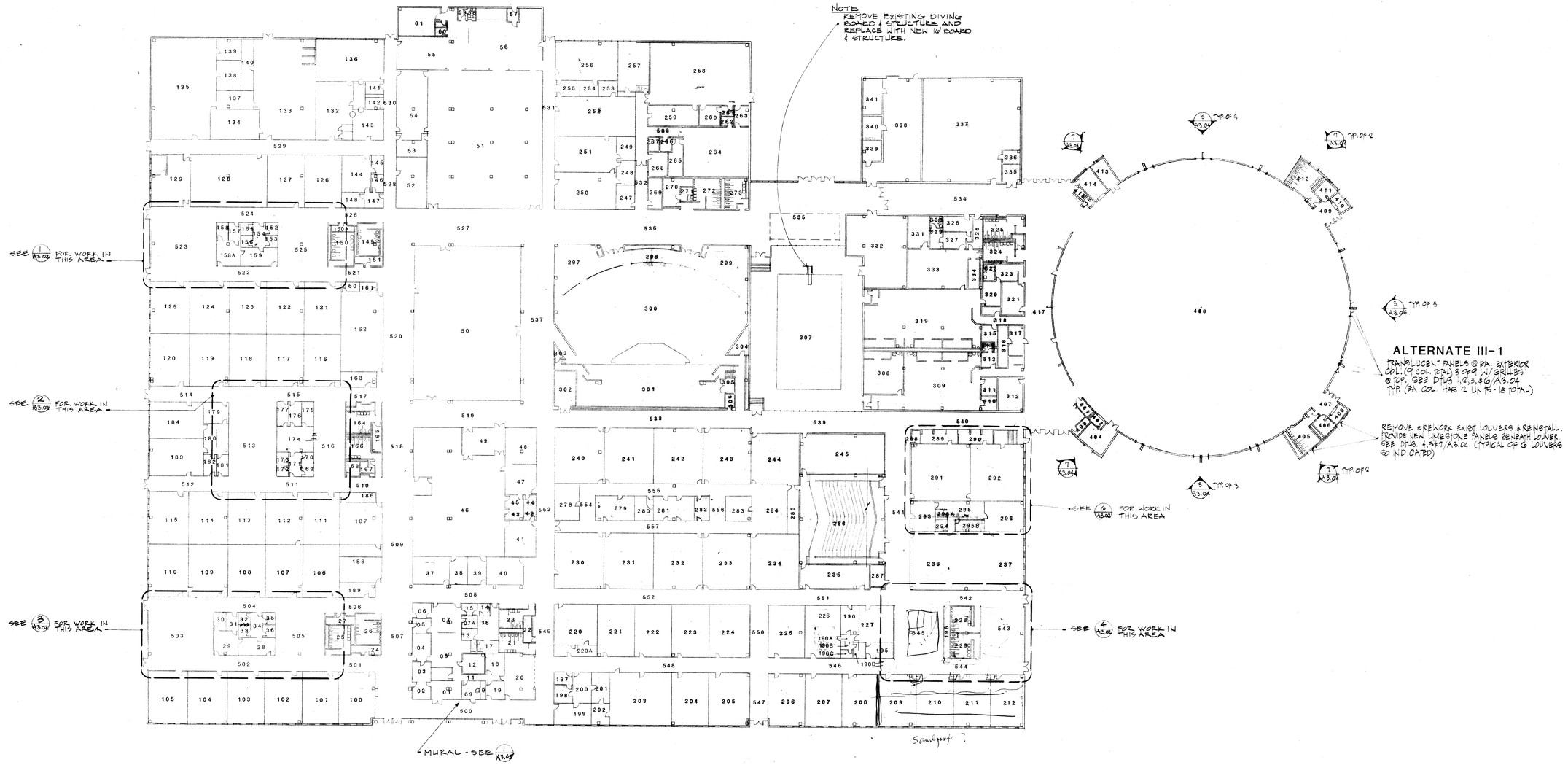
METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

NO.	DATE	REVISIONS DESCRIPTION

COMM. NO.	83321
DATE	3-27-84
DRAWN BY	G.C.
CHECKED BY	SPH

REGISTERED ARCHITECT STEPHEN P. HANSON No. 4041 STATE OF INDIANA
CERTIFIED BY

SHEET
S3.01
OF



GROUND LEVEL FLOOR PLAN

SCALE: 1" = 30'

NORTH

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #3
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

LAWRENCE CENTRAL HIGH SCHOOL BID PACKAGE #3

GROUND LEVEL FLOOR PLAN

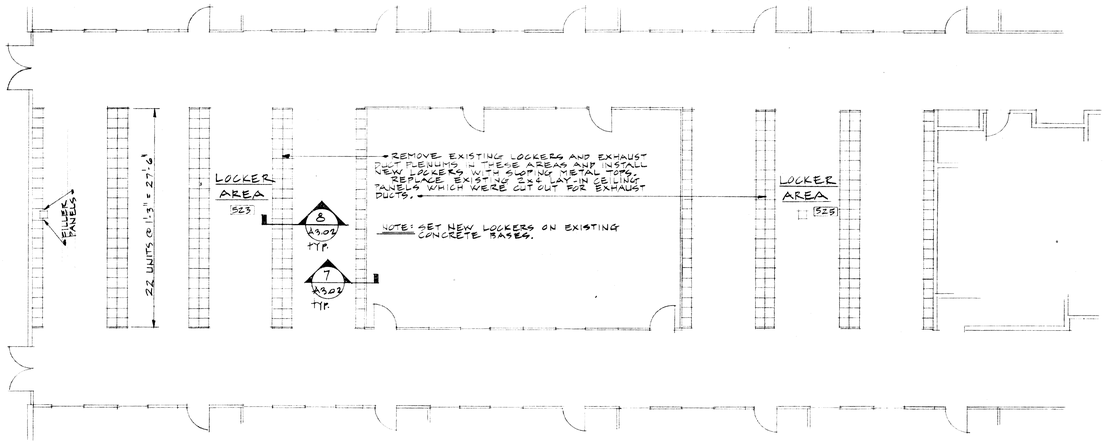
METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	85521
DATE	3-29-84
DRAWN BY	
CHECKED BY	

DAN T. LAWSON REGISTERED No. 4041 STATE OF INDIANA ARCHITECT
CERTIFIED BY

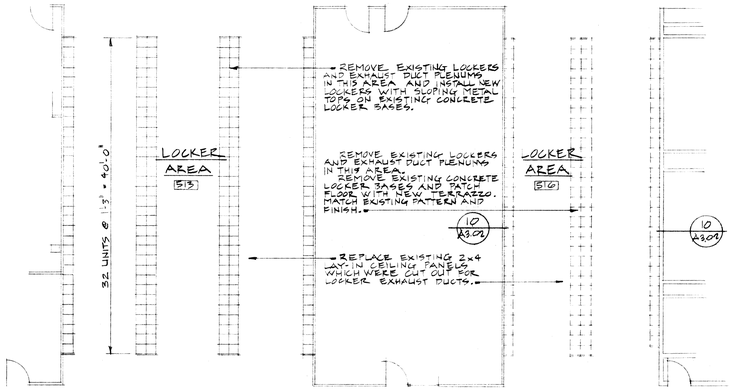
SHEET
A3.01
OF



(PARTIAL) FLOOR PLAN
1/8" = 1'-0" LOCKER AREAS # 523 & # 525 — 1 / A3.02

NORTH

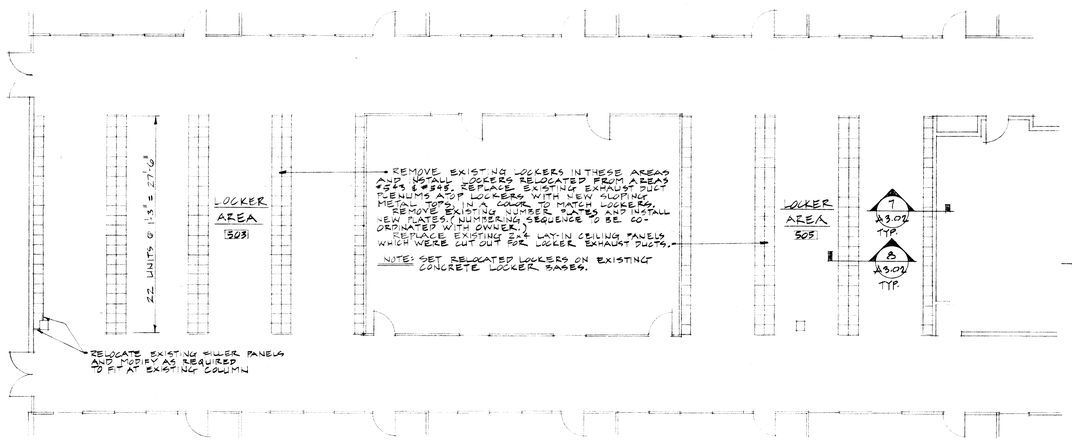
ALL PLANS THIS SHEET



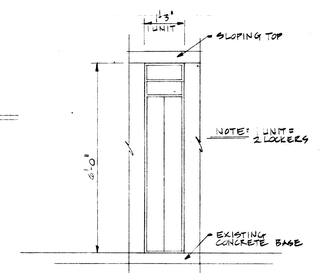
(PARTIAL) FLOOR PLAN
1/8" = 1'-0" LOCKER AREAS # 513 & # 516 — 2 / A3.02

NOTES:

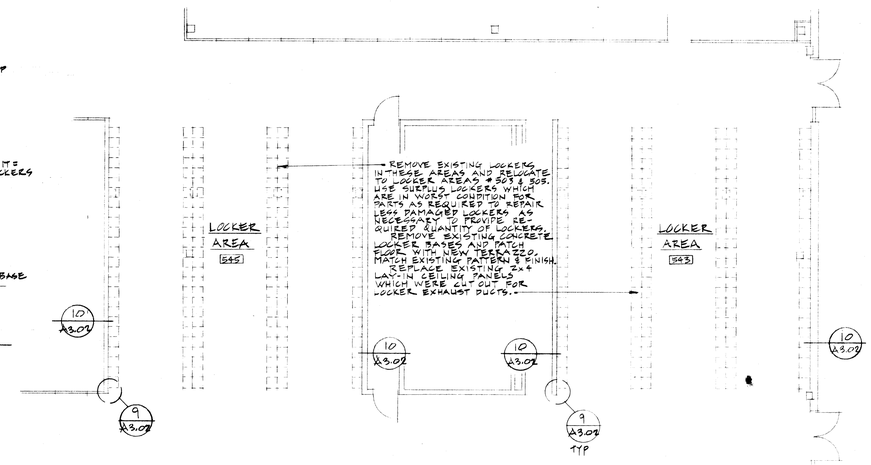
1. LOCKER NUMBERING SEQUENCE TO BE CO-ORDINATED WITH OWNER.
2. ALL NEW LOCKERS THIS SHEET TO BE TYPE D. REFER TO "TYPICAL LOCKER" DETAIL, BELOW.
3. REFER TO GROUND LEVEL FLOOR PLAN, SHEET A-3.01, FOR LOCKER AREA LOCATIONS.



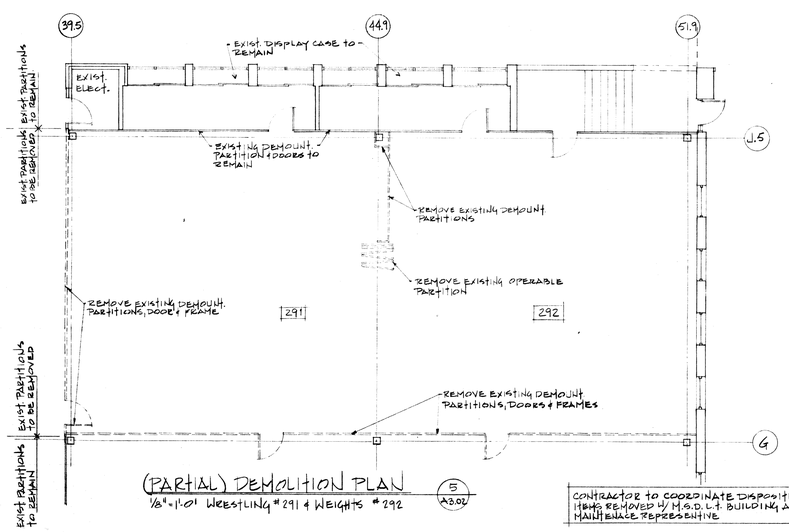
(PARTIAL) FLOOR PLAN
1/8" = 1'-0" LOCKER AREAS # 503 & # 505 — 3 / A3.02



TYPICAL LOCKER
NO SCALE

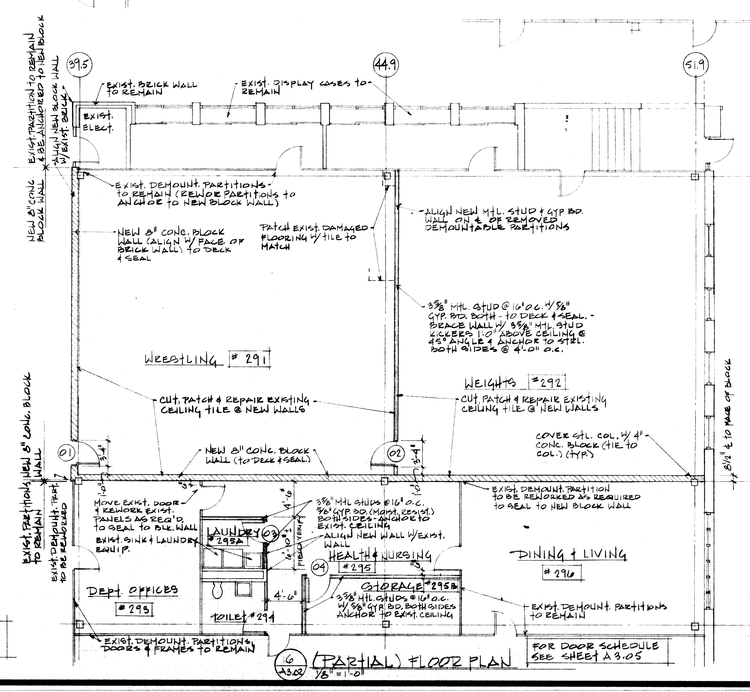


(PARTIAL) FLOOR PLAN
1/8" = 1'-0" LOCKER AREAS # 543 & # 545 — 4 / A3.02

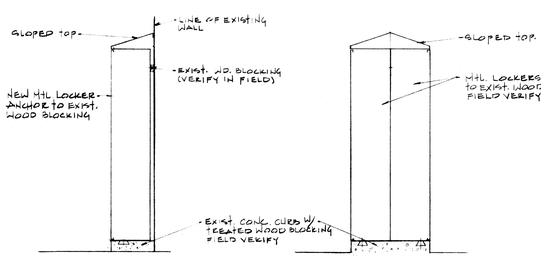


(PARTIAL) DEMOLITION PLAN
1/8" = 1'-0" WRESTLING # 291 & WEIGHTS # 292 — 5 / A3.02

CONTRACTOR TO COORDINATE DISPOSITION OF ITEMS REMOVED W/ M.S.D. L.T. BUILDING AND MAINTENANCE REPRESENTATIVE

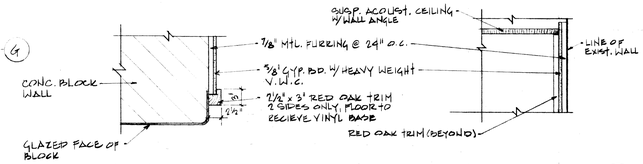


6 / A3.02 (PARTIAL) FLOOR PLAN
1/8" = 1'-0"



LOCKER DETAIL
1/2" = 1'-0" — 7 / A3.02

LOCKER DETAIL
1/2" = 1'-0" — 8 / A3.02



WALL TRIM DETAIL
1" = 1'-0" — 9 / A3.02

WALL TRIM DETAIL
1" = 1'-0" — 10 / A3.02

WRIGHT/PORTEOUS & LOWE, INC.

INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

LAWRENCE CENTRAL HIGH SCHOOL BID PACKAGE #3

LOCKER ROOM RENOVATION

ARCHITECTS/ENGINEERS

METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP

PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	8391
DATE	3-27-84
DRAWN BY	DAVE
CHECKED BY	D.F.H.

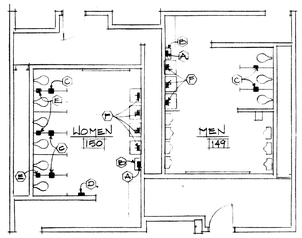
JOHN M. LAWSON REGISTERED No. 4104 STATE OF INDIANA ARCHITECT

CERTIFIED BY

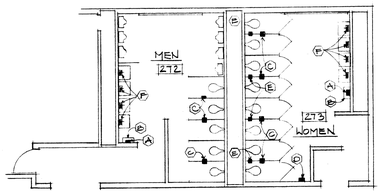
SHEET

A3.02

OF

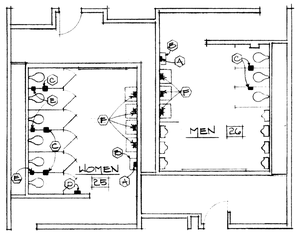


TOILET ROOM PLAN
AREA 'C' 1/8" = 1'-0"

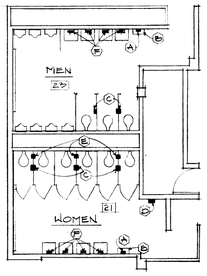


TOILET ROOM PLAN
AREA 'D' 1/8" = 1'-0"

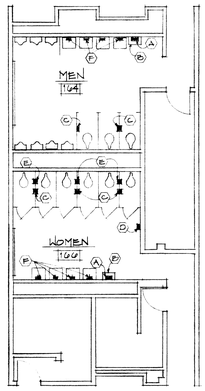
NOTE:
TOILET ROOM PARTITIONS IN RM. #273 ARE TO REMAIN. REPLACE MISSING STAHL DOOR WITH SALVAGED DOOR FROM PARTITIONS BEING REMOVED FROM OTHER TOILETS. PAINT (1P6-4) TO MATCH ADJACENT PARTITIONS.



TOILET ROOM PLAN
AREA 'A' SOUTH 1/8" = 1'-0"



TOILET ROOM PLAN
AREA 'B' 1/8" = 1'-0"



TOILET ROOM PLAN
AREA 'A' NORTH 1/8" = 1'-0"

NOTES:

1. Toilet Partitions - Remove existing toilet partitions in all toilet rooms, this sheet, and install new prefinished, floor mounted, overhead braced partitions. Match original stall dimensions. Patch, repair and refinish any damaged area caused or left by the removal of existing partitions and/or accessories.
2. Toilet Room Accessories - Remove existing surface mounted towel dispensers, trash receptacles, napkin dispensers and disposals, toilet tissue holders and soap dispensers. Install new units as per plan this sheet. Install new units at manufacturer's recommended mounting height.
3. Toilet Room Ceilings - Paint all existing drywall ceilings.

TOILET ROOM ACCESSORIES SCHEDULE

A. Surface Mounted Paper Towel Dispenser

B. Surface Mounted Trash Receptacle

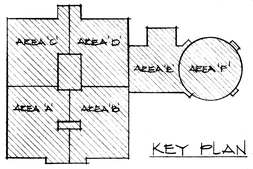
C. Surface Mounted Toilet Tissue Holder

D. Surface Mounted Feminine Napkin Dispenser

E. Surface Mounted Feminine Napkin Disposal Receptacle

F. Wall Mounted Soap Dispensers

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #3
EXCEPT AS OTHERWISE NOTED



KEY PLAN

NORTH

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

LAWRENCE CENTRAL
HIGH SCHOOL BID PACKAGE #3

TOILET ROOM PLANS & SCHEDULE

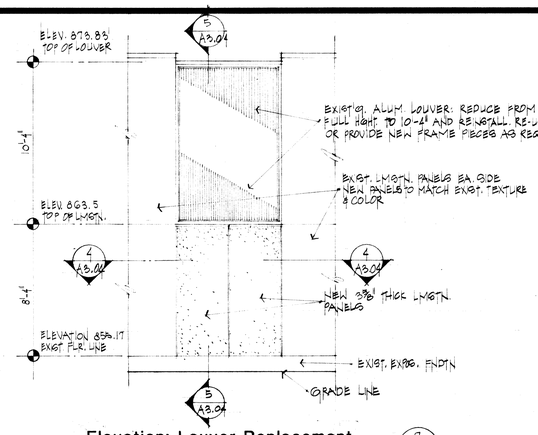
METROPOLITAN SCHOOL DISTRICT
OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	8952.1
DATE	3.27.84
DRAWN BY	G.L.
CHECKED BY	E.P.H.

WAYNE T. LAWSON REGISTERED No. 4141 STATE OF INDIANA ARCHITECT
CERTIFIED BY

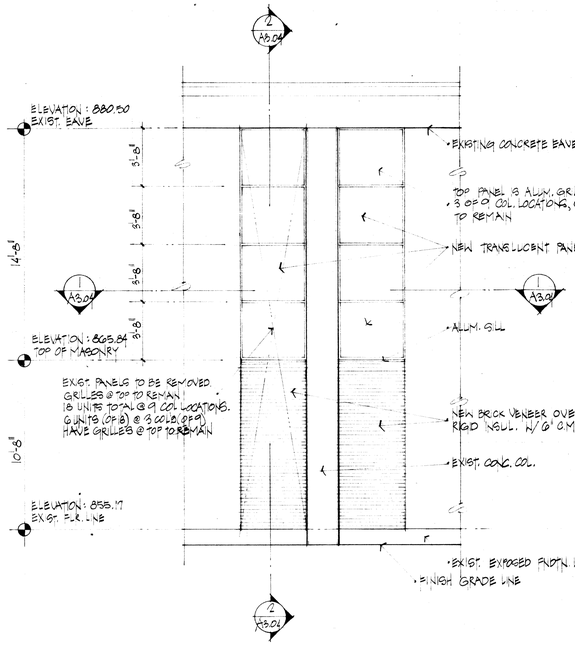
SHEET
A3.03
OF



Elevation: Louver Replacement (7 / A3.04)

4'=1'-0"

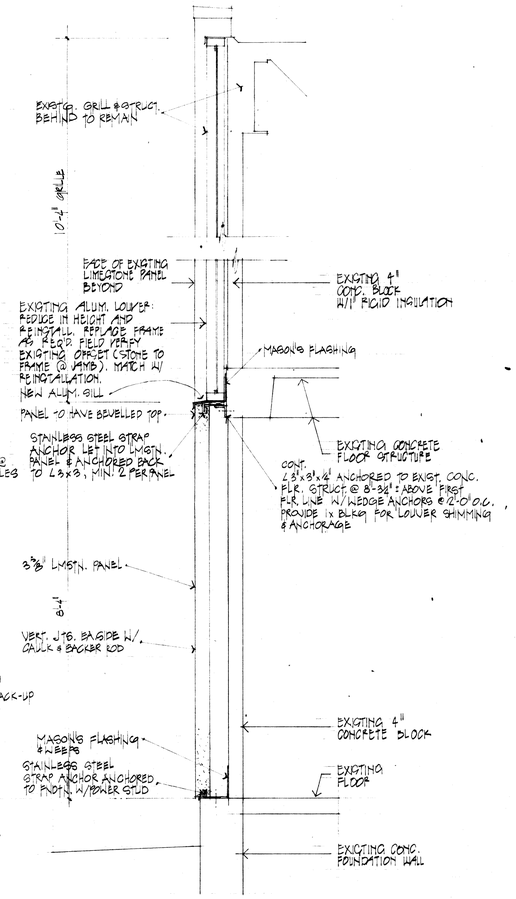
TYPICAL OF 6 LOUVER LOCATIONS (SEE PLAN)



Elevation: Translucent Panel Replacement (3 / A3.04)

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

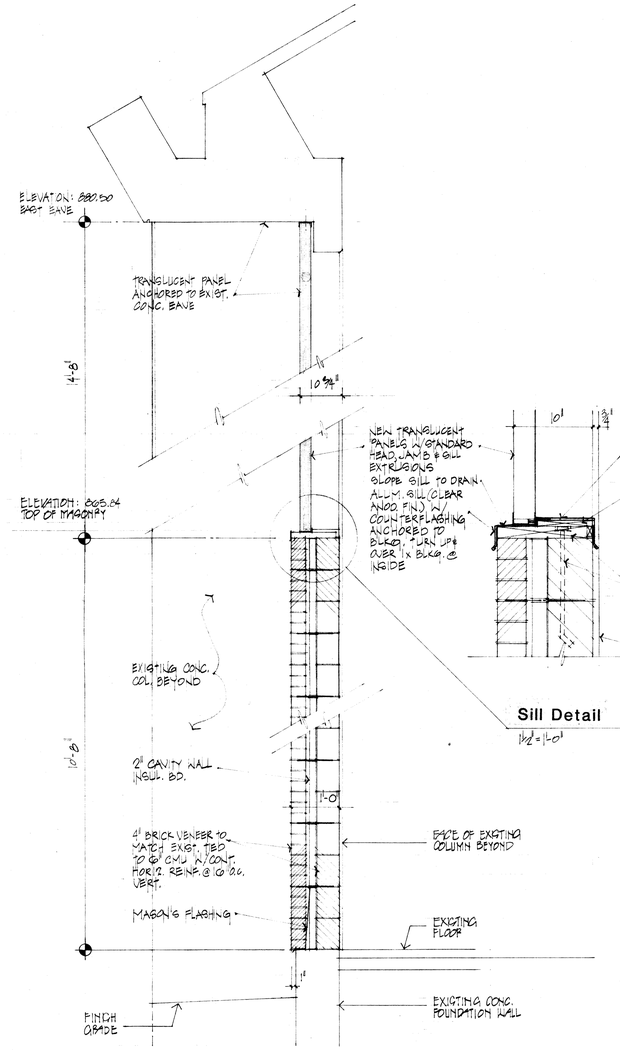
TYPICAL OF 6 OF 9 COL. LOCATIONS, REMAINDER HAVE GRILLE @ TOP TO REMAIN (VERIFY). TOTAL OF 18 UNITS



Section: Louver Replacement (5 / A3.04)

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

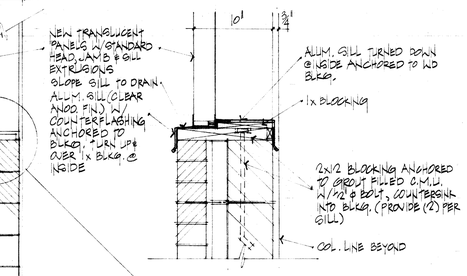
TYPICAL OF 6 LOUVER LOCATIONS (SEE PLAN)



Section: Translucent Panel Replacement (2 / A3.04)

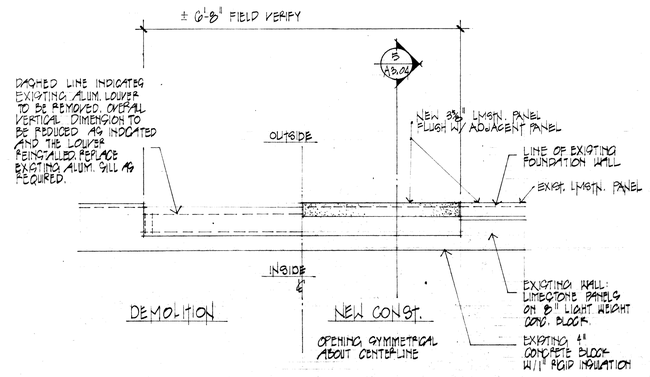
SCALE: 3/4" = 1'-0"

ALTERNATE III-1

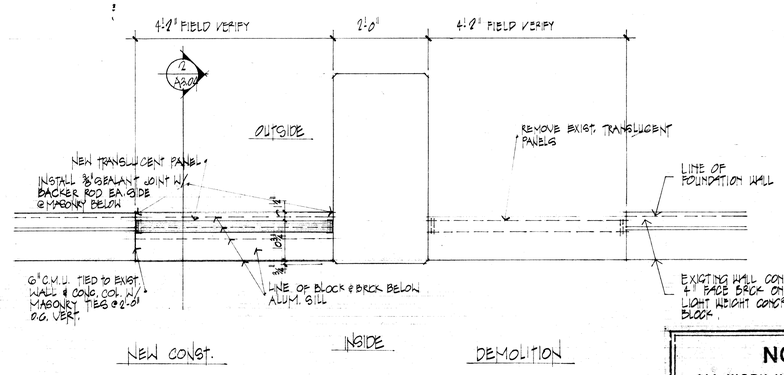


Sill Detail (6 / A3.04)

1 1/2" = 1'-0"



Plan: Louver Replacement (4 / A3.04)



Plan: Translucent Panel Replacement (1 / A3.04)

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

ALTERNATE III-1

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #3
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

LAWRENCE CENTRAL HIGH SCHOOL BID PACKAGE #3

TRANSLUCENT PANEL & LOUVER REPLACEMENTS

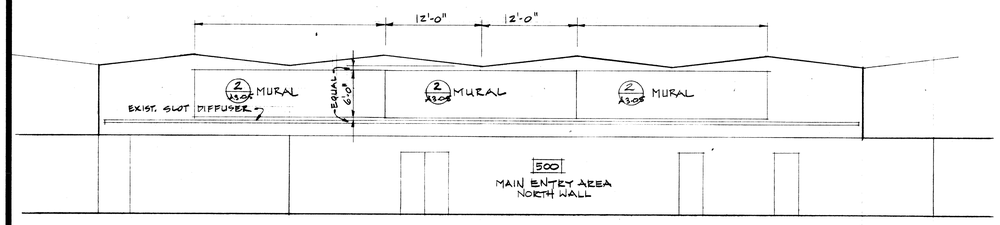
METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

REVISIONS		
NO.	DATE	DESCRIPTION

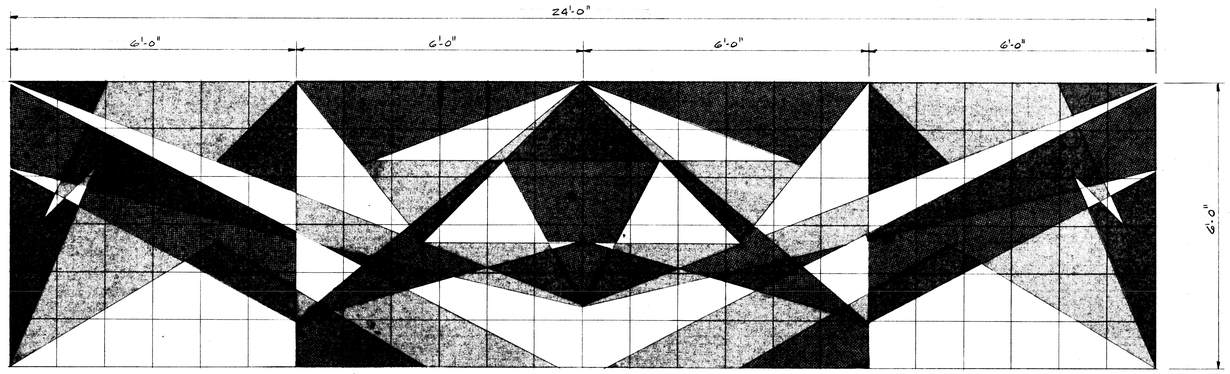
COMM. NO.	85261
DATE	2-27-84
DRAWN BY	J.N.
CHECKED BY	E.W.H.

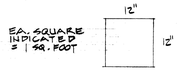
JOHN T. LANGAN REGISTERED No. 4041 STATE OF INDIANA ARCHITECT
CERTIFIED BY

SHEET
A3.04
OF



MURAL LOCATION DIAGRAM (1 / A3.05)
1/8" = 1'-0"





MURAL ELEVATION (2 / A3.05)
3/4" = 1'-0"

ASH 2-39 ES
BERRY 2-39-FQ
GUNMETAL 2-39-EU
BURGUNDY 2-39-FR

MURAL COLOR SCHEDULE

(BASED ON GENON 'STARDUST' VINYLS)

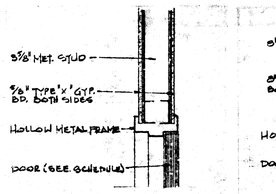
NOTE:
SUBMIT SCALE DRAWING OF MURAL TO ARCH. FOR APPROVAL PRIOR TO INSTALLATION. DRAWING SHALL INDICATE SCALE, COLOR & TECHNIQUE TO INSTALL MURAL

DOOR AND FRAME SCHEDULE

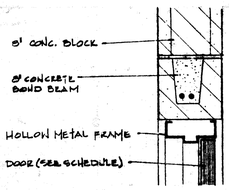
DOOR NUMBER	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	TRANSOM SIZE W	TRANSOM SIZE H	TRANSOM SIZE T	DOOR MAT'L	DOOR TYPE	DOOR GLASS	LOUVER W	LOUVER H	FRAME MAT'L	FRAME TYPE	FRAME PROFILE	FRAME GLASS	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	LABEL FIRE RATING	HARDWARE SET	REMARKS
01	3'-0	7'-0	1¾"	—	—	—	SC WD	—	—	—	—	HM	—	—	—	H2	J2	—	20 H		
02	3'-0	7'-0	1¾"	—	—	—	SC WD	—	—	—	—	HM	—	—	—	H2	J2	—	—		
03	2'-8"	7'-0	1¾"	—	—	—	SC WD	—	—	—	—	HM	—	—	—	H1	J1	—	—		
04	3'-0	7'-0	1¾"	—	—	—	SC WD	—	—	—	—	HM	—	—	—	H1	J1	—	—		

SCWD - FLUSH SOLID CORE WOOD
HM - 2" HOLLOW METAL
1¾" THROAT WRAPAROUND IN GYP. BD WALLS
5¾" W/ MASONRY ANCHORS IN MASONRY WALLS.

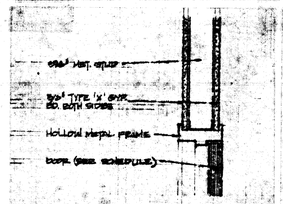
FOR DOOR LOCATIONS SEE SH. A3.02



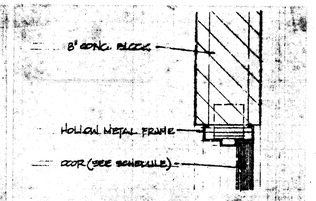
HEAD (H1)



HEAD (H2)



JAMB (J1)



JAMB (J2)

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
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INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

LAWRENCE CENTRAL HIGH SCHOOL BID PACKAGE #3

MURAL ELEVATION
DOOR & FRAME SCHEDULE

METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

NO.	DATE	DESCRIPTION

REVISIONS

COMM. NO. 83-9-31
DATE 3-21-84
DRAWN BY P.W.
CHECKED BY R.P.H.

JOHN T. LAWSON REGISTERED No. 4041 STATE OF INDIANA ARCHITECT
CERTIFIED BY

SHEET
A3.05
OF

LAWRENCE TOWNSHIP METROPOLITAN SCHOOL DISTRICT

PHASE V, 1984 PROJECTS

MECHANICAL ELECTRICAL & PLUMBING RENOVATION

INDEX OF BID PACKAGES

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E3.01	PARTIAL SITE PLAN - ELECTRICAL
E3.02 & M3.02	BUILDING FLOOR PLAN - MECHANICAL & ELECTRICAL
M3.03	AREA 'G' FLOOR PLAN - HVAC
M3.04	AREA 'E' PARTIAL FLOOR PLAN - HVAC
M3.05	SMALL SCALE FLOOR PLAN - MECHANICAL
M3.06	AREA 'B' FLOOR PLAN - PLUMBING
M3.07	LARGE SCALE FLOOR PLAN - PLUMBING
M3.08	SCHEDULE & DETAILS - MECHANICAL
M3.09	SCHEDULE & DETAILS - MECHANICAL & ELECTRICAL
E3.03	LARGE SCALE FLOOR PLAN - ELECTRICAL
M3.10	PARTIAL FLOOR PLAN - MECHANICAL

#4 BELZER MIDDLE SCHOOL

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M4.02	BUILDING C & D TUNNEL PLAN - DEMOLITION
M4.03	BUILDING E TUNNEL PLAN - DEMOLITION
M4.04	BUILDING A & B FLOOR PLAN - HVAC
M4.05	BUILDING A & B 2ND FLOOR - HVAC
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M4.11	BOILER ROOM FLOOR PLAN - MECHANICAL
M4.12	DETAILS - MECHANICAL
M4.13	SCHEDULE - MECHANICAL
E4.01	BOILER ROOM PLAN - ELECTRICAL

LAWRENCE NORTH
#6 CRAIG MIDDLE SCHOOL

E6.01 & M6.01	BUILDING GROUND FLOOR PLAN - MECHANICAL & ELECTRICAL
E6.02 & M6.02	BUILDING 1ST FLOOR PLAN - MECHANICAL & ELECTRICAL
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E6.06	1ST FLOOR LARGE SCALE PLAN - ELECTRICAL
E6.07	2ND FLOOR LARGE SCALE PLAN - ELECTRICAL
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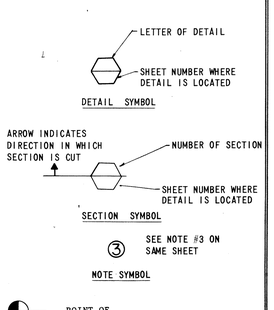
E6.09	PARTIAL FLOOR PLAN - ELECTRICAL

MECHANICAL ABBREVIATIONS & SYMBOLS

MECHANICAL ABBREVIATIONS & DRAWING SYMBOLS

A.D.	AREA DRAIN
A.P.	ACCESS PANEL
B.D.	BUTTERFLY DAMPER
B.D.D.	BACKDRAFT DAMPER
C.B.	CATCH BASIN
C.D.	CANOPY DRAIN
CFM	CUBIC FEET/MIN.
CH.W.COIL	CHILLED WATER COIL
C.I.	CAST IRON
C.O.	CLEANOUT
CSAC	CENTRAL STATION AIR CONDITIONER
CUH	CABINET UNIT HEATER
CUV	CLASSROOM UNIT VENTILATOR
CUV & A.C.	CLASSROOM UNIT VENT & AIR COND.
C.W.	COLD WATER
D.S.	DOWNSPOUT
D.B.	DRY BULB
D.F.	DRINKING FOUNTAIN
D.G.	DOOR GRILLE
DX.COIL	DIRECT EXPANSION REFRIG. COIL
E.B.R.	ELECTRIC BASEBOARD RADIATION
E.C.	ELECTRICAL CONTRACTOR
E.G.	EXHAUST GRILLE
E.H.C.	ELECTRICAL HEATING COIL
ENT.AIR	ENTERING AIR
E.O.M. DRIP	END OF MAIN DRIP
E.S.P.	EXTERNAL STATIC PRESSURE
E.W.C.	ELECTRIC WATER COOLER
F.A.	FACE AREA
FCRC	FAN & COIL ROOM CONDITIONER
F.D.	FLOOR DRAIN
F.DMPR.	FIRE DAMPER
F.E.C.	FIRE EXTINGUISHER CABINET
F.E.	FIRE EXTINGUISHER
F.P.M.	FEET PER MIN.
FT.	FOOT
F.T.R.	FIN TUBE RADIATION
F.V.	FACE VELOCITY
G.C.	GENERAL CONTRACTOR
G.I.	GALVANIZED IRON
G.P.H.	GAL. PER HOUR
G.P.M.	GAL. PER MINUTE
H.B.	HOSE BIBB
H.P.	HORSEPOWER
H.W.	HOT WATER
IN.	INCH
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR
L. OR LAV	LAVATORY
LV. AIR	LEAVING AIR
MBH	1000 BTU/HR.
M.C.	MECHANICAL CONTRACTOR
M.H.	MANHOLE
M.S.	MOP SUMP
M.S.D.	MULTI-VANE SPLITTER DAMPER
O.A.	OUTSIDE AIR
O.S.D.	OPEN SIGHT DRAIN
O.V.	OUTLET VELOCITY
P.D.	PRESSURE DROP
P.R.V.	POWER ROOF VENTILATOR
PROP. R.V.	PROPELLER ROOF VENTILATOR
PSI	POUNDS/SQ. INCH
PUH	PROPELLER UNIT HEATER
RHC	REHEAT COIL
R.A.	RETURN AIR
R.D.	ROOF DRAIN
R.G.	RETURN GRILLE
RIV	ROOF INTAKE VENT
RPM	REVOLUTIONS PER MIN.
RRV	ROOF RELIEF VENT
S.C.	SILL COCK
SCD	SQUARE CEILING DIFFUSER
S.D.	SPLITTER DAMPER
SH.D.	SHOWER DRAIN
S.G.	SUPPLY GRILLE
SH.	SHOWER
SK.	SINK
S.SK.	SERVICE SINK
S.P.	STATIC PRESSURE
S.S.	SOIL STACK
T.C.C.	TEMPERATURE CONTROL CONTRACTOR
T.S.P.	TOTAL STATIC PRESSURE
UR.	URINAL
V.B.	VACUUM BREAKER
V.D.	VOLUME DAMPER
W.	WASTE
W.B.	WET BULB
W.C.	WATER CLOSET
WG.	WATER GAUGE
W.H.	WALL HYDRANT
W.I.	WROUGHT IRON
WTR.	WATER
WT.	WEIGHT
Y.D.	YARD DRAIN

DRAWING SYMBOLS



MECHANICAL SYMBOLS

PIPING

- ACID RESISTANT WASTE (SUSPENDED)
- ACID RESISTANT WASTE (BURIED)
- AIR LINE — A
- COLD WATER
- COLD SOFT WATER — CS
- FIRE LINE — F
- FUEL OIL RETURN — FOR
- FUEL OIL SUPPLY — FOS
- GAS LINE — G
- HEATING WATER RETURN — HR
- HEATING WATER SUPPLY — HS
- HOT SOFT WATER — HSW
- HOT WATER (DOMESTIC)
- STORM WATER (SUSPENDED)
- STORM WATER (BURIED)
- SANITARY WASTE (SUSPENDED)
- SANITARY WASTE (BURIED)
- SANITARY VENT
- HOT WATER RETURN
- CHILLED WATER (ONLY) SUPPLY — CHS
- CHILLED WATER (ONLY) RETURN — CHR
- COMBINATION HOT & COLD WATER SUPPLY — H & CHS
- COMBINATION HOT & COLD WATER RETURN — H & CHR
- REFRIGERANT LIQUID — RL
- REFRIGERANT SUCTION — RS
- DRAIN — D
- DROP
- PITCH LINE DOWN IN DIRECTION OF ARROW
- RUN-OUT
- RUN-OUT OFF TOP OF MAIN
- RUN-OUT OFF BOTTOM OF MAIN
- TEE OFF SIDE OF MAIN
- LOW PRESSURE STEAM — S
- MED. & HIGH PRESSURE STEAM — # STM.
- CONDENSATE RETURN (GRAVITY) — R
- CONDENSATE RETURN (PUMPED) — O
- MED. & HIGH PRESSURE COND. RETURN — # RTN.
- SPRINKLER HEAD
- PIPING TO BE INSTALLED
- PIPING TO BE REMOVED

VALVES, SPECIALTIES & FITTINGS

- AIR CHAMBER
- ANCHOR
- AUTOMATIC AIR VENT
- AUTOMATIC RELIEF VALVE
- AUTOMATIC WATER MAKE-UP VALVE
- BASKET TYPE STRAINER
- BALANCING VALVE
- BUCKET TRAP — B
- CHECK VALVE
- ECCENTRIC REDUCER
- EXPANSION JOINT
- FLANGED CONNECTION
- FLOAT & THERMOSTATIC TRAP — F.T
- FLEXIBLE PUMP CONNECTION
- GAS METER — M
- SHUT-OFF VALVE
- GLOBE VALVE
- 'P' TRAP
- PIPE GUIDE
- PRESSURE GAUGE — G
- PRESSURE REDUCING VALVE — PRV
- RUNNING TRAP
- SHOWER HEAD
- THERMOMETER — T
- THERMOMETER WELL — W
- THERMOSTATIC TRAP
- UNION
- 'Y' STRAINER
- WATER METER — M
- SHOCK ABSORBER
- FLOW CONTROL VALVE — FCV

REFRIGERATION

- CHARGING VALVE
- CONDENSER WATER REGULATOR VALVE
- DRYER — D
- EVAPORATOR PRESSURE REGULATOR — REFG.
- FLEXIBLE PIPE CONNECTION
- MANUAL REFRIGERATION VALVE
- SIGHT GLASS
- SOLENOID VALVE — S
- STRAINER
- THERMOSTATIC EXPANSION VALVE

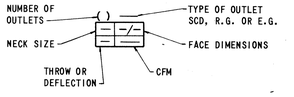
TEMPERATURE CONTROL

- ROOM THERMOSTAT (PNEUMATIC) — T
- ROOM THERMOSTAT (ELECTRIC) — T E
- TEMPERATURE CONTROL VALVE
- 3-WAY TEMPERATURE CONTROL VALVE

SHEET METAL

- VERTICAL FIRE DAMPER
- HORIZONTAL FIRE DAMPER
- CEILING FIRE DAMPER — C
- VOLUME DAMPER — Z

DIFFUSER OR GRILLE SYMBOL



ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DESCRIPTION
	FLUORESCENT LIGHTING OUTLET
	INCANDESCENT LIGHTING OUTLET (SURFACE)
	INCANDESCENT LIGHTING OUTLET (RECESSED)
	INCANDESCENT LIGHTING OUTLET (WALL MOUNTED)
	DUPLEX RECEPTACLE (MOUNTED AT + 18" UNLESS OTHERWISE NOTED)
	FLOOR MOUNTED DUPLEX RECEPTACLE
	MOTOR OUTLET (SINGLE PHASE) (THREE PHASE)
	MANUAL MOTOR STARTER
	MAGNETIC STARTER WITH DISCONNECT
	DISCONNECT SWITCH (NON-FUSED)
	LIGHTING PANEL
S	SINGLE POLE SWITCH
S3	THREE-WAY SWITCH
S4	FOUR-WAY SWITCH
SK	KEY OPERATED SWITCH
SP	SWITCH WITH PILOT LIGHT
SM	MOMENTARY CONTACT SWITCH
J	JUNCTION BOX
	INDICATES OUTLET IN VERTICAL ALIGNMENT
	CONDUIT IN WALL OR CEILING
	CONDUIT IN OR BELOW FLOOR
	EXPOSED CONDUIT

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS
2602 E. 55 TH. ST.

TITLE SHEET - MECHANICAL & ELECTRICAL

REVISIONS		
NO.	DATE	DESCRIPTION

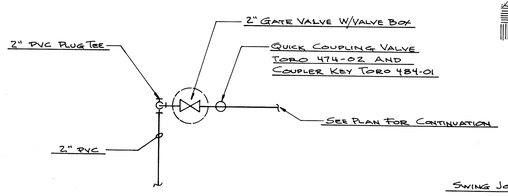
COMM. NO.	5-6004
DATE	3-29-84
DRAWN BY	NJ
CHECKED BY	RJC

STEVEN D. NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER

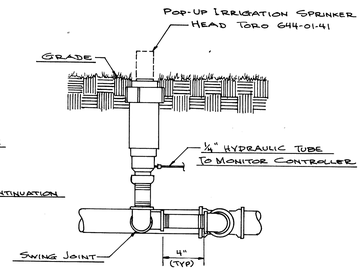
CERTIFIED BY

SHEET

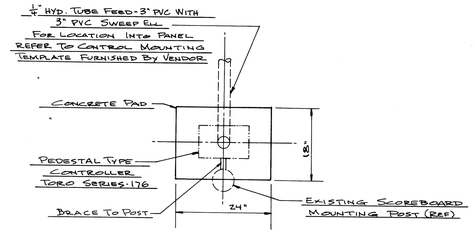
OF



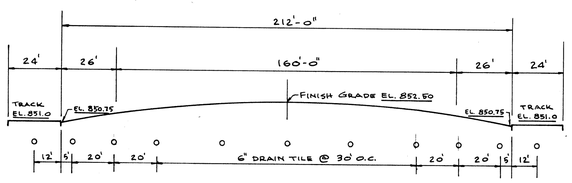
UNDER GROUND COUPLING
DETAIL 'A'
NO SCALE



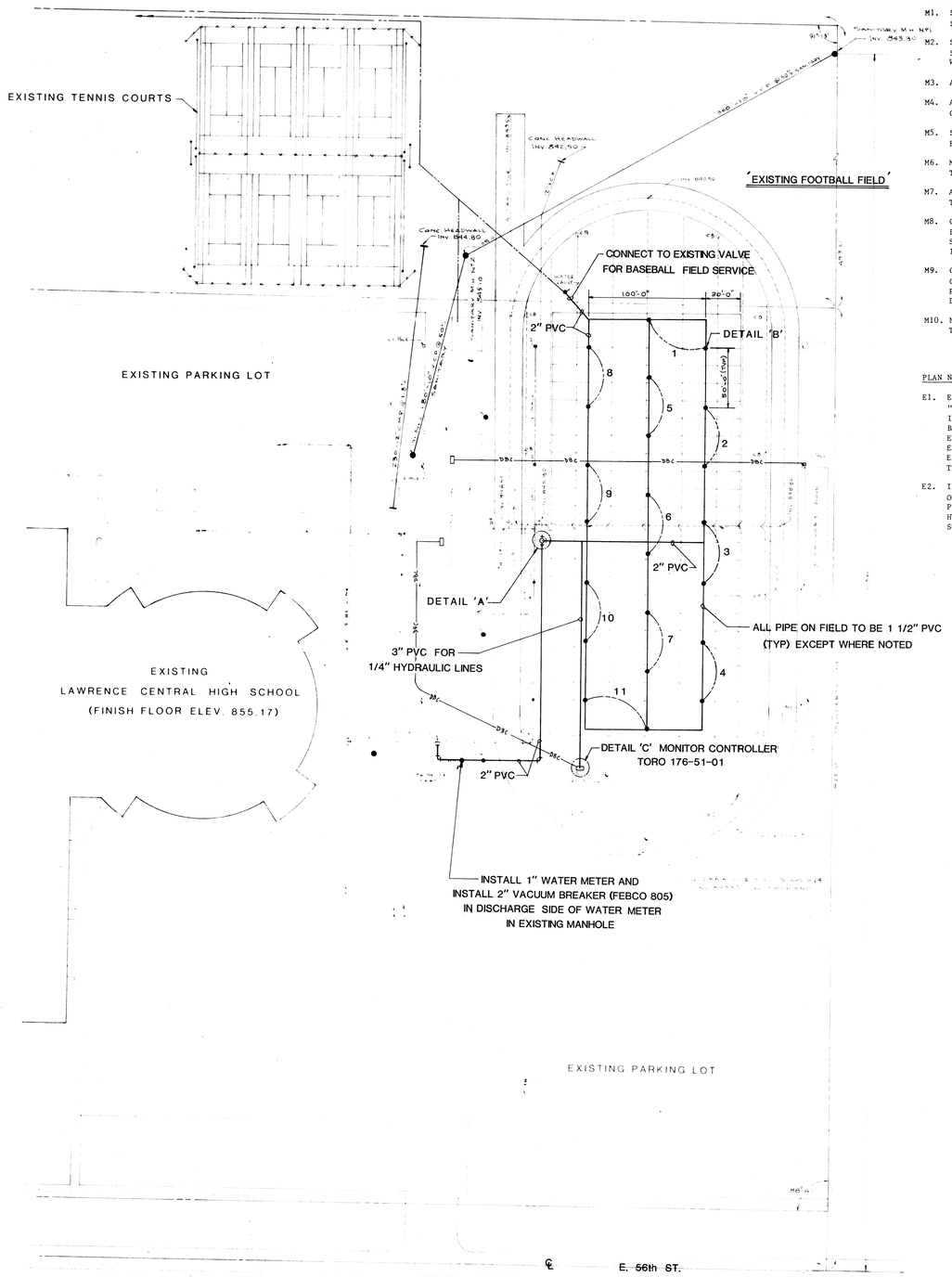
TYPICAL POP-UP SPRINKLER & SWING JOINT
DETAIL 'B'
NO SCALE



CONCRETE MOUNTING PAD FOR
PEDESTAL TYPE CONTROLLER TORO SERIES-176
DETAIL 'C'
NO SCALE



PROFILE OF FOOTBALL FIELD
SCALE HORIZ. 1"=30' VERT. 1"=5'



IRRIGATION SYSTEM
SCALE: 1"= 50'

PLAN NOTES: - MECHANICAL

M1. SPRINKLER CONTRACTOR TO INSTALL 1/4" HYDRAULIC LINES UNDERGROUND FROM SPRINKLERS TO MONITOR CONTROLLER AND TEE LINES IN BOX.

M2. SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR WINTERIZATION OF ENTIRE SPRINKLER SYSTEM DURING FIRST FULL YEAR, AND FOR DAMAGE CAUSED BY WINTER WEATHER TO ANY AND ALL PIPING.

M3. ALL PVC PIPE SHALL BE CLASS 160.

M4. ALL PIPING TO BE PLOWED IN AT A MINIMUM DEPTH OF 18" BELOW EXISTING GRADES. SEE NOTE M8.

M5. SPRINKLER CONTRACTOR SHALL INSTALL POP-UP SPRINKLER HEADS BELOW EXISTING GRADES.

M6. MOUNT MONITOR CONTROLLER AT EXISTING SCOREBOARD POST. ANCHOR SECURELY TO CONCRETE PAD AND BRACE PANEL TO POST (REF DETAIL 'C').

M7. ANY DAMAGE TO EXISTING LAWN, TRACK OR PROPERTY SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

M8. COORDINATE NEW INSTALLATION WITH EXISTING ELECTRICAL SERVICE "DIRECT BURIAL CABLE" FEEDING 4 LIGHT POLES LOCATED ON EAST SIDE OF FIELD, AND SCOREBOARD ON SOUTH END OF FIELD. HAND TRENCHING MAY BE REQUIRED FOR IRRIGATION DISTRIBUTION WHERE IT CROSSES ELECTRICAL CABLE. —DBC—DBC—

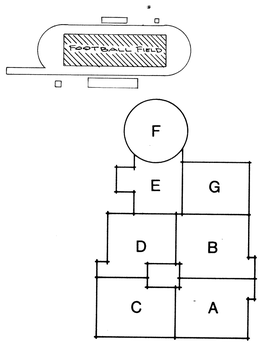
M9. COORDINATE NEW INSTALLATION WITH EXISTING FIELD DRAINAGE TILE. CROSSOVER POINTS MAY REQUIRE HAND TRENCHING. PARALLEL RUNS MUST BE POSITIONED WITH SUFFICIENT SIDE CLEARANCES TO AVOID DAMAGE TO TILE DURING TRENCHING.

M10. NUMBER (1) ONE THRU (11) ELEVEN SHOWN ON THE FOOTBALL FIELD ILLUSTRATE THE ELEVEN ZONES TO BE CONTROLLED.

PLAN NOTES: - ELECTRICAL

E1. ELECTRICAL CONTRACTOR SHALL CONNECT MONITOR CONTROLLER TO A CONSTANTLY "HOT" 120V-20A CIRCUIT. THIS CONNECTION CAN BE MADE AT THE SCOREBOARD IF A SUITABLE "HOT" CIRCUIT EXISTS THERE; IF NOT, THE CONNECTION MUST BE MADE TO EXISTING PANEL USED FOR FIELD LIGHTING LOCATED AT THE NORTH END OF THE CONCRETE GRANDSTAND; VERIFY SERVICE VOLTAGE. VERIFY EXISTING CONDITIONS. DETERMINE WHERE CONNECTION CAN BE MADE, AND GET ENGINEER'S APPROVAL OF CONNECTION METHOD PRIOR TO SUBMITTING PRICE FOR THIS WORK.

E2. IF MONITOR CONTROLLER CONNECTION IS TO BE MADE TO FIELD LIGHTING PANEL OR A "NEW" SERVICE IS REQUIRED; WIRING IS TO BE INSTALLED IN A NEW 1" PVC PIPE; AND MAY RUN PARALLEL TO THE 3" PVC PIPE FEEDER FOR THE 1/4" HYDRAULIC TUBE LINES TO THE MONITOR CONTROLLER PANEL AT THE SCOREBOARD.



KEY PLAN

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LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS
2602 E. 55TH. ST.

PARTIAL SITE PLAN – MECHANICAL

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO. 8404
DATE 3-29-84
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CHECKED BY BOC

CERTIFIED BY

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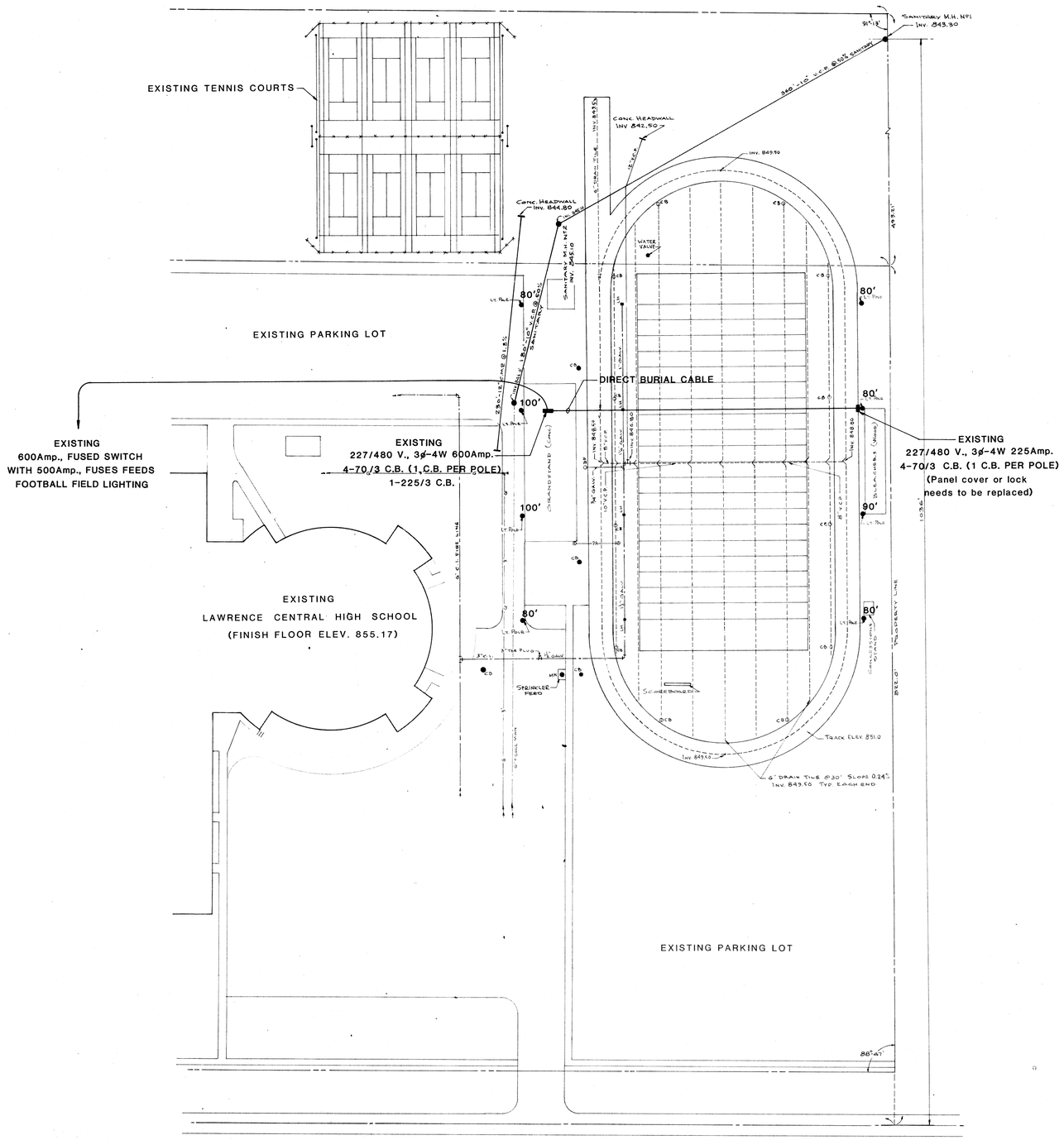

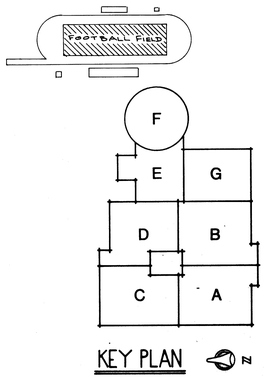

FOOTBALL FIELD LIGHTING

SCALE: 1" = 50'

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SITE PLAN – ELECTRICAL

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PHASE V, 1984 PROJECTS

REVISIONS		
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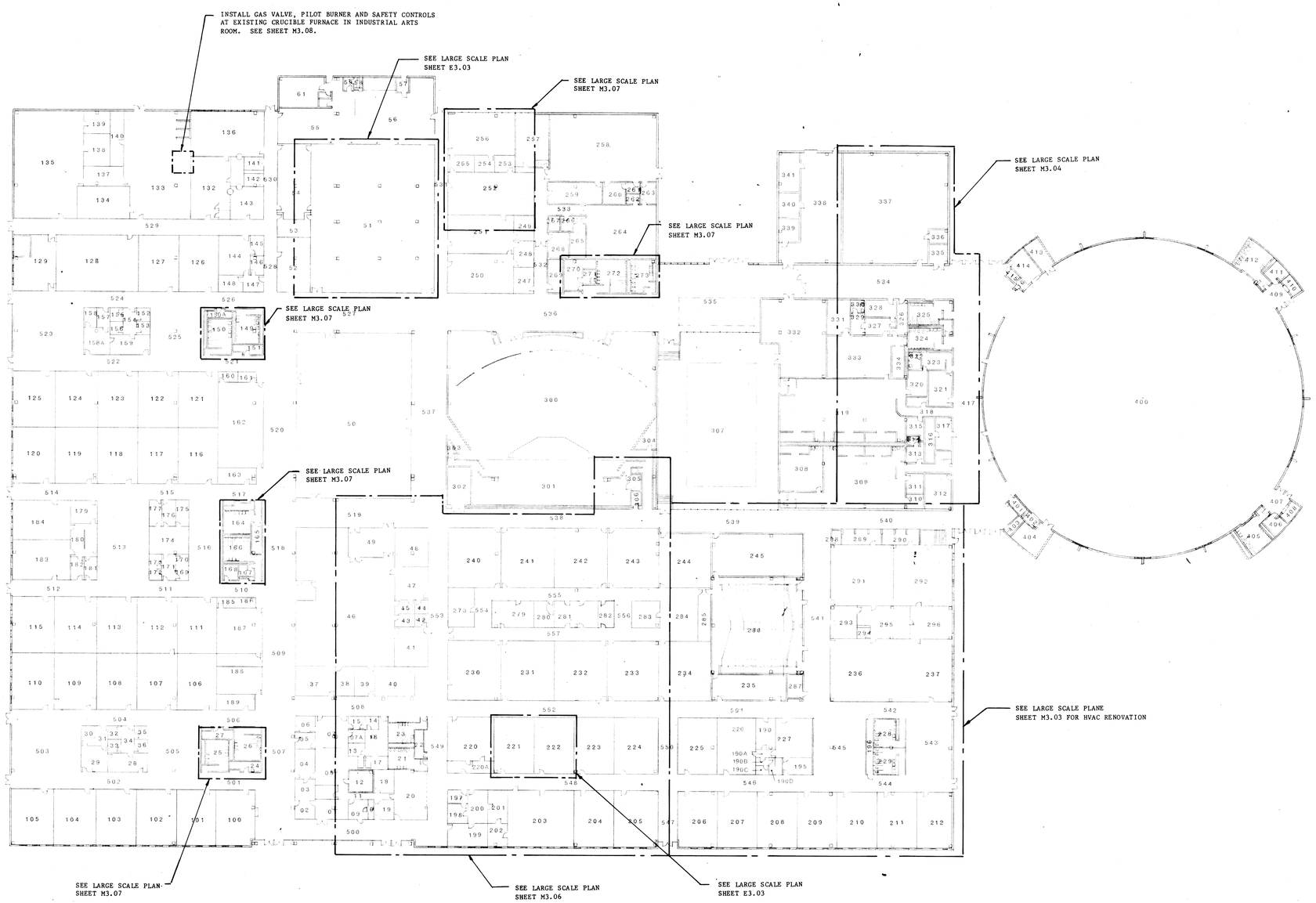
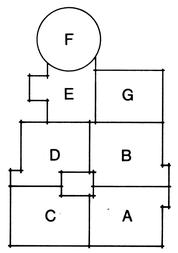


BUILDING FLOOR PLAN–MECHANICAL & ELECTRICAL

SCALE – 1"–36'



KEY PLAN

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BUILDING FLOOR PLAN – MECHANICAL & ELECTRICAL

LAWRENCE CENTRAL – BID PACKAGE # 3
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

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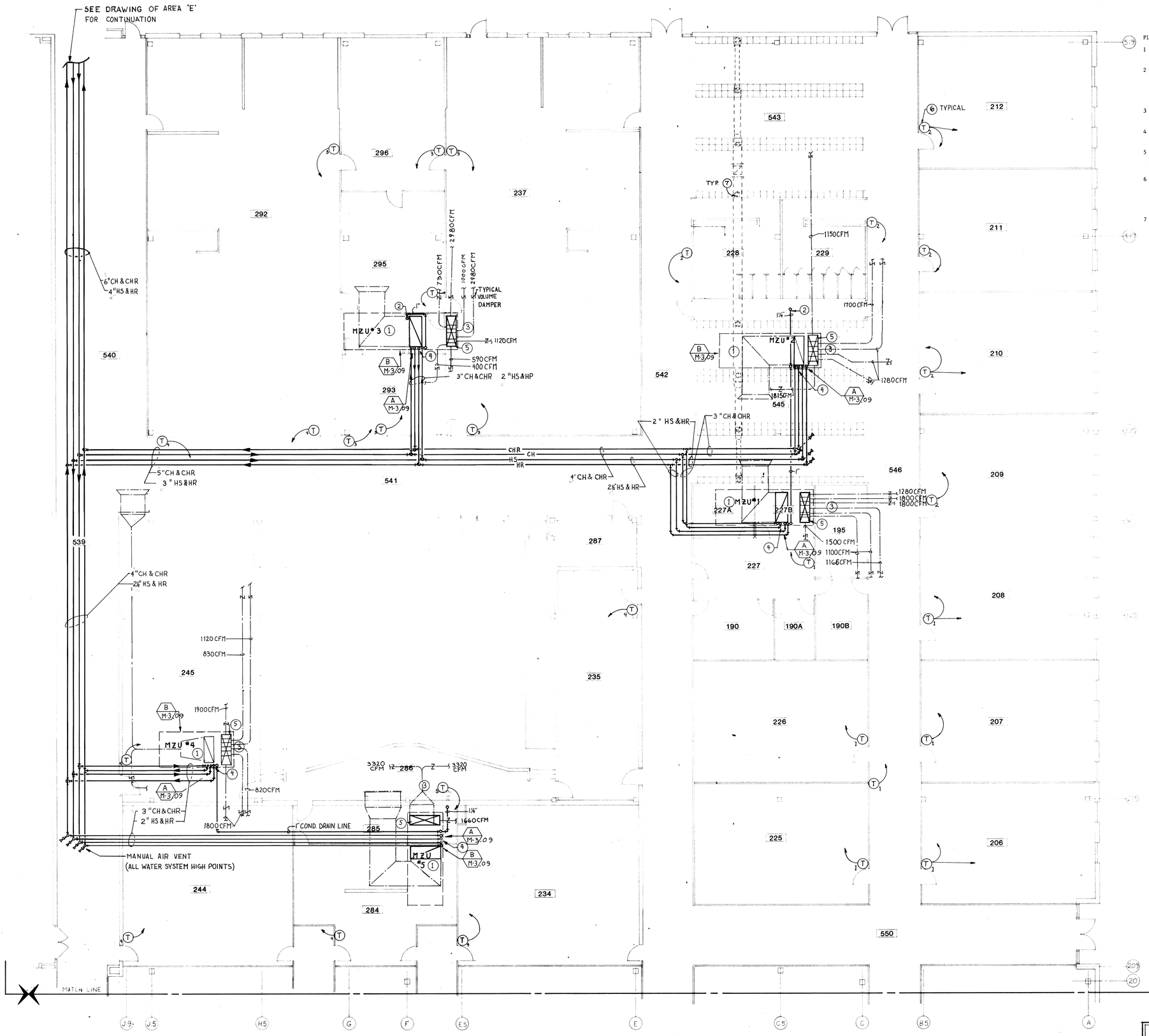
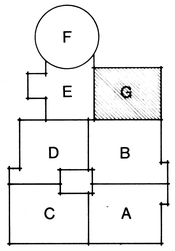


PLAN NOTES:

1. REMOVE EXISTING ROOFTOP MULTI-ZONE UNITS FROM ROOF. (MZU #1 THROUGH MZU #5)
2. INSTALL NEW MULTI-ZONE ROOFTOP UNITS IN PLACE ON EXISTING ROOF CURBS AND SEAL AIRTIGHT. RUN NEW CONDENSATE PIPING THROUGH ROOF TO NEAREST SANITARY WASTE RISER AND CONNECT WITH AIR GAP FITTING.
3. REBALANCE INDIVIDUAL ZONES TO AIR CAPACITIES SHOWN ON PLAN ONCE THE UNIT HAS BEEN STARTED UP.
4. SEAL ALL ROOF & EQUIPMENT PENETRATIONS AIRTIGHT AND WATERPROOF.
5. FIELD VERIFY EXACT DUCT DIMENSIONS AND LOCATION TO MAKE FINAL CONNECTION TO NEW MZU. PROVIDE TRANSITIONS AS REQUIRED TO MAKE CONNECTIONS.
6. PROVIDE NEW ROOM THERMOSTATS W/LOCKING COVERS PNEUMATIC PIPING TO RESPECTIVE ZONE DAMPERS AND TEMPERATURE CONTROL VALVES. VERIFY LOCATION OF EXISTING THERMOSTATS AND REPLACE WITH NEW THERMOSTATS.
7. REMOVE EXISTING 10" X 10" EXHAUST RISERS FROM LOCKER PLENUMS AND CAP AT MAIN DUCT. 8 LOCATIONS TOTAL IN ROOMS 543 & 545. (G21, G28)



KEY PLAN

AREA 'G' FLOOR PLAN HVAC

SCALE: 1/8"=1'0"

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AREA 'G' FLOOR PLAN – HVAC

LAWRENCE CENTRAL – BID PACKAGE # 3
LAWRENCE TOWNSHIP M.S.D.
PHASE V, 1984 PROJECTS

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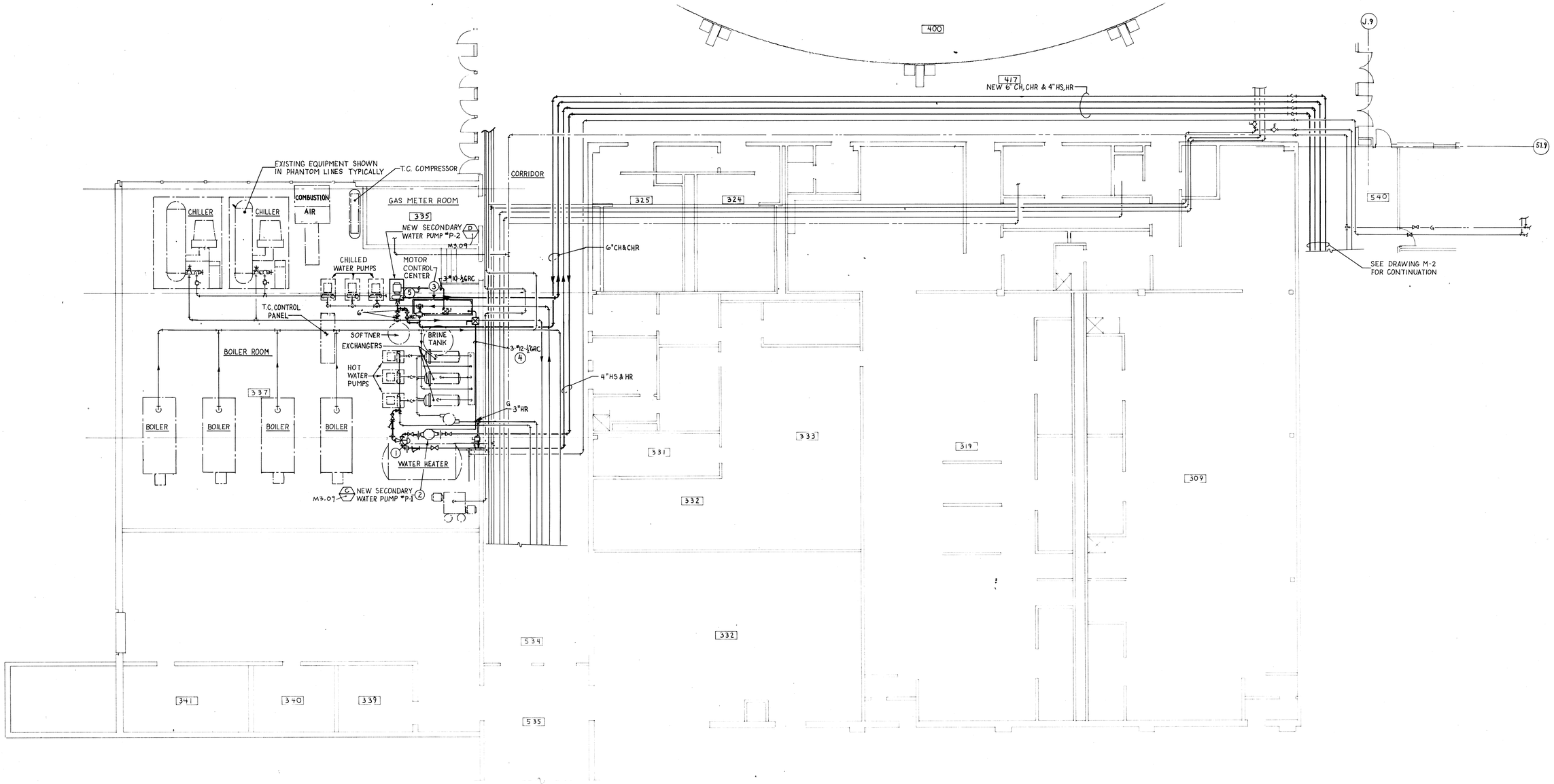
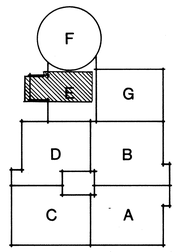


AREA 'E' PARTIAL FLOOR PLAN HVAC

SCALE: 1/8 - 1' 0"

PLAN NOTES:

1. THREE-WAY HOT WATER MIXING VALVE. 200° F. INLET WATER MAXIMUM, MIXED WITH RETURN WATER TO SUPPLY 160° F. MAXIMUM TO MULTI-ZONE ROOFTOP UNITS.
2. INSTALL INLINE SECONDARY PUMP #P-1 IN AN ACCESSIBLE MANNER IN THIS AREA.
3. INSTALL A GALVANIZED DRIP PAN ABOVE EXISTING MOTOR CONTROL CENTER PRIOR TO BEGINNING WORK IN THIS AREA.
4. E.C. SHALL CONNECT NEW SECONDARY WATER PUMP #P-2 TO EXISTING SPARE STARTER IN MOTOR CONTROL CENTER. INSTALL PROPER SIZE FUSES AND OVERLOAD ELEMENTS TO PROTECT PUMP MOTOR. FEEDER FROM STARTER TO MOTOR TO BE 3-#10-1/2" GRC.
5. E.C. SHALL INSTALL COMBINATION MAGNETIC STARTER FOR NEW SECONDARY WATER PUMP #P-1. STARTER SHALL HAVE NEMA 1 ENCLOSURE, PILOT LIGHT, AND H.O.A. SWITCH. CONNECT STARTER TO BUS IN SWITCHBOARD, FEEDER SHALL BE 3-#12-1/2" GRC.



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AREA 'E' PARTIAL FLOOR PLAN – HVAC

LAWRENCE CENTRAL – BID PACKAGE # 3
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

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SHEET M3.04

OF

GENERAL NOTES

G1 AIR BALANCING - REBALANCE ALL EXISTING SUPPLY AIR OUTLETS ON EXISTING FAN SYSTEMS MZU #1 THRU MZU #11, AND ACU #1 THRU ACU #6, AND RELIEF AIR DAMPERS #1, 2, AND 3. REFER TO T.C. SCHEDULE ON SHEET M3.08. BALANCE ALL EXISTING AIR OUTLETS AND ROOFTOP UNITS FOR 5 NEW SYSTEMS IN AREA 'G'. PROVIDE WATER BALANCING FOR 2 PUMPS SERVING ROOFTOP UNITS.

G2 TEMPERATURE CONTROL - CHECK, ADJUST, CALIBRATE, AND REBUILD CONTROLS ON ALL EXISTING SYSTEMS LISTED IN SCHEDULE ON SHEET M3.08, AND AS CALLED FOR IN SPECIFICATIONS.

PLAN NOTES

1 REMOVE EXISTING 15" X 15" OR 12" X 12" RISERS AND 16" X 6" EXHAUST DUCTS FROM LOCKER PLENUM AND CAP AT MAIN DUCT. (3) LOCATIONS IN ROOM 516.

SEE SHEET # , ROOMS 543 & 545, FOR TYPICAL 1/8" SCALE PLAN OF LOCKER VENTILATION DUCT.

2 STORM DOWNSPOUTS

REMOVE EXISTING INSULATION BELOW CEILING TO FLOOR. PIPE TO BE CLEANED AND PAINTED BY G.C.

3 ROOM 107 (COMPUTER): REPAIR STORM PIPE LEAK AT CLEAN OUT.

4 PATCH AND REPAINT TORN INSULATION.

5 EXTERIOR CLASSROOMS

ADD ADDITIONAL INSULATION WHERE BARE PIPE IS EXPOSED. COVER THRU CEILING USING SAME THICKNESS.

COVER INSULATED PIPE WITH MATERIAL SIMILAR TO MANVILLE MICRO-LOK METAL JACKET FROM RADIATION TO AT LEAST 60" ABOVE FLOOR. CUT OUT FOR SUPPORT BRACKETS.

6 INTERIOR EXPOSED PIPES

REPLACE EXISTING DETERIORATED INSULATION WITH 1/2" THICK, 3-1/2# DENSITY, GLASS FIBER TYPE INSULATION.

COVER INSULATED PIPE WITH MATERIAL SIMILAR TO MANVILLE MICRO-LOK METAL JACKET FROM RADIATION TO CEILING.

7 MISCELLANEOUS PIPES TO COUNTERTOP

REPAIR EXISTING INSULATION OR REPLACE WITH SAME THICKNESS.

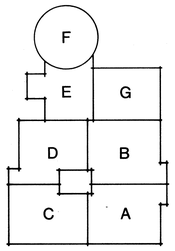
FOR GROUP OF PIPES:

A) INSULATE RADIATOR PIPES WITH 1/2" THICK, 3-1/2# DENSITY, GLASS FIBER TYPE INSULATION.

B) COVER GROUP WITH SINGLE JACKET SIMILAR TO MANVILLE MICRO-LOK OR COVER GROUP WITH CUSTOM BUILT JACKET OR ENCLOSURE.

LEGEND

- RADIATION PIPES
- EXPOSED DOMESTIC PIPES
- STORM DOWNSPOUT



KEY PLAN

GROUND LEVEL FLOOR PLAN

SCALE 1" - 30'

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SMALL SCALE FLOOR PLAN - MECHANICAL

LAWRENCE CENTRAL - BID PACKAGE # 3
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

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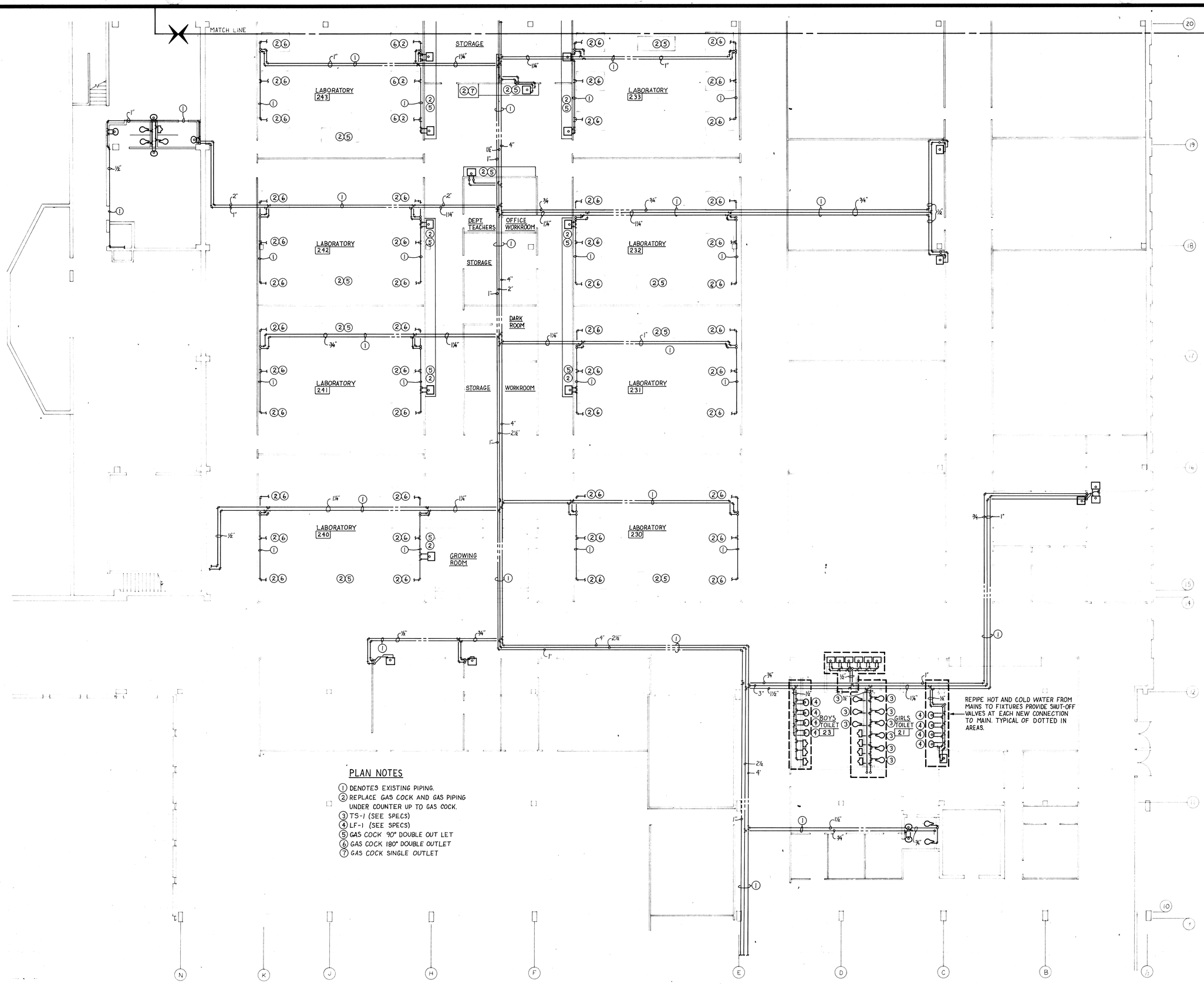
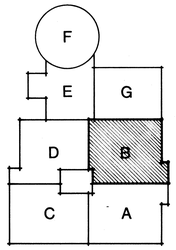


PLAN NOTES

1. DENOTES EXISTING PIPING.
2. REPLACE GAS COCK AND GAS PIPING UNDER COUNTER UP TO GAS COCK.
3. TS-1 (SEE SPECS)
4. LF-1 (SEE SPECS)
5. GAS COCK 90° DOUBLE OUT LET
6. GAS COCK 180° DOUBLE OUTLET
7. GAS COCK SINGLE OUTLET

AREA 'B' FLOOR PLAN PLUMBING

SCALE: 1/8"=1'0"



KEY PLAN

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AREA 'B' FLOOR PLAN – PLUMBING

LAWRENCE CENTRAL – BID PACKAGE # 3
LAWRENCE TOWNSHIP M.S.D.
PHASE V, 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	84004
DATE	3-29-84
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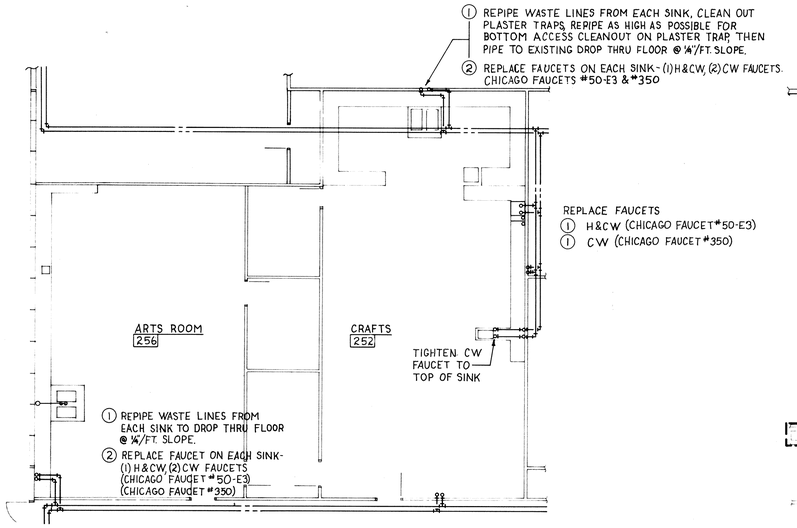
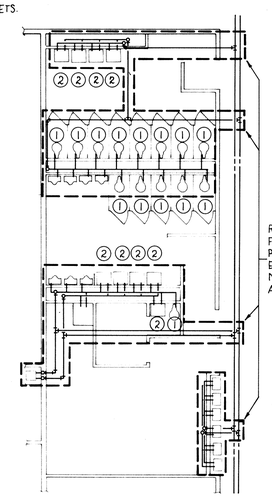
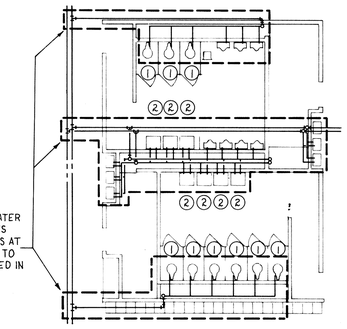


AREA 'D' - PARTIAL PLUMBING FLOOR PLAN
SCALE: 1/8"-1'0"

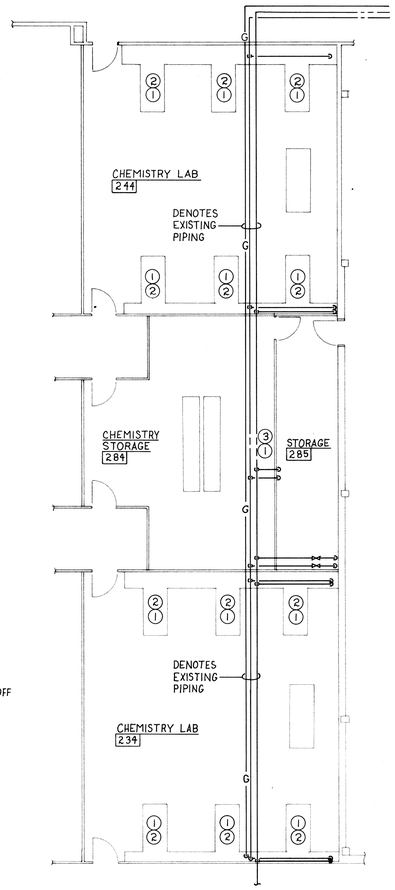


AREA 'D' - ROOMS 272,&273 - PLUMBING
SCALE: 1/8"-1'0"



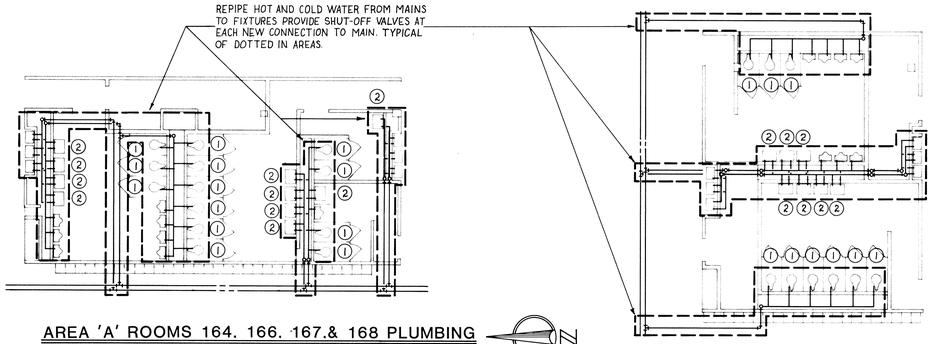
AREA 'C' ROOMS 149,& 150 PLUMBING
SCALE: 1/8"-1'0"

PLAN NOTES
① REPLACE TOILET SEAT. (TS-1)
② REPLACE FAUCET, STRAINER, P-TRAP, STOPS & SUPPLY RISER TO WALL. (LF-1)



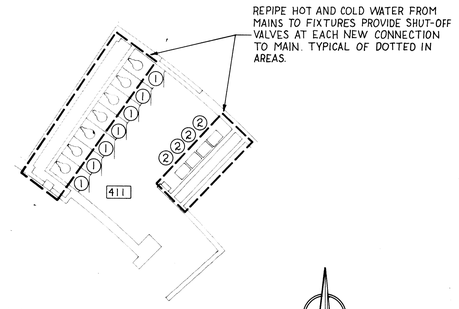
AREA 'G' - PARTIAL PLUMBING FLOOR PLAN
SCALE: 1/8"-1'0"

① REPLACE GAS COCK AND GAS PIPING UNDER COUNTER UP TO GAS COCK.
② GAS COCK - 180° DOUBLE OUTLET
③ GAS COCK - 90° DOUBLE OUTLET

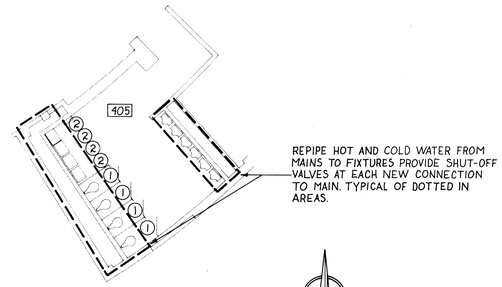


AREA 'A' ROOMS 164. 166. 167.& 168 PLUMBING
SCALE: 1/8"-1'0"

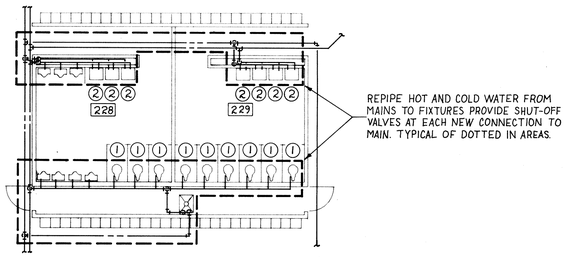
AREA 'A' ROOMS 25,& 26 PLUMBING
SCALE: 1/8"-1'0"



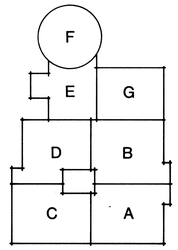
AREA 'F' PARTIAL PLUMBING FLOOR PLAN
SCALE: 1/8"-1'0"



AREA 'F' PARTIAL PLUMBING FLOOR PLAN
SCALE: 1/8"-1'0"



AREA 'G' ROOMS 228,& 229 PLUMBING
SCALE: 1/8"-1'0"



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LARGE SCALE FLOOR PLAN - PLUMBING

LAWRENCE CENTRAL - BID PACKAGE # 3
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	5-4004
DATE	3-29-84
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CHECKED BY	

VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
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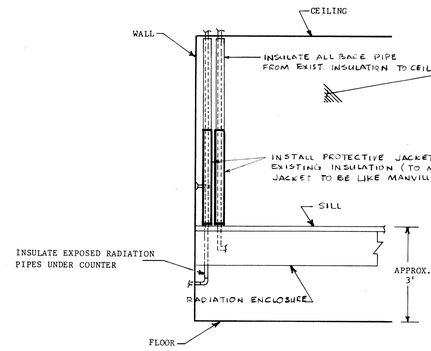
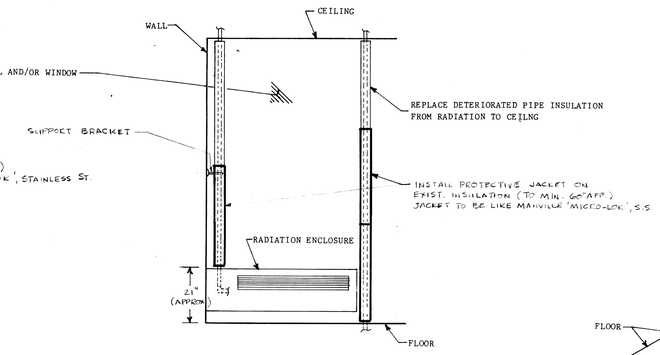
OF

EXISTING SYSTEM DATA FOR TEMPERATURE CONTROL REVISIONS

UNIT OR SYSTEM	PENTHOUSE OR ROOM	RETURN AIR FAN	100% OUTSIDE AIR	NO OUTSIDE AIR	STEAM COIL	HOT WATER COIL	CHILL WATER COIL
MZU #1	1		✓			✓	✓
MZU #2	1	✓	✓			✓	✓
MZU #3	1		✓			✓	✓
MZU #4	2		✓			✓	✓
MZU #5	2		✓			✓	✓
MZU #6	2	✓	✓			✓	✓
MZU #7	3		✓			✓	✓
MZU #8	3		✓			✓	✓
MZU #9	3	✓	✓			✓	✓
MZU #10	2		✓			✓	✓
MZU #11	ROOM 303		✓		✓		
ACU #1	1		✓			✓	✓
ACU #2	2		✓			✓	✓
ACU #3	3	✓	✓			✓	✓
ACU #4A	AUD.		✓			✓	✓
ACU #4B	AUD.		✓			✓	✓
ACU #5A	AUD.		✓			✓	✓
ACU #5B	AUD.		✓			✓	✓
ACU #6			✓			✓	✓
H & V #1A	GYM		✓		✓		
H & V #1B	GYM		✓		✓		
H & V #1C	GYM		✓		✓		
H & V #1D	GYM		✓		✓		
H & V #1E	GYM		✓		✓		
H & V #1F	GYM		✓		✓		
H & V #2	POOL		✓		✓		
H & V #3	SHOP		✓		✓		
H & V #4	KITCHEN		✓		✓		
H & V #5	BOILER RM.		✓		✓		
UV #1A	GYM		✓		✓		
UV #1B	GYM		✓		✓		
UV #1C	GYM		✓		✓		
UV #1D	GYM		✓		✓		
UV #2A	LOCKERS		✓		✓		
UV #2B	LOCKERS		✓		✓		
SF #1	1			✓		✓	✓
SF #2	1			✓		✓	✓
SF #3	2			✓		✓	✓
SF #4	3			✓		✓	✓
RELIEF DMPR. #1	1	(SYSTEM INTERLOCK)					
RELIEF DMPR. #2	2	(SYSTEM INTERLOCK)					
RELIEF DMPR. #3	3	(SYSTEM INTERLOCK)					



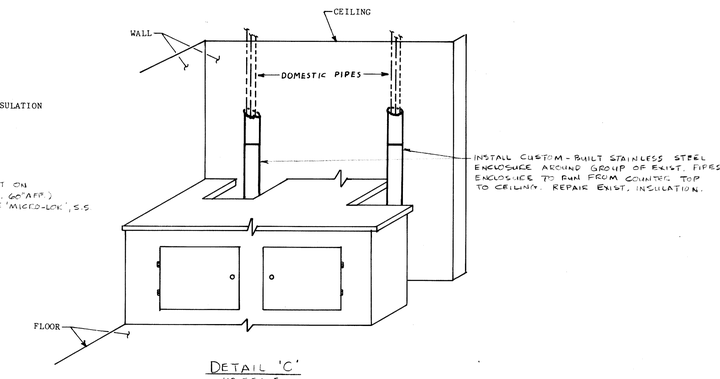
DETAIL 'A'
NO SCALE



DETAIL 'B'
NO SCALE

EXTERIOR CLASSROOMS & INTERIOR EXPOSED PIPES

NO SCALE

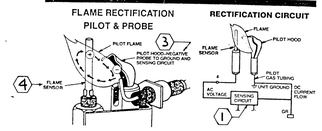


DETAIL 'C'
NO SCALE

MISCELLANEOUS PIPES TO COUNTERTOP

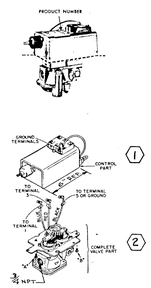
NO SCALE

PRINCIPLES OF OPERATION



SEQUENCE OF OPERATION

1. When the temperature control calls for heat, the ignition control's spark transformer and pilot valve are automatically energized.
2. The spark lights the pilot on each operating cycle.
3. The flame sensor proves the presence of the flame. The ignition control then shuts off the spark. At the same time, the main burner valve is opened. (Some models permit the spark to continue for a short period of time after the main burner lights). 100% lockout models provide for shut-down of the entire system when the pilot does not light within some fixed period of time (usually 30 seconds).
4. The main burner ignites and the system continues normal operation.
5. When the temperature control is satisfied, the main burner and pilot valves are de-energized, shutting off all gas flow.



EQUIPMENT SCHEDULE

1. IGNITION CONTROL MODEL CSA51A601A 120 VOLTS A.C. 50/60 HZ
2. GAS CONTROL VALVE MODEL VLV 4.2 A602R 120 VOLTS 50/60 HZ 3/4" NPT PORTS FOR 200,000 BTU GAS INPUT
3. PILOT BURNER AND SENSOR PROBE MODEL Q90 SERIES

NOTE: ALL OF THE ABOVE ARE JOHNSON CONTROLS, INC. (BRYANT HEDBACK CORP., INDIANAPOLIS, IND., DISTRIBUTOR). EQUIVALENT SUBSTITUTION OF GAS CONTROL PACKAGE MAY BE MADE UNDER THE FOLLOWING SPECIFICATIONS:

A) SOLID STATE IGNITION CONTROL TO LIGHT PILOT BURNER BY A SPARK.

B) PILOT GAS IS IGNITED AND BURNS DURING EACH RUNNING CYCLE.

C) MAIN BURNER AND PILOT GAS ARE EXTINGUISHED DURING "OFF" CYCLE.

D) MAIN GAS VALVE TO OPEN ONLY WHEN THE PILOT IS PROVEN TO BE LIT.

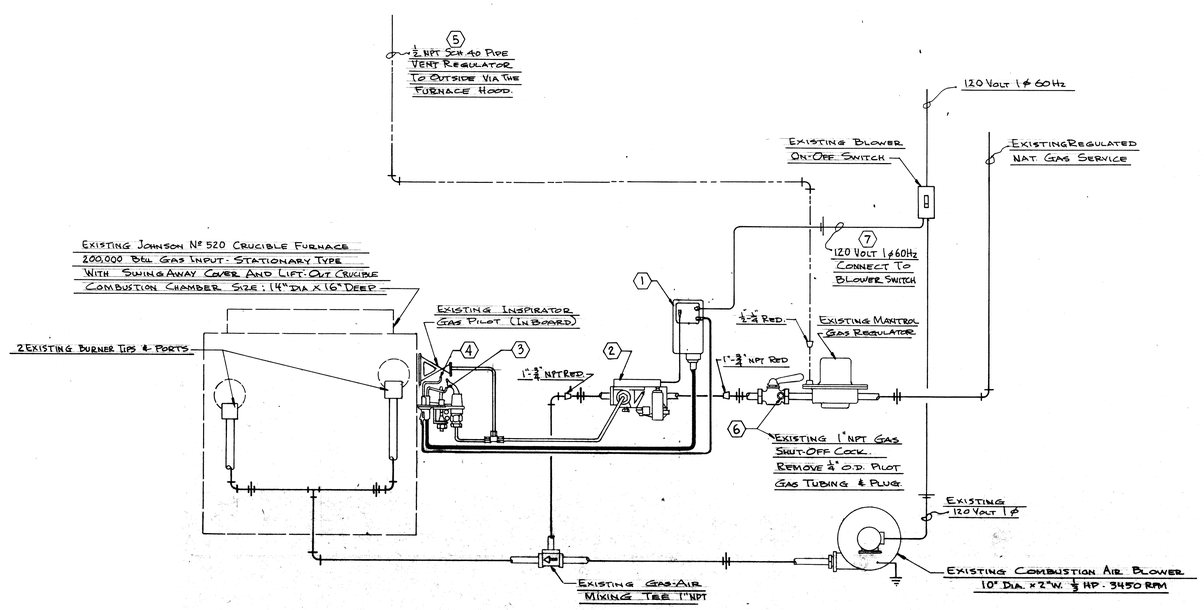
E) ON LOSS OF FLAME THE MAIN GAS VALVE CLOSES AND THE SPARK RECURS WITHIN 0.8 TO 1.0 SECOND.

F) REDUNDANT GAS VALVE - 100% SHUT-OFF.

G) AGA APPROVED.

GENERAL NOTES

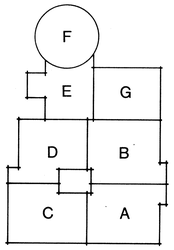
1. IGNITION CONTROL - HOUSES THE ELECTRONIC CIRCUITRY WHICH CONTROLS THE SAFETY, SEQUENCING, AND OPERATION OF THE SYSTEM.
2. GAS VALVE - ELECTRICALLY CONTROLS BOTH THE PILOT AND MAIN BURNER GAS SUPPLY. MAY ALSO INCLUDE A PRESSURE REGULATOR AND MANUAL SHUTOFF VALVE.
3. ELECTRODE PILOT BURNER - INCORPORATES AN ELECTRODE THAT LIGHTS THE PILOT GAS ON A CALL FOR HEAT.
4. FLAME SENSOR - DETECTS THE PRESENCE OF THE PILOT FLAME AND ACTS AS A PART OF THE FLAME SENSING CIRCUIT.
5. REGULATOR VENTED TO OUTSIDE - IN EVENT OF DIAPHRAGM RUPTURE, GAS IS VENTED OUT OF BUILDING.
6. OLD 1/4" OD GAS PILOT TUBING TO BE REMOVED AND THE PORT SHUT WITH 1/4" NPT PIPE PLUG.
7. ELECTRICAL SERVICE AND ON-OFF CONTROL FOR THE FURNACE IS TO BE THRU THE EXISTING BLOWER SWITCH. SUFFICIENT DWELL TIME OCCURS ON START-UP VALVE ACTION TO PROVIDE A SAFE FURNACE PURGE CYCLE.



COMBUSTION SAFEGUARD SYSTEM

ADDITIONS TO INDUSTRIAL ARTS CRUCIBLE FURNACE

'NO SCALE'



KEY PLAN

N

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #3
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA
ARCHITECTS/ENGINEERS
MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS
2602 E. 55TH. ST.

SCHEDULES & DETAILS – MECHANICAL

LAWRENCE CENTRAL – BID PACKAGE # 3
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

NO.	DATE	REVISIONS DESCRIPTION

COMM. NO.	8420-4
DATE	3-29-84
DRAWN BY	JW
CHECKED BY	BOC

CERTIFIED BY

SHEET
M3.08

OF

ROOFTOP MULTIZONE UNIT

MARK NO.	NAME	MANUFACTURER & MODEL	LOCATION	COOLING E.A. D.B. & W.B.	COOLING L.A. D.B. & W.B.	COOLING MBH TOTAL SENS	COOLING ENT.W. EVAP. TEMP.	COOLING ROWS GPM	COOLING W.P.D. FEET W.G.	COOLING FX. FPM SQ. FT. COIL	HEATING TEMP E.A. TD L.A.	HEATING MBH	HEATING ENT.W. LV. WTR.	HEATING ROWS GPM	HEATING W.P.D. FEET W.G.	HEATING FX. FPM SQ. FT. COIL	FAN DATA T.AIR FRESH AIR	FAN DATA ESP INCHES W.G.	FAN DATA TSP INCHES W.G.	FAN DATA D.V. FPM RPM	FACE & BYPASS DMPRS.	TYPE MIX. BOX & FILTERS	ARRGT.	WEIGHT	REMARKS	MOTOR DATA H.P.	MOTOR DATA FLA	MOTOR DATA VOLT PHASE	STARTER TYPE	STARTER NEMA ENCL.	STARTER MOUNT	STARTER SPECIAL CONTROLS	STARTER FURN. BY	DISCONNECT TYPE	DISCONNECT NEMA ENCL.	DISCONNECT FURN BY	MARK NO.
MZU #1	MULTI-ZONE UNIT #1	MAMMOTH ADAPT-AIRE	AREA 'G' ROOF	78°	53.6°	334	45°	6	6'	541	58°	375	160	3	.7'	665	9740		2.75"	2380	N.A.	2" THROWAWAY	BLOW		RETURN FAN -.28"SP @ 9740 CFM	10 & 2	17.4	460	COMB.	3R	C.P.		M.C.	FUSE	3R	M.C.	MZU #1
				64.8°	53.3°	231	55°	66.7		18	111.3°		120	19.1		9.75	1450			1660			THRU					3	MAG.									
MZU #2	MULTI-ZONE UNIT #2		AREA 'G' ROOF	77.5°	56°	269	45°	6	4'	518	62	375	160	4	.8'	632	9330		2.75"	2660	N.A.	2" THROWAWAY	BLOW		RETURN FAN -9330 CFM @.28"TSP	10 & 2	17.4	460									MZU #2
				64.5°	55°	203	55°	53.7		18	118.2°		120	19.7		9.75	950			1640			THRU					3										
MZU #3	MULTI-ZONE UNIT #3		AREA 'G' ROOF	77.2°	52.3°	357	45°	8	8.5'	555	60°	375	160	4	.8'	684	10,000		2.75"	2410	N.A.	2" THROWAWAY	BLOW		RETURN FAN -10,000 CFM @.28"TSP	10 & 2	17.4	460									MZU #3
				64.2°	52°	223	55°	71.3		18	111.9°		120	19.1		9.75	1230			1720			THRU					3										
MZU #4	MULTI-ZONE UNIT #4		AREA 'G' ROOF	78°	56.8°	232	45°	6	2.5'	470	57.6°	375	160	4	.8'	579	8470		2.75"	2075	N.A.	2" THROWAWAY	BLOW		RETURN FAN -8470 CFM @.28"TSP	7½ & 1½	13.6	460									MZU #4
				64.8°	55.8°	184	55°	46.3		18	118.8°		120	19.1		9.75	1310			1550			THRU					3										
MZU #5	MULTI-ZONE UNIT #5		AREA 'G' ROOF	81°	52.9°	362	45°	6	7'	464	45°	300	160	3	.4'	567	8300		2.75"	1950	N.A.	2" THROWAWAY	BLOW		RETURN FAN -8300 CFM @.28"TSP	7½ & 1½	13.6	460									MZU #5
				67°	52.7°	181	55°	72.3		18	95°		120	15.3		9.75	2600			1530			THRU					3										

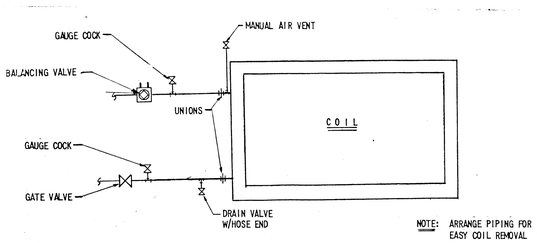
PUMP SCHEDULE

MARK NO.	NAME	MANUFACTURER & MODEL	LOCATION	SERVICE/PURPOSE	TYPE & MOUNTING	PUMP DATA GPM	PUMP DATA HD. FT. W.G.	PUMP DATA RPM	PUMP DATA BHP	WEIGHT	REMARKS	MOTOR DATA H.P.	MOTOR DATA FLA	MOTOR DATA VOLT PHASE	STARTER TYPE	STARTER NEMA ENCL.	STARTER MOUNT	STARTER SPECIAL CONTROL	STARTER FURN. BY	DISCONNECT TYPE	DISCONNECT NEMA ENCL.	DISCONNECT FURN. BY	REMOTE CONTROLS CONTROLS	REMOTE CONTROLS FURN. BY	ELECTRICAL CONNECTIONS WIRE & CONDUIT	CIR. BRKRS. OR FUSED SWITCH NO.	CIR. BRKRS. OR FUSED SWITCH FRAME	CIR. BRKRS. OR FUSED SWITCH P.	CIR. BRKRS. OR FUSED SWITCH AMPS.	PANEL	MARK NO.
P1	BOILER ROOM SECONDARY HOT WATER PUMP	B&G 80 2×2×9¼	BOILER ROOM	INLINE	INLINE	92	41'	1750	2.8			3		460	COMB.	1	SURF.	H.O.A.	E.C.	-	-	-			3-#12-1/2"C			3	5.6	-	P1
														3	MAG.																	
P2	BOILER ROOM SECONDARY CHILL WATER PUMP	B&G 1510 #2½ B	BOILER ROOM	END SUCTION BASE MOUNTED	END SUCTION BASE MOUNT	310	36'	1750	4.4			5		460	COMB.	1	M.C.C.	H.O.A.	E.C.	-	-	-			3-#12-1/2"C			3	9	M.C.C.	P2
														3	MAG.																	

SCHEDULE OF DUCT INSULATION & PIPE INSULATION

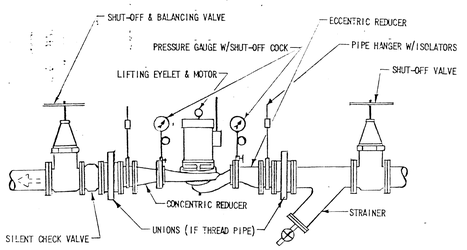
APPLICATION	NO INSULATION	1" FLEXIBLE FIBERGLASS, 2" THICK	3" RIGID BOARD FIBERGLASS, 1" THICK	1" THICK STANDARD ARMAFLEX	6" RIGID BOARD FIBERGLASS, 1" THICK	3" DUCT LINER BOARD, 2" THICK	FR ARMAFLEX 3/4" THICK	3/4" FIBERGLASS 1½" THICK
MULTIZONE DUCT TRANSITIONS		(5)	(5)					
HEATING WATER SUPPLY & RETURN								(1)
CHILL WATER SUPPLY & RETURN								(1)
DOMESTIC HOT, COLD & HOT RETURN WATER							(◯)	

NOTES:
1. WITH ALL SERVICE JACKET.
2. FINISH WITH PRESIZED FIBERGLASS CLOTH.
3. FINISH WITH 2 COATS OF WEATHERPROOF VINYL PLASTIC.
4. DUCTS INSULATED INSIDE WITH DUCT LINER SHALL NOT BE INSULATED ON OUTSIDE.
5. WITH FACTORY APPLIED FOIL REINFORCED KRAFT JACKET.

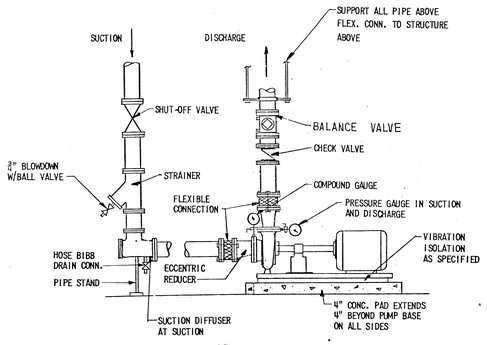


NOTE: ARRANGE PIPING FOR EASY COIL REMOVAL

CHILLED WATER OR HOT WATER COIL PIPING
DETAIL 'A'
NO SCALE

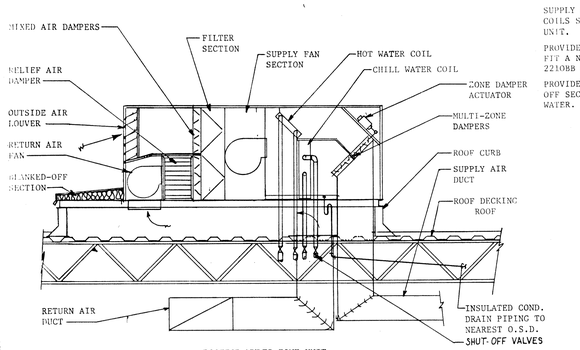


IN-LINE CIRCULATING PUMP
DETAIL 'C'
NO SCALE



NOTES:
1. ALL VALVES, STRAINERS, FLEX. CONN., ETC. SHALL BE FULL LINE SIZE

PUMP PIPING DETAIL -- END SUCTION
DETAIL 'D'
NO SCALE



ROOFTOP MULTI-ZONE UNIT
DETAIL 'B'
NO SCALE

NOTES: ROOF CURB, SUPPLY & RETURN DUCTWORK, AND ELEC. ROUGH-IN ARE EXISTING. USE WITH NEW EQUIPMENT INSTALLATION.

SUPPLY & RETURN PIPING TO COILS SHALL RUN WITHIN NEW UNIT.

PROVIDE ADAPTER FLANGE TO FIT A NESBITT # RMA-100NG5C-2210BB CURB DIMENSIONS.

PROVIDE INSULATED BLANKED-OFF SECTION CAP TO SHED WATER.

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #3
EXCEPT AS OTHERWISE NOTED

ELECTRICAL ABBREVIATIONS

CIRC. BRKR OR C.B.	- CIRCUIT BREAKER
COMB.	- COMBINATION
C.P.	- CONTROL PANEL
E.C.	- ELECTRICAL CONTRACTOR
ENCL.	- ENCLOSURE
FLA.	- FULL LOAD AMPS
F.S.	- FUSED SWITCH
G.C.	- GENERAL CONTRACTOR
H.O.A.	- HAND-OFF-AUTOMATIC
MAG.	- MAGNETIC
MAN.	- MANUAL
M.C.	- MECHANICAL CONTRACTOR
M.C.C.	- MOTOR CONTROL CENTER
MFR.	- MANUFACTURER
M.S.P.	- MOTOR STARTER PANEL
N.F.	- NON-FUSED
NO.	- NUMBER
P.	- POLE
P.B.	- PUSH-BUTTON
P.L.	- PILOT LIGHT
REC.	- RECESSED
SURF.	- SURFACE
SW.	- SWITCH
T.C.C.	- TEMPERATURE CONTROL CONTRACTOR

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA
MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS
2602 E. 55TH. ST.

SCHEDULES & DETAILS

LAWRENCE CENTRAL - BID PACKAGE #3
LAWRENCE TOWNSHIP M.S.D.
PHASE V, 1984 PROJECTS

REVISIONS

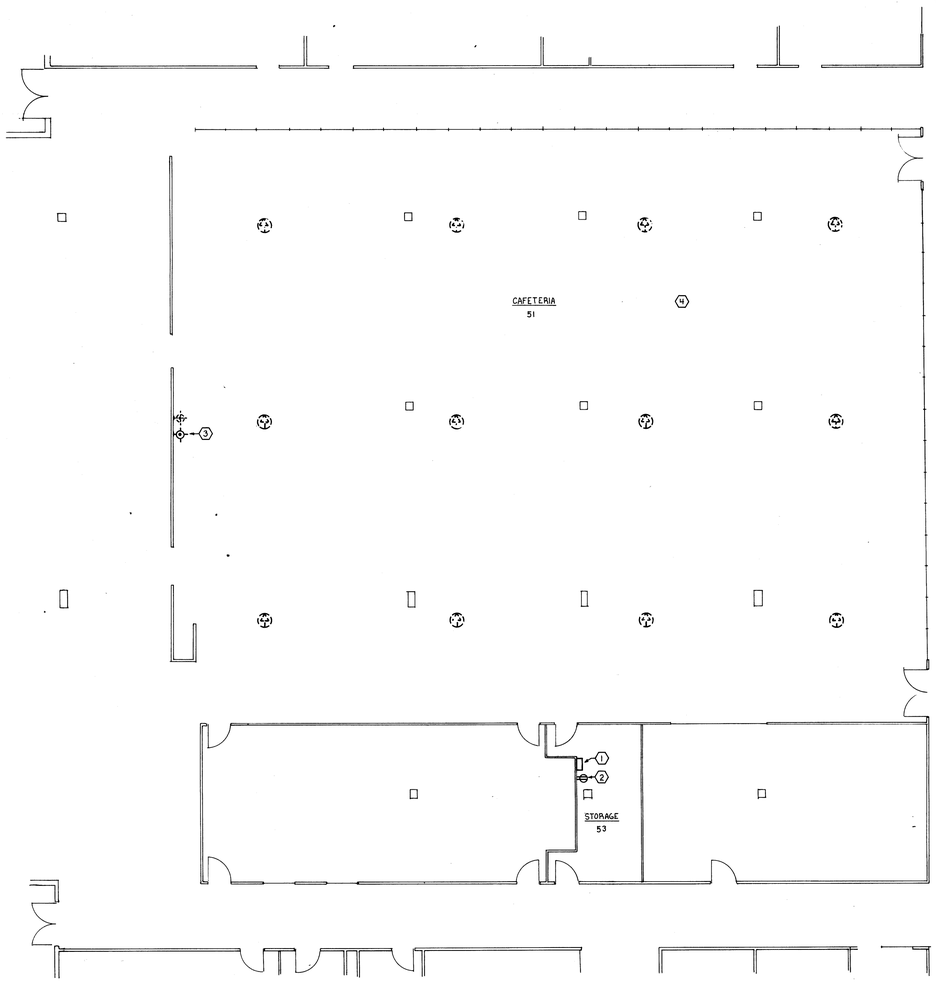
NO.	DATE	DESCRIPTION

COMM. NO. 84004
DATE 3-29-84
DRAWN BY TC
CHECKED BY BAC

MICHAEL SEVERIO NICHOLAS No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

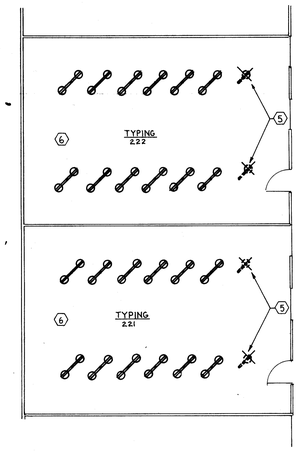
SHEET M3.09

OF



① CAFETERIA FLOOR PLAN – ELECTRICAL

SCALE :1/8"=1'-0"

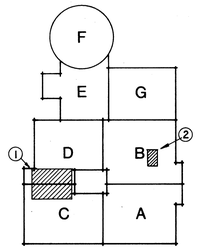


② TYPING ROOM FLOOR PLAN – ELECTRICAL

SCALE :1/8"=1'-0"

NOTES

1. INSTALL PACKAGE AMPLIFIER IN STORAGE 53 TO FEED EXISTING SPEAKERS IN CAFETERIA 51. INSTALL DPDT SWITCH BESIDE AMPLIFIER TO SWITCH SPEAKERS TO EITHER PACKAGE AMPLIFIER OR BUILDING P.A. SYSTEM. RECONNECT EXISTING SPEAKER LINE TO NEW SWITCH. INSTALL SHELF AT +70" AND MOUNT AMPLIFIER ON SHELF. AMPLIFIER TO BE REATED 35 WATTS WITH FREQUENCY RESPONSE 50-15,000 HZ +/- 2DB, SIMILAR TO DUKANE 1A1335.
2. INSTALL DUPLEX RECEPTACLE AT +72" FOR AMPLIFIER. CONNECT TO NEAREST RECEPTACLE CIRCUIT.
3. INSTALL NEW MICROPHONE OUTLET ADJACENT TO EXISTING MICROPHONE OUTLET. NEW OUTLET SHALL BE SAME TYPE AS EXISTING AND SHALL BE CONNECTED TO NEW AMPLIFIER. NEW OUTLET SHALL BE LABELED "LOCAL P.A." AND EXISTING OUTLET SHALL BE LABELED "BUILDING P.A."
4. EXISTING SPEAKERS IN CAFETERIA ARE TO REMAIN AND ARE TO BE RECONNECTED AS NOTED IN NOTE #1 ABOVE.
5. IN ROOMS 221 AND 222, FLOOR MOUNTED RECEPTACLES AT SOUTH END OF ROOM ARE TO BE REMOVED AND FLOOR BOX SHALL BE CAPPED.
6. IN ROOMS 221 AND 222, 12 FLOOR OUTLETS IN EACH ROOM SHALL BE REMOVED AND REPLACED WITH FLOOR OUTLETS HAVING TWO DUPLEX RECEPTACLES. NEW OUTLETS SHALL BE SIMILAR TO WALKER 513D. VERIFY MOUNTING ARRANGEMENT OF EXISTING OUTLETS AND PROVIDE NEW OUTLET COMPATIBLE WITH EXISTING CONDITIONS.
7. REFER TO SHEETS M3.03 AND M3.04 FOR ELECTRICAL CONNECTIONS TO HVAC EQUIPMENT.



KEY PLAN

NOTE:
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BID PACKAGE #3
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS
2602 E. 55TH. ST.

LARGE SCALE FLOOR PLAN – ELECTRICAL

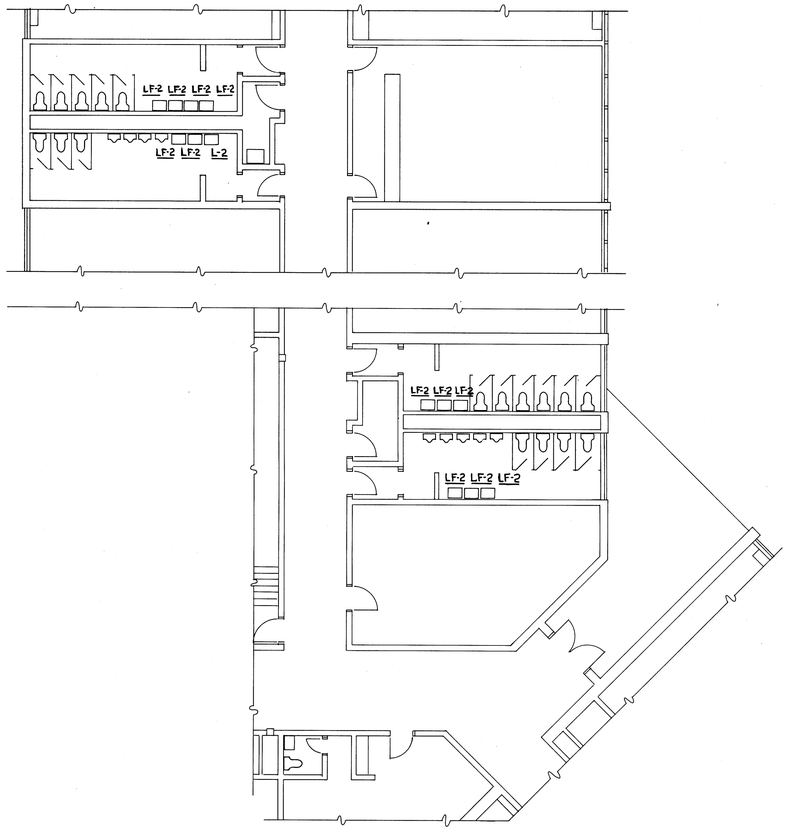
LAWRENCE CENTRAL – BID PACKAGE # 3
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO. 84004
DATE 5-29-84
DRAWN BY EO
CHECKED BY MOP

VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET
E3.03
OF

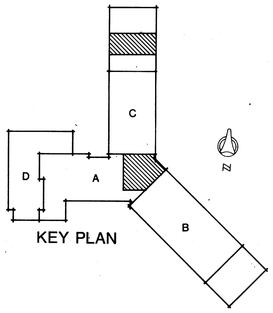


PARTIAL FLOOR PLAN -PLUMBING

SCALE 1/8"-1'-0"

N

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #3
EXCEPT AS OTHERWISE NOTED



KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

HARRISON HILL ELEMENTARY - BID PACKAGE #3

LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

NO.	DATE	REVISIONS DESCRIPTION

COMM. NO.	8400-4
DATE	3-29-84
DRAWN BY	S.H.
CHECKED BY	B.O.C.

VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY

SHEET
M3.10

OF

LAWRENCE TOWNSHIP METROPOLITAN SCHOOL DISTRICT

PHASE V, 1984 PROJECTS

MECHANICAL ELECTRICAL & PLUMBING RENOVATION

INDEX OF BID PACKAGES

LAWRENCE CENTRAL
#3 HARRISON HILL ELEMENTARY

M3.01	PARTIAL SITE PLAN - MECHANICAL
E3.01	PARTIAL SITE PLAN - ELECTRICAL
E3.02 & M3.02	BUILDING FLOOR PLAN - MECHANICAL & ELECTRICAL
M3.03	AREA 'G' FLOOR PLAN - HVAC
M3.04	AREA 'E' PARTIAL FLOOR PLAN - HVAC
M3.05	SMALL SCALE FLOOR PLAN - MECHANICAL
M3.06	AREA 'B' FLOOR PLAN - PLUMBING
M3.07	LARGE SCALE FLOOR PLAN - PLUMBING
M3.08	SCHEDULE & DETAILS - MECHANICAL
M3.09	SCHEDULE & DETAILS - MECHANICAL & ELECTRICAL
E3.03	LARGE SCALE FLOOR PLAN - ELECTRICAL
M3.10	PARTIAL FLOOR PLAN - MECHANICAL

#4 BELZER MIDDLE SCHOOL

M4.01	BUILDING A & B TUNNEL PLAN - DEMOLITION
M4.02	BUILDING C & D TUNNEL PLAN - DEMOLITION
M4.03	BUILDING E TUNNEL PLAN - DEMOLITION
M4.04	BUILDING A & B FLOOR PLAN - HVAC
M4.05	BUILDING A & B 2ND FLOOR - HVAC
M4.06	BUILDING A & B FLOOR PLAN - PLUMBING
M4.07	BUILDING C & D FLOOR PLAN - HVAC
M4.08	BUILDING C & D FLOOR PLAN - PLUMBING
M4.09	BUILDING E FLOOR PLAN - HVAC
M4.10	BUILDING E FLOOR PLAN - PLUMBING
M4.11	BOILER ROOM FLOOR PLAN - MECHANICAL
M4.12	DETAILS - MECHANICAL
M4.13	SCHEDULE - MECHANICAL
E4.01	BOILER ROOM PLAN - ELECTRICAL

LAWRENCE NORTH
#6 CRAIG MIDDLE SCHOOL

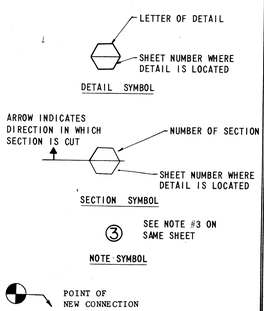
E6.01 & M6.01	BUILDING GROUND FLOOR PLAN - MECHANICAL & ELECTRICAL
E6.02 & M6.02	BUILDING 1ST FLOOR PLAN - MECHANICAL & ELECTRICAL
E6.03 & M6.03	BUILDING 2ND FLOOR PLAN - MECHANICAL & ELECTRICAL
M6.04	SMALL SCALE 1ST FLOOR PLAN - HVAC
M6.05	LARGE SCALE GROUND FLOOR PLAN - MECHANICAL
M6.06	1ST FLOOR LARGE SCALE PLAN - HVAC
M6.07	2ND FLOOR LARGE SCALE PLAN - HVAC
M6.08	LARGE SCALE FLOOR PLAN - MECHANICAL
M6.09	DIAGRAMS & DETAILS - PLUMBING
M6.10	SCHEDULES & DETAILS - MECHANICAL
E6.04	SITE PLAN - MECHANICAL & ELECTRICAL
E6.05	GROUND FLOOR LARGE SCALE PLAN - ELECTRICAL
E6.06	1ST FLOOR LARGE SCALE PLAN - ELECTRICAL
E6.07	2ND FLOOR LARGE SCALE PLAN - ELECTRICAL
E6.08	LARGE SCALE FLOOR PLAN - ELECTRICAL
E6.09	PARTIAL FLOOR PLAN - ELECTRICAL

MECHANICAL ABBREVIATIONS & SYMBOLS

MECHANICAL ABBREVIATIONS & DRAWING SYMBOLS

A.D.	AREA DRAIN
A.P.	ACCESS PANEL
B.D.	BUTTERFLY DAMPER
B.D.D.	BACKDRAFT DAMPER
C.B.	CATCH BASIN
C.D.	CANOPY DRAIN
CFM	CUBIC FEET/MIN.
CH.W.COIL	CHILLED WATER COIL
C.I.	CAST IRON
C.O.	CLEANOUT
CSAC	CENTRAL STATION AIR CONDITIONER
CUH	CABINET UNIT HEATER
CUV	CLASSROOM UNIT VENTILATOR
CUV & A.C.	CLASSROOM UNIT VENT & AIR COND.
C.W.	COLD WATER
D.S.	DOWNSPOUT
D.B.	DRY BULB
D.F.	DRINKING FOUNTAIN
D.G.	DOOR GRILLE
DX.COIL	DIRECT EXPANSION REFRIG. COIL
E.B.R.	ELECTRIC BASEBOARD RADIATION
E.C.	ELECTRICAL CONTRACTOR
E.G.	EXHAUST GRILLE
E.H.C.	ELECTRICAL HEATING COIL
ENT.AIR	ENTERING AIR
E.O.M. DRIP	END OF MAIN DRIP
E.S.P.	EXTERNAL STATIC PRESSURE
E.W.C.	ELECTRIC WATER COOLER
F.A.	FACE AREA
FCRC	FAN & COIL ROOM CONDITIONER
F.D.	FLOOR DRAIN
F.DMPR.	FIRE DAMPER
F.E.C.	FIRE EXTINGUISHER CABINET
F.E.	FIRE EXTINGUISHER
F.P.M.	FEET PER MIN.
FT.	FOOT
F.T.R.	FIN TUBE RADIATION
F.V.	FACE VELOCITY
G.C.	GENERAL CONTRACTOR
G.I.	GALVANIZED IRON
G.P.H.	GAL. PER HOUR
G.P.M.	GAL. PER MINUTE
H.B.	HOSE BIBB
H.P.	HORSEPOWER
H.W.	HOT WATER
IN.	INCH
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR
L. OR LAV	LAVATORY
LV. AIR	LEAVING AIR
MBH	1000 BTU/HR.
M.C.	MECHANICAL CONTRACTOR
M.H.	MANHOLE
M.S.	MOP SUMP
M.S.D.	MULTI-VANE SPLITTER DAMPER
O.A.	OUTSIDE AIR
O.S.D.	OPEN SIGHT DRAIN
O.V.	OUTLET VELOCITY
P.D.	PRESSURE DROP
P.R.V.	POWER ROOF VENTILATOR
PROP. R.V.	PROPELLER ROOF VENTILATOR
PSI	POUNDS/SQ. INCH
PUH	PROPELLER UNIT HEATER
RHC	REHEAT COIL
R.A.	RETURN AIR
R.D.	ROOF DRAIN
R.G.	RETURN GRILLE
RIV	ROOF INTAKE VENT
RPM	REVOLUTIONS PER MIN.
RRV	ROOF RELIEF VENT
S.C.	SILL COCK
SCD	SQUARE CEILING DIFFUSER
S.D.	SPLITTER DAMPER
SH.D.	SHOWER DRAIN
S.G.	SUPPLY GRILLE
SH.	SHOWER
SK.	SINK
S.SK.	SERVICE SINK
S.P.	STATIC PRESSURE
S.S.	SOIL STACK
T.C.C.	TEMPERATURE CONTROL CONTRACTOR
T.S.P.	TOTAL STATIC PRESSURE
UR.	URINAL
V.B.	VACUUM BREAKER
V.D.	VOLUME DAMPER
W.	WASTE
W.B.	WET BULB
W.C.	WATER CLOSET
WG.	WATER GAUGE
W.H.	WALL HYDRANT
W.I.	WROUGHT IRON
WTR.	WATER
WT.	WEIGHT
Y.D.	YARD DRAIN

DRAWING SYMBOLS



MECHANICAL SYMBOLS

PIPING

ACID RESISTANT WASTE (SUSPENDED)	
ACID RESISTANT WASTE (BURIED)	
AIR LINE	A
COLD WATER	
COLD SOFT WATER	CS
FIRE LINE	F
FUEL OIL RETURN	FOR
FUEL OIL SUPPLY	FOS
GAS LINE	G
HEATING WATER RETURN	HR
HEATING WATER SUPPLY	HS
HOT SOFT WATER	HSW
HOT WATER (DOMESTIC)	
STORM WATER (SUSPENDED)	
STORM WATER (BURIED)	
SANITARY WASTE (SUSPENDED)	
SANITARY WASTE (BURIED)	
SANITARY VENT	
HOT WATER RETURN	
CHILLED WATER (ONLY) SUPPLY	CHS
CHILLED WATER (ONLY) RETURN	CHR
COMBINATION HOT & COLD WATER SUPPLY	H & CHS
COMBINATION HOT & COLD WATER RETURN	H & CHR
REFRIGERANT LIQUID	RL
REFRIGERANT SUCTION	RS
DRAIN	D
DROP	
PITCH LINE DOWN IN DIRECTION OF ARROW	
RUN-OUT	
RUN-OUT OFF TOP OF MAIN	
RUN-OUT OFF BOTTOM OF MAIN	
TEE OFF SIDE OF MAIN	
LOW PRESSURE STEAM	S
MED. & HIGH PRESSURE STEAM	# STM.
CONDENSATE RETURN (GRAVITY)	R
CONDENSATE RETURN (PUMPED)	O O
MED. & HIGH PRESSURE COND. RETURN	# RTN.
SPRINKLER HEAD	
PIPING TO BE INSTALLED	
PIPING TO BE REMOVED	

VALVES, SPECIALTIES & FITTINGS

AIR CHAMBER	
ANCHOR	
AUTOMATIC AIR VENT	
AUTOMATIC RELIEF VALVE	
AUTOMATIC WATER MAKE-UP VALVE	
BASKET TYPE STRAINER	
BALANCING VALVE	
BUCKET TRAP	B
CHECK VALVE	
ECCENTRIC REDUCER	
EXPANSION JOINT	
FLANGED CONNECTION	
FLOAT & THERMOSTATIC TRAP	F&T
FLEXIBLE PUMP CONNECTION	
GAS METER	M
SHUT-OFF VALVE	
GLOBE VALVE	
'P' TRAP	
PIPE GUIDE	
PRESSURE GAUGE	G
PRESSURE REDUCING VALVE	PRV
RUNNING TRAP	
SHOWER HEAD	
THERMOMETER	
THERMOMETER WELL	W
THERMOSTATIC TRAP	
UNION	
'Y' STRAINER	
WATER METER	M
SHOCK ABSORBER	
FLOW CONTROL VALVE	FCV

REFRIGERATION

CHARGING VALVE	
CONDENSER WATER REGULATOR VALVE	
DRYER	D
EVAPORATOR PRESSURE REGULATOR	REFG.
FLEXIBLE PIPE CONNECTION	
MANUAL REFRIGERATION VALVE	
SIGHT GLASS	
SOLENOID VALVE	S
STRAINER	
THERMOSTATIC EXPANSION VALVE	

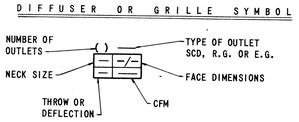
TEMPERATURE CONTROL

ROOM THERMOSTAT (PNEUMATIC)	T
ROOM THERMOSTAT (ELECTRIC)	T_E
TEMPERATURE CONTROL VALVE	
3-WAY TEMPERATURE CONTROL VALVE	

SHEET METAL

VERTICAL FIRE DAMPER	
HORIZONTAL FIRE DAMPER	
CEILING FIRE DAMPER	C
VOLUME DAMPER	Z

DIFFUSER OR GRILLE SYMBOL



ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DESCRIPTION
	FLUORESCENT LIGHTING OUTLET
	INCANDESCENT LIGHTING OUTLET (SURFACE)
	INCANDESCENT LIGHTING OUTLET (RECESSED)
	INCANDESCENT LIGHTING OUTLET (WALL MOUNTED)
	DUPLEX RECEPTACLE (MOUNTED AT + 18" UNLESS OTHERWISE NOTED)
	FLOOR MOUNTED DUPLEX RECEPTACLE
	MOTOR OUTLET (SINGLE PHASE) (THREE PHASE)
	MANUAL MOTOR STARTER
	MAGNETIC STARTER WITH DISCONNECT
	DISCONNECT SWITCH (NON-FUSED)
	LIGHTING PANEL
S	SINGLE POLE SWITCH
S^3	THREE-WAY SWITCH
S^4	FOUR-WAY SWITCH
S^K	KEY OPERATED SWITCH
S^P	SWITCH WITH PILOT LIGHT
S^M	MOMENTARY CONTACT SWITCH
J	JUNCTION BOX
	INDICATES OUTLET IN VERTICAL ALIGNMENT
	CONDUIT IN WALL OR CEILING
	CONDUIT IN OR BELOW FLOOR
	EXPOSED CONDUIT

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CONSULTING ENGINEERS
2602 E. 55 TH. ST.

TITLE SHEET - MECHANICAL & ELECTRICAL

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	84004
DATE	3-29-84
DRAWN BY	A.T.
CHECKED BY	P.W.

VINCENT J. NICHOLAS No. 7951 STATE OF INDIANA REGISTERED PROFESSIONAL ENGINEER

CERTIFIED BY

SHEET

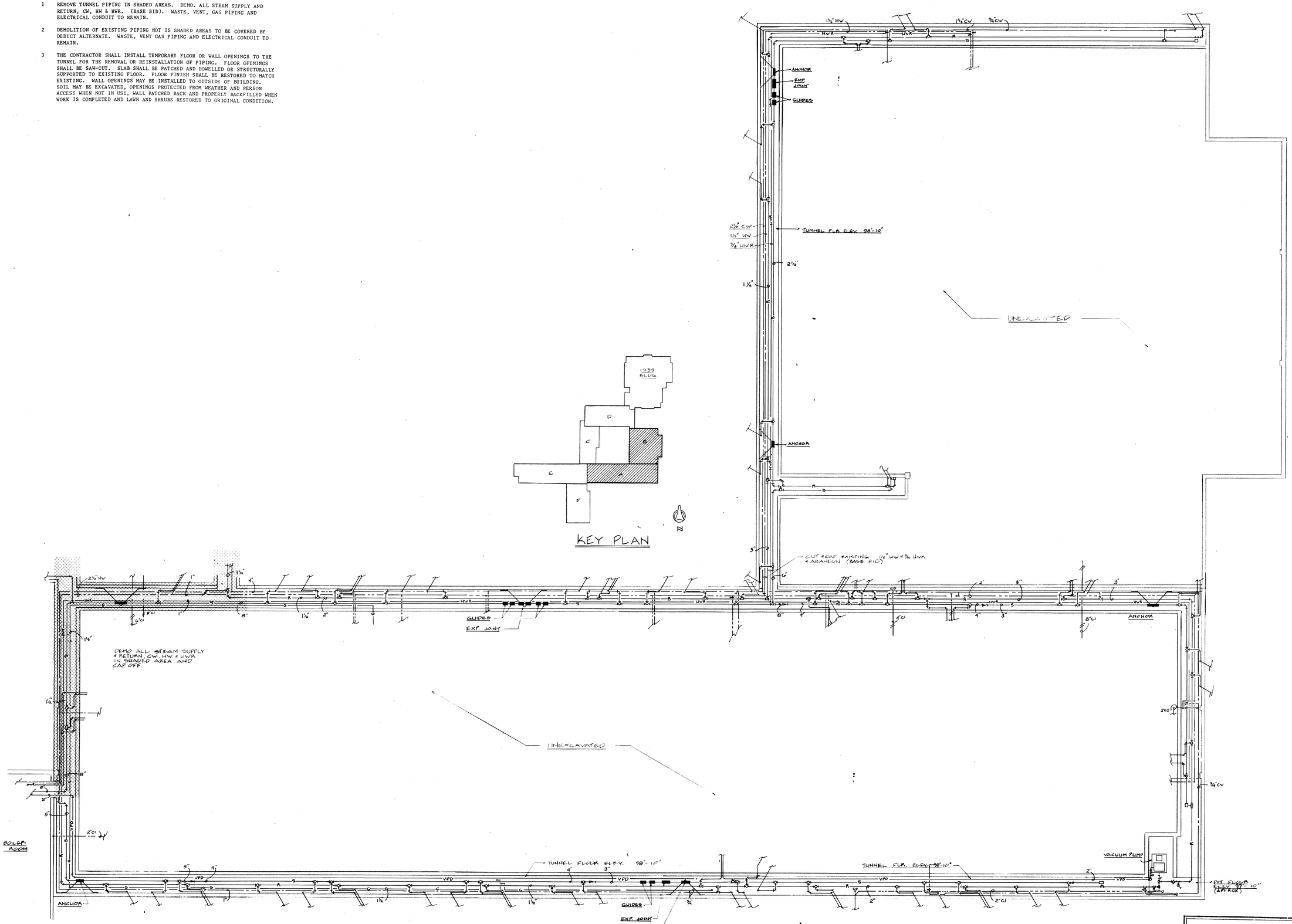
OF

GENERAL NOTES

1 REMOVE TUNNEL PIPING IN SHADED AREAS. DEMO. ALL STEAM SUPPLY AND RETURN, CW, HW & HWR. (BASE BID). WASTE, VENT, GAS PIPING AND ELECTRICAL CONDUIT TO REMAIN.

2 DEMOLITION OF EXISTING PIPING NOT IS SHADED AREAS TO BE COVERED BY DEDUCT ALTERNATE. WASTE, VENT GAS PIPING AND ELECTRICAL CONDUIT TO REMAIN.

3 THE CONTRACTOR SHALL INSTALL TEMPORARY FLOOR OR WALL OPENINGS TO THE TUNNEL FOR THE REMOVAL OR REINSTALLATION OF PIPING. FLOOR OPENINGS SHALL BE SAW-CUT. SLAB SHALL BE PATCHED AND DOWELLED OR STRUCTURALLY SUPPORTED TO EXISTING FLOOR. FLOOR FINISH SHALL BE RESTORED TO MATCH EXISTING. WALL OPENINGS MAY BE INSTALLED TO OUTSIDE OF BUILDING. SOIL MAY BE EXCAVATED, OPENINGS PROTECTED FROM WEATHER AND PERSON ACCESS WHEN NOT IN USE, WALL PATCHED BACK AND PROPERLY BACKFILLED WHEN WORK IS COMPLETED AND LAWN AND SHRUBS RESTORED TO ORIGINAL CONDITION.



BUILDINGS A&B TUNNEL-DEMOLITION

SCALE 1/8"-1'-0"

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
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BELZER MIDDLE SCHOOL – BID PACKAGE #4
LAWRENCE TOWNSHIP M.S.D.
PHASE V, 1984 PROJECTS

BUILDINGS A&B TUNNEL PLAN – DEMOLITION

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO. 24004
DATE 3-29-84
DRAWN BY RDS
CHECKED BY BCC

VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
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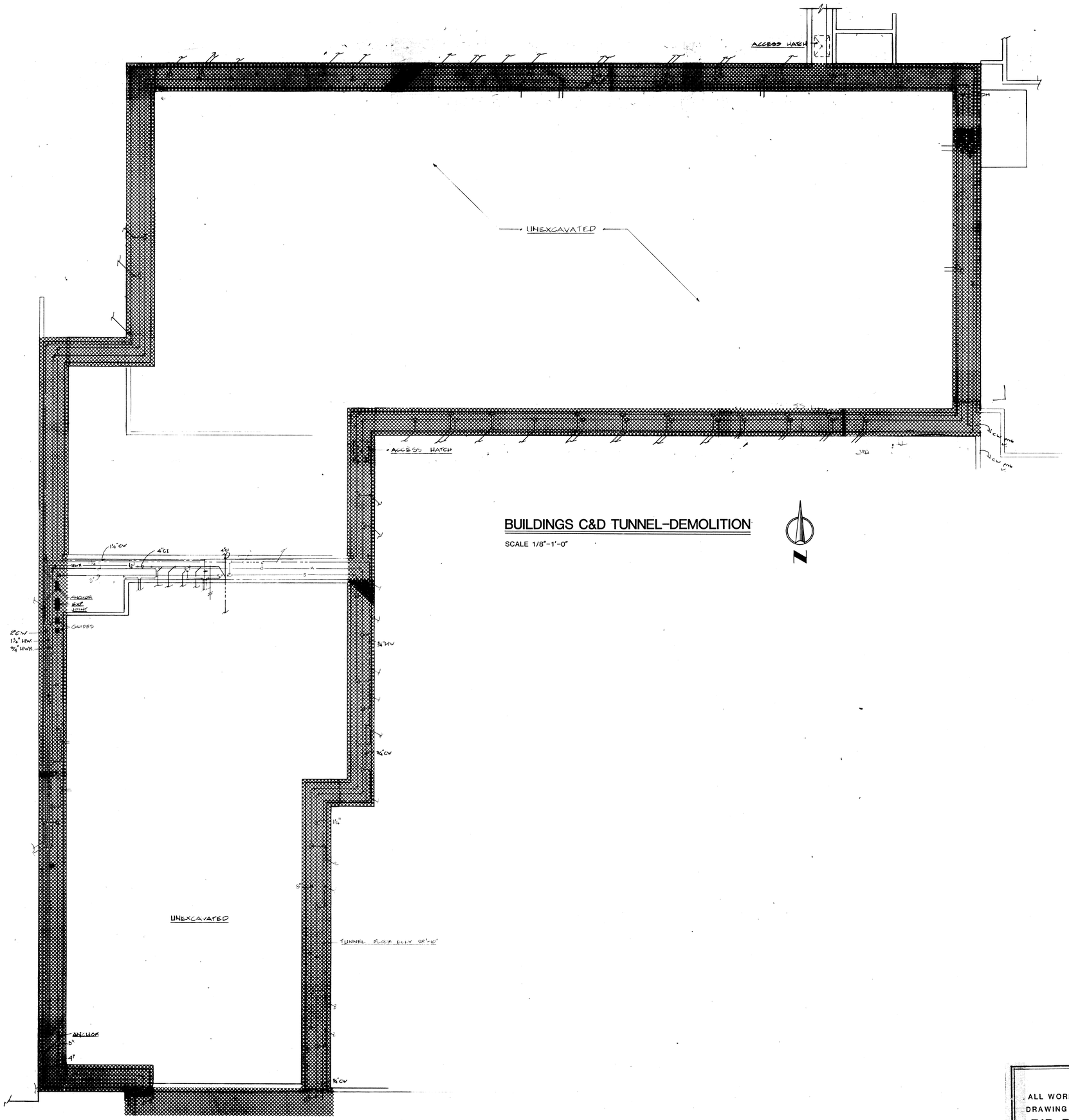

BUILDINGS C&D TUNNEL-DEMOLITION

SCALE 1/8"-1'-0"

GENERAL NOTES

1 REMOVE TUNNEL PIPING IN SHADED AREAS. DEMO. ALL STEAM SUPPLY AND RETURN, CW, HW & HWR. (BASE BID). WASTE, VENT, GAS PIPING AND ELECTRICAL CONDUIT TO REMAIN.

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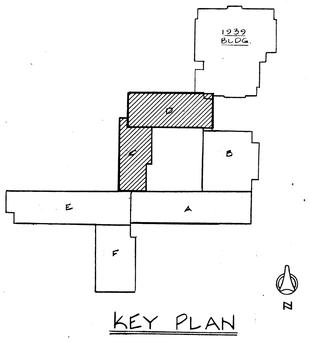

KEY PLAN

NOTE:
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BUILDINGS C&D TUNNEL PLAN – DEMOLITION

BID PACKAGE #4

LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

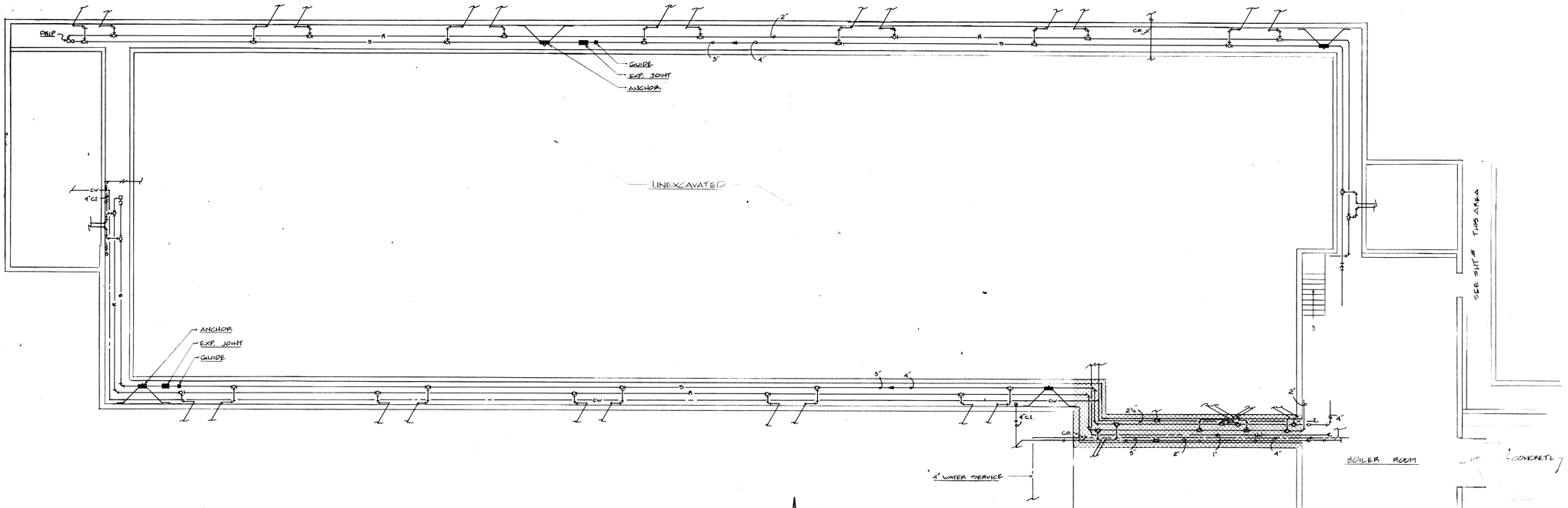
COMM. NO. 84004
DATE 8-20-84
DRAWN BY RSG
CHECKED BY RCC

MICHAEL NICHOLAS REGISTERED PROFESSIONAL ENGINEER No. 7951 STATE OF INDIANA

CERTIFIED BY

SHEET M4.02

OF



BUILDING E TUNNEL-DEMOLITION

SCALE 1/8"-1'-0"

N

GENERAL NOTES

1 REMOVE TUNNEL PIPING IN SHADED AREAS. DEMO. ALL STEAM SUPPLY AND RETURN, CW, HW & HWR. (BASE BID). WASTE, VENT, GAS PIPING AND ELECTRICAL CONDUIT TO REMAIN.

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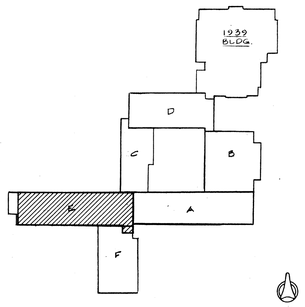
SLAB ON GRADE



KEY PLAN

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BUILDING E TUNNEL PLAN – DEMOLITION

BELZER MIDDLE SCHOOL – BID PACKAGE #4

LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

NO.	DATE	REVISIONS DESCRIPTION

COMM. NO. 8400.4
DATE 5-29-84
DRAWN BY RSS
CHECKED BY BJC

VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY

SHEET

M4.03

OF

GENERAL NOTES

G1 ALL EXISTING WALLS EXCEPT WHERE NOTED ARE MASONRY AND EXTEND TO DECK ABOVE. INSTALL SLEEVES AROUND NEW PIPES PENETRATING WALLS AND CLOSE TO SLEEVES WITH MASONRY.

G2 REMOVAL AND REINSTALLATION OF EXISTING SUSPENDED CEILING SYSTEMS FOR INSTALLATION OF WORK SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THE M.C. SHALL ALSO BE RESPONSIBLE FOR REPLACEMENT OF ANY DAMAGED TILES OR SUSPENSION SYSTEM.

G3 THE M.C. SHALL CLOSE ANY EXISTING FLOOR OPENINGS LEFT BY REMOVAL OF EXISTING PIPING. OPENINGS COVERED BY NEW CUV'S NEED NOT BE CLOSED. CLOSE OPENINGS WITH CONCRETE AND FINISHED FLOOR MATCHING EXISTING.

G4 ALL WORK ASSOCIATED WITH THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THIS IS TO INCLUDE (BUT NOT BE LIMITED TO) CEILING WORK, MASONRY, CUTTING AND PATCHING, PAINTING AND ELECTRICAL WORK. THE M.C. SHALL HIRE TRADES SPECIALIZING IN THIS WORK TO PERFORM THIS WORK AS HIS SUB-CONTRACTORS.

G5 THE CONTRACTOR SHALL INSTALL TEMPORARY FLOOR OR WALL OPENINGS TO THE TUNNEL FOR THE REMOVAL OR REINSTALLATION OF PIPING. FLOOR OPENINGS SHALL BE SAW-CUT. SLAB SHALL BE PATCHED AND DOWELLED OR STRUCTURALLY SUPPORTED TO EXISTING FLOOR. FLOOR FINISH SHALL BE RESTORED TO MATCH EXISTING. WALL OPENINGS MAY BE INSTALLED TO OUTSIDE OF BUILDING. SOIL MAY BE EXCAVATED, OPENINGS PROTECTED FROM WEATHER AND PERSON ACCESS WHEN NOT IN USE, WALL PATCHED BACK AND PROPERLY BACKFILLED WHEN WORK IS COMPLETED AND LAWN AND SHRUBS RESTORED TO ORIGINAL CONDITION.

FOR EXISTING UNITS:

CUV (CLASSROOM UNIT VENTILATOR)

CONV. (CONVECTOR)

RAD. (RADIATION)

CUH (CABINET UNIT HEATER)

PLAN NOTES

1. EXISTING CLASSROOM UNIT VENTILATOR TO BE REMOVED. EXISTING FIN RADIATION AND COVER TO REMAIN.

   INSTALL NEW CLASSROOM UNIT VENTILATOR IN PLACE OF EXISTING. IF NEW UNIT IS LARGER THAN EXISTING, CONTRACTOR TO CUT BACK EXISTING RADIATION ENCLOSURE ON EITHER SIDE. IF NEW UNIT IS SMALLER THAN EXISTING, CONTRACTOR TO FURNISH EXTENDED SECTIONS OF MATCHING RADIATION ENCLOSURE. PROVIDE CUV WITH ADAPTING BACK SECTION TO CONNECT TO EXISTING OUTSIDE AIR LOUVER.

   PROVIDE SECTIONS OF BLANK MATCHING RADIATION ENCLOSURE TO BE INSTALLED FROM EXISTING ENCLOSURE TO SIDE WALL TO HOUSE BRANCH PIPING FROM VERTICAL DROPS.

   NEW CUV'S TO BE CONNECTED ELECTRICALLY FROM THE EXISTING ELECTRICAL CIRCUIT. MAKE ANY EXTENSIONS AS REQUIRED.

   NEW CUV CONTROLS TO CONNECT TO EXISTING TEMPERATURE CONTROL MAIN AND BRANCH THERMOSTAT PIPING. REFER TO T.C. SEQUENCE OF OPERATION IN SPECS.

2. EXISTING RADIATION, CONVECTORS AND CABINET UNIT HEATERS TO BE CONVERTED FROM STEAM TO HOT WATER. REMOVE EXISTING TEMPERATURE CONTROL VALVE AND STEAM TRAP. INSTALL NEW HOT WATER T.C. VALVE CONNECTED TO CONTROL PIPING. INSTALL A COMBINATION SHUT-OFF/BALANCING VALVE ON RETURN, AND A MANUAL AIR VENT COCK ON THE HEATING COIL OR FIN RADIATION.

3. EXISTING STEAM HEATING COIL TO BE REPLACED WITH NEW HOT WATER HEATING COIL. REMOVE EXISTING STEAM T.C. VALVE, TRAP AND ASSOCIATED PIPING. INSTALL NEW T.C. VALVE AND ASSOCIATED PIPING AS CALLED FOR IN DETAIL. EXISTING T.C. SEQUENCE SHALL REMAIN; CONNECT VALVE TO CONTROL PIPING. CONTRACTOR TO FURNISH ANY ADAPTING FLANGES OR UNIT MODIFICATIONS REQUIRED TO REPLACE EXISTING COIL WITH NEW COIL.

4. CHANGE BELTS AND SHEAVES AND REBALANCE AIR QUANTITY TO 8500 CFM WITH THE ADDITION OF THE NEW HW COIL. OUTSIDE AIR QUANTITY SHALL BE 25% MAXIMUM DURING THE HEATING SEASON.

5. PROVIDE PIPE ENCLOSE TO COVER DROPS FROM CEILING TO EXISTING RADIATION. COVER TO BE EQUAL IN CONSTRUCTION TO FIN-RADIATION ENCLOSURE WITH ENAMEL FINISH; COLOR TO MATCH EXISTING WINDOW MULLIONS.

6. DOWNFEED PIPES SHOULD BE TIGHT WITH THE WALL OR CORNER. HORIZONTAL PIPING CONNECTING DOWNFEED PIPING TO UNITS SHOULD BE TIGHT TO WALL AND STACKED.

   PROVIDE PROTECTIVE JACKET ON PIPING OVER INSULATION IN EXPOSED AREAS. JACKET TO BE SIMILAR TO MANVILLE MICRO-LOK.

7. REMOVE AND RELOCATE 36" X 10" TRANSFER DUCT AND GRILLE AS SHOWN.

8. HORIZONTAL PIPING CONNECTING DOWNFEED HS & HR TO UNITS SHOULD BE COVERED BY RADIATION ENCLOSURE SIMILAR TO VULCAN FLOORLINE FR IF UNIT IS FLOOR MOUNTED OR VULCAN FLOORLINE FR W/BOTTOM CLOSED TO WALL IF WALL MOUNTED.

9. CUT OPENING IN EXISTING MASONRY WALL TO ALLOW FOR INSTALLATION OF NEW HS & HR PIPING. SEE GENERAL NOTE G1.

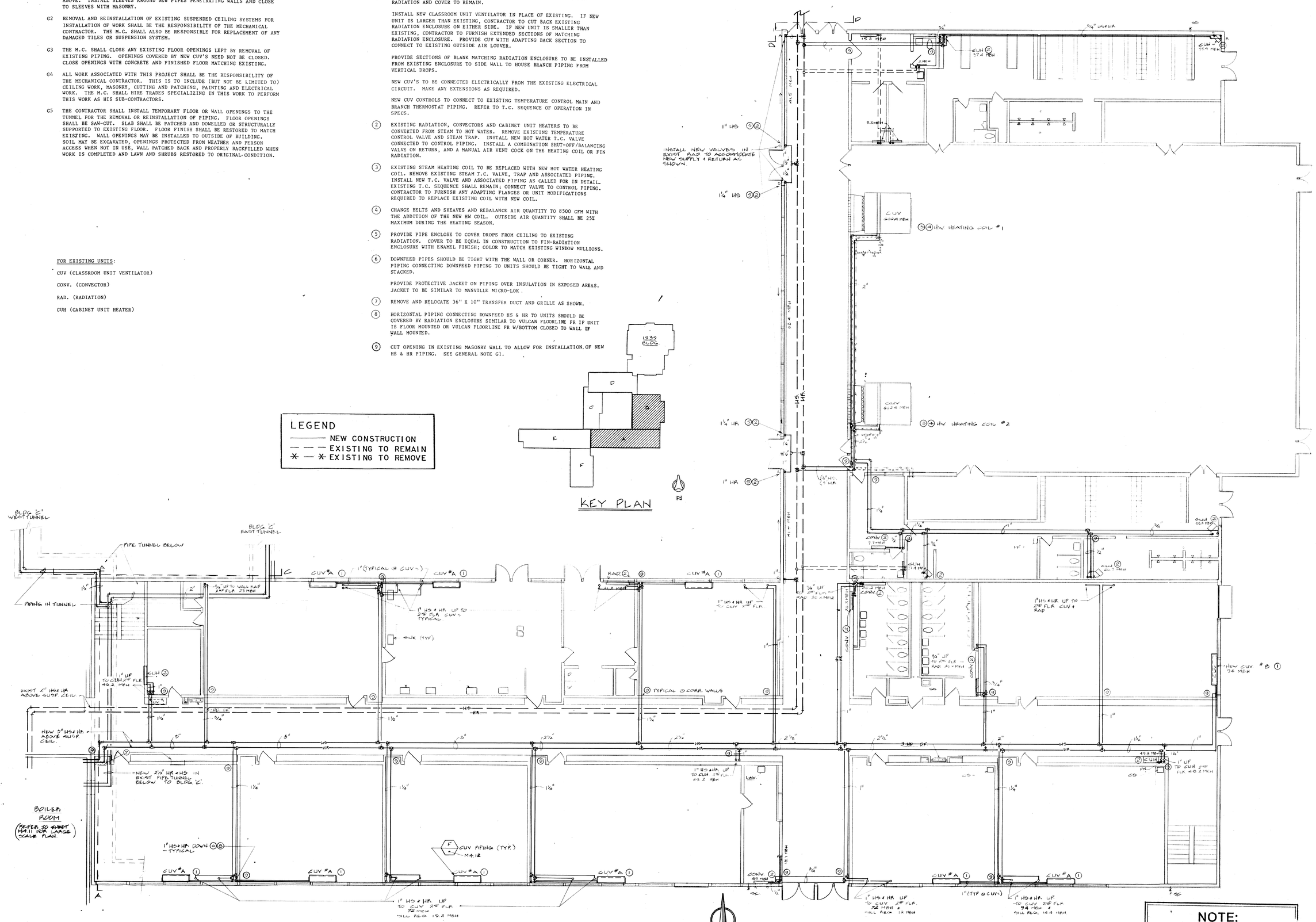
LEGEND

NEW CONSTRUCTION

EXISTING TO REMAIN

EXISTING TO REMOVE

KEY PLAN



BUILDINGS A&B FIRST FLOOR PLAN – HVAC

SCALE 1/8"=1'-0"

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #4
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WRIGHT/PORTEOUS & LOWE, INC.
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BELZER MIDDLE SCHOOL – BID PACKAGE #4
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

BUILDINGS A&B FIRST FLOOR PLAN – HVAC

NO.	DATE	REVISIONS DESCRIPTION

COMM. NO.	8404
DATE	3-29-84
DRAWN BY	RGS
CHECKED BY	BJG

WILLIAM NICHOLAS No. 7951 REGISTERED PROFESSIONAL ENGINEER

CERTIFIED BY

SHEET

M4.04

OF

GENERAL NOTES

G1 ALL EXISTING WALLS EXCEPT WHERE NOTED ARE MASONRY AND EXTEND TO DECK ABOVE. INSTALL SLEEVES AROUND NEW PIPES PENETRATING WALLS AND CLOSE TO SLEEVES WITH MASONRY.

G2 REMOVAL AND REINSTALLATION OF EXISTING SUSPENDED CEILING SYSTEMS FOR INSTALLATION OF WORK SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THE M.C. SHALL ALSO BE RESPONSIBLE FOR REPLACEMENT OF ANY DAMAGED TILES OR SUSPENSION SYSTEM.

G3 THE M.C. SHALL CLOSE ANY EXISTING FLOOR OPENINGS LEFT BY REMOVAL OF EXISTING PIPING. OPENINGS COVERED BY NEW CUV'S NEED NOT BE CLOSED. CLOSE OPENINGS WITH CONCRETE AND FINISHED FLOOR MATCHING EXISTING.

G4 ALL WORK ASSOCIATED WITH THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THIS IS TO INCLUDE (BUT NOT BE LIMITED TO) CEILING WORK, MASONRY, CUTTING AND PATCHING, PAINTING AND ELECTRICAL WORK. THE M.C. SHALL HIRE TRADES SPECIALIZING IN THIS WORK TO PERFORM THIS WORK AS HIS SUB-CONTRACTORS.

G5 THE CONTRACTOR SHALL INSTALL TEMPORARY FLOOR OR WALL OPENINGS TO THE TUNNEL FOR THE REMOVAL OR REINSTALLATION OF PIPING. FLOOR OPENINGS SHALL BE SAW-CUT. SLAB SHALL BE PATCHED AND DOWELLED OR STRUCTURALLY SUPPORTED TO EXISTING FLOOR. FLOOR FINISH SHALL BE RESTORED TO MATCH EXISTING. WALL OPENINGS MAY BE INSTALLED TO OUTSIDE OF BUILDING. SOIL MAY BE EXCAVATED, OPENINGS PROTECTED FROM WEATHER AND PERSON ACCESS WHEN NOT IN USE, WALL PATCHED BACK AND PROPERLY BACKFILLED WHEN WORK IS COMPLETED AND LAWN AND SHRUBS RESTORED TO ORIGINAL CONDITION.

PLAN NOTES

1. EXISTING CLASSROOM UNIT VENTILATOR TO BE REMOVED. EXISTING FIN RADIATION AND COVER TO REMAIN.

   INSTALL NEW CLASSROOM UNIT VENTILATOR IN PLACE OF EXISTING. IF NEW UNIT IS LARGER THAN EXISTING, CONTRACTOR TO CUT BACK EXISTING RADIATION ENCLOSURE ON EITHER SIDE. IF NEW UNIT IS SMALLER THAN EXISTING, CONTRACTOR TO FURNISH EXTENDED SECTIONS OF MATCHING RADIATION ENCLOSURE. PROVIDE CUV WITH ADAPTING BACK SECTION TO CONNECT TO EXISTING OUTSIDE AIR LOUVER.

   PROVIDE SECTIONS OF BLANK MATCHING RADIATION ENCLOSURE TO BE INSTALLED FROM EXISTING ENCLOSURE TO SIDE WALL TO HOUSE BRANCH PIPING FROM VERTICAL DROPS.

   NEW CUV'S TO BE CONNECTED ELECTRICALLY FROM THE EXISTING ELECTRICAL CIRCUIT. MAKE ANY EXTENSIONS AS REQUIRED.

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2. EXISTING RADIATION, CONVECTORS AND CABINET UNIT HEATERS TO BE CONVERTED FROM STEAM TO HOT WATER. REMOVE EXISTING TEMPERATURE CONTROL VALVE AND STEAM TRAP. INSTALL NEW HOT WATER T.C. VALVE CONNECTED TO CONTROL PIPING. INSTALL A COMBINATION SHUT-OFF/BALANCING VALVE ON RETURN, AND A MANUAL AIR VENT COCK ON THE HEATING COIL OR FIN RADIATION.

3. DOWNFEED PIPES SHOULD BE TIGHT WITH THE WALL OR CORNER. HORIZONTAL PIPING CONNECTING DOWNFEED PIPING TO UNITS SHOULD BE TIGHT TO WALL AND STACKED.

   PROVIDE PROTECTIVE JACKET ON PIPING OVER INSULATION IN EXPOSED AREAS. JACKET TO BE SIMILAR TO MANVILLE MICRO-LOK WITH ENAMEL PAINT FINISH.

4. HORIZONTAL PIPING CONNECTING DOWNFEED HS & HR TO UNITS SHOULD BE COVERED BY RADIATION ENCLOSURE SIMILAR TO VULCAN FLOORLINE FR IF UNIT IS FLOOR MOUNTED OR VULCAN FLOORLINE FR W/BOTTOM CLOSED TO WALL IF WALL MOUNTED.

5. CUT AND OPEN EXISTING MASONRY WALL IF NECESSARY TO ALLOW FOR INSTALLATION OF HS & HR PIPING. SEE GENERAL NOTE G1.

FOR EXISTING UNITS:

CUV (CLASSROOM UNIT VENTILATOR)

CONV. (CONVECTOR)

RAD. (RADIATION)

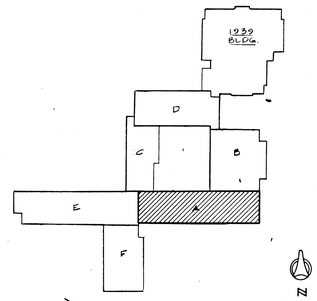
CUH (CABINET UNIT HEATER)

LEGEND

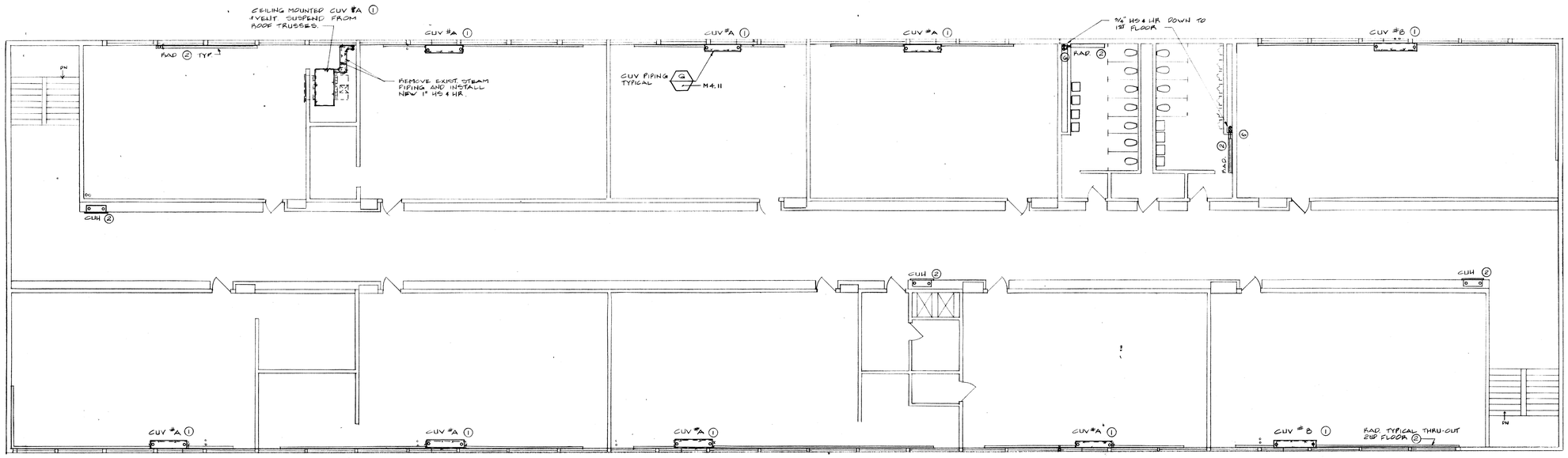
——— NEW CONSTRUCTION

— — — EXISTING TO REMAIN

✕ — ✕ EXISTING TO REMOVE



KEY PLAN



BUILDING A SECOND FLOOR PLAN-HVAC

SCALE 1/8"-1'-0"

N

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE # 4
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA · TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

BUILDING 'A' SECOND FLOOR PLAN – HVAC

BID PACKAGE #4

BELZER MIDDLE SCHOOL – BID PACKAGE #4
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	84004
DATE	3-29-84
DRAWN BY	RSS
CHECKED BY	BCC

VIRGIL NICHOLAS REGISTERED (No. 7951) STATE INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY

SHEET

M4.05

OF

GENERAL NOTES

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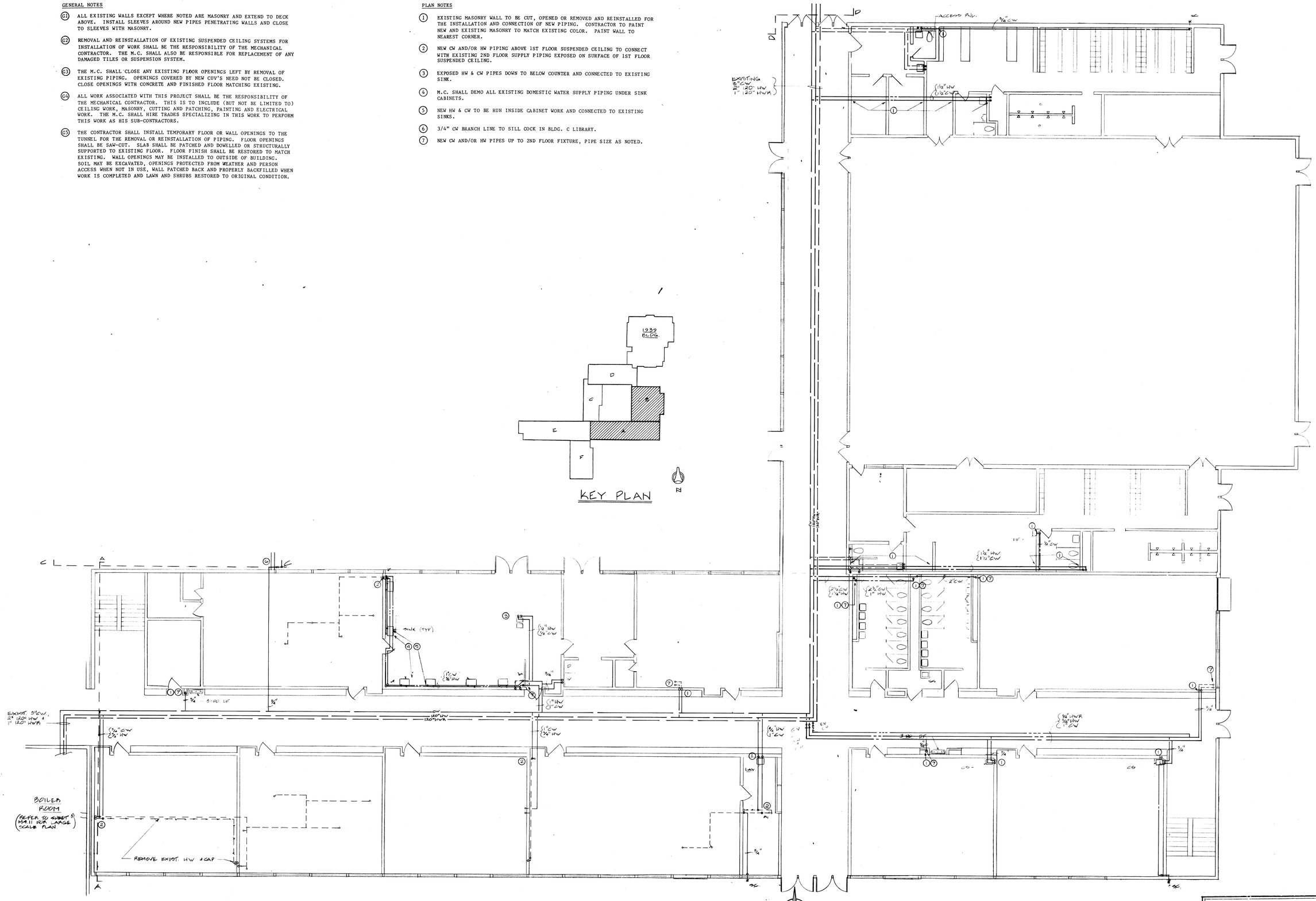
PLAN NOTES

1. EXISTING MASONRY WALL TO BE CUT, OPENED OR REMOVED AND REINSTALLED FOR THE INSTALLATION AND CONNECTION OF NEW PIPING. CONTRACTOR TO PAINT NEW AND EXISTING MASONRY TO MATCH EXISTING COLOR. PAINT WALL TO NEAREST CORNER.
2. NEW CW AND/OR HW PIPING ABOVE 1ST FLOOR SUSPENDED CEILING TO CONNECT WITH EXISTING 2ND FLOOR SUPPLY PIPING EXPOSED ON SURFACE OF 1ST FLOOR SUSPENDED CEILING.
3. EXPOSED HW & CW PIPES DOWN TO BELOW COUNTER AND CONNECTED TO EXISTING SINK.
4. M.C. SHALL DEMO ALL EXISTING DOMESTIC WATER SUPPLY PIPING UNDER SINK CABINETS.
5. NEW HW & CW TO BE RUN INSIDE CABINET WORK AND CONNECTED TO EXISTING SINKS.
6. 3/4" CW BRANCH LINE TO SILL COCK IN BLDG. C LIBRARY.
7. NEW CW AND/OR HW PIPES UP TO 2ND FLOOR FIXTURE, PIPE SIZE AS NOTED.

KEY PLAN



BUILDINGS A&B FIRST FLOOR PLAN PLUMBING

SCALE 1/8"=1'-0"

NOTE:
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WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

BELZER MIDDLE SCHOOL – BID PACKAGE #4
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

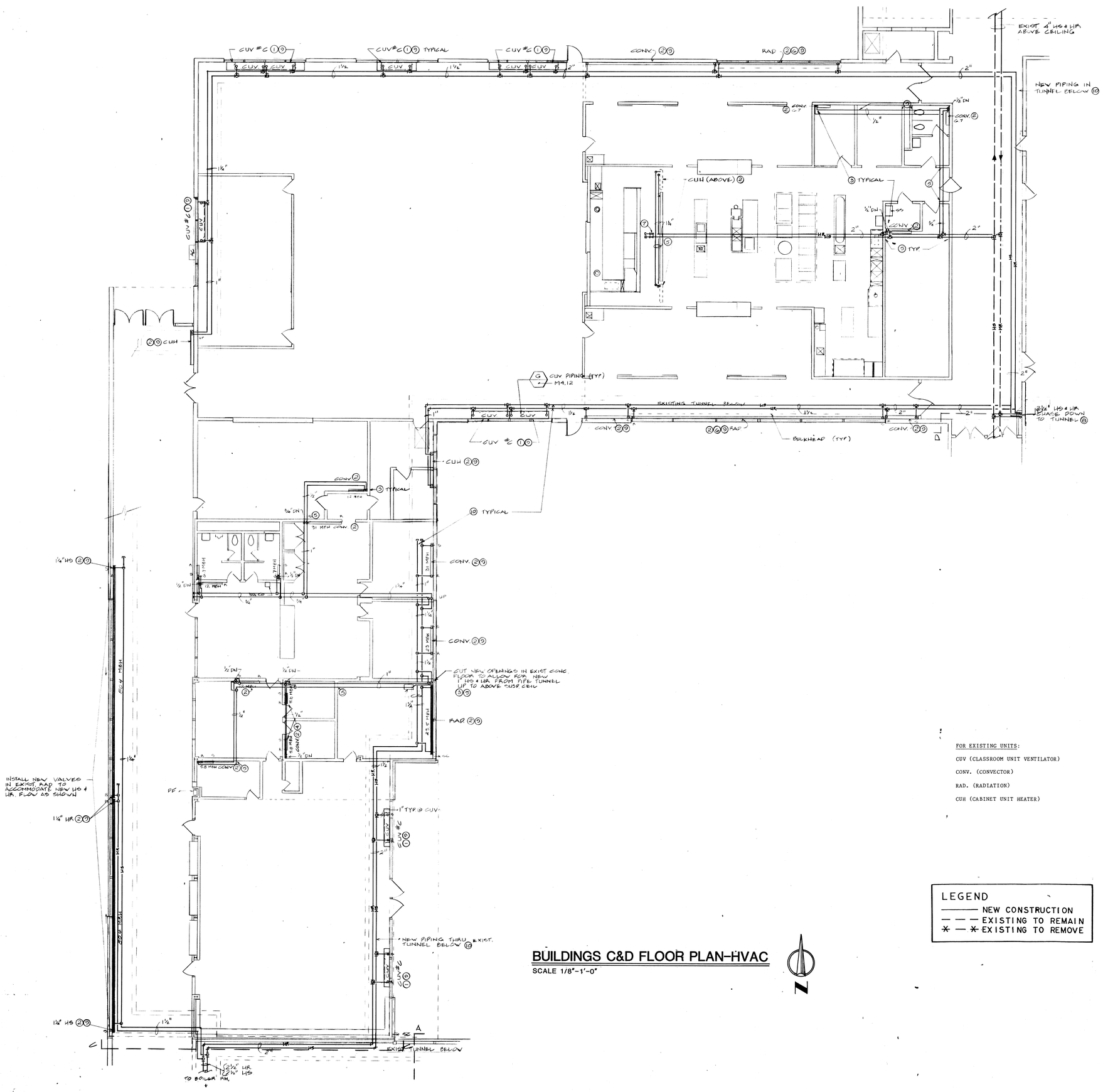
BUILDINGS A&B FIRST FLOOR PLAN – PLUMBING

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO. 840-4
DATE 9-20-84
DRAWN BY RSS
CHECKED BY BCC

VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET
M4.06
OF



BUILDINGS C&D FLOOR PLAN–HVAC

SCALE 1/8"–1'–0"

GENERAL NOTES

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PLAN NOTES

1. EXISTING CLASSROOM UNIT VENTILATOR TO BE REMOVED. EXISTING FIN RADIATION AND COVER TO REMAIN.

   INSTALL NEW CLASSROOM UNIT VENTILATOR IN PLACE OF EXISTING. IF NEW UNIT IS LARGER THAN EXISTING, CONTRACTOR TO CUT BACK EXISTING RADIATION ENCLOSURE ON EITHER SIDE. IF NEW UNIT IS SMALLER THAN EXISTING, CONTRACTOR TO FURNISH EXTENDED SECTIONS OF MATCHING RADIATION ENCLOSURE. PROVIDE CUV WITH ADAPTING BACK SECTION TO CONNECT TO EXISTING OUTSIDE AIR LOUVER.

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5. CUT AND OPEN EXISTING MASONRY WALL IF NECESSARY TO ALLOW FOR INSTALLATION OF HS & HR PIPING. SEE GENERAL NOTE G1.

6. CONNECT EXISTING PIECES OF RADIATION INTO SINGLE CONTINUOUS CIRCUIT. MAINTAIN EXISTING OVERALL LENGTH.

7. STUB OUT 2" PIPE. VALVE AND CAP FOR FUTURE EXPANSION.

8. M.C. TO BUILD CHASEWAY TO TAKE NEW H.S. & H.R. BRANCH FROM OVERHEAD DOWN TO PIPE TUNNEL BELOW. CONSTRUCTION TO BE 2 LAYERS OF 1/2" GYPSUM BOARD OVER 3-1/2" 24 GA. C STUDS. CHASE TO EXTEND SOUTH TO CORNER.

9. UNIT FED FROM BELOW.

10. HS & HR PIPING IN TUNNELS SHOULD BE STACKED AND CLOSE TO WALL WHERE POSSIBLE.

FOR EXISTING UNITS:

CUV (CLASSROOM UNIT VENTILATOR)

CONV. (CONVECTOR)

RAD. (RADIATION)

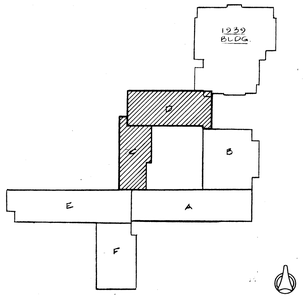
CUH (CABINET UNIT HEATER)

LEGEND

——— NEW CONSTRUCTION

— — — EXISTING TO REMAIN

✳ — ✳ EXISTING TO REMOVE



KEY PLAN

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE # 4
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WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

BELZER MIDDLE SCHOOL – BID PACKAGE #4

LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

BUILDINGS C&D FLOOR PLAN – HVAC

REVISIONS		
NO.	DATE	DESCRIPTION

CONTR. NO.	84004
DATE	3-20-84
DRAWN BY	RSS
CHECKED BY	DSC

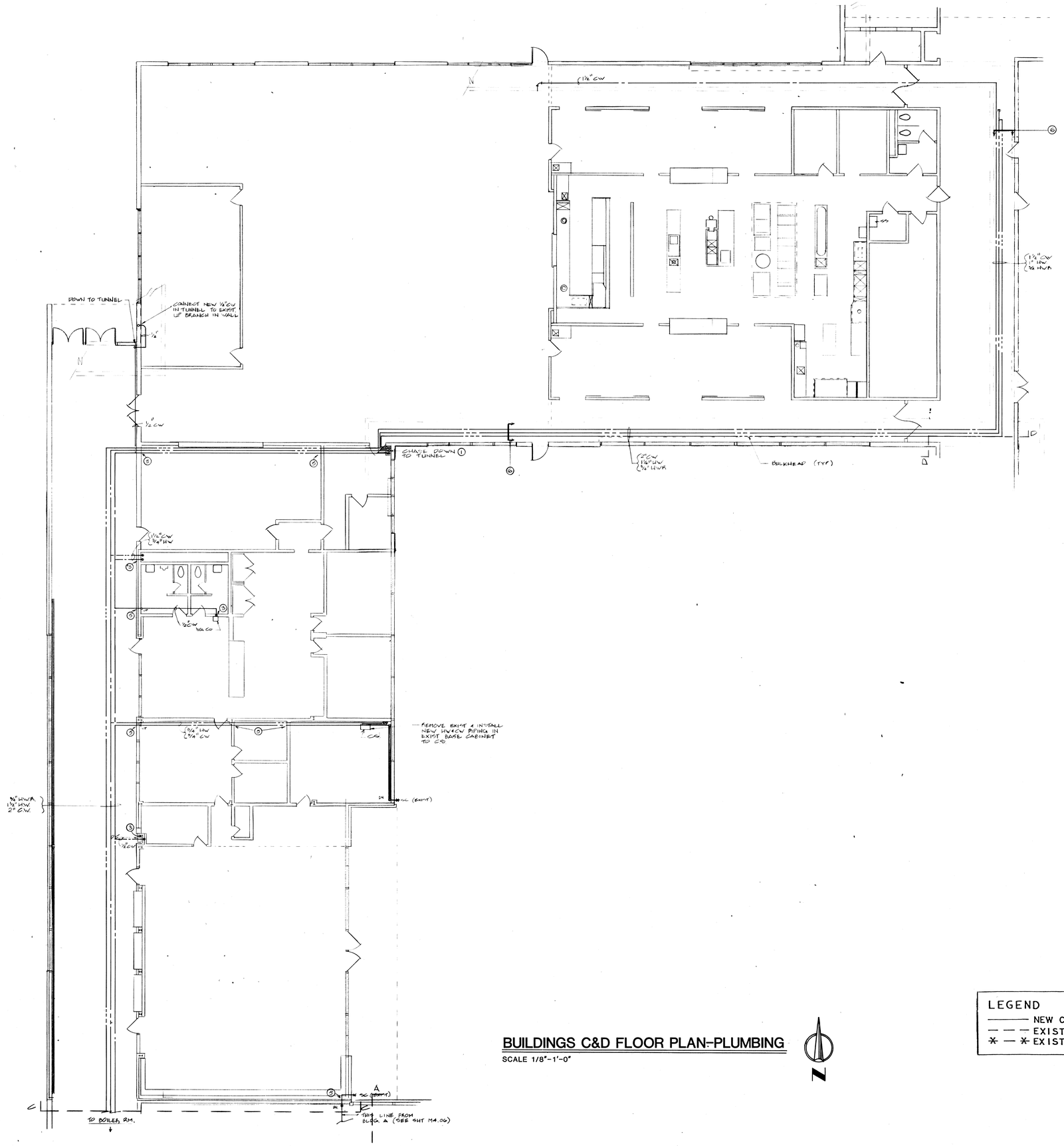
VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY

SHEET

M4.07

OF



BUILDINGS C&D FLOOR PLAN-PLUMBING

SCALE 1/8"=1'-0"

GENERAL NOTES

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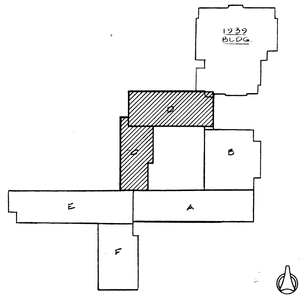
PLAN NOTES

1. M.C. TO BUILD CHASEWAY TO TAKE NEW HW, CW & CWR PIPING FROM OVERHEAD DOWN TO PIPE TUNNEL BELOW. CONSTRUCTION TO BE 2 LAYERS OF 1/2" GYPSUM BOARD OVER 3-1/2" 24 GA. C STUDS.
2. NEW DOMESTIC WATER PIPES INSTALLED IN TUNNEL SHOULD BE TIGHT TO WALL AND STACKED WHERE POSSIBLE.
3. EXISTING MASONRY WALL TO BE CUT AND OPENED TO ALLOW INSTALLATION OF WATER PIPING THEN REINSTALLED OR REBUILT AND PAINTED TO NEAREST CORNER TO MATCH EXISTING, EXCEPT IN THE CASE OF GLAZED MASONRY WHICH IS TO BE RESTORED TO EXISTING.
4. NEW DOMESTIC WATER LINES IN TUNNEL TO CONNECT TO EXISTING BURIED BRANCHES TO KITCHEN AS INDICATED. M.C. TO PROVIDE ALL NECESSARY ADAPTERS TO COMPLETE CONNECTIONS.
5. CUT AND OPEN EXISTING MASONRY WALL IF NECESSARY TO ALLOW FOR INSTALLATION OF DOMESTIC WATER PIPING. SEE GENERAL NOTE G1.
6. CONNECT DOMESTIC CW, HW AND HWR TO EXISTING BRANCHES SERVING KITCHEN AREA. BRANCHES SHALL BE SAME SIZE AS EXISTING.

LEGEND

——— NEW CONSTRUCTION
— — — EXISTING TO REMAIN
✕ — ✕ EXISTING TO REMOVE



KEY PLAN

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BID PACKAGE # 4
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WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

BUILDINGS C&D FLOOR PLAN – PLUMBING

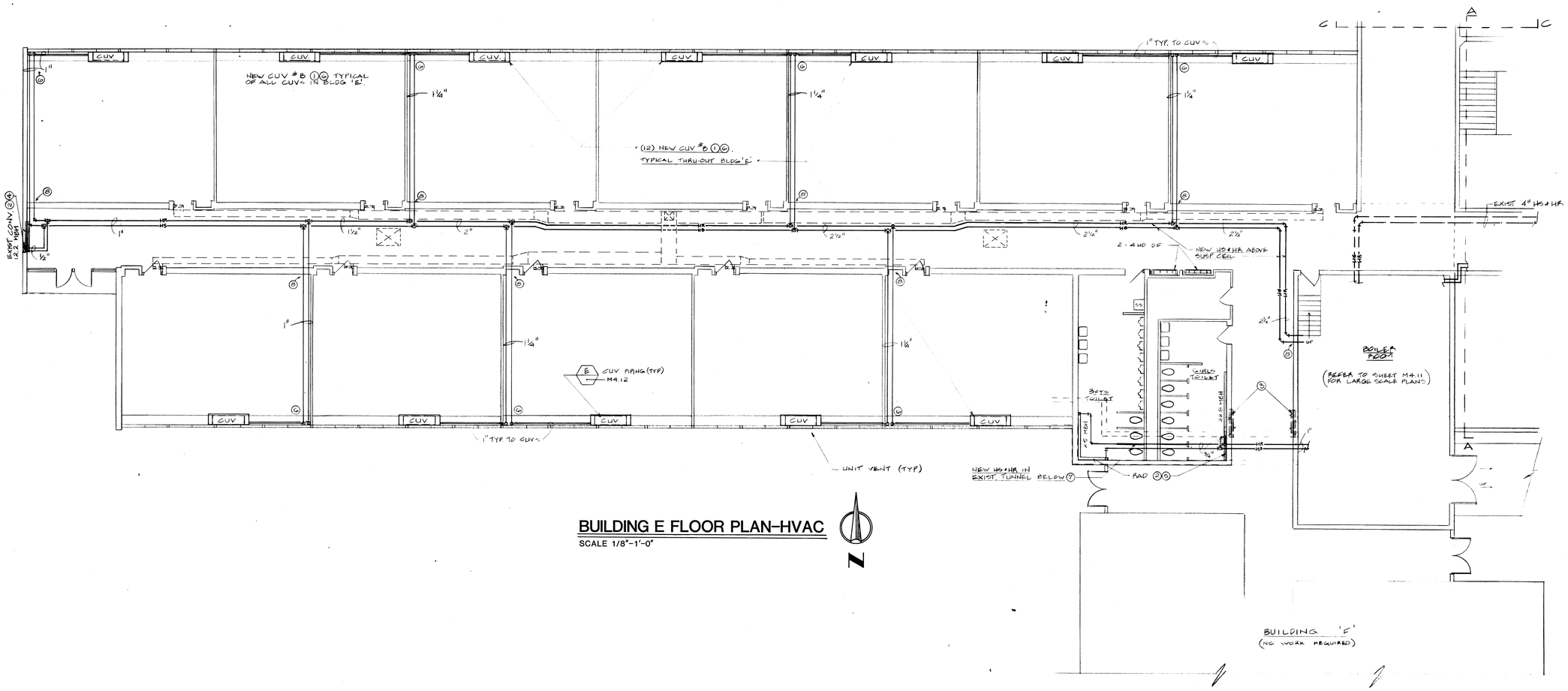
BELZER MIDDLE SCHOOL – BID PACKAGE #4
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO. 84004
DATE 3-20-84
DRAWN BY FJS
CHECKED BY

VIRGIL L. NICHOLAS REGISTERED No. 7051 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET 1
M4.08
OF



BUILDING E FLOOR PLAN-HVAC

SCALE 1/8"-1'-0"

GENERAL NOTES

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NEW CUV'S TO BE CONNECTED ELECTRICALLY FROM THE EXISTING ELECTRICAL CIRCUIT. MAKE ANY EXTENSIONS AS REQUIRED.

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(3) REMOVE EXISTING RECESSED CONV AND RETURN TO OWNER, TOOTH IN NEW BRICK TO MATCH EXISTING.

(4) EXISTING MASONRY WALL TO BE CUT AND OPENED TO ALLOW INSTALLATION OF NEW HS & HR PIPING FROM OVERHEAD. MASONRY SHALL THEN BE REINSTALLED OR REBUILT AND PAINTED TO NEAREST CORNER TO MATCH EXISTING.

(5) UNIT FED FROM BELOW.

(6) DOWNFEED PIPES SHOULD BE TIGHT WITH THE WALL OR CORNER. HORIZONTAL PIPING CONNECTING DOWNFEED PIPING TO UNITS SHOULD BE TIGHT TO WALL AND STACKED.

PROVIDE PROTECTIVE JACKET ON PIPING OVER INSULATION IN EXPOSED AREAS. JACKET TO BE SIMILAR TO MANVILL MICRO-LOK.

(7) HS & HR PIPING IN TUNNELS SHOULD BE STACKED AND CLOSE TO WALL WHERE POSSIBLE.

(8) CUT OPENING IN EXISTING MASONRY WALL TO ALLOW FOR INSTALLATION OF NEW HS & HR PIPING. SEE GENERAL NOTE G1.

FOR EXISTING UNITS:

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CONV. (CONVECTOR)

RAD. (RADIATION)

CUH (CABINET UNIT HEATER)

LEGEND

——— NEW CONSTRUCTION

— — — EXISTING TO REMAIN

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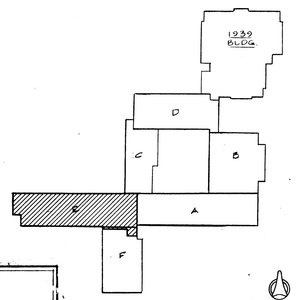

KEY PLAN

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EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.

ARCHITECTS/ENGINEERS

INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

BELZER MIDDLE SCHOOL - BID PACKAGE #4

LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

BUILDING E FLOOR PLAN – HVAC

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	8402-4
DATE	2-22-84
DRAWN BY	R.G.D.
CHECKED BY	D.L.C.

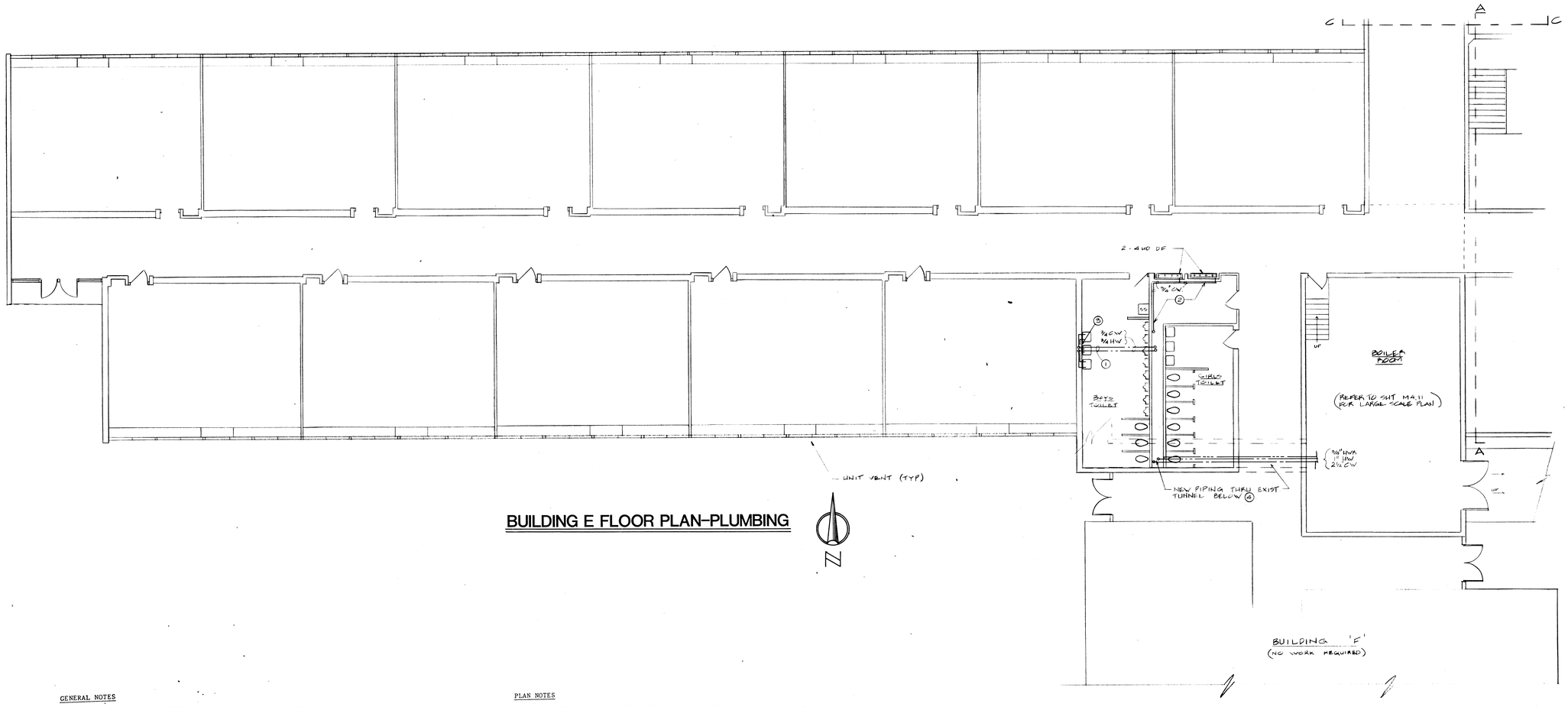
VIRGIL NICHOLAS REGISTERED No. 7051 STATE OF INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY

SHEET

M4.09

OF



BUILDING E FLOOR PLAN–PLUMBING

GENERAL NOTES

G1 ALL EXISTING WALLS EXCEPT WHERE NOTED ARE MASONRY AND EXTEND TO DECK ABOVE. INSTALL SLEEVES AROUND NEW PIPES PENETRATING WALLS AND CLOSE TO SLEEVES WITH MASONRY.

G2 REMOVAL AND REINSTALLATION OF EXISTING SUSPENDED CEILING SYSTEMS FOR INSTALLATION OF WORK SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THE M.C. SHALL ALSO BE RESPONSIBLE FOR REPLACEMENT OF ANY DAMAGED TILES OR SUSPENSION SYSTEM.

G3 THE M.C. SHALL CLOSE ANY EXISTING FLOOR OPENINGS LEFT BY REMOVAL OF EXISTING PIPING. OPENINGS COVERED BY NEW CUV'S NEED NOT BE CLOSED. CLOSE OPENINGS WITH CONCRETE AND FINISHED FLOOR MATCHING EXISTING.

G4 ALL WORK ASSOCIATED WITH THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THIS IS TO INCLUDE (BUT NOT BE LIMITED TO) CEILING WORK, MASONRY, CUTTING AND PATCHING, PAINTING AND ELECTRICAL WORK. THE M.C. SHALL HIRE TRADES SPECIALIZING IN THIS WORK TO PERFORM THIS WORK AS HIS SUB-CONTRACTORS.

G5 THE CONTRACTOR SHALL INSTALL TEMPORARY FLOOR OR WALL OPENINGS TO THE TUNNEL FOR THE REMOVAL OR REINSTALLATION OF PIPING. FLOOR OPENINGS SHALL BE SAW-CUT. SLAB SHALL BE PATCHED AND DOWELLED OR STRUCTURALLY SUPPORTED TO EXISTING FLOOR. FLOOR FINISH SHALL BE RESTORED TO MATCH EXISTING. WALL OPENINGS MAY BE INSTALLED TO OUTSIDE OF BUILDING. SOIL MAY BE EXCAVATED, OPENINGS PROTECTED FROM WEATHER AND PERSON ACCESS WHEN NOT IN USE, WALL PATCHED BACK AND PROPERLY BACKFILLED WHEN WORK IS COMPLETED AND LAWN AND SHRUBS RESTORED TO ORIGINAL CONDITION.

PLAN NOTES

1 NEW PIPES ABOVE SUSPENDED CEILING TO LAVS FROM EXISTING HW & CW IN PIPE CHASE.

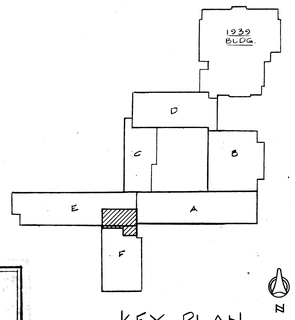
2 INSTALL NEW 3/4" CW PIPE FROM EXSITING TO VACANT DRINKING FOUNTAIN LOCATIONS, CAP FOR FUTURE USE.

3 EXISTING MASONRY WALL TO BE CUT AND OPENED TO ALLOW INSTALLATION OF NEW HW & CW PIPING THEN REINSTALLED OR REBUILT AND PAINTED TO NEAREST CORNER TO MATCH EXISTING, EXCEPT GLAZED MASONRY WHICH IS TO BE RESTORED TO EXISTING.

4 NEW DOMESTIC WATER PIPING IN TUNNEL TO CONNECT TO EXISTING BRANCH PIPING UP INTO CHASE. PIPES INSTALLED IN TUNNEL SHOULD BE STACKED AND CLOSE TO WALL WHERE POSSIBLE.

LEGEND

NEW CONSTRUCTION
EXISTING TO REMAIN
EXISTING TO REMOVE



KEY PLAN

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE # 4
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

BUILDING E FLOOR PLAN – PLUMBING

BELZER MIDDLE SCHOOL – BID PACKAGE #4

LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO. 84004
DATE 5-29-84
DRAWN BY RCS
CHECKED BY PJC

VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET
M4.10
OF

GENERAL NOTES:

1 INSTALL AN AIR VENT AT THE HIGH POINT OF EACH HW PUMP DISCHARGE AND AT THE HIGH POINT OF EACH HEATING WATER RETURN MAIN ENTERING THE BOILER ROOM.

2 ALL HORIZONTAL PIPING IN BOILER ROOM SHALL BE SUSPENDED ON RUBBER-IN-SHEAR HANGERS.

3 PAINT ALL NEW PIPING, INSULATION AND EQUIPMENT TO COINCIDE WITH THE EXISTING COLOR CODE.

DEMOLITION NOTES:

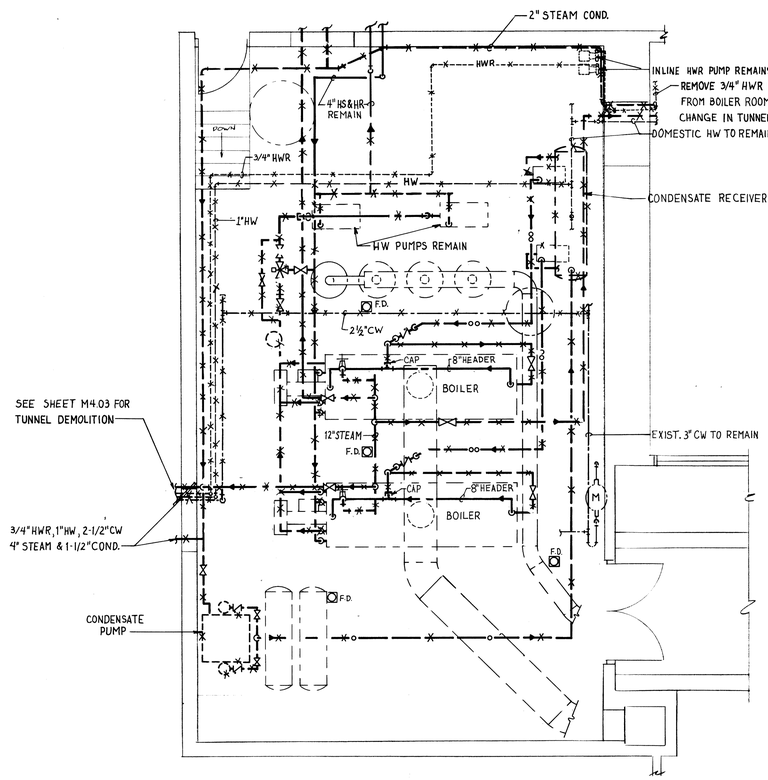
D1 REMOVE ALL DASHED AND X'D OUT PIPING EQUIPMENT AND STRUCTURAL SUPPORTS AND RETURN TO OWNER MATERIALS HE REQUESTS.

D2 REMOVE FROM BOILER: LOW WATER CUT-OFF, STEAM RELIEF VALVES, PRESSURE GAUGES, PRESSURE SWITCHES, AUTO-WATER MAKE-UP VALVE AND ALL OTHER STEAM RELATED APPURTENANCES.

D3 EXISTING TUBE BUNDLE HEAT EXCHANGERS SHALL REMAIN IN BOILERS. REMOVE PIPING SERVING TUBE BUNDLES AND LEAVE HEAT EXCHANGER OPEN TO ATMOSPHERE.

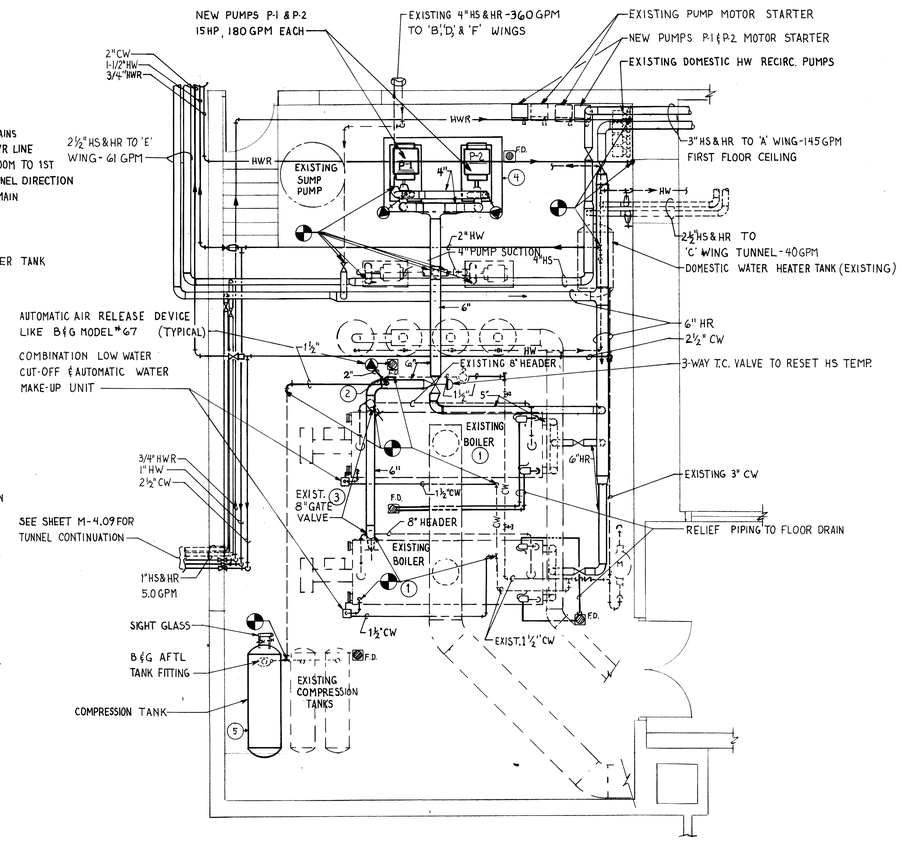
PLAN NOTES:

1. PROVIDE NEW VALVES AND TRIM TO CONVERT EACH BRYAN WATER TUBE L-80S-EX-FD LOW PRESSURE STEAM BOILER TO HOT WATER BOILER; COMBINATION LWCO AND AUTOMATIC WATER MAKE-UP, HIGH LIMIT SAFETY CONTROL, TWO 1-1/2" 30 PSI RELIEF VALVES, TWO HONEYWELL L6004 AQUASTATS, HONEYWELL T991 MODULATING AQUASTAT, COMBINATION THERMOMETER PRESSURE GAUGE AND REWIRE EXISTING BURNER TO NEW OPERATING CONTROLS PER MANUFACTURER'S RECOMMENDATIONS.
2. RECONNECT EXISTING 1-1/2" CW MAKE-UP LINE TO THE NEW "AUTOMATIC AIR RELEASE DEVICE 2" PIPE TAPPING.
3. CONNECT 6" SUPPLY HEADERS TO EXISTING 8" GATE VALVES WITH A REDUCING FITTING.
4. INSTALL PUMPS #P-1 AND #P-2 ON 4" HIGH CONCRETE PAD, VALVE AS SHOWN AND DETAILED ON SHEET M-3.09.
5. INSTALL NEW 222 GALLON HOT WATER HEATING SYSTEM COMPRESSION TANK, 30"Ø AND 6'-0" LONG. SUSPEND ADJOINING EXISTING TANKS IN SIMILAR MANNER. TANK SHALL BE ASMA CONSTRUCTED FOR 30 PSI W.P.



BOILER ROOM - DEMOLITION - MECHANICAL

SCALE: 1/4"-1'0"



BOILER ROOM FLOOR PLAN - MECHANICAL

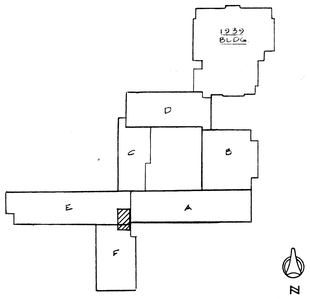
SCALE: 1/4"-1'0"

LEGEND

NEW CONSTRUCTION

EXISTING TO REMAIN

EXISTING TO REMOVE



KEY PLAN

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INDIANAPOLIS, INDIANA/TAMPA, FLORIDA
ARCHITECTS/ENGINEERS

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

BELZER MIDDLE SCHOOL - BID PACKAGE #4

LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

BOILER ROOM - FLOOR PLAN - MECHANICAL

REVISIONS		
NO.	DATE	DESCRIPTION

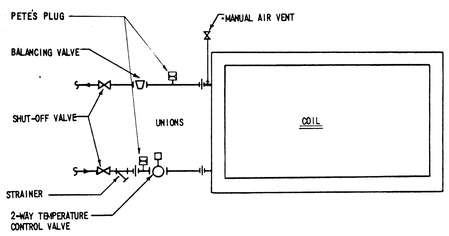
COMM. NO. 8404.4
DATE 3-21-84
DRAWN BY TWC
CHECKED BY

VINCENT NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET 1

M4.11

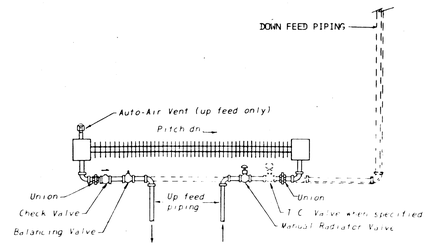
OF



HOT WATER COIL PIPING

DETAIL 'A'

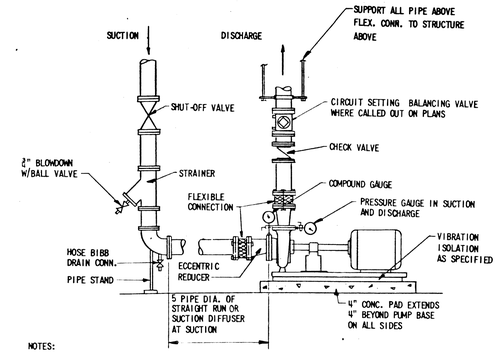
NO SCALE



HOT WATER PIPING TO CONVECTOR and/or CABINET UNIT HEATER

DETAIL 'B'

No Scale



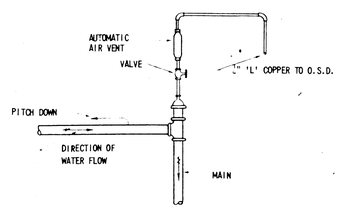
NOTES:

1. ALL VALVES, STRAINERS, FLEX. CONN., ETC. SHALL BE FULL LINE SIZE

PUMP PIPING DETAIL -- END SUCTION

DETAIL 'C'

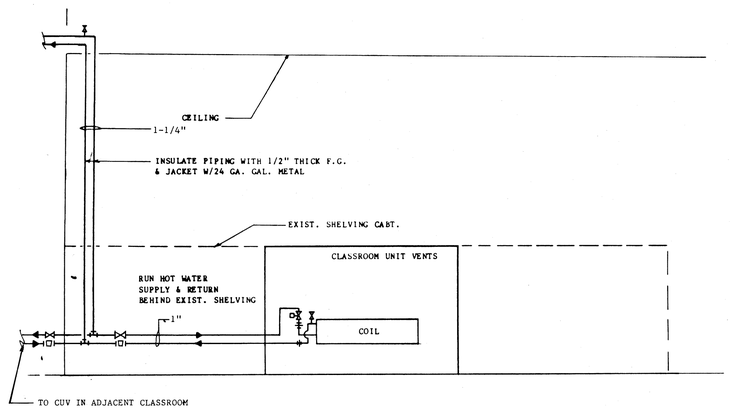
NO SCALE



VENT PIPING - HIGH POINT OF WATER MAINS

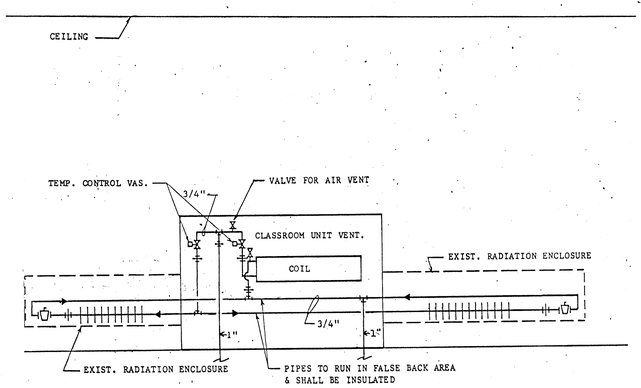
DETAIL 'D'

NO SCALE



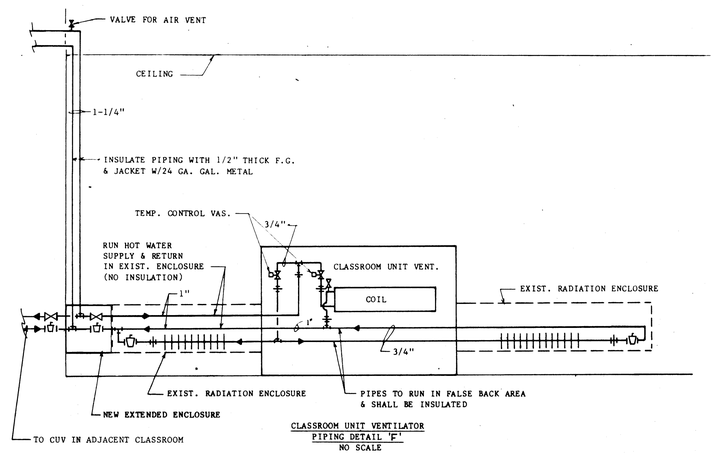
CLASSROOM UNIT VENTILATOR PIPING DETAIL 'E'

NO SCALE



CLASSROOM UNIT VENTILATOR PIPING DETAIL 'G'

NO SCALE



CLASSROOM UNIT VENTILATOR PIPING DETAIL 'F'

NO SCALE

NOTE:

ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF

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EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.

ARCHITECTS ENGINEERS

INDIANAPOLIS, INDIANA TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

DETAILS

BELZER MIDDLE SCHOOL - BID PACKAGE #4

LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

NO.	DATE	REVISIONS DESCRIPTION

COMM. NO.	84004
DATE	5-29-84
DRAWN BY	R.S.
CHECKED BY	P.C.

WILLIS NICHOLAS REGISTERED No. 7951 STATE INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY

SHEET

M4.12

OF

FAN & COIL SCHEDULE

MARK NO.	NAME	MANUFACTURER & MODEL	LOCATION	COOLING: E.A. D.B. & W.B.	COOLING: L.A. D.B. & W.B.	COOLING: MBH TOTAL SENS	COOLING: ENT.W. EVAP. TEMP.	COOLING: ROWS GPM	COOLING: W.P.D. FEET W.G.	COOLING: FV. FPM SQ. FT. COIL	HEATING: TEMP E.A. TO L.A.	HEATING: MBH	HEATING: ENT.W. LV. WTR.	HEATING: ROWS GPM	HEATING: W.P.D. FEET W.G.	HEATING: FV. FPM SQ. FT. COIL	FAN DATA: T.AIR FRESH AIR	FAN DATA: ESP INCHES W.G.	FAN DATA: TSP INCHES W.G.	FAN DATA: O.V. FPM RPM	FACE & BYPASS DMPRS.	TYPE MIX. BOX & FILTERS	ARRGT.	WEIGHT	REMARKS	MOTOR DATA: H.P.	MOTOR DATA: FLA	MOTOR DATA: VOLT PHASE	STARTER: TYPE	STARTER: NEMA ENCL.	STARTER: MOUNT	STARTER: SPECIAL CONTROLS	STARTER: FURN. BY	DISCONNECT: TYPE	DISCONNECT: NEMA ENCL.	DISCONNECT: FURN. BY	REMOTE CONTROL: CONTROLS	REMOTE CONTROL: FURN. BY	ELECTRICAL CONNECTIONS: WIRE & CONDUIT	ELECTRICAL CONNECTIONS: CIR. BRKRS. OR FUSED SWITCH NO.	FRAME	P.	AMPS.	PANEL	MARK NO.
(A)	CLASS ROOM UNIT VENTILATOR	TRANE # TUVA-07VA2	SEE PLANS	NA	NA	NA	NA	NA	NA	NA	60° / 130°	62	200° / 160°	2 / 3.8	5.5'		750 / 150	.1"	½"	1100	NA	1" THROWAWAY	VERT.	350#		⅙	2.1	115 / 1											CONNECT TO EXIST. CIRCUITS					
(B)		TRANE # TUVA-10VA2									60° / 135°	85	200° / 160°	2 / 4.3	3.0'		1000 / 150			1100				420#		⅙	2.4	115 / 1											CONNECT TO EXIST. CIRCUITS					
(C)		TRANE # TUVA-12VA2									60° / 145°	135	200° / 160°	2 / 6.8	8.0'		1250 / 150			1100				470#		¼	3.3	115 / 1											CONNECT TO EXIST. CIRCUITS					

PUMP SCHEDULE

MARK NO.	NAME	MANUFACTURER & MODEL	LOCATION	SERVICE/PURPOSE	TYPE & MOUNTING	PUMP DATA: GPM	PUMP DATA: HD. FT. W.G.	PUMP DATA: RPM	PUMP DATA: BHP	WEIGHT	REMARKS	MOTOR DATA: H.P.	MOTOR DATA: FLA	MOTOR DATA: VOLT PHASE	STARTER: TYPE	STARTER: NEMA ENCL.	STARTER: MOUNT	STARTER: SPECIAL CONTROL	STARTER: FURN. BY	DISCONNECT: TYPE	DISCONNECT: NEMA ENCL.	DISCONNECT: FURN. BY	REMOTE CONTROLS: CONTROLS	REMOTE CONTROLS: FURN. BY	ELECTRICAL CONNECTIONS: WIRE & CONDUIT	ELECTRICAL CONNECTIONS: CIR. BRKRS. OR FUSED SWITCH NO.	FRAME	P.	AMPS.	PANEL	MARK NO.
P1 & P2	HOT WATER PUMP P1 & P2	PEERLESS 1215A	BOILER ROOM	HEATING PUMPS FOR 'A' 'C' & 'E' AREAS	END SUCTION BASE MOUNT	180	140	1750	12.5	650	2" SUCTION; 1½" DISCH. INTERLOCK CONTROLS W/EXIST. PUMP CONTROLS	15		460 / 3	F.S.	1	SURF.	H.O.A.	E.C.				EXISTING									

COIL SCHEDULE

MARK NO.	NAME	MANUFACTURER & MODEL	LOCATION	CAPACITY: MBH	CAPACITY: CFM	HEATING - COOLING MEDIUM: STEAM PRESS. P.S.I.	STEAM CAP. LBS.	WATER PRESS DROP	GPM	WATER TEMP.: ENT.	WATER TEMP.: LV.	AIR TEMPERATURES: ENTERING DB.	ENTERING WB.	LEAVING DB.	LEAVING WB.	COIL DESCRIPTION & ARRANGEMENT: FACE AREA	FACE WIDTH	TUBE LENGTH	NO. ROWS	FACE VEL.	FINS PER INCH	P.D. INCHES W.G.	REMARKS
#1&2	HOT WATER HEATING COIL	TRANE W	'B' WING GIRLS GYM	507.0	8500	X	X	.6'	29.1			50		105		20#	30	96	2	425	7	.09	EXIST. CUV # 1 & 2

ELECTRICAL ABBREVIATIONS

CIRC. BKR OR C.B.	- CIRCUIT BREAKER
COMB.	- COMBINATION
C.P.	- CONTROL PANEL
E.C.	- ELECTRICAL CONTRACTOR
ENCL.	- ENCLOSURE
FLA.	- FULL LOAD AMPS
F.S.	- FUSED SWITCH
G.C.	- GENERAL CONTRACTOR
H.O.A.	- HAND-OFF-AUTOMATIC
MAG.	- MAGNETIC
MAN.	- MANUAL
M.C.	- MECHANICAL CONTRACTOR
M.C.C.	- MOTOR CONTROL CENTER
MFR.	- MANUFACTURER
M.S.P.	- MOTOR STARTER PANEL
N.F.	- NON-FUSED
NO.	- NUMBER
P.	- POLE
P.B.	- PUSH-BUTTON
P.L.	- PILOT LIGHT
REC.	- RECESSED
SURF.	- SURFACE
SW.	- SWITCH
T.C.C.	- TEMPERATURE CONTROL CONTRACTOR

SCHEDULE OF DUCT INSULATION & PIPE INSULATION

APPLICATION	1. NO INSULATION	2. FLEXIBLE FIBERGLASS, 2" THICK	3. RIGID BOARD FIBERGLASS, 1" THICK	4. 1" THICK STANDARD ARMAFLEX	5. RIGID BOARD FIBERGLASS, 1" THICK	6. DUCT LINER BOARD, 2" THICK	7. ARMAFLEX ½" THICK	8. 3½" FIBERGLASS BAT THICK	
DOMESTIC HOT WATER S & R							○		
DOMESTIC COLD WATER							○		
HEATING WATER S & R (2½" & LARGER)									(1)
O.A. DUCTWORK TO CUV'S					(5)				
HEATING WATER S & R (2½" & LARGER)								(1)	

NOTES:
1. WITH ALL SERVICE JACKET.
2. FINISH WITH PRESIZED FIBERGLASS CLOTH.
3. FINISH WITH 2 COATS OF WEATHERPROOF VINYL PLASTIC.
4. DUCTS INSULATED INSIDE WITH DUCT LINER SHALL NOT BE INSULATED ON OUTSIDE.
5. WITH FACTORY APPLIED FOIL REINFORCED KRAFT JACKET.

NOTE:
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BID PACKAGE #4
EXCEPT AS OTHERWISE NOTED

WRIGHT PORTEOUS & LOWE INC.
ARCHITECTS : ENGINEERS
MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

BELZER MIDDLE SCHOOL – BID PACKAGE #4
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

SCHEDULES

NO.	DATE	REVISIONS DESCRIPTION

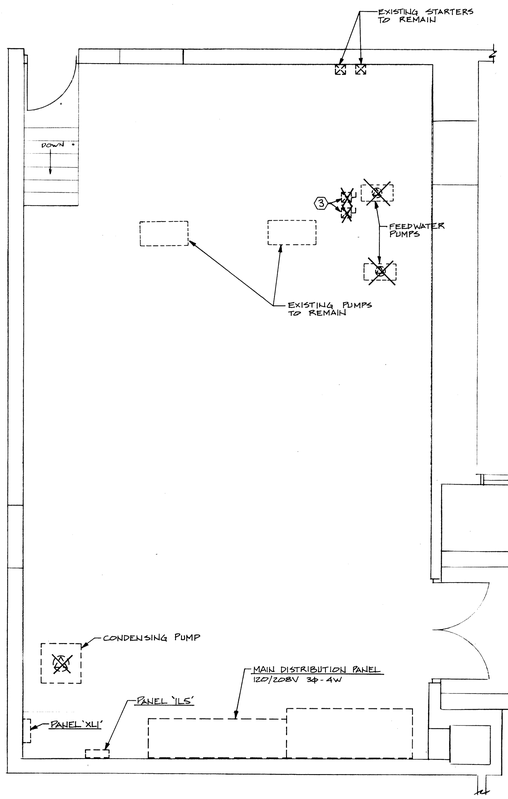
COMM. NO. 8420-4
DATE 7-29-84
DRAWN BY TMC
CHECKED BY

VIRGIL NICHOLAS REGISTERED No. 7951 STATE INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET M4.13 OF

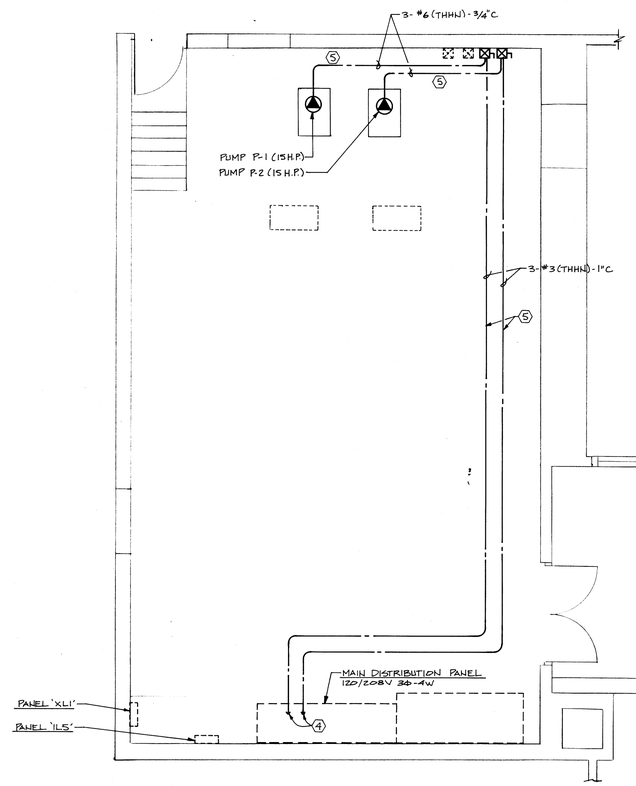
NOTES

1. ELECTRICAL EQUIPMENT SHOWN DASHED IS EXISTING TO REMAIN UNLESS NOTED OR INDICATED.
2. EXISTING MOTORS SHOWN X'ED OUT ARE TO BE DISCONNECTED.
3. EXISTING SIZE 0 COMBINATION MAGNETIC STARTERS TO BE REMOVED AND TURNED OVER TO THE OWNER.
4. CONNECT FEEDERS FOR PUMPS P-1 AND P-2 TO TWO (2) 100A-3P SPARE BREAKERS IN MAIN DISTRIBUTION PANEL.
5. NEW CONDUIT TO BE GALVANIZED AND RIGID.



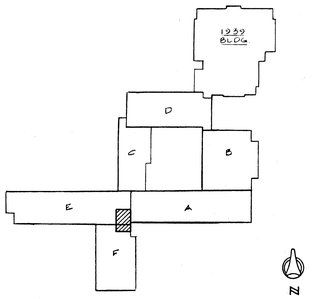
BOILER ROOM FLOOR PLAN - ELECTRICAL - DEMOLITION

SCALE :1/4"-1'-0"



BOILER ROOM FLOOR PLAN -ELECTRICAL - CONSTRUCTION

SCALE :1/4"-1'-0"



KEY PLAN

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WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

BOILER ROOM FLOOR PLAN
- DEMOLITION & CONSTRUCTION

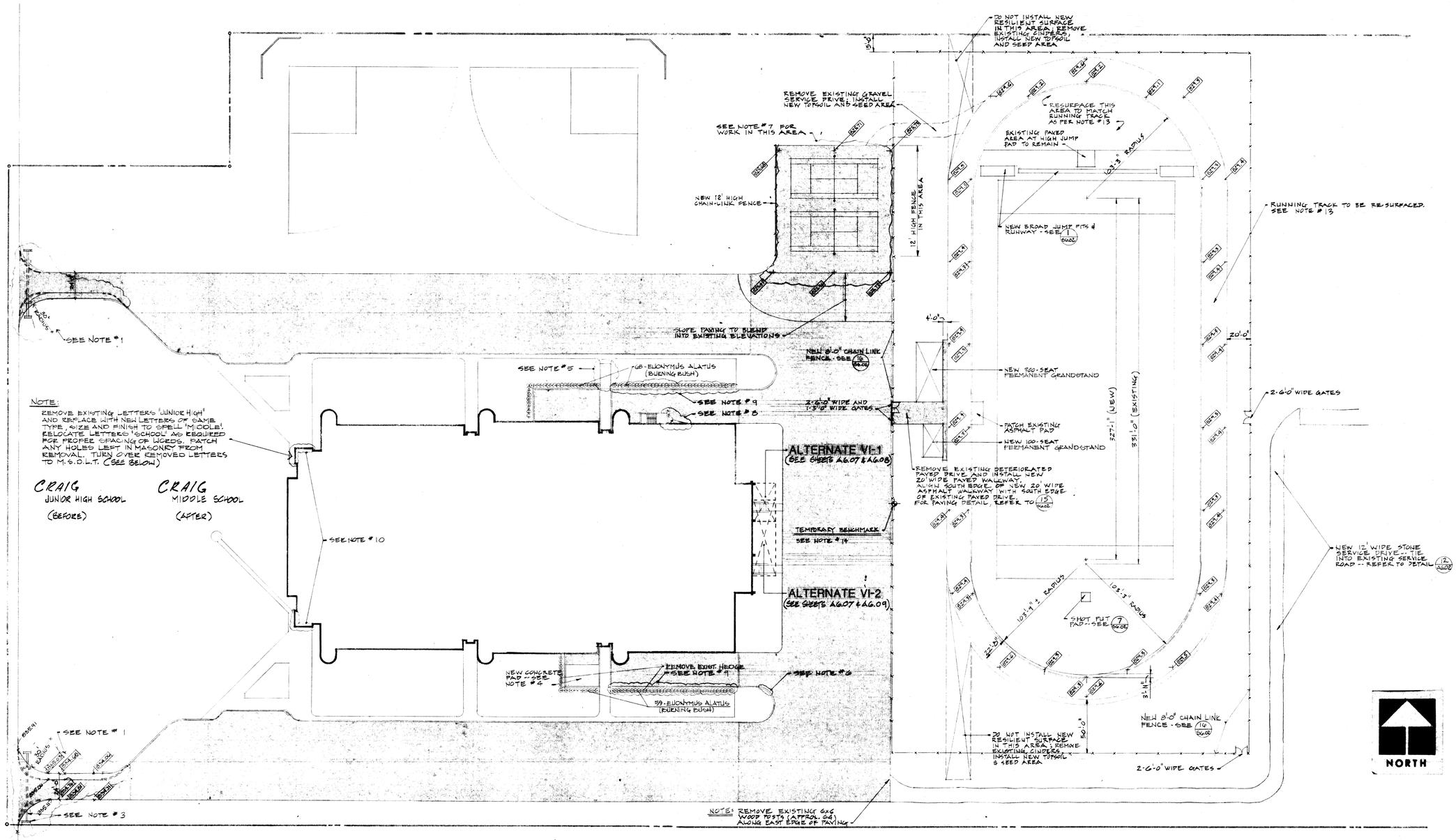
BELZER MIDDLE SCHOOL - BID PACKAGE #4
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO. 84-004
DATE 9-20-84
DRAWN BY BCO
CHECKED BY WGP

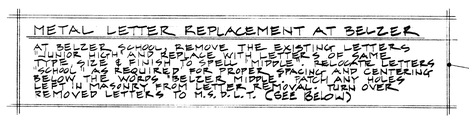
VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET 1
E4.01
OF



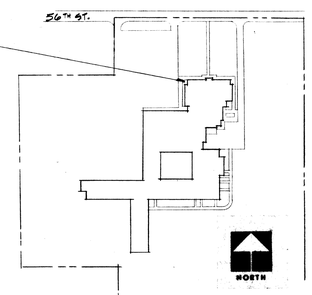
SITE PLAN

SCALE: 1" : 40'-0"



BELZER JUNIOR HIGH SCHOOL
MSD
LAWRENCE TOWNSHIP
(BEFORE)

BELZER MIDDLE SCHOOL
MSD
LAWRENCE TOWNSHIP
(AFTER)



BELZER JUNIOR HIGH SCHOOL SITE
NO SCALE

1. Remove existing curbing at entrance and exit drives. Widen existing entrance and exit drives to 24'0" as shown. At the exit drive, adjust slope as shown. Adjust existing parking lot in this area to meet proposed elevations in the exit drive. - SEE 11/S6.02

2. Install new 1" (min.) asphalt topping over existing asphalt paving where indicated by shaded areas. Cut out cracked, alligatored, deteriorated, settled, or otherwise unsuitable areas of existing paving and replace with new "full-depth" asphalt paving. Remove portions of paving around existing catch basins to allow proper sloping of new asphalt topping to basins. Slope new topping to provide positive drainage without "ponding". (Refer to detail 11/S6.02 for "full depth" asphalt paving.)

3. Remove existing concrete headwall. Extend existing culvert pipe to clear new paving and install new concrete headwall. Refer to detail 10/S6.02 (Typical of 4 locations.)

4. Remove portion of existing asphalt paving and install new 6" thick concrete slab with 6x6 6/6 wwf. Slope new slab 1/8" per foot to existing catch basin. Slab size to be 20'0" x 30'0".

5. Remove portion of existing walk as indicated and install new 4" thick concrete walk with 6x6 10/10 wwf. Align ends of new walk with existing walk and existing bridge. Build lip grade along walk as necessary. Refer to details 13/S6.02 and 14/S6.02.

6. Remove damaged sections of curb in areas indicated and install new concrete curb of a size and configuration to match existing.

7. Build up new asphalt paving over existing in this area to elevations indicated. Stripe tennis courts as per requirements of Indiana High School Athletic Association and install removable tennis net posts in sleeves in paving. Provide net.

8. Install new 6"x6" concrete curb as indicated. Build up asphalt topping to provide positive drainage away from building and around end of curb away from existing stairwell.

9. Remove existing shrubs along existing concrete retaining wall. Build up grade to provide positive drainage away from retaining wall. Install a new hedge of 36"-40" H. Euonymus Alatus Compactus - Burning Bush, planted at 3' o.c. where indicated on plan.

10. Install new caulking (and backer rod, as required) along bottom of existing window sill members at joint with concrete floor slab.

11. Clean out loose concrete in areas indicated and patch with latex admixture concrete patching compound.

12. Clean existing brick masonry and coat with clear liquid waterproofing.

13. TRACK RESURFACING

Remove existing concrete curbs around inside perimeter of track and at ends of main straight. Remove existing cinders and install new asphalt base as per detail 2/S6.02. Install new resilient "all-weather" surface over asphalt base. Stripe track and install start/finish lines and lane numbers as required by Indiana High School Athletic Association.

NOTE: Slope of track and finish grades indicated on plan.

14. Temporary Benchmark - PK nail in SE side of existing P.W.P., up 1.5', 287' N of South property Line and 125' east of building; elevation - 827.77'.

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

CRAIG MIDDLE SCHOOL BID PACKAGE #6

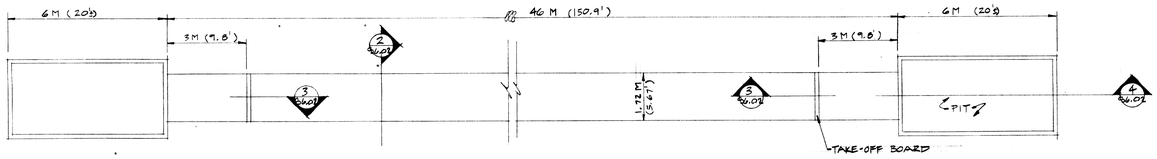
SITE PLAN
LETTER REPLACEMENT AT BELZER JUNIOR HIGH

NO.	DATE	REVISIONS DESCRIPTION

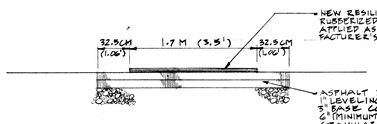
COMM. NO.	8292.1
DATE	3-29-84
DRAWN BY	C.H.
CHECKED BY	E.F.H.

HUNT LAMSON REGISTERED No. 4044 STATE OF INDIANA ARCHITECT
CERTIFIED BY

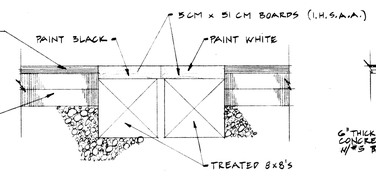
SHEET
S6.01
OF



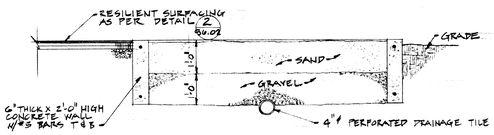
RUNNING BROAD JUMP LAYOUT (1 / S6.02)
NO SCALE



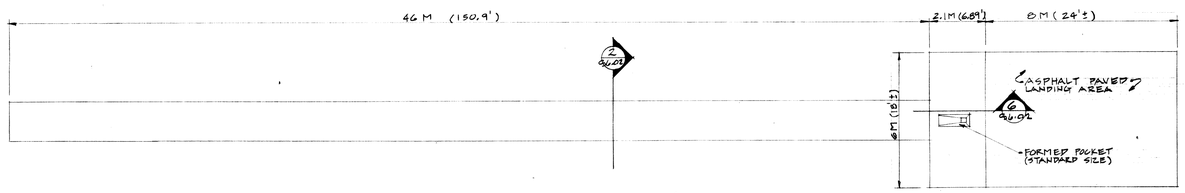
SECTION (2 / S6.02)
NO SCALE



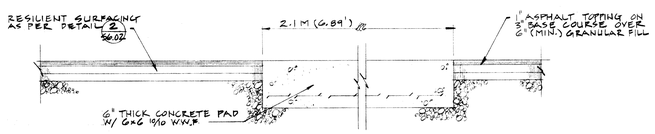
SECTION (3 / S6.02)
NO SCALE



SECTION (4 / S6.02)
NO SCALE

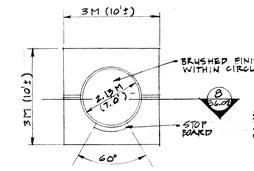


POLE VAULT LAYOUT (5 / S6.02)
NO SCALE

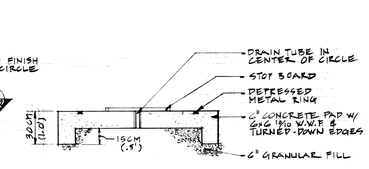


SECTION (6 / S6.02)
NO SCALE

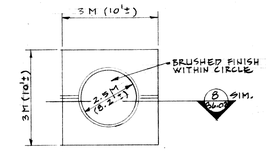
NOTE:
ALL DIMENSIONS TO BE VERIFIED AND/OR CO-ORDINATED WITH APPROPRIATE ATHLETIC ASSOCIATION OR RULING BODY PRIOR TO BEGINNING OF ANY CONSTRUCTION



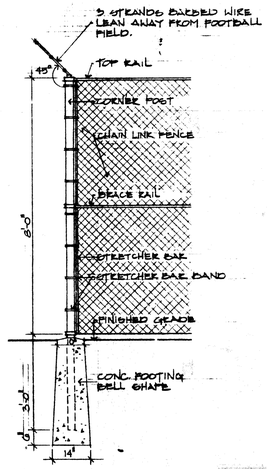
SHOT PUT PAD (7 / S6.02)
NO SCALE
RE: REMOVE EXISTING PAD



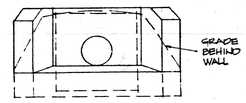
SECTION (8 / S6.02)



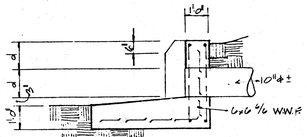
DISCUS PAD (9 / S6.02)
NO SCALE



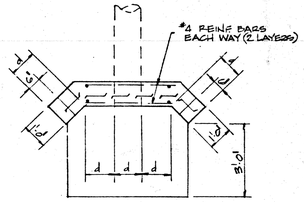
FENCE DETAIL (10 / S6.02)



ELEVATION



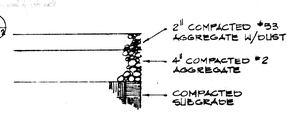
SECTION



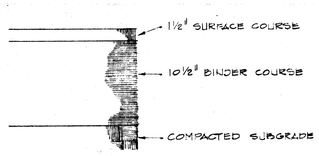
- d = DIAMETER OF INLET PIPE
- USE 3/4" CHAMFERED EDGES

PLAN

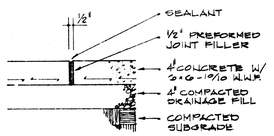
CONCRETE HEADWALL (10 / S6.02)



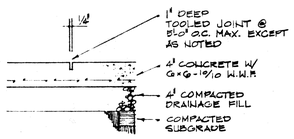
GRAVEL DETAIL (12 / S6.02)



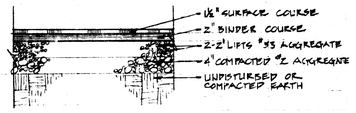
FULL DEPTH ASPHALT PAVING DETAIL (11 / S6.02)



EXPANSION JOINT CONCRETE WALK DETAIL (30'-0" MAX. SPACING) (14 / S6.02)



CONTROL JOINT CONCRETE WALK DETAIL (13 / S6.02)



ASPHALT PAVING (15 / S6.02)
NO SCALE

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

CRAIG MIDDLE SCHOOL BID PACKAGE #6

METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

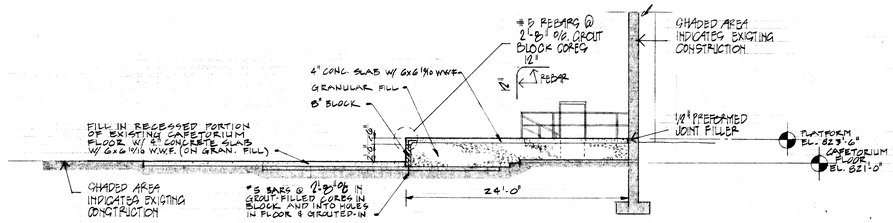
SITE DETAILS

REVISIONS		
NO.	DATE	DESCRIPTION

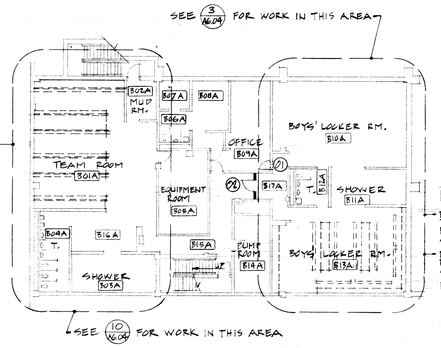
COMM. NO.	83-521
DATE	3-29-84
DRAWN BY	G.C.
CHECKED BY	D.F.H.

JOHN M. LANGAN REGISTERED No. 4041 STATE OF INDIANA ARCHITECT
CERTIFIED BY

SHEET
S6.02
OF



Section: Cafetorium
1/8" = 1'-0"
1 / A6.01



Demolition Note:

EXISTING TEAM ROOM LOCKERS TO BE REMOVED CONTRACTOR TO CO-ORDINATE DISPOSITION WITH MSDLT BUILDING AND MAINTENANCE REPRESENTATIVE. ALSO REMOVE EXISTING CONC BLOCK LOCKER SHANKS AND BENCHES.

Demolition Note:

EXISTING BENCHES & PEDESTALS TO BE REMOVED. REPAIR/PATCH FLOOR AS REQUIRED TO MATCH ADJACENT SURFACES.

EXISTING LOCKERS TO BE REMOVED. CONTRACTOR TO CO-ORDINATE DISPOSITION WITH M.S.D.L.T. BUILDING AND MAINTENANCE REPRESENTATIVE

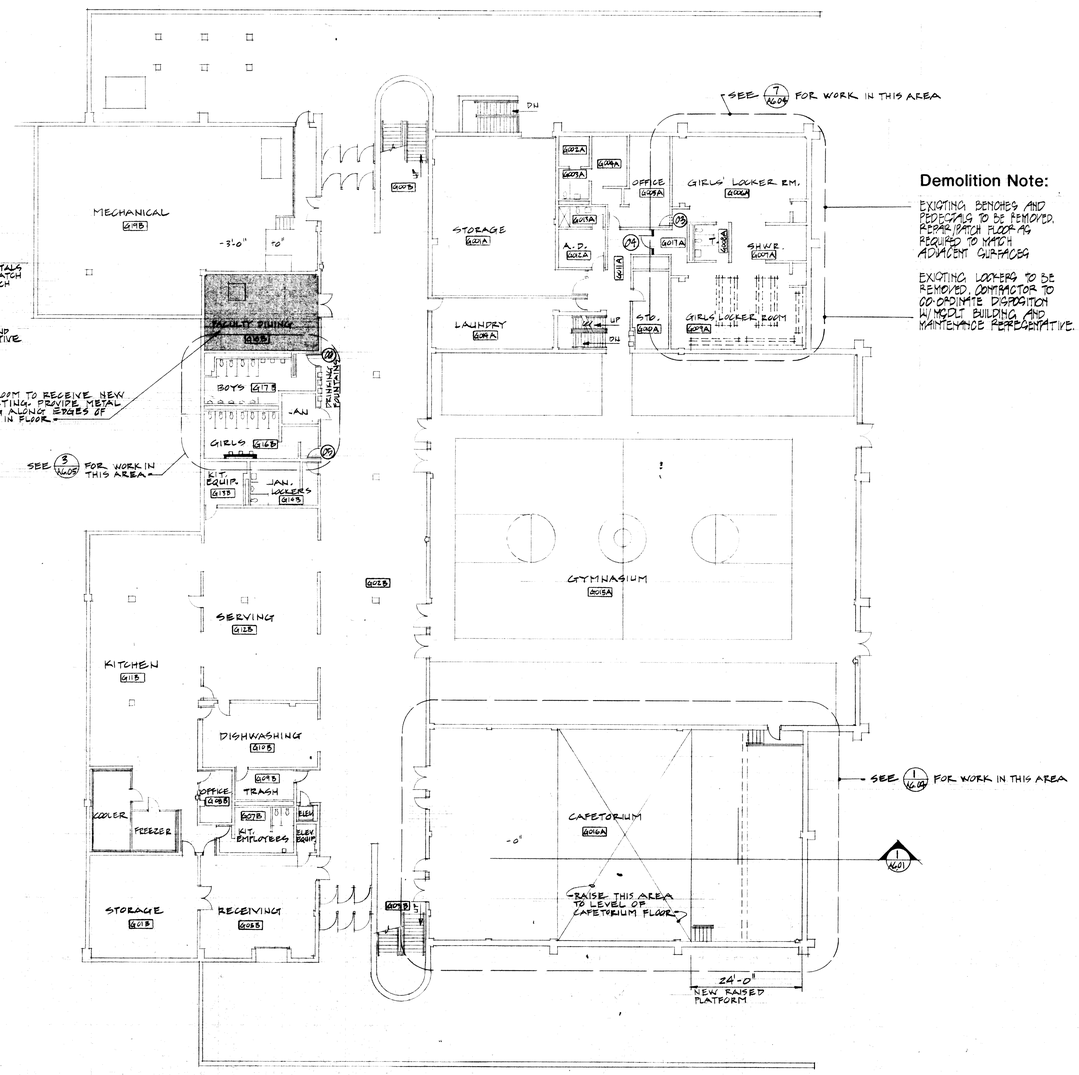
NORTH

BASEMENT PLAN

SCALE: 1/8" = 1'-0"

Note:

FOR ROOMS 501A THRU 517A REMOVE EXISTING SUSPENDED GYPSUM BOARD CEILING AND SUPPORTING SYSTEM. INSTALL NEW 5/8" MOISTURE RESISTANT GYP. BD. AND SUSPENSION SYSTEM @ ± 9'-4" ABOVE FINISH FLOOR. FIELD VERIFY AND MATCH EXISTING HEIGHT.



Demolition Note:

EXISTING BENCHES AND PEDESTALS TO BE REMOVED. REPAIR/PATCH FLOOR AS REQUIRED TO MATCH ADJACENT SURFACES

EXISTING LOCKERS TO BE REMOVED. CONTRACTOR TO CO-ORDINATE DISPOSITION W/ MSDLT BUILDING AND MAINTENANCE REPRESENTATIVE.

NORTH

GROUND FLOOR PLAN

SCALE: 1/8" = 1'-0"

FLOOR ELEVATION ± 821'-0" EXCEPT AS NOTED

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.

INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

ARCHITECTS/ENGINEERS

METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

CRAIG MIDDLE SCHOOL BID PACKAGE #6

BASEMENT PLAN
GROUND FLOOR PLAN

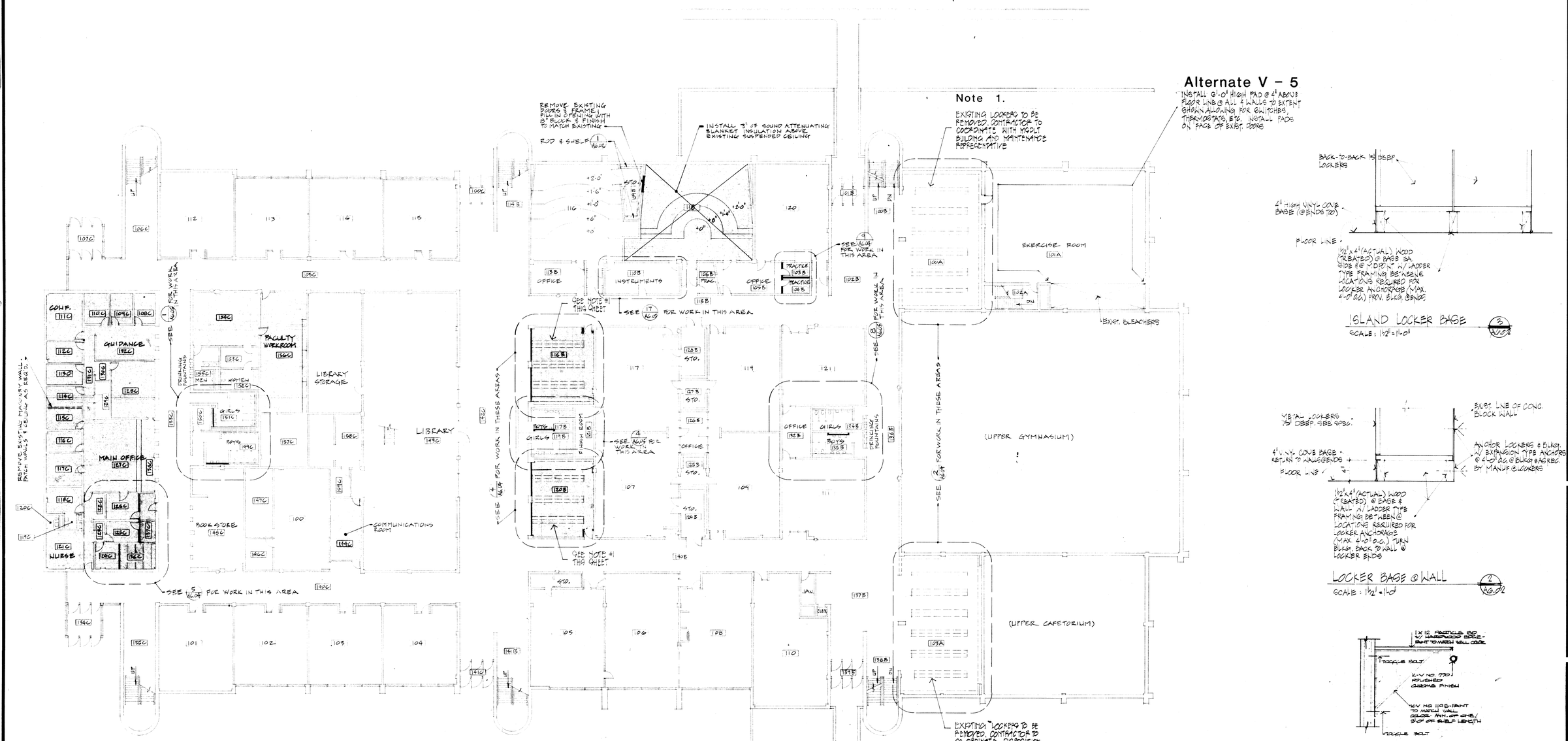
NO.	DATE	REVISIONS DESCRIPTION

COMM. NO.	83521
DATE	3-22-84
DRAWN BY	DAVE
CHECKED BY	B.F.H.

JOHN T. LAWSON REGISTERED No. 4041 STATE OF INDIANA ARCHITECT

CERTIFIED BY

SHEET
A6.01
OF



FIRST FLOOR PLAN

1/16" = 1'-0"

FLOOR ELEVATION +838'-0" EXCEPT AS NOTED

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED

ISLAND LOCKER BASE (3 / A6.02)
SCALE: 1½" = 1'-0"

LOCKER BASE @ WALL (7 / A6.02)
SCALE: 1½" = 1'-0"

ROD & SHELF (1 / A6.02)
NO SCALE
RE: STORAGE #109 B

WRIGHT PORTEOUS & LOWE INC.
ARCHITECTS : ENGINEERS
INDIANAPOLIS INDIANA

METROPOLITAN SCHOOL DISTRICT
OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

CRAIG
MIDDLE SCHOOL BID PACKAGE #6

FIRST FLOOR PLAN

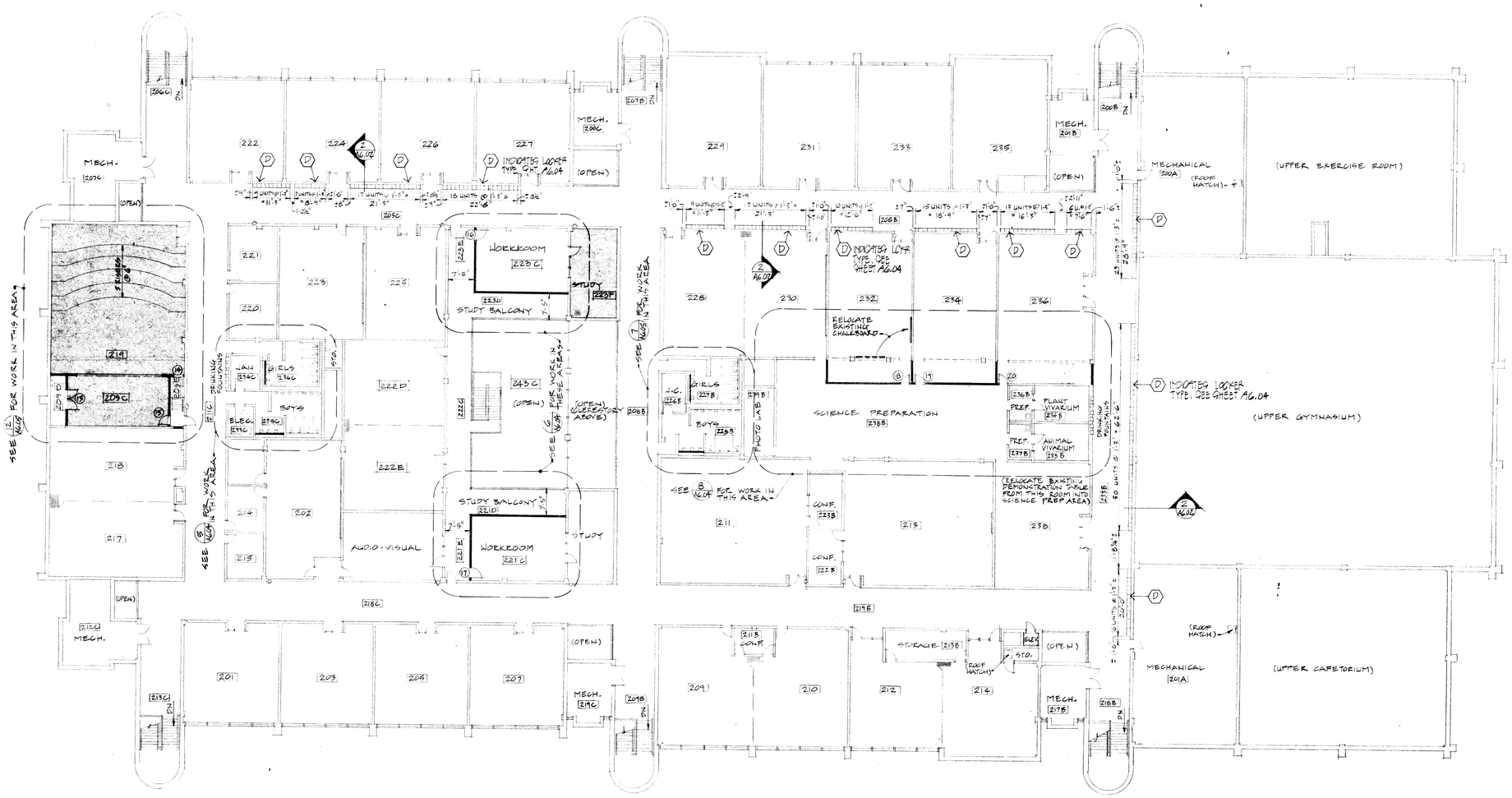
REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	8-2-21
DATE	3-23-84
DRAWN BY	PWC
CHECKED BY	R.P.H.

JOHN R. HANSON REGISTERED No. 4041 STATE OF INDIANA
CERTIFIED BY

SHEET
A6.02
OF

MARAUGH-17-0233



NOTE: SHADED AREAS ( ) ARE TO RECEIVE NEW CARPET

SECOND FLOOR PLAN

1/16" = 1'-0"

FLOOR ELEVATION +849'-0" EXCEPT AS NOTED

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED

WRIGHT PORTEOUS & LOWE INC.
ARCHITECTS : ENGINEERS
INDIANAPOLIS INDIANA

METROPOLITAN SCHOOL DISTRICT
OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

CRAIG

SECOND FLOOR PLAN

REVISIONS		
NO.	DATE	DESCRIPTION

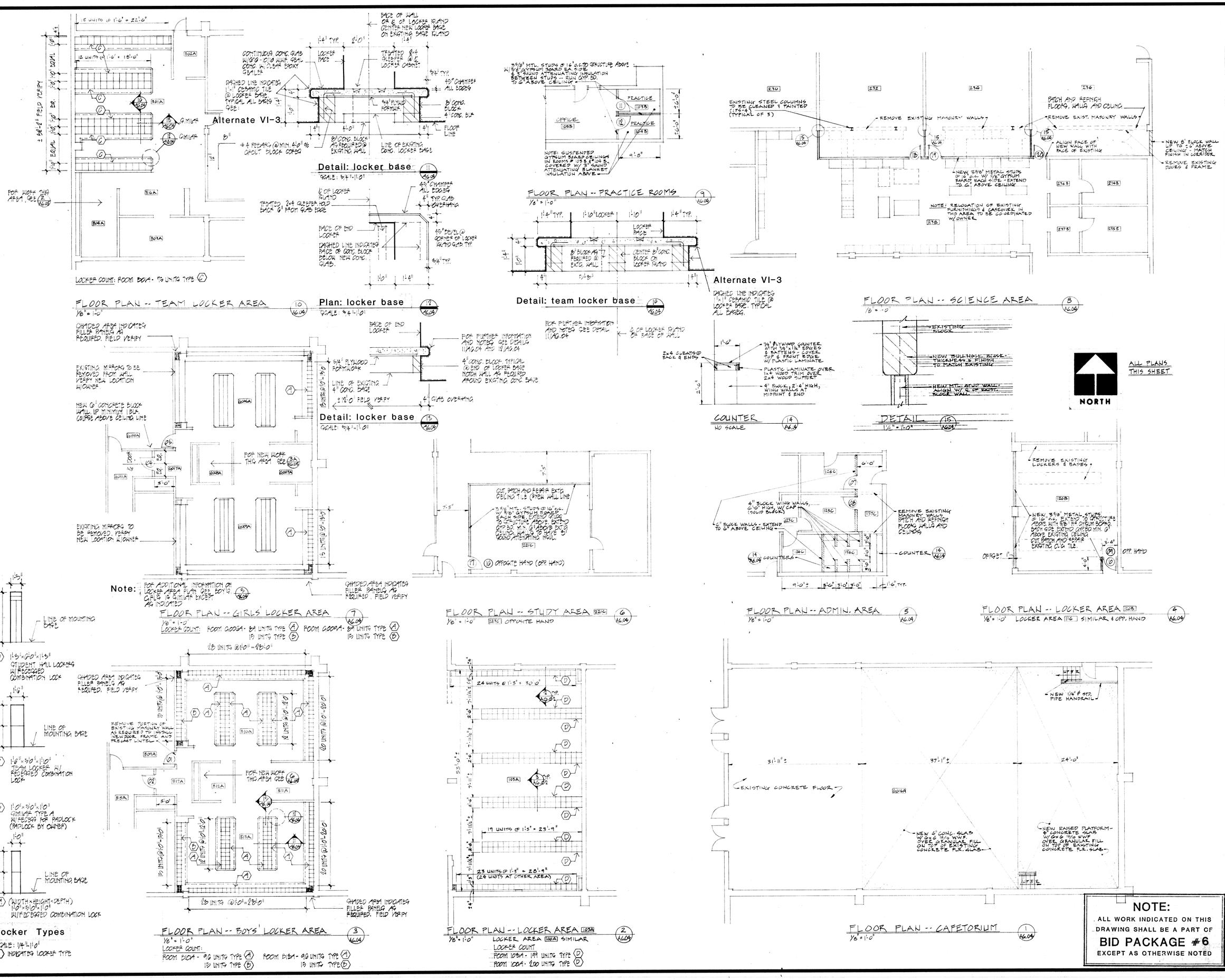
COMM. NO.	8552.1
DATE	3-29-84
DRAWN BY	DAVE
CHECKED BY	E.F.H.

JOHN T. LAMSON REGISTERED No. 4041 STATE OF INDIANA ARCHITECT

CERTIFIED BY

SHEET
A6.03
OF

MARAUGH-17-0253



NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

CRAIG MIDDLE SCHOOL BID PACKAGE #6

ENLARGED FLOOR PLANS DETAILS

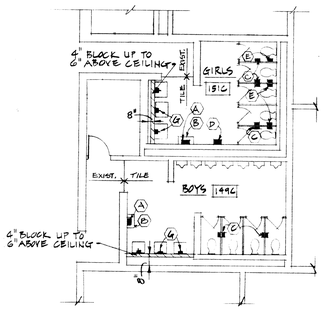
METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

REVISIONS		
NO.	DATE	DESCRIPTION

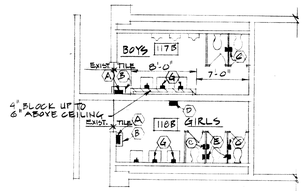
COMM. NO.	83-521
DATE	2-23-84
DRAWN BY	CES/LOW
CHECKED BY	E.F.H.

IDEN L. LANDON REGISTERED No. 4041 STATE OF ARCHITECT

SHEET A6.04 OF

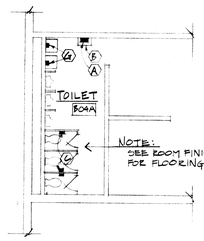


FLOOR PLAN 1
1/8" = 1'-0" A6.05



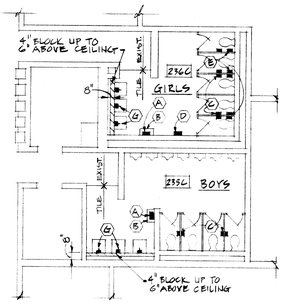
FLOOR PLAN 4
1/8" = 1'-0" A6.05

NORTH
ALL PLANS THIS SHEET

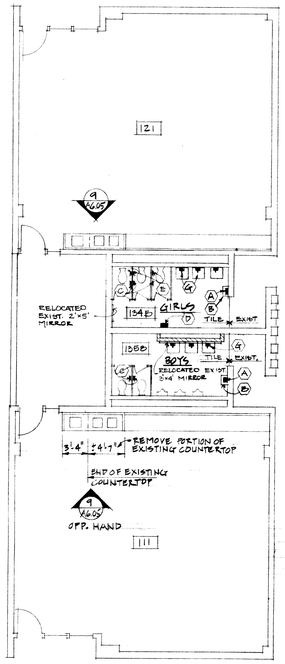


NOTE:
SEE ROOM FINISH SCHEDULE FOR FLOORING WORK IN THIS AREA.

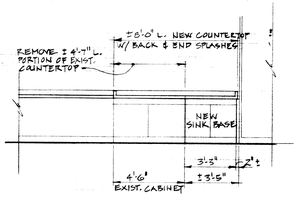
FLOOR PLAN 2
1/8" = 1'-0" A6.05



FLOOR PLAN 5
1/8" = 1'-0" A6.05

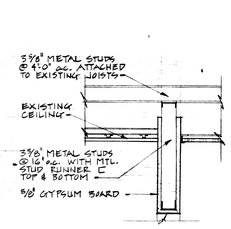


FLOOR PLAN 8
1/8" = 1'-0" A6.05

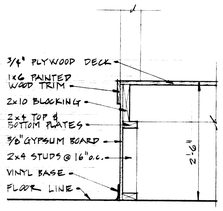


NOTES:
1. NEW SINK BASE TO BE METAL AND TO MATCH EXISTING IN COLOR, STYLE, AND HARDWARE AS CLOSELY AS POSSIBLE
2. REFER TO MECHANICAL DRAWINGS FOR ALL WORK CONCERNING SINKS & FIXTURES.
3. END SPLASH TO COVER SEAM IN COUNTERTOP.

ELEVATION 9
1/4" = 1'-0" A6.05
TYP. OF 2 LOCATIONS (1 OPP. HAND)



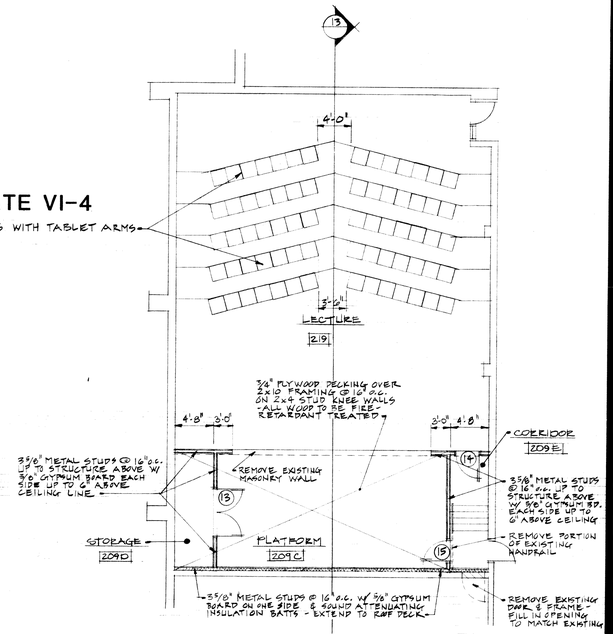
DETAIL 10
3/4" = 1'-0" A6.05



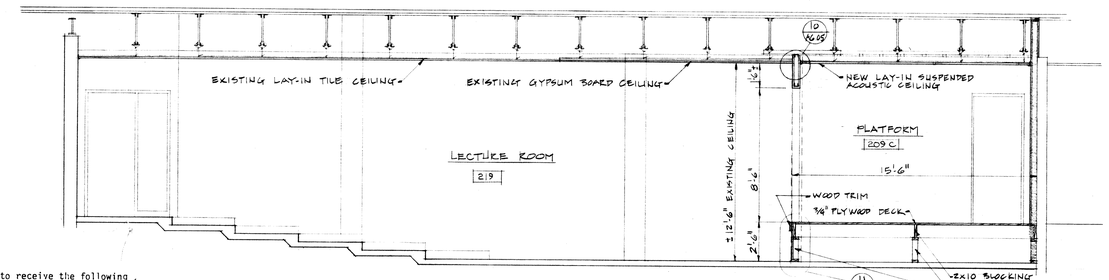
DETAIL 11
3/4" = 1'-0" A6.05

ALTERNATE VI-4

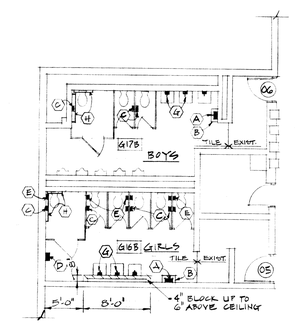
70 FIXED SEATS WITH TABLET ARMS



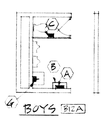
FLOOR PLAN -- LECTURE ROOM 219
1/8" = 1'-0" A6.05



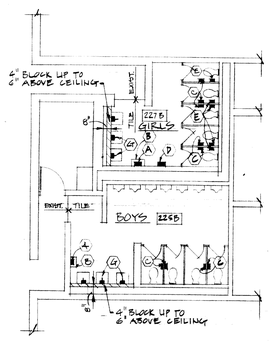
SECTION THROUGH LECTURE ROOM 13
1/4" = 1'-0" A6.05



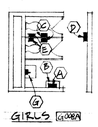
FLOOR PLAN 3
1/8" = 1'-0" A6.05



FLOOR PLAN 6
1/8" = 1'-0" A6.05



FLOOR PLAN 7
1/8" = 1'-0" A6.05



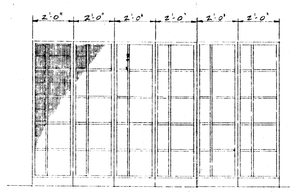
FLOOR PLAN 3A
1/8" = 1'-0" A6.05

TOILET ROOM NOTES

1. TOILET ROOM FINISHES - All toilet rooms this sheet to receive the following new finishes:
   A. Ceramic Tile Floor
   B. Ceramic Tile Base
   C. Epoxy Paint on Walls
2. TOILET PARTITIONS - Remove existing toilet partitions in all toilet rooms this sheet and install new prefinished metal toilet partitions. Match original stall dimensions except as noted.
3. TOILET ROOM CEILINGS - Remove existing suspended drywall (furring and supports to remain) and suspended lay-in ceilings in all toilet rooms this sheet. Modify existing supports to accept new light fixtures (as required) and install new 5/8" moisture-resistant drywall on existing furring. In rooms with existing lay-in ceiling, install new 1½" support channels at 4'0" o.c. and furring channels at 16" o.c. Install new 5/8" moisture-resistant drywall ceiling.
4. TOILET ROOM ACCESSORIES - Remove existing towel dispensers, trash receptacles, napkin dispensers and disposals, toilet tissue holders and soap dispensers. Install new units as per plan views this sheet. Refer to accessory schedule this sheet. Install units at manufacturers recommended mounting heights.
5. Toilet Room Floors - The transition strip between existing floor and new ceramic tile floor is to be provided by tile contractor.

TOILET ROOM ACCESSORIES SCHEDULE

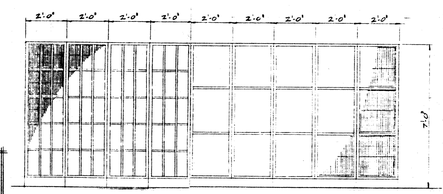
A. Surface Mounted Paper Towel Dispenser
B. Surface Mounted Trash Receptacle
C. Surface Mounted Toilet Tissue Holder
D. Surface Mounted Feminine Napkin Dispenser
E. Surface Mounted Feminine Napkin Disposal Receptacle
F. Plate Glass Mirror - Size as Indicated on Drawing
G. Wall Mounted Soap Dispenser
H. Grab Bar



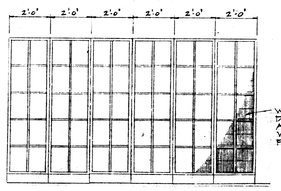
ELEVATION 15
NO SCALE MU-403 A6.05

NOTE:
INSTRUMENT STORAGE CABINETS MATERIALS FINISH AND CONSTRUCTION DETAILS TO BE EQUIVALENT TO CABINETS MANUFACTURED BY THE YORKTOWNE DIVISION OF THE WILCES CORPORATION.
MU-1 NUMBERS REFER TO STANDARD CABINET DESIGNATIONS OF YORKTOWNE.

NOTE:
PROVIDE METAL GUARD ALONG BOTTOM FRONT EDGE OF EACH COMPARTMENT, TYPICAL.



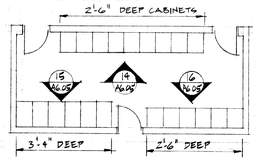
ELEVATION 14
NO SCALE MU-301 & 304 A6.05



ELEVATION 16
NO SCALE MU-302 A6.05

STORAGE COMPARTMENTS

WIDTH x HEIGHT x DEPTH	QUANTITY
6½" x 14 15/16" x 28½"	60
10 7/32" x 14 15/16" x 28½"	60
6½" x 14 15/16" x 38½"	30
13 7/16" x 14 15/16" x 38½"	30
20 7/64" x 23 39/32" x 28½"	15



FLOOR PLAN - INSTRUMENT STORAGE 17
1/8" = 1'-0" INSTRUMENT STORAGE CABINETS A6.05

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA
ARCHITECTS/ENGINEERS

CRAIG MIDDLE SCHOOL BID PACKAGE #6

TOILET ROOM RENOVATION
LECTURE ROOM RENOVATION
INSTRUMENT STORAGE CABINETS

METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

REVISIONS		
NO.	DATE	DESCRIPTION

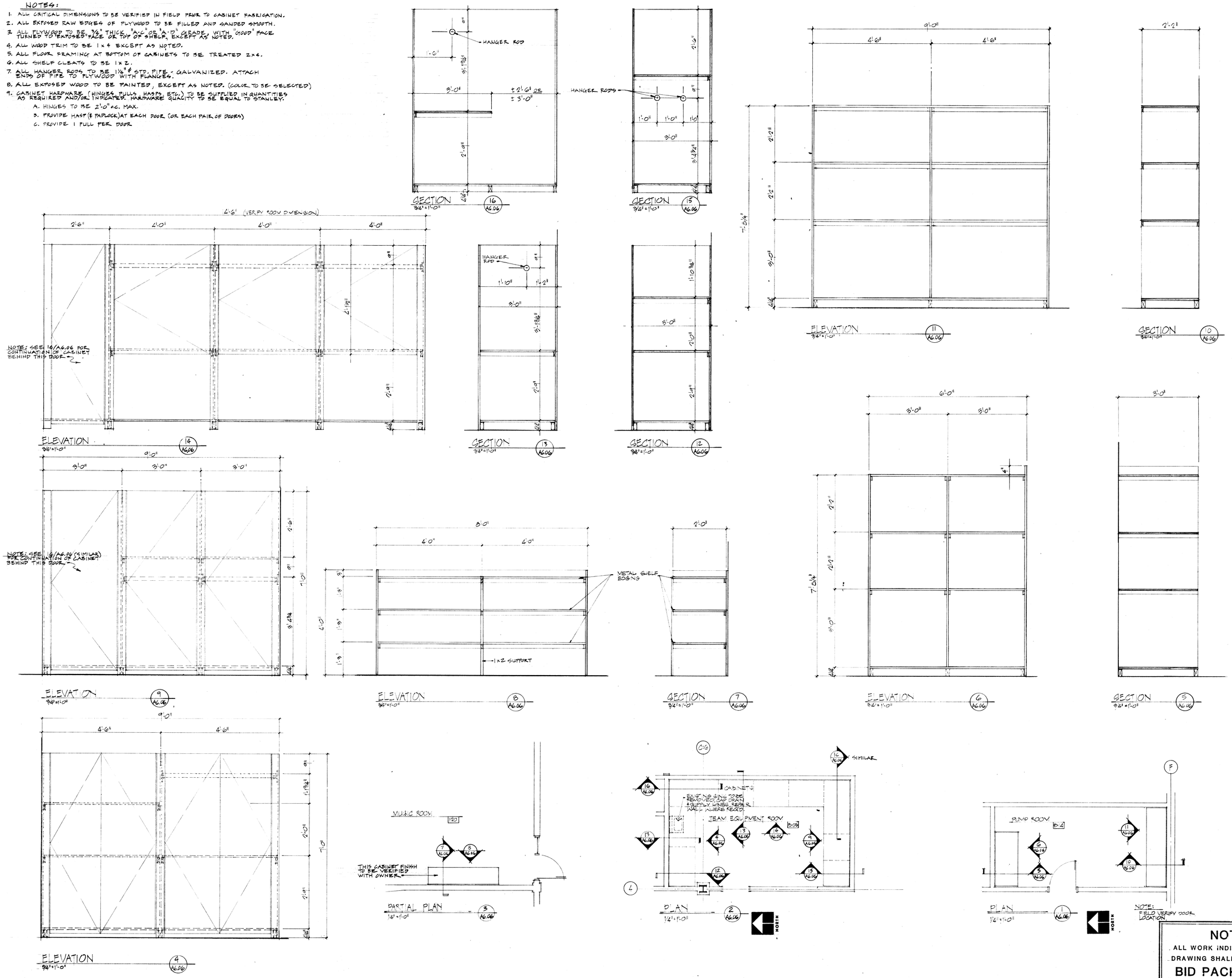
COMM. NO.	85521
DATE	3.29.84
DRAWN BY	JAVE
CHECKED BY	E.F.H.

JOHN T. LAWSON REGISTERED No. 4041 STATE OF INDIANA ARCHITECT
CERTIFIED BY

SHEET
A6.05
OF

NOTES:

1. ALL CRITICAL DIMENSIONS TO BE VERIFIED IN FIELD PRIOR TO CABINET FABRICATION.
2. ALL EXPOSED RAW EDGES OF PLYWOOD TO BE FILLED AND SANDED SMOOTH.
3. ALL PLYWOOD TO BE 3/4" THICK "A-C" OR "A-D" GRADE, WITH "GOOD" FACE TURNED TO "EXPOSED" FACE OR TOP OF SHELF, EXCEPT AS NOTED.
4. ALL WOOD TRIM TO BE 1 x 4 EXCEPT AS NOTED.
5. ALL FLOOR FRAMING AT BOTTOM OF CABINETS TO BE TREATED 2x4.
6. ALL SHELF CLEATS TO BE 1 x 2.
7. ALL HANGER RODS TO BE 1 1/4" ϕ STD. PIPE - GALVANIZED. ATTACH ENDS OF PIPE TO PLYWOOD WITH FLANGES.
8. ALL EXPOSED WOOD TO BE PAINTED, EXCEPT AS NOTED. (COLOR TO BE SELECTED)
9. CABINET HARDWARE (HINGES, PULLS, HASPS, ETC.) TO BE SUPPLIED IN QUANTITIES AS REQUIRED AND/OR INDICATED. HARDWARE QUALITY TO BE EQUAL TO STANLEY.
   A. HINGES TO BE 2'-0" o.c. MAX.
   B. PROVIDE HASP & PADLOCK AT EACH DOOR (OR EACH PAIR OF DOORS)
   C. PROVIDE 1 PULL PER DOOR



NOTE:
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BID PACKAGE #6
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WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

CRAIG MIDDLE SCHOOL BID PACKAGE #6

STORAGE CABINETS

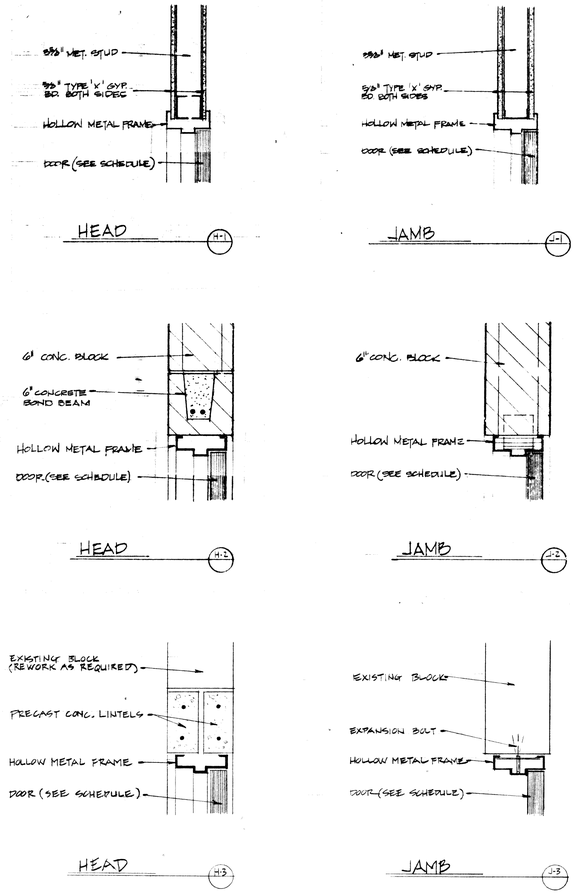
METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1994 PROJECTS BID PACKAGE 2 THRU 6

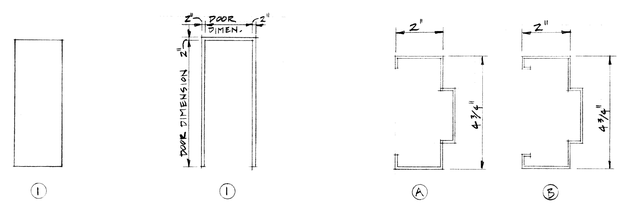
REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	8932.21
DATE	3-28-94
DRAWN BY	KMM
CHECKED BY	E.F.H.

DAVID T. LAWSON REGISTERED No 4041 STATE OF INDIANA ARCHITECT
CERTIFIED BY

SHEET
A6.06
OF





DOOR TYPES — FRAME TYPES — FRAME PROFILES

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR: EXIST. TO REMAIN	CERAMIC TILE	CARPET	VINYL TILE	ALTERNATE VI-3 CERAMIC TILE	BASE: EXIST. TO REMAIN	4" VINYL	CERAMIC TILE	ALTERNATE VI-3 CERAMIC TILE	WALLS: EXIST. TO REMAIN	PAINT (IPS-9)	PAINT (IPS-1)	PAINT (IPS-10)	PAINT (IPS-2)	V.W.C.	CEILING: EXIST. TO REMAIN	PAINT (IPS-10)	PAINT (IPS-2)	2'x2' SUSP. ACOUS.	CLG. HGT.	REMARKS
SECOND FLOOR LEVEL:																						
206B	CORRIDOR	X					X	*			X						X				8'-0"	* NEW VINYL ON LOCKER BASES
208B	CORRIDOR	X					X				X						X				"	
219B	CORRIDOR	X					X				X						X				"	
225B	BOY'S TOILET		X						X			X							X		"	
227B	GIRLS TOILET		X						X			X							X		"	
233B	CORRIDOR	X						*			X		*				X				"	* FINISHES ON NEW CONST. ONLY
238B	SCIENCE PREP.	X					X				X				X		X				"	
209	CLASSROOM	X					X				X					X	X				8'-0"	
210	CLASSROOM	X					X				X					X	X				"	
212	CLASSROOM	X					X				X					X	X				"	
214	CLASSROOM	X					X				X					X	X				"	
217	CLASSROOM	X					X				X					X	X				"	
218	CLASSROOM	X					X				X					X	X				"	
219	CLASSROOM		X					X					X		X		X				10'-0"	
228	CLASSROOM	X					X				X					X	X				8'-0"	
230	CLASSROOM	X					X				X					X	X				"	
232	CLASSROOM	X		*			X						X		X						"	* V.T. CONST. AREA ONLY
234	CLASSROOM	X		*			X						X		X						"	* V.T. CONST. AREA ONLY
236	CLASSROOM	X		*			X						X		X						"	* V.T. CONST. AREA ONLY
205C	CORRIDOR	X					X	*			X						X				8'-0"	* NEW VINYL ON LOCKER BASES
209C	PLATFORM		X					X						X		X					"	
209D	STORAGE			X				X			X			X		X					"	
209E	CORRIDOR			X				X			X			X		X					"	
211C	CORRIDOR	X					X				X						X				"	
218C	CORRIDOR	X					X				X						X				"	
221C	WORKROOM	X					X						X		X		X				"	
221D	STUDY BALCONY	X					X				X				X		X				"	
221E	CORRIDOR	X					X				X				X		X				"	
222C	CORRIDOR	X					X				X				X		X				"	
222D	CLASSROOM	X					X				X				X		X				"	
222E	CLASSROOM	X					X				X				X		X				"	
223C	WORKROOM	X					X						X		X		X				"	
223D	STUDY BALCONY	X					X				X				X		X				"	
223E	CORRIDOR	X					X				X				X		X				"	
223F	STUDY ROOM		X					X			X				X		X				"	
235C	BOY'S TOILET								X			X						X			"	
236C	GIRL'S TOILET		X						X			X						X			"	

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR: EXIST. TO REMAIN	CERAMIC TILE	CARPET	VINYL TILE	ALTERNATE VI-3 CERAMIC TILE	BASE: EXIST. TO REMAIN	4" VINYL	CERAMIC TILE	ALTERNATE VI-3 CERAMIC TILE	WALLS: EXIST. TO REMAIN	PAINT (IPS-3)	PAINT (IPS-1)	PAINT (IPS-10)	PAINT (IPS-2)	V.W.C.	CEILING: EXIST. TO REMAIN	PAINT (IPS-10)	PAINT (IPS-2)	2'x2' SUSP. ACOUS.	CLG. HGT.	REMARKS
BASEMENT LEVEL:																						
B01A	TEAM ROOM	X				X	X			X	X						X				9'-4"	
B02A	MUD ROOM	X				X	X			X	X						X				"	
B03A	SHOWER ROOM	X				X	X			X	X						X				"	
B04A	TOILET	X				X	X			X	X						X				"	
B05A	EQUIPMENT ROOM	X				X	X			X	X						X				"	
B06A	TOILET	X				X	X			X	X						X				"	
B07A	SHOWER ROOM	X				X	X			X	X						X				"	
B08A	LOCKER ROOM	X				X	X			X	X						X				"	
B09A	OFFICE	X				X	X			X	X						X				"	
B10A	BOY'S LOCKER RM.	X				X	X			X	X						X				"	
B11A	SHOWER	X				X	X			X	X						X				"	
B12A	TOILET	X				X	X			X	X						X				"	
B13A	BOY'S LOCKER RM.	X				X	X			X	X						X				"	
B14A	PUMP ROOM	X					X				X						X				"	
B15A	CORRIDOR	X				X	X			X	X						X				"	
B16A	CORRIDOR	X				X	X			X	X						X				"	
B17A	CORRIDOR	X				X	X			X	X						X				"	
GROUND FLOOR LEVEL:																						
G002A	SHOWER ROOM	X				X	X			X	X						X				9'-4"	
G003A	TOILET	X				X	X			X	X						X				"	
G004A	LOCKER ROOM	X				X	X			X	X						X				"	
G006A	GIRLS LOCKER RM.	X				X	X			X	X						X				"	
G007A	SHOWER ROOM	X				X	X			X	X						X				"	
G008A	TOILET	X				X	X			X	X						X				"	
G009A	GIRLS LOCKER RM.	X				X	X			X	X						X				"	
G011A	CORRIDOR	X				X	X			X	X	*					X				"	* PAINT NEW WALL ONLY
G012A	OFFICE	X				X	X			X	X						X				"	
G013A	TOILET	X				X	X			X	X						X				"	
G016A	CORRIDOR	X				X	X			X	X						X				"	
G16B	GIRLS TOILET		X						X			X						X			8'-0"	
G17B	BOY'S TOILET		X						X			X						X			"	
G18B	FACULTY DIN RM.			X					X		X						X				"	
FIRST FLOOR LEVEL:																						
103A	LOCKER AREA	X						X			X						X				8'-0"	* NEW VINYL ON LOCKER BASES
103A	LOCKER AREA	X						X			X						X				"	* NEW VINYL ON LOCKER BASES
103B	PRACTICE ROOM	X						X					X		X				X		"	
104B	PRACTICE ROOM	X						X					X		X				X		"	
105B	OFFICE	X						X			X				X		X				"	
109B	STORAGE	X						X			X		X				X				"	
110B	NOTE STORAGE	X						X			X						X				"	
116B	LOCKER AREA		X					X					X		X				X		"	
117B	BOY'S TOILET		X						X			X						X			"	
119B	GIRLS TOILET		X						X			X						X			"	
120B	LOCKER AREA		X					X					X		X				X		"	
124B	GIRLS TOILET		X						X			X						X			"	
135B	BOY'S TOILET		X						X			X						X			"	
118	BAND ROOM			X				X					X				X				11'-4"	* FLR. STEPS UP (see plan)
108C	OFFICE			X				X			X						X				8'-0"	
109C	OFFICE			X				X			X						X				"	
110C	OFFICE			X				X			X						X				"	
111C	CONFERENCE RM.			X				X			X						X				"	
112C	OFFICE			X				X			X						X				"	
113C	OFFICE			X				X			X						X				"	
114C	OFFICE			X				X					X				X				"	PATCH CEILING AS REQ.
115C	OFFICE			X				X					X				X				"	PATCH CEILING AS REQ.
116C	OFFICE			X				X			X						X				"	
117C	OFFICE			X				X			X						X				"	
118C	OFFICE			X				X			X						X				"	
119C	TOILET	X					X				X						X				"	
120C	TOILET	X					X				X						X				"	
121C	NURSE			X				X			X						X				"	
122C	CORRIDOR			X				X			X						X				"	
123C	ALCOVE			X				X			X						X				"	
124C	OFFICE	X						X			X		X				X				"	
125C	OFFICE			X				X			X						X				"	
126C	OFFICE			X				X			X		X				X				"	
127C	MAIN OFFICE			X				X			X						X				"	
128C	OFFICE			X				X			X						X				"	
129C	STORAGE	X						X			X						X				"	
130C	ALCOVE			X				X			X						X				"	
131C	CORRIDOR			X				X			X						X				"	
132C	OFFICE			X				X			X						X				"	
136C	DETENTION RM.			X				X			X		X				X				"	
137C	WAITING ROOM			X				X			X		X				X				"	
138C	WAITING AREA			X				X			X						X				"	
142C	CORRIDOR	X						X			X				X		X				"	V.W.C. NEW CONST. ONLY
144C	COMMUNICATIONS RM.			X				X			X						X				"	
149C	BOY'S TOILET			X					X			X						X			"	
151C	GIRL'S TOILET			X					X			X						X			"	
154C	LOUNGE			X				X			X						X				"	
156C	WORKROOM			X				X			X						X				"	

DOOR AND FRAME SCHEDULE

DOOR NUMBER	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	TRANSOM SIZE W	TRANSOM SIZE H	TRANSOM SIZE T	DOOR MAT'L	TYPE	GLASS	LOUVER W	LOUVER H	FRAME MAT'L	TYPE	PROFILE	GLASS	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	LABEL FIRE RATING	HARDWARE SET	REMARKS
01	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	A	–	H-3	J-3	–	–		
02	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	A	–	H-2	J-2	–	–		
03	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	A	–	H-3	J-3	–	–		
04	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	A	–	H-2	J-2	–	–		
05	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	A	–	–	J-3	–	–		FIELD VERIFY OP'NG. DIMENSIONS
06	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	A	–	–	J-3	–	–		FIELD VERIFY OP'NG. DIMENSIONS
07	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	A	–	H-2	J-2	–	–		
08	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	A	–	H-2	J-2	–	–		
09	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
10	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
11	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
12	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
FR 13	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
14	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
15	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
16	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
17	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
18	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
19	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		
20	3-0	7-10	1¾	–	–	–	WOOD	1	–	–	–	H.M.	1	B	–	H-1	J-1	–	–		

NOTE:
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BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

CRAIG MIDDLE SCHOOL BID PACKAGE #6

DOOR SCHEDULE & DETAILS
& ROOM FINISH SCHEDULE

METROPOLITAN SCHOOL DISTRICT
OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

REVISIONS

NO.	DATE	DESCRIPTION

COMM. NO. 85921
DATE 2-27-84
DRAWN BY
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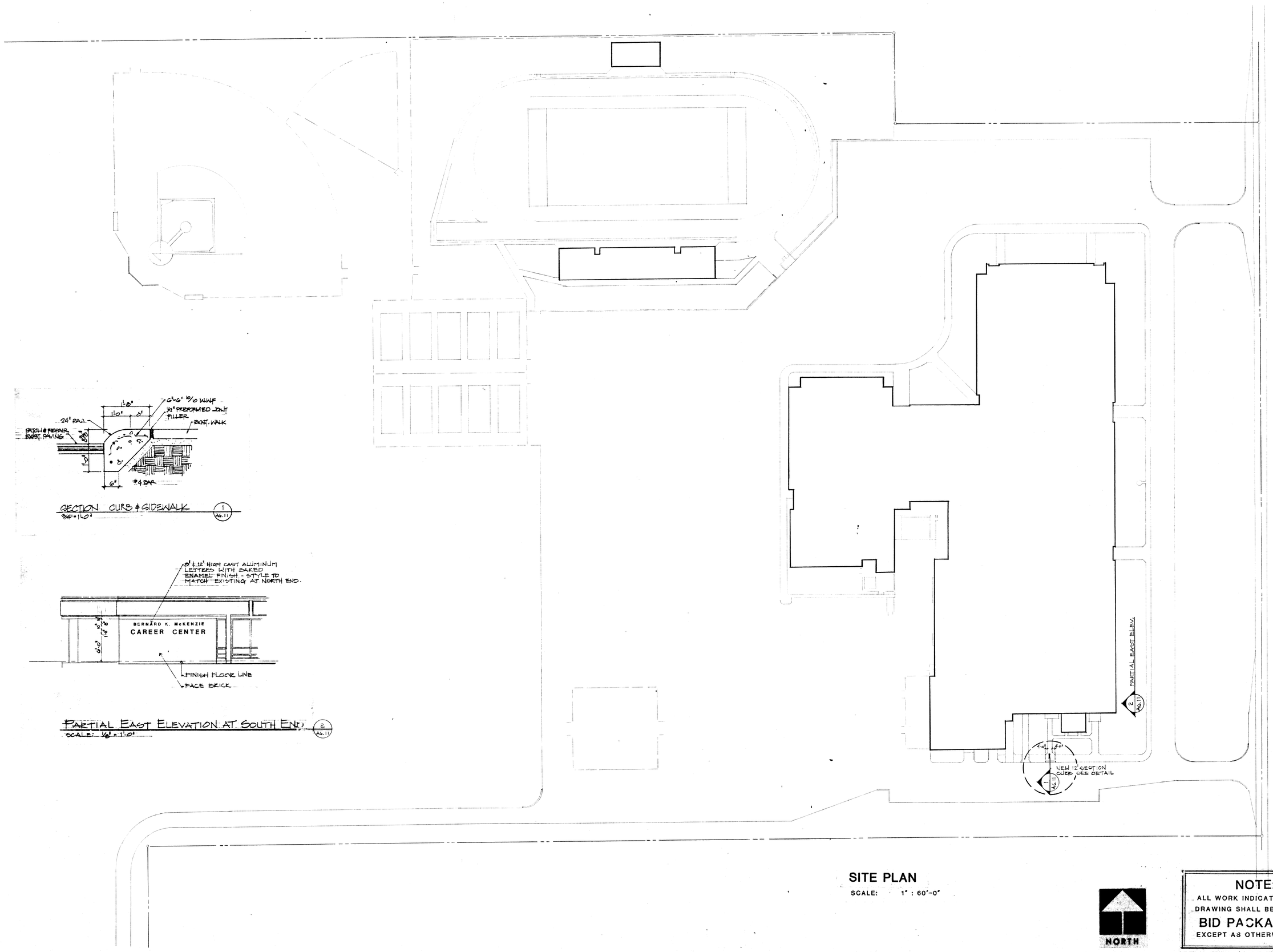

SITE PLAN

SCALE: 1" : 60'-0"

NORTH

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INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

LAWRENCE NORTH HIGH SCHOOL
BID PACKAGE #6

SITE PLAN

METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
PHASE V - 1984 PROJECTS BID PACKAGE 2 THRU 6

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	83-321
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LAWRENCE TOWNSHIP METROPOLITAN SCHOOL DISTRICT

PHASE V, 1984 PROJECTS

MECHANICAL ELECTRICAL & PLUMBING RENOVATION

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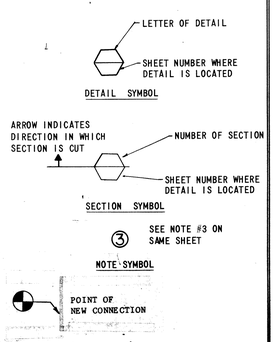
MECHANICAL ABBREVIATIONS & SYMBOLS

MECHANICAL ABBREVIATIONS & DRAWING SYMBOLS

A.D.	AREA DRAIN
A.P.	ACCESS PANEL
B.D.	BUTTERFLY DAMPER
B.D.D.	BACKDRAFT DAMPER
C.B.	CATCH BASIN
C.D.	CANOPY DRAIN
CFM	CUBIC FEET/MIN.
CH.W.COIL	CHILLED WATER COIL
C.I.	CAST IRON
C.O.	CLEANOUT
CSAC	CENTRAL STATION AIR CONDITIONER
CUH	CABINET UNIT HEATER
CUV	CLASSROOM UNIT VENTILATOR
CUV & A.C.	CLASSROOM UNIT VENT & AIR COND.
C.W.	COLD WATER
D.S.	DOWNSPOUT
D.B.	DRY BULB
D.F.	DRINKING FOUNTAIN
D.G.	DOOR GRILLE
DX.COIL	DIRECT EXPANSION REFRIG. COIL
E.B.R.	ELECTRIC BASEBOARD RADIATION
E.C.	ELECTRICAL CONTRACTOR
E.G.	EXHAUST GRILLE
E.H.C.	ELECTRICAL HEATING COIL
ENT.AIR	ENTERING AIR
E.O.M. DRIP	END OF MAIN DRIP
E.S.P.	EXTERNAL STATIC PRESSURE
E.W.C.	ELECTRIC WATER COOLER
F.A.	FACE AREA
FCRC	FAN & COIL ROOM CONDITIONER
F.D.	FLOOR DRAIN
F.DMPR.	FIRE DAMPER
F.E.C.	FIRE EXTINGUISHER CABINET
F.E.	FIRE EXTINGUISHER
F.P.M.	FEET PER MIN.
FT.	FOOT
F.T.R.	FIN TUBE RADIATION
F.V.	FACE VELOCITY
G.C.	GENERAL CONTRACTOR
G.I.	GALVANIZED IRON
G.P.H.	GAL. PER HOUR
G.P.M.	GAL. PER MINUTE
H.B.	HOSE BIBB
H.P.	HORSEPOWER
H.W.	HOT WATER
IN.	INCH
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR
L. OR LAV	LAVATORY
LV. AIR	LEAVING AIR
MBH	1000 BTU/HR.
M.C.	MECHANICAL CONTRACTOR
M.H.	MANHOLE
M.S.	MOP SUMP
M.S.D.	MULTI-VANE SPLITTER DAMPER
O.A.	OUTSIDE AIR
O.S.D.	OPEN SIGHT DRAIN
O.V.	OUTLET VELOCITY
P.D.	PRESSURE DROP
P.R.V.	POWER ROOF VENTILATOR
PROP. R.V.	PROPELLER ROOF VENTILATOR
PSI	POUNDS/SQ. INCH
PUH	PROPELLER UNIT HEATER
RHC	REHEAT COIL
R.A.	RETURN AIR
R.D.	ROOF DRAIN
R.G.	RETURN GRILLE
RIV	ROOF INTAKE VENT
RPM	REVOLUTIONS PER MIN.
RRV	ROOF RELIEF VENT
S.C.	SILL COCK
SCD	SQUARE CEILING DIFFUSER
S.D.	SPLITTER DAMPER
SH.D.	SHOWER DRAIN
S.G.	SUPPLY GRILLE
SH.	SHOWER
SK.	SINK
S.SK.	SERVICE SINK
S.P.	STATIC PRESSURE
S.S.	SOIL STACK
T.C.C.	TEMPERATURE CONTROL CONTRACTOR
T.S.P.	TOTAL STATIC PRESSURE
UR.	URINAL
V.B.	VACUUM BREAKER
V.D.	VOLUME DAMPER
W.	WASTE
W.B.	WET BULB
W.C.	WATER CLOSET
WG.	WATER GAUGE
W.H.	WALL HYDRANT
W.I.	WROUGHT IRON
WTR.	WATER
WT.	WEIGHT
Y.D.	YARD DRAIN

DRAWING SYMBOLS



MECHANICAL SYMBOLS

PIPING

ACID RESISTANT WASTE (SUSPENDED)	
ACID RESISTANT WASTE (BURIED)	
AIR LINE	A
COLD WATER	
COLD SOFT WATER	CS
FIRE LINE	F
FUEL OIL RETURN	FOR
FUEL OIL SUPPLY	FOS
GAS LINE	G
HEATING WATER RETURN	HR
HEATING WATER SUPPLY	HS
HOT SOFT WATER	HSW
HOT WATER (DOMESTIC)	
STORM WATER (SUSPENDED)	
STORM WATER (BURIED)	
SANITARY WASTE (SUSPENDED)	
SANITARY WASTE (BURIED)	
SANITARY VENT	
HOT WATER RETURN	
CHILLED WATER (ONLY) SUPPLY	CHS
CHILLED WATER (ONLY) RETURN	CHR
COMBINATION HOT & COLD WATER SUPPLY	H & CHS
COMBINATION HOT & COLD WATER RETURN	H & CHR
REFRIGERANT LIQUID	RL
REFRIGERANT SUCTION	RS
DRAIN	D
DROP	
PITCH LINE DOWN IN DIRECTION OF ARROW	
RUN-OUT	
RUN-OUT OFF TOP OF MAIN	
RUN-OUT OFF BOTTOM OF MAIN	
TEE OFF SIDE OF MAIN	
LOW PRESSURE STEAM	S
MED. & HIGH PRESSURE STEAM	# STM.
CONDENSATE RETURN (GRAVITY)	R
CONDENSATE RETURN (PUMPED)	O O
MED. & HIGH PRESSURE COND. RETURN	# RTN.
SPRINKLER HEAD	
PIPING TO BE INSTALLED	
PIPING TO BE REMOVED	

VALVES, SPECIALTIES & FITTINGS

AIR CHAMBER	
ANCHOR	
AUTOMATIC AIR VENT	
AUTOMATIC RELIEF VALVE	
AUTOMATIC WATER MAKE-UP VALVE	
BASKET TYPE STRAINER	
BALANCING VALVE	
BUCKET TRAP	B
CHECK VALVE	
ECCENTRIC REDUCER	
EXPANSION JOINT	
FLANGED CONNECTION	
FLOAT & THERMOSTATIC TRAP	F&T
FLEXIBLE PUMP CONNECTION	
GAS METER	M
SHUT-OFF VALVE	
GLOBE VALVE	
'P' TRAP	
PIPE GUIDE	
PRESSURE GAUGE	G
PRESSURE REDUCING VALVE	PRV
RUNNING TRAP	
SHOWER HEAD	
THERMOMETER	T
THERMOMETER WELL	M
THERMOSTATIC TRAP	S
UNION	
'Y' STRAINER	
WATER METER	M
SHOCK ABSORBER	
FLOW CONTROL VALVE	FCV

REFRIGERATION

CHARGING VALVE	
CONDENSER WATER REGULATOR VALVE	
DRYER	D
EVAPORATOR PRESSURE REGULATOR	REFG.
FLEXIBLE PIPE CONNECTION	
MANUAL REFRIGERATION VALVE	H
SIGHT GLASS	
SOLENOYD VALVE	S
STRAINER	
THERMOSTATIC EXPANSION VALVE	

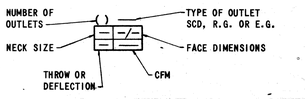
TEMPERATURE CONTROL

ROOM THERMOSTAT (PNEUMATIC)	T
ROOM THERMOSTAT (ELECTRIC)	T E
TEMPERATURE CONTROL VALVE	
3-WAY TEMPERATURE CONTROL VALVE	

SHEET METAL

VERTICAL FIRE DAMPER	
HORIZONTAL FIRE DAMPER	
CEILING FIRE DAMPER	C
VOLUME DAMPER	Z

DIFFUSER OR GRILLE SYMBOL



ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DESCRIPTION
	FLUORESCENT LIGHTING OUTLET
	INCANDESCENT LIGHTING OUTLET (SURFACE)
	INCANDESCENT LIGHTING OUTLET (RECESSED)
	INCANDESCENT LIGHTING OUTLET (WALL MOUNTED)
	DUPLEX RECEPTACLE (MOUNTED AT + 18" UNLESS OTHERWISE NOTED)
	FLOOR MOUNTED DUPLEX RECEPTACLE
	MOTOR OUTLET (SINGLE PHASE) (THREE PHASE)
	MANUAL MOTOR STARTER
	MAGNETIC STARTER WITH DISCONNECT
	DISCONNECT SWITCH (NON-FUSED)
	LIGHTING PANEL
S	SINGLE POLE SWITCH
S3	THREE-WAY SWITCH
S4	FOUR-WAY SWITCH
SK	KEY OPERATED SWITCH
SP	SWITCH WITH PILOT LIGHT
SM	MOMENTARY CONTACT SWITCH
J	JUNCTION BOX
	INDICATES OUTLET IN VERTICAL ALIGNMENT
	CONDUIT IN WALL OR CEILING
	CONDUIT IN OR BELOW FLOOR
	EXPOSED CONDUIT

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2602 E. 55 TH. ST.

TITLE SHEET - MECHANICAL & ELECTRICAL

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	84204
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VIRGIL NICHOLAS REGISTERED PROFESSIONAL ENGINEER No. 7951 STATE OF INDIANA

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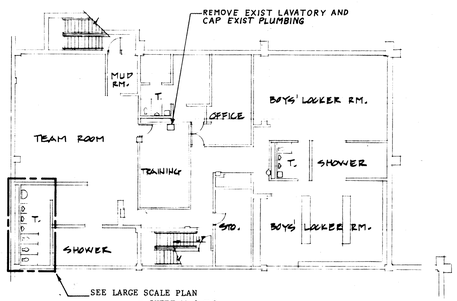
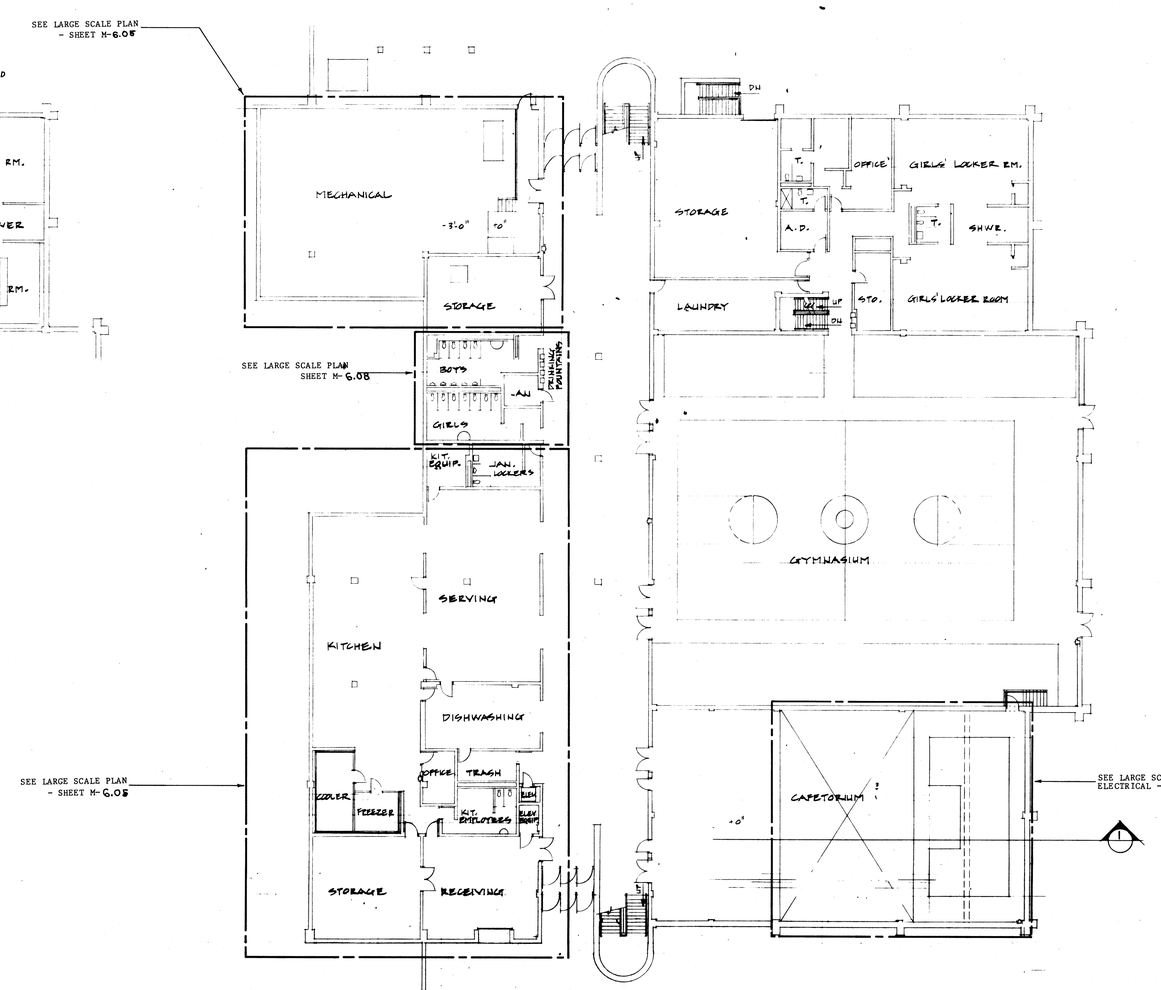


BASEMENT FLOOR PLAN

SCALE: 1/16"-1'-0"



BUILDING GROUND FLOOR PLAN

SCALE 1/16"-1'-0"

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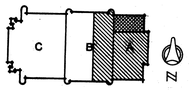

KEY PLAN

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CRAIG MIDDLE SCHOOL - BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

BUILDING GROUND FLOOR PLAN -
MECHANICAL & ELECTRICAL

NO.	DATE	REVISIONS DESCRIPTION

COMM. NO.	84004
DATE	3-29-84
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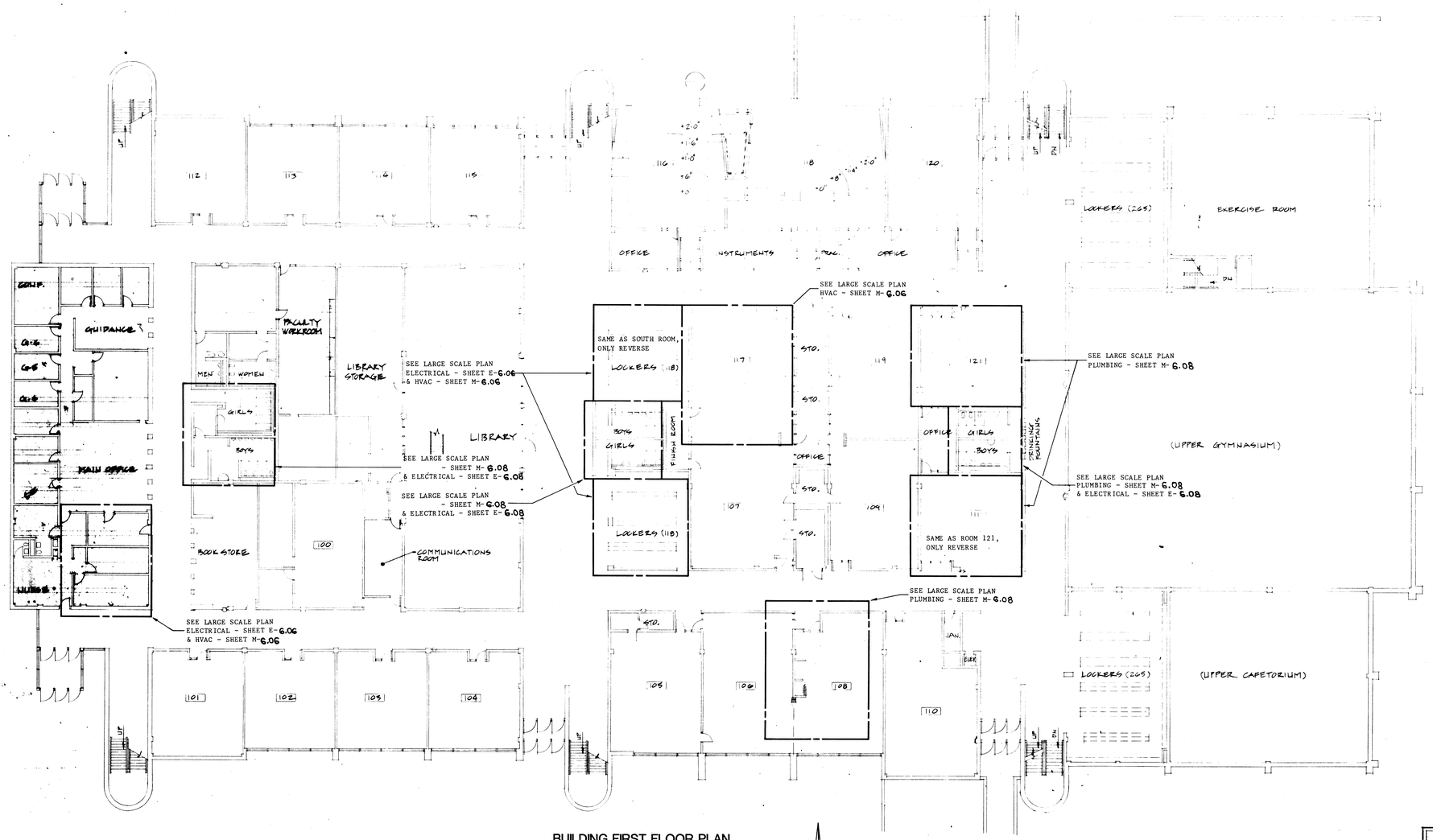

BUILDING FIRST FLOOR PLAN

SCALE 1/16"-1'-0"

N

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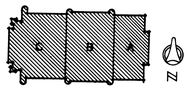

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LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

BUILDING FIRST FLOOR PLAN –
MECHANICAL & ELECTRICAL

REVISIONS		
NO.	DATE	DESCRIPTION

CONM. NO.	84004
DATE	3-29-84
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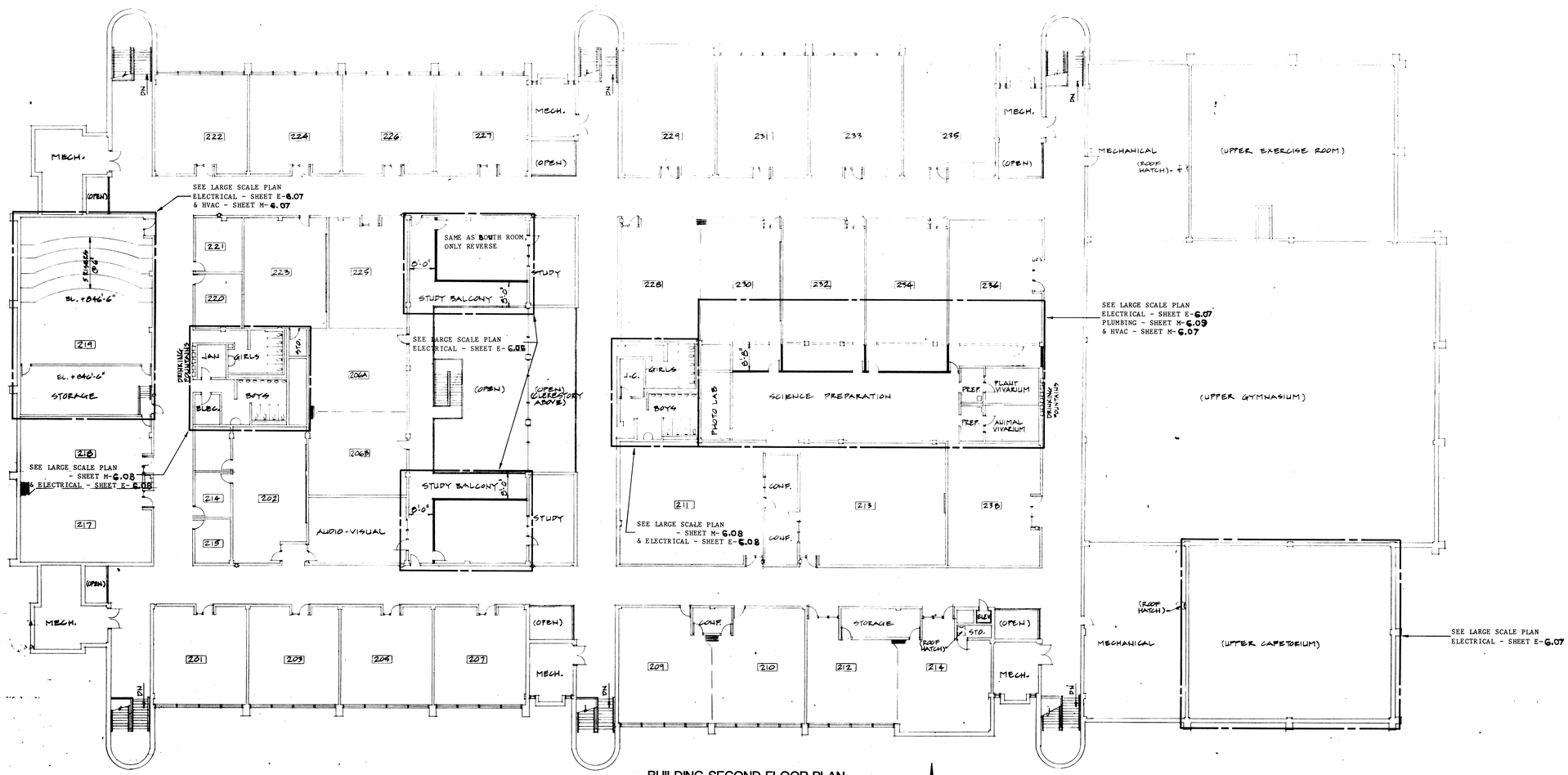

BUILDING SECOND FLOOR PLAN

SCALE 1/16"-1'-0"

NOTE:
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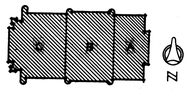

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BUILDING SECOND FLOOR PLAN –
MECHANICAL & ELECTRICAL

CRAIG MIDDLE SCHOOL – BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V, 1984 PROJECTS

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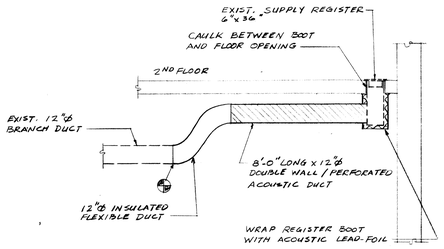
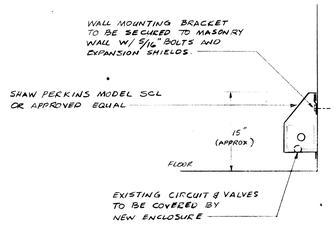
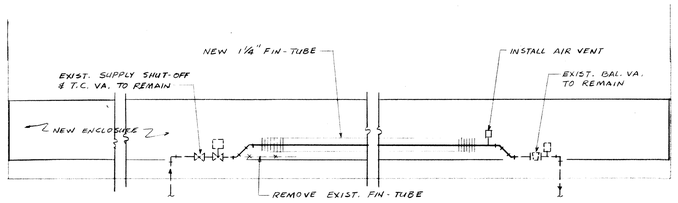


ACOUSTIC TREATMENT DETAIL 'B'
NO SCALE



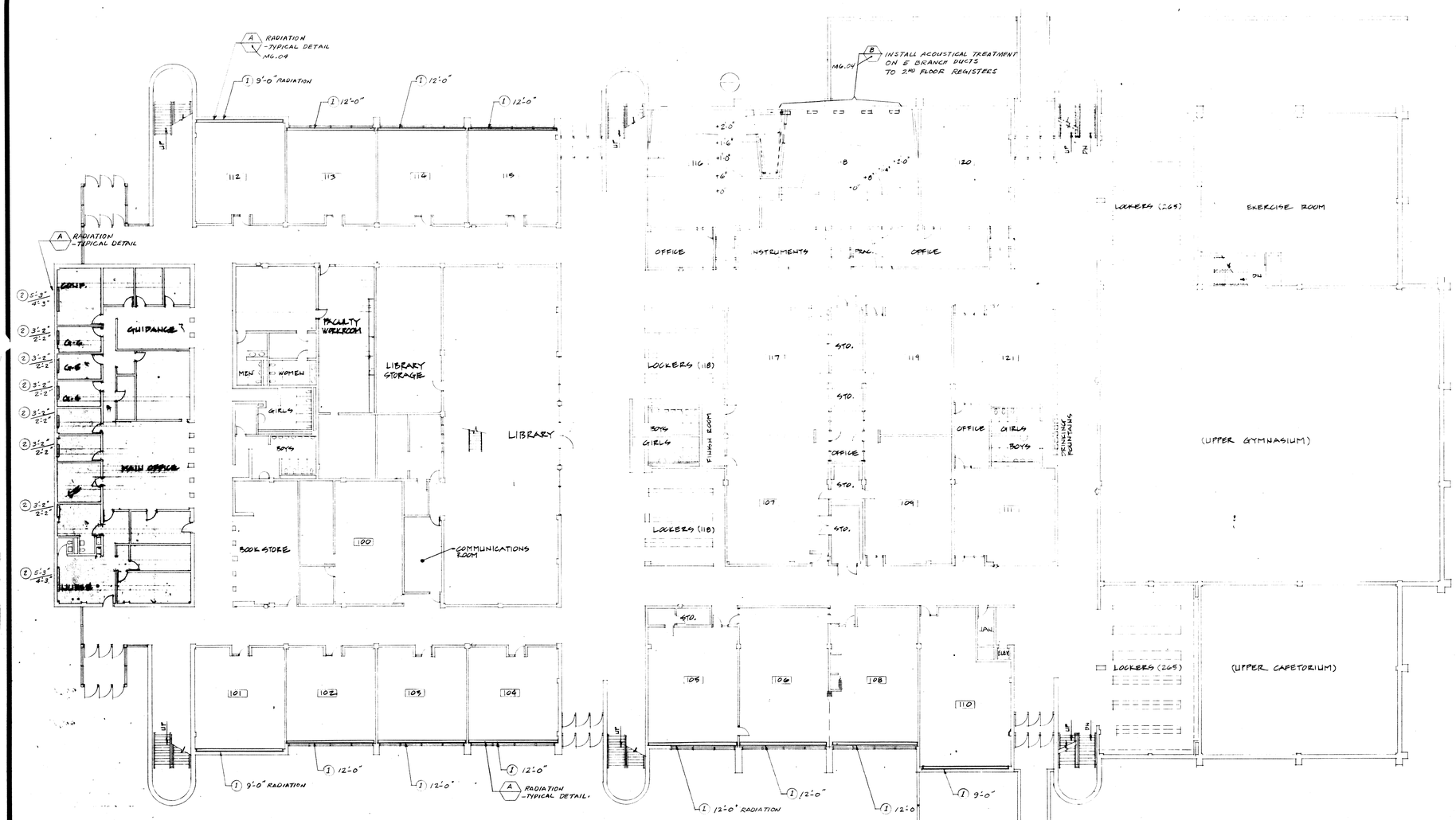


FIN - TUBE ENCLOSURE DETAIL 'A'
NO SCALE

PLAN NOTES

1 REMOVE EXISTING ENCLOSURE AND FIN-TUBE RADIATION. VALVES SHALL REMAIN. INSTALL APPROX. FIN-TUBE LENGTH CALLED FOR AT ROOM. INSTALL ENCLOSURE FROM WALL TO WALL.

2 REMOVE EXISTING ENCLOSURE AND FIN-TUBE RADIATION. VALVES SHALL REMAIN. INSTALL APPROX. FIN-TUBE LENGTH CALLED FOR AT ROOM. INSTALL APPROX. ENCLOSURE LENGTH CALLED FOR AT ROOM.



SMALL SCALE FIRST FLOOR PLAN
SCALE 1/16"-1'-0"

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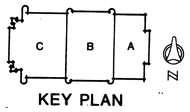

KEY PLAN

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ARCHITECTS/ENGINEERS

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

CRAIG MIDDLE SCHOOL - BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

SMALL SCALE FIRST FLOOR PLAN - HVAC

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	84204
DATE	3-29-84
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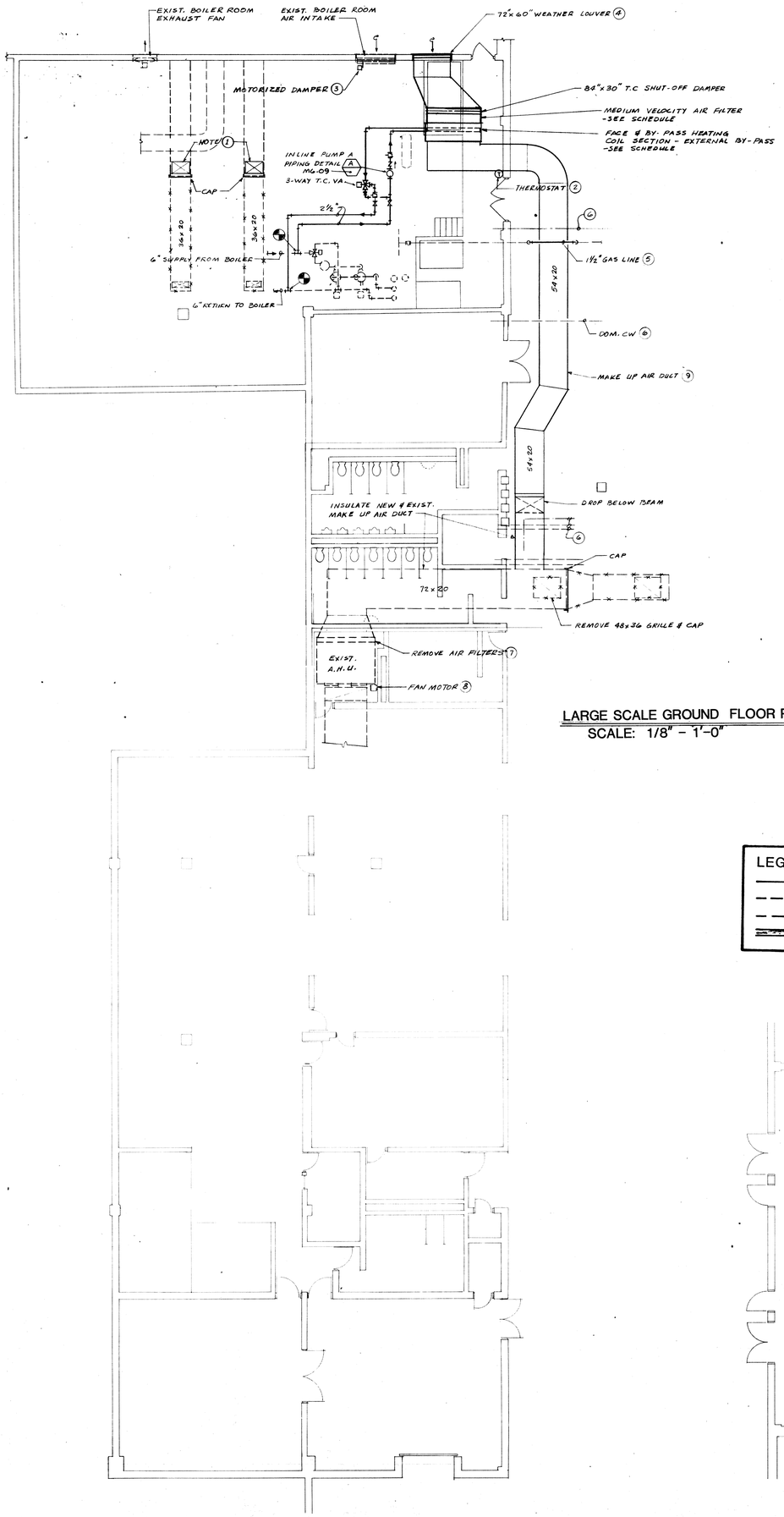
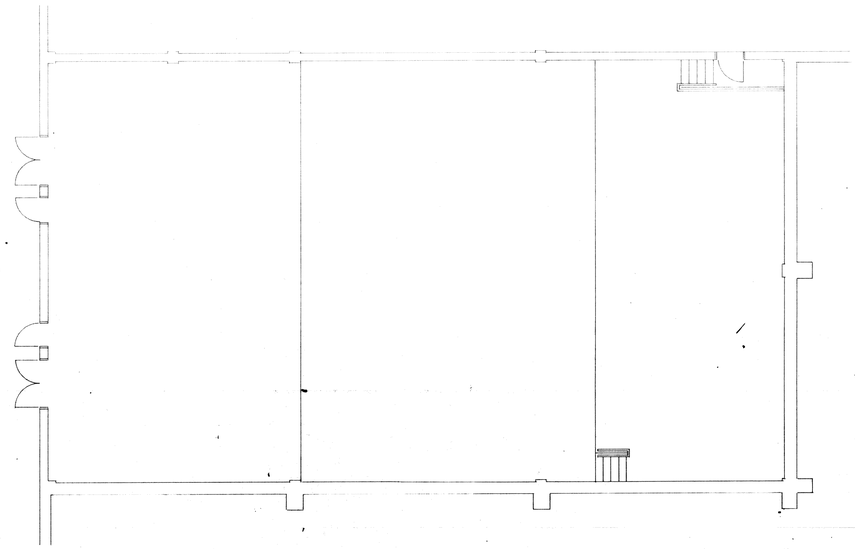


LARGE SCALE GROUND FLOOR PLAN
SCALE: 1/8" - 1'-0"

LEGEND
- NEW CONSTRUCTION
- EXISTING TO REMAIN
- EXISTING TO REMOVE
- NEW WALLS OR PARTITIONS

PLAN NOTES

1. INSTALL 34" X 20" COMBUSTION AIR INTAKE OPENINGS ON TOP SIDE OF EXISTING DUCT. OPENING TO HAVE HARDWARE CLOTH COVER.
2. INSTALL PNEUMATIC ROOM THERMOSTAT (IN GUARD) SET AT 80° F. TO CYCLE P.E. SWITCH AND BOILER ROOM EXHAUST FAN. MOTORIZED DAMPER AT AIR INTAKE TO BE INTERLOCKED TO OPEN WHEN FAN RUNS.
3. EXISTING DAMPER TO REMAIN. INSTALL NEW T.C. ACTUATOR TO REPLACE EXISTING.
4. NEW WALL OPENING AND LINTEL BY G.C.
5. RELOCATE EXISTING GAS LINE TO COORDINATE WITH NEW DUCT. INSTALL DIRT LEG AT RISER.
6. RELOCATE EXISTING PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ALLOW FOR INSTALLATION OF NEW DUCT.
7. REMOVE EXISTING AIR FILTERS. FIX ACCESS DOOR CLOSED.
8. CHANGE FAN DRIVE ON EXISTING AIR HANDLING UNIT TO INCREASE RPM TO MOTOR NAME PLATE AMPS.
9. REMOVE AND REINSTALL ACOUSTICAL CEILING AS REQUIRED FOR INSTALLATION OF MAKE UP AIR DUCT. REPLACE ANY DAMAGED PADS OR GRID.



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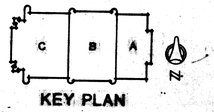
EXCEPT AS OTHERWISE NOTED



KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

GROUND FLOOR LARGE SCALE PLANS - MECHANICAL

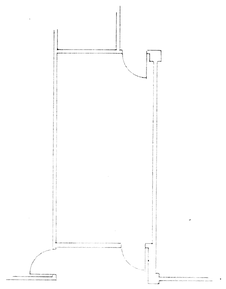
CRAIG MIDDLE SCHOOL - BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

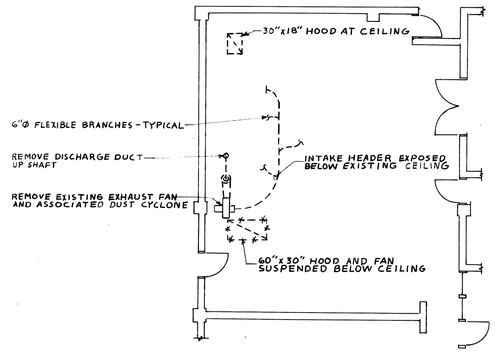
REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO. 8420-4
DATE 5-29-84
DRAWN BY JW
CHECKED BY BVC

VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET M6.05
OF



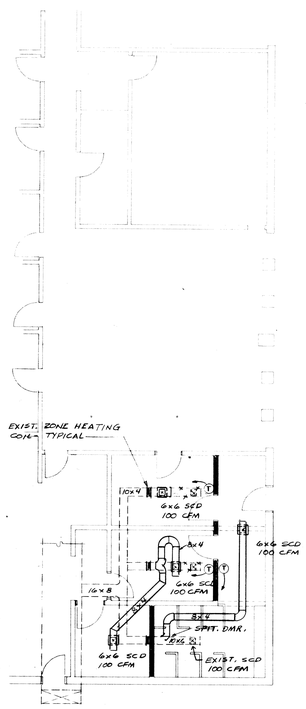


DEMOLITION PLAN - ROOM 117

SCALE 1/8" 1'-0"

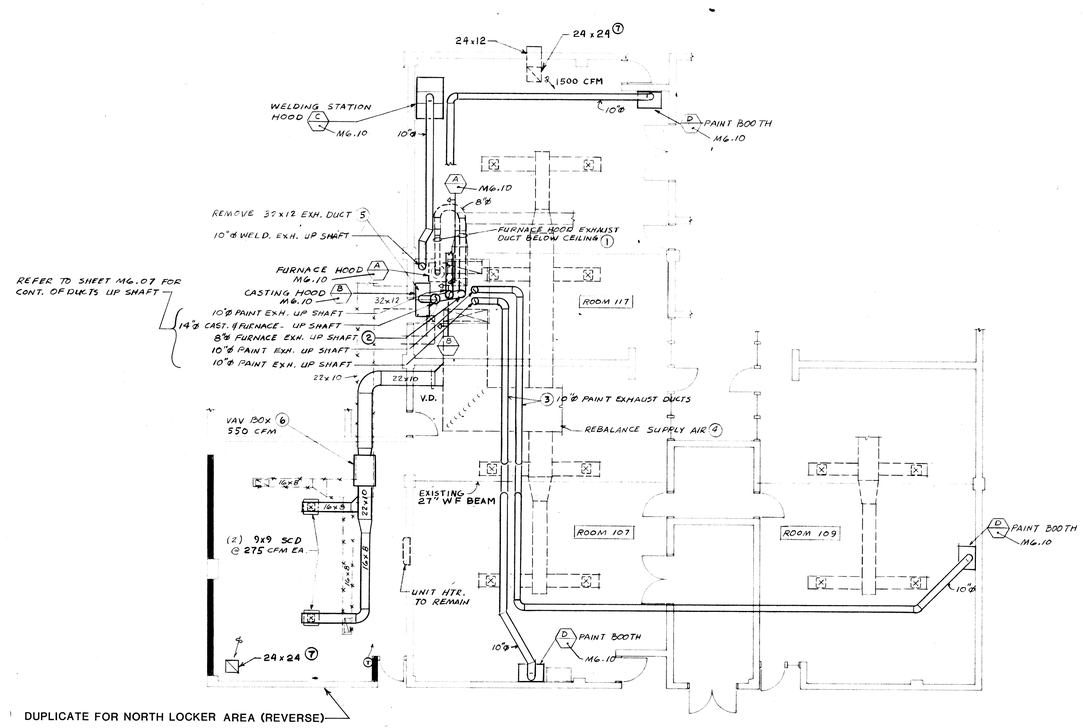
PLAN NOTES

1. ALL DUCTS EXPOSED TO ROOM AND SHOP BUILT WELDING, FURNACE AND CASTING HOODS TO BE PAINTED. PAINT PRIME COAT AND 2 FINISH COATS WITH COLOR SELECTED BY ARCHITECT.
2. INSULATE ENTIRE FURNACE EXHAUST DUCT ABOVE HOOD. REFER TO INSULATION SCHEDULE. DUCT SHALL BE MINIMUM 26 GA. GALV. STEEL.
3. REMOVE JOIST CROSS-BRIDGING WHERE NECESSARY TO ROUTE DUCTS THRU PLENUM. DUCT ROUTING IS APPROXIMATE AND SHALL BE FIELD VERIFIED. NO EXTRA CHARGES WILL BE ALLOWED FOR INTERFERENCES.
4. 6 CLASSROOMS SERVED BY R.T. UNIT #4 SHALL BE REBALANCED. REDUCT TO SUPPLY AIR BY 10% OF EXISTING QUANTITY TO ALLOW ADDITIONAL AIR FOR LOCKER AREAS.
5. REMOVE EXISTING 32 X 12 LOCKER EXHAUST DUCT RISER UP SHAFT AND CAP WHERE 2ND FLOOR BRANCHES JOIN MAIN.
6. VARIABLE VOLUME BOX TO BE LIKE CARNES MODEL AVCB - SIZE 12 FOR LOW VELOCITY PRESSURE DROP, WITH SOUND ATTENUATED PLENUM. CONNECT TEMPERATURE CONTROL AIR AND PROVIDE THERMOSTAT.
7. EGG-CRATE LAY-IN CEILING GRILLE.



LARGE SCALE PLAN - OFFICE

SCALE - 1/8" 1'-0"



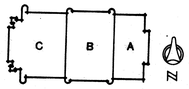
LARGE SCALE PLAN - SOUTH LOCKER AREA & ROOMS 107, 109, & 117

SCALE - 1/8" 1'-0"

LEGEND

- NEW CONSTRUCTION
- EXISTING TO REMAIN
- EXISTING TO REMOVE
- NEW WALLS OR PARTITIONS

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED



KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

FIRST FLOOR LARGE SCALE PLANS - HVAC

CRAIG MIDDLE SCHOOL - BID PACKAGE #6

LAWRENCE TOWNSHIP M.S.D.
PHASE V, 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

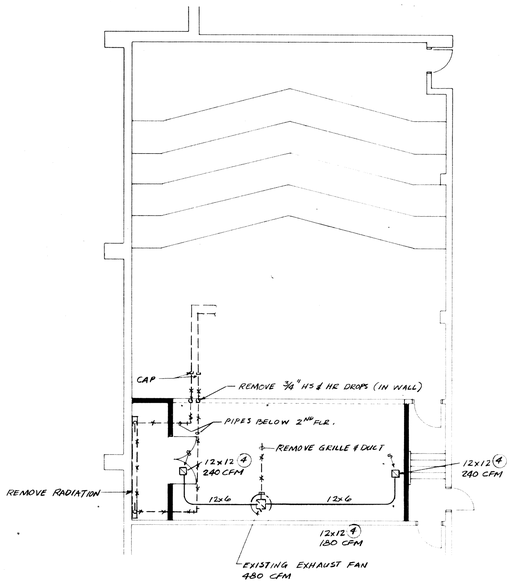
COMM. NO.	84004
DATE	3-29-84
DRAWN BY	JW
CHECKED BY	BOC

VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY

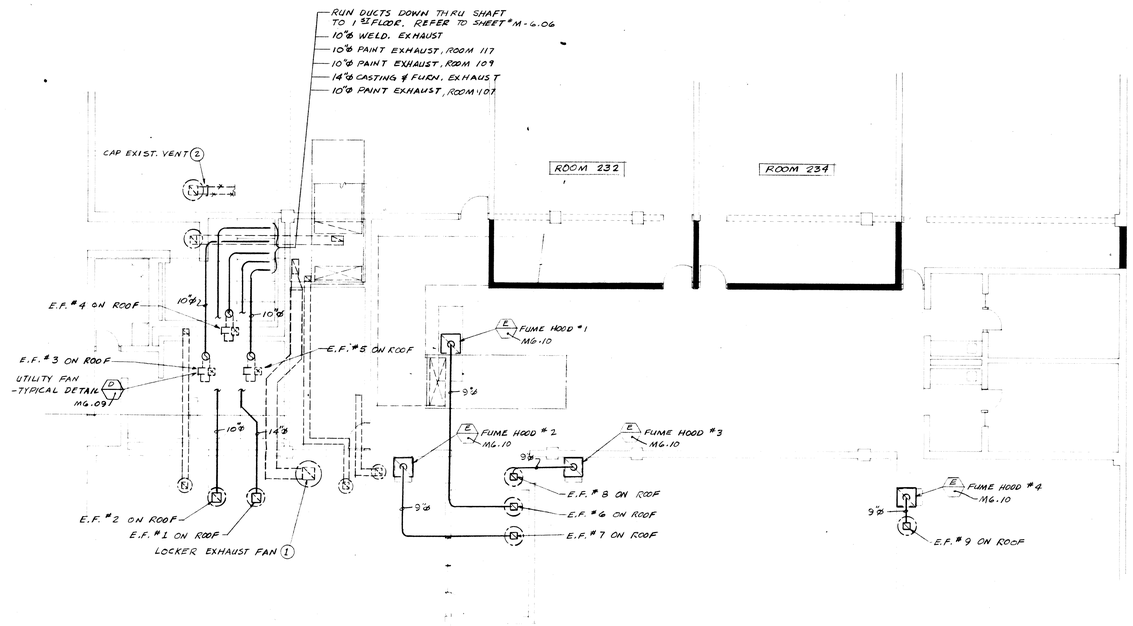
SHEET M6.06

OF



LARGE SCALE PLAN – 219

SCALE: 1/8" – 1'-0"



LARGE SCALE PLAN – ROOMS 232, 234, 236 & TOILET ROOMS

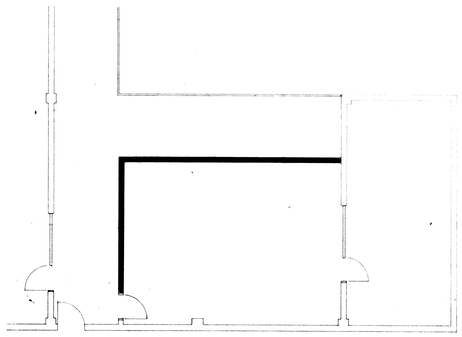
SCALE: 1/8" – 1'-0"

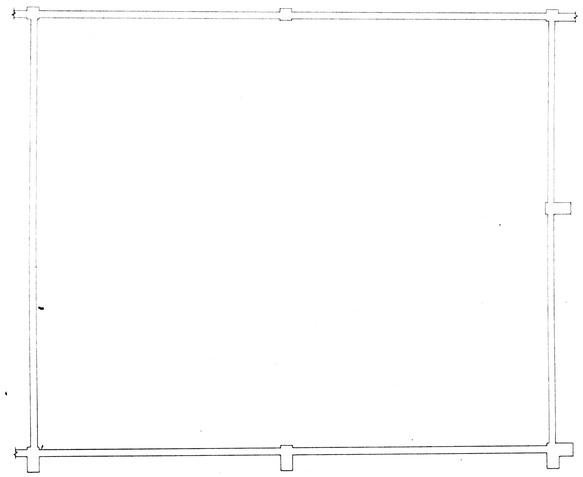
LEGEND

- NEW CONSTRUCTION
- EXISTING TO REMAIN
- EXISTING TO REMOVE
- NEW WALLS OR PARTITIONS

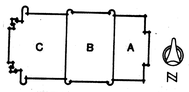
PLAN NOTES

1. CHANGE DRIVE ON EXISTING ROOF EXHAUST FAN TO REDUCE TO 1800 CFM @ .25" S.P.
2. DISCONNECT EXISTING WELDING EXHAUST FAN AND CAP DUCT BELOW ROOF.
3. REMOVE AND REINSTALL ACOUSTICAL CEILING AS REQUIRED FOR INSTALLATION OF DUCTWORK AND PIPING. REPLACE ANY DAMAGED PADS OR GRID.
4. EXHAUST REGISTER WITH VOLUME DAMPER.





NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED



KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

SECOND FLOOR LARGE SCALE PLANS – HVAC

CRAIG MIDDLE SCHOOL – BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V, 1984 PROJECTS

NO.	DATE	REVISIONS DESCRIPTION

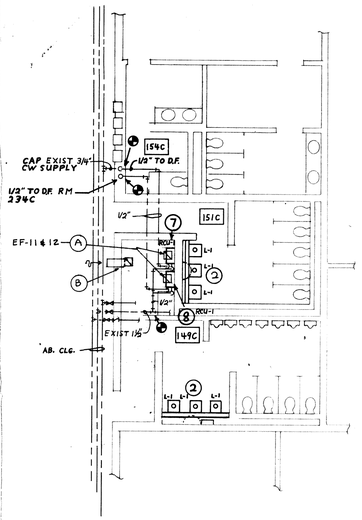
COMM. NO.
DATE
DRAWN BY
CHECKED BY

VIRGIL NICHOLAS REGISTERED PROFESSIONAL ENGINEER No. 7951 STATE OF INDIANA

CERTIFIED BY

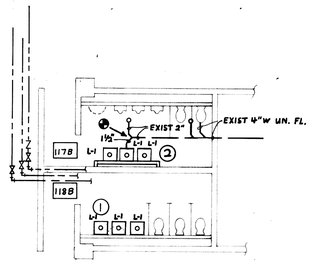
SHEET
M6.07

OF



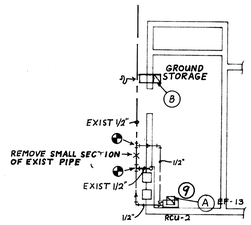
TOILET ROOM PLAN 149C-151C

SCALE: 1/8''-1'-0''



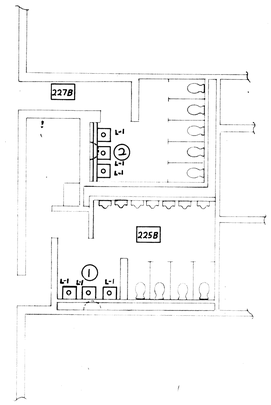
TOILET ROOM PLAN 117B-118B

SCALE: 1/8''-1'-0''



GROUND STORAGE ROOM PLAN

SCALE: 1/8''-1'-0''



TOILET ROOM PLAN 225B-227B

SCALE: 1/8''-1'-0''

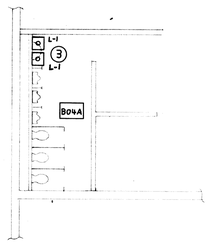
PLUMBING PLAN NOTES

1. REMOVE EXISTING BRADLEY UNIT AND INSTALL LAVATORIES AS SHOWN. CONNECT TO EXISTING PIPING IN CHASE.
2. REMOVE EXISTING BRADLEY UNIT AND INSTALL LAVATORIES AS SHOWN. A CHASE OF 4" BLOCK SHALL BE BUILT AND FINISHED TO MATCH EXISTING. CONNECT TO EXISTING PIPING.
3. REMOVE EXISTING BRADLEY UNIT AND INSTALL 1 LAVATORY AS SHOWN. CONNECT TO EXISTING PIPING.
4. INSTALL 1 SERVICE SINK AS SHOWN AND CONNECT TO EXISTING PIPING. REWORK THE EXISTING WASTE PIPE IF NECESSARY TO OBTAIN NEEDED HEIGHT. CONNECT TO HW AND CW AS SHOWN ABOVE CEILING.
5. REMOVE EXISTING SINK AND INSTALL 2 SINKS IN EXISTING BASE AND NEW COUNTERTOP. INSTALL NEW SINK IN NEW BASE AND NEW COUNTERTOP. CONNECT TO EXISTING PIPING IN CHASE AS SHOWN ON DETAIL 'E' SHEET M6.09.

   PLASTER TRAPS SHALL BE J.R. SMITH #8710.
6. ALL HW & CW SUPPLY CONNECTIONS TO SINKS AND LAVATORIES SHALL BE 1/2". ALL WASTE PIPE CONNECTIONS SHALL BE 1-1/2" UNLESS OTHERWISE NOTED.
7. INSTALL REMOTE COOLING UNIT AS HIGH AS POSSIBLE ON WALL OF ROOM 150C. INTERCEPT SUPPLY LINES TO DRINKING FOUNTAINS OUTSIDE OF 154C AS SHOWN.
8. INSTALL REMOTE COOLING UNIT AS HIGH AS POSSIBLE ON WALL OF ROOM 150C. INTERCEPT SUPPLY LINES WHICH SERVE THE DRINKING FOUNTAINS OUTSIDE OF ROOM 236C AS SHOWN.
9. INSTALL REMOTE COOLING UNIT AS HIGH AS POSSIBLE ON WALL OF GROUND STORAGE ROOM. INTERCEPT SUPPLY LINES TO DRINKING FOUNTAINS OUTSIDE OF SAME ROOM AS SHOWN.
10. INSTALL REMOTE COOLING UNIT ON WALL AS HIGH AS POSSIBLE OF STORAGE ROOM AS SHOWN. INTERCEPT SUPPLY LINES TO DRINKING FOUNTAINS OUTSIDE OF SAME ROOM.
11. REMOVE 1 W.C. AND 1 PARTITION AS SHOWN TO ACCOMODATE HANDICAPPED. PATCH AND FINISH TO MATCH EXISTING.
12. CONFIRM LOCATION OF EXISTING SUPPLY TO DRINKING FOUNTAINS.
13. CONTRACTOR SHALL REPAIR AND FINISH TO MATCH EXISTING, ALL AREAS OF DAMAGE WHICH WERE INCURRED AS A RESULT OF THE CONSTRUCTION WORK.

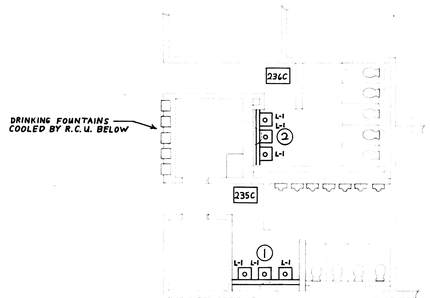
MECHANICAL PLAN NOTES

A. INSTALL CEILNG EXHAUST FAN (EF 10-15). REFER TO SCHEDULE.
B. AIR TRANSFER GRILLE - 22 X 12 GRILLE WITH 22 X 8 DUCT TO CORRIDOR.



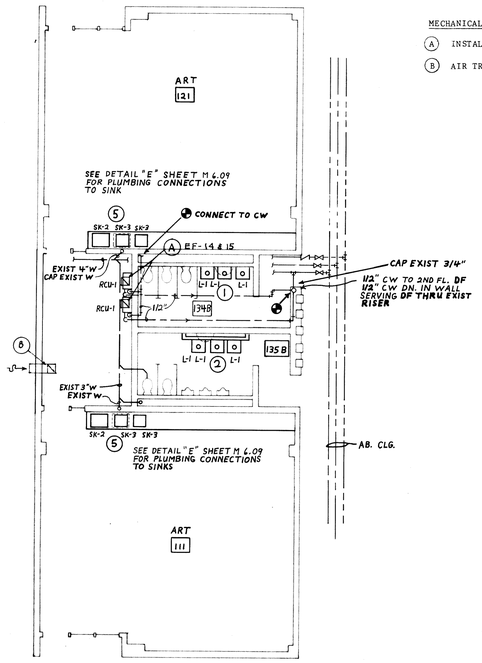
TOILET ROOM PLAN B04A

SCALE: 1/8''-1'-0''



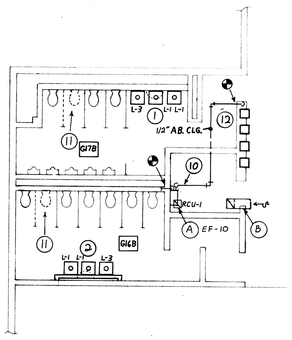
TOILET ROOM PLAN 235C-236C

SCALE: 1/8''-1'-0''



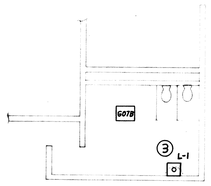
ART ROOM PLAN 111-121
TOILET ROOM PLAN 134B-135B

SCALE: 1/8''-1'-0''



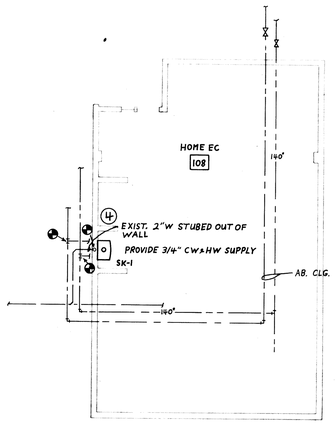
TOILET ROOM PLAN G16B-G17B

SCALE: 1/8''-1'-0''



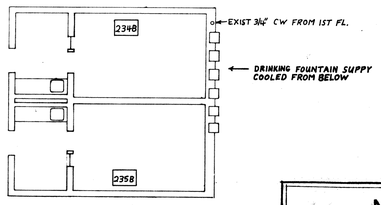
TOILET ROOM PLAN G07B

SCALE: 1/8''-1'-0''



HOME EC. ROOM PLAN

SCALE: 1/8''-1'-0''



ROOM PLAN 234B-235B

SCALE: 1/8''-1'-0''

NOTE:
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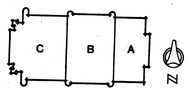
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED



KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

LARGE SCALE FLOOR PLANS - MECHANICAL

ARCHITECTS/ENGINEERS
CRAIG MIDDLE SCHOOL - BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

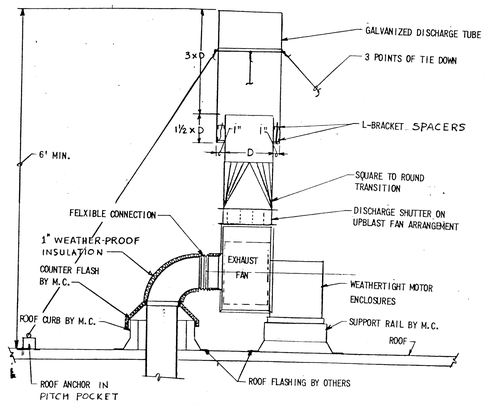
REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	8-100-4
DATE	3-29-84
DRAWN BY	K.B.
CHECKED BY	EOC

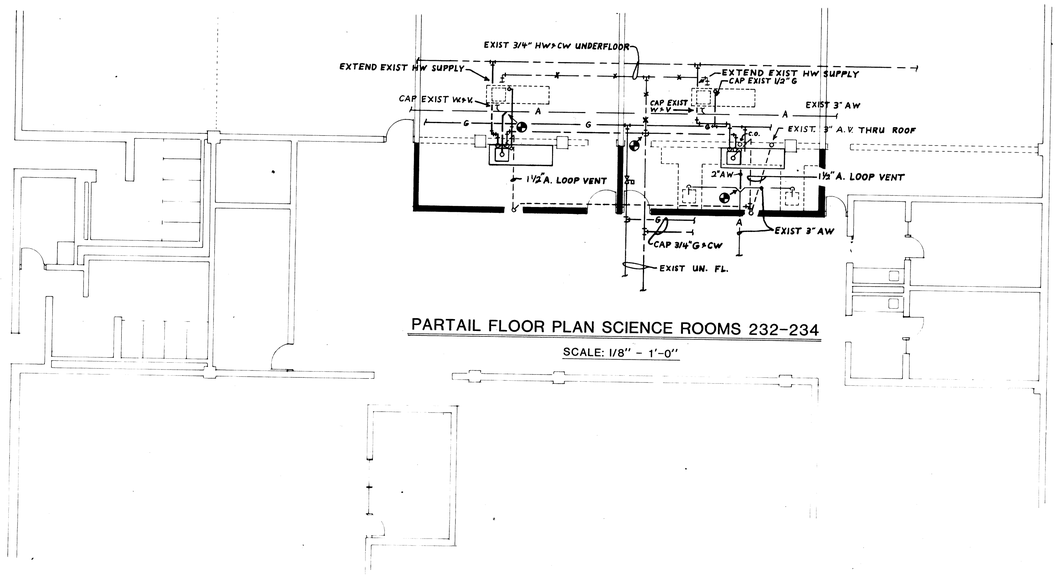
VIRGIL NICHOLAS REGISTERED PROFESSIONAL ENGINEER No. 7951 STATE OF INDIANA

CERTIFIED BY

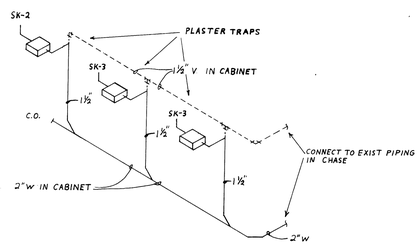
SHEET
M6.08
OF



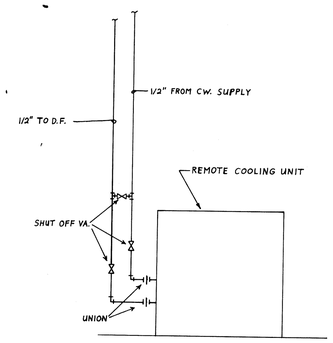
UTILITY VENT SET
W/FUME DISCHARGE
DETAIL 'D'
NO SCALE



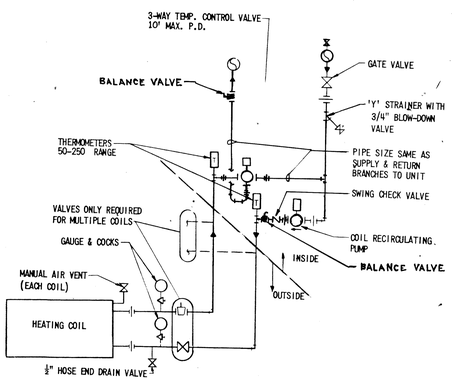
PARTAIL FLOOR PLAN SCIENCE ROOMS 232-234
SCALE: 1/8" - 1'-0"



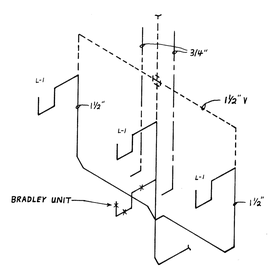
TYPICAL ART ROOMS PLUMBING DIAGRAM 111-121
DETAIL "E"
NO SCALE



REMOTE COOLING UNIT
DETAIL "C"
NO SCALE



RECIRCULATED WATER COIL
DETAIL 'A'
NO SCALE



TYPICAL LAVATORY PLUMBING DIAGRAM
DETAIL "B"
NO SCALE

NOTE:
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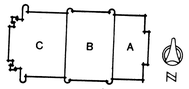


KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

DIAGRAMS & DETAILS – PLUMBING

CRAIG MIDDLE SCHOOL – BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	8409-4
DATE	3-29-84
DRAWN BY	KB
CHECKED BY	FOC

VIRGIL R. NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET
M6.09
OF

FAN SCHEDULE

MARK NO.	NAME	MANUFACTURER & MODEL	LOCATION	SERVICE/PURPOSE	FAN OPERATING DATA: CFM	OUTLET VEL.	STATIC PRESS.	RPM	BHP	MISC. DATA: MOTOR RPM	DRIVE ARRGT.	WEIGHT	REMARKS	MOTOR DATA: H.P.	FLA	VOLT PHASE	STARTER: TYPE	NEMA ENCL.	MOUNT	SPECIAL CONTROL	FURN. BY	DISCONNECT: TYPE	NEMA ENCL.	FURN. BY	REMOTE CONTROLS: CONTROLS	FURN. BY	ELECTRICAL CONNECTIONS: WIRE & CONDUIT	CIR. BRKRS. OR FUSED SWITCH: NO.	FRAME	P.	AMPS.	PANEL	MARK NO.
EF-1	POWER ROOF VENT UPBLAST	COOK 18UR4B	ROOF	CASTING HOOD EXHAUST	1400		0.75	935	0.30		BELT	300	W/ROOF CURB, BDD & B.S.	0.33		115/1																	
EF-2	POWER ROOF VENT UPBLAST	COOK 15UR3B	ROOF	WELDING HOOD EXHAUST	800		0.75	900	0.21		BELT	200	W/ROOF CURB, BDD & B.S.	0.25		115/1																	
EF-3,4&5	UTILITY FAN VENT SET	TWIN CITY 122-BCV	ROOF	PAINT BOOTH EXHAUST	900		1.0	1460	0.23		BELT	300	W/DISCH. SHUTTER, VIB ISOLATION, WEATHER COVER, TYPE B SPARK RESISTANT CONSTRUCTION	0.33		115/1																	
EF-6-9	POWER ROOF VENT UPBLAST	COOK 10OUR150	ROOF	FUME HOOD EXHAUST	500		0.50	1550	.08	1550	DIR.	100	W/ROOF CURB, BDD & B.S.	0.10		115/1																	
EF-10-15	CENTRIFUGAL CEILING FAN	COOK GEMINI 6-10	JANITORS CLOSET	WATER COOLER EXHAUST	490		0.125	1075		1075		30	W/INTAKE GRILLE & DISCHARGE	0.08		115/1																	

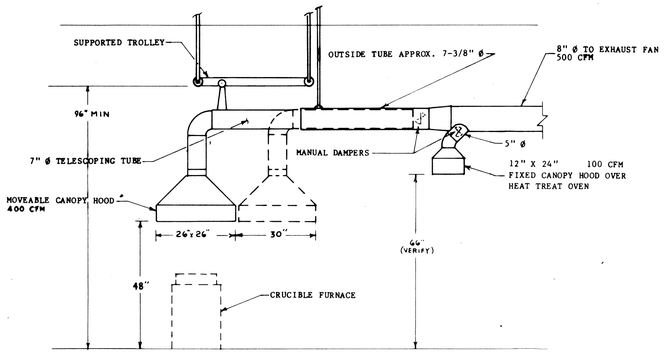
MISCELLANEOUS EQUIPMENT SCHEDULE

MARK NO.	NAME	MANUFACTURER & MODEL	LOCATION	SERVICE/PURPOSE	OPERATING DATA OR PHYSICAL DATA	WEIGHT	REMARKS	MOTOR DATA: H.P.	FLA	VOLT PHASE	STARTER: TYPE	NEMA ENCL.	MOUNT	SPECIAL CONTROL	FURN. BY	DISCONNECT: TYPE	NEMA ENCL.	FURN. BY	REMOTE CONTROL: CONTROLS	FURN. BY	ELECTRICAL CONNECTIONS: WIRE & CONDUIT	CIR. BRKRS. OR FUSED SWITCH: NO.	FRAME	P.	AMPS	PANEL	MARK NO.
	PAINT BOOTH HOOD	STEVENS F7-520-36W	INDUSTRIAL ARTS	PAINT EXHAUST	900 CFM, ENAMEL FINISH	150	W/BASE CABT., FILTER, LIGHT OR APPROVED EQUAL																				
	RADIATION	SHAW-PERKINS SCL GROUND TANE	SEE PLANS	HOT WATER RADIATION	1140 BTU/HR W/180° AWT 1-1/4" COP/ALUM 4-1/4 X 4-1/4 - 40 FINS		W/REQUIRED END CAPS, SPLICE PLATES & CLOSURES																				
	HEATING COIL W/ FACE & BY-PASS	TRANE #21	BOILER ROOM	KITCHEN MAKEUP	12,000 CFM, -10° EAT TO 70° LAT, W/ 54 GPM, 190° EWT TO 150° LWT	500	MIN 20 SF COIL, MAX 0.2" AIR PD 2 ROW, 9 FIN/IN. EXTERNAL FACE & BY-PASS																				
	AIR FILTER HOUSING	TRANE #21	BOILER ROOM	HEATING COIL	12,000 CFM, 2" THICK THROW AWAY MIN. 34 S.F.	200																					
PUMP A	IN-LINE CIRC. PUMP	B & G - 60 2" A	BOILER ROOM	HEATING COIL	54 GPM @ 30 FT. HEAD 1750	50		1		460/3																	

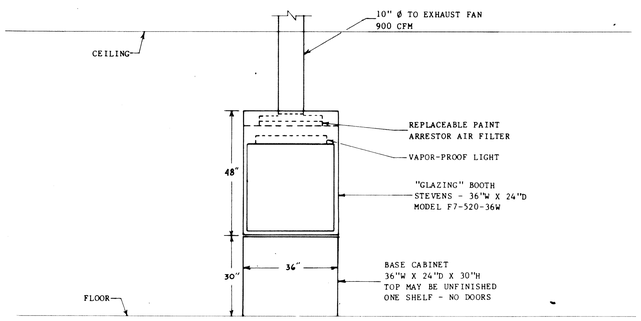
SCHEDULE OF DUCT INSULATION & PIPE INSULATION

DUCT APPLICATION	INSULATION TYPE: NO INSULATION	2" FLEXIBLE FIBERGLASS, 2" THICK	3#" RIGID BOARD FIBERGLASS, 1" THICK	1" THICK STANDARD ARMAFLEX	6# RIGID BOARD FIBERGLASS, 1" THICK	3" DUCT LINER BOARD, 2" THICK	FR ARMAFLEX 1/2" THICK	3#" FIBERGLASS 1 1/2" THICK
DOMESTIC HOT WATER S & R							○	
DOMESTIC COLD WATER							○	
HEATING WATER S & R								1
SUPPLY AIR DUCTWORK		○						
OUTSIDE AIR DUCTWORK			○					
RETURN & EXHAUST AIR DUCTWORK 6	○							

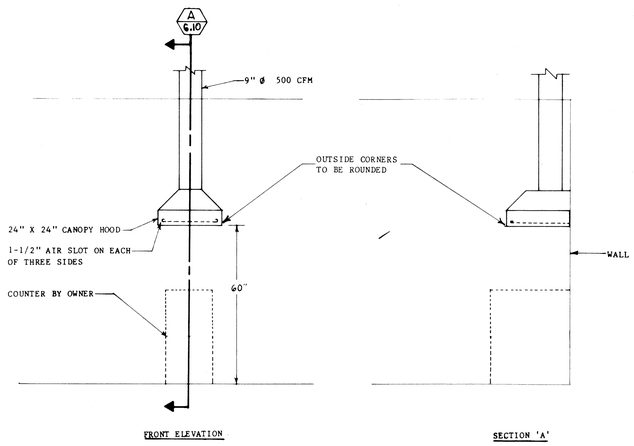
NOTES:
1. WITH ALL SERVICE JACKET.
2. FINISH WITH PRESIZED FIBERGLASS CLOTH.
3. FINISH WITH 2 COATS OF WEATHERPROOF VINYL PLASTIC.
4. DUCTS INSULATED INSIDE WITH DUCT LINER SHALL NOT BE INSULATED ON OUTSIDE.
5. WITH FACTORY APPLIED FOIL REINFORCED KRAFT JACKET.
6. REFER TO FIRST FLOOR LARGE SCALE PLAN - HVAC FOR INSULATION OF FURNACE DUCT.



FURNACE HOOD ELEVATION
DETAIL 'A'
1/2" = 1'-0"

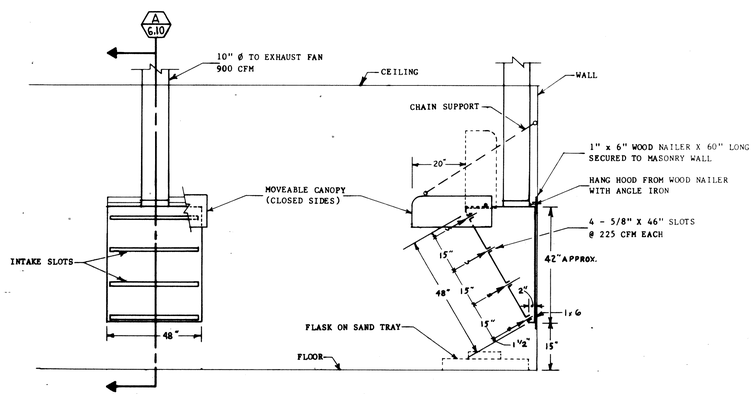


PAINT BOOTH
DETAIL 'D'
1/2" = 1'-0"



FRONT ELEVATION — SECTION 'A'

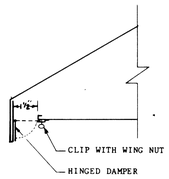
SCIENCE FUME HOOD
DETAIL 'E'
1/2"=1'-0"



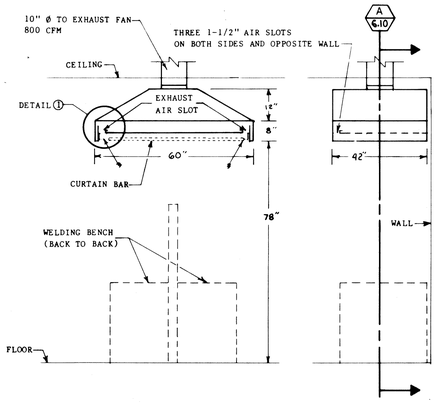
FRONT ELEVATION
1/2" = 1'-0"

CASTING HOOD
DETAIL 'B'

SECTION 'A'
1/2" = 1'-0"



DETAIL 1
NO SCALE

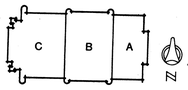


SECTION 'A'
1/2" = 1'-0"

FRONT ELEVATION
1/2" = 1'-0"

WELDING STATION HOOD
DETAIL 'C'

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED



KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

SCHEDULES & DETAILS - MECHANICAL

ARCHITECTS/ENGINEERS

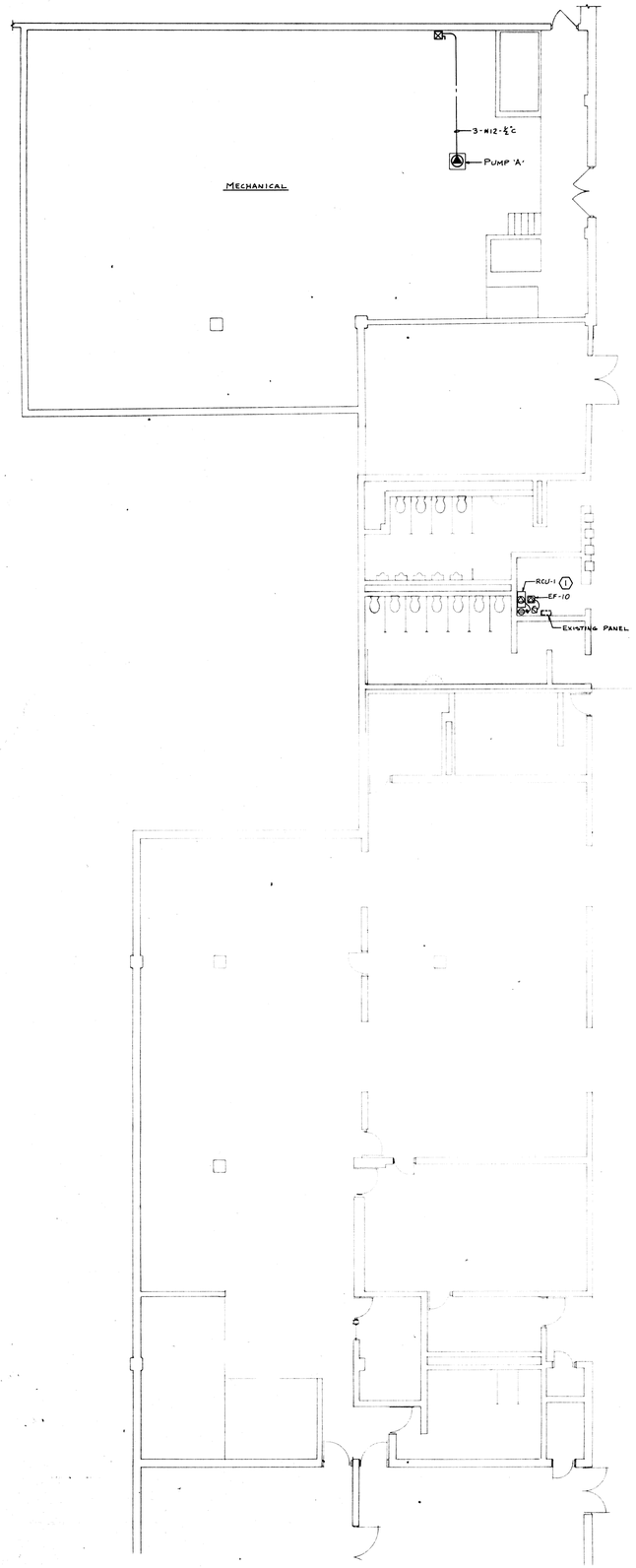
CRAIG MIDDLE SCHOOL - BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO. 8404
DATE 3-29-84
DRAWN BY JE
CHECKED BY BOC

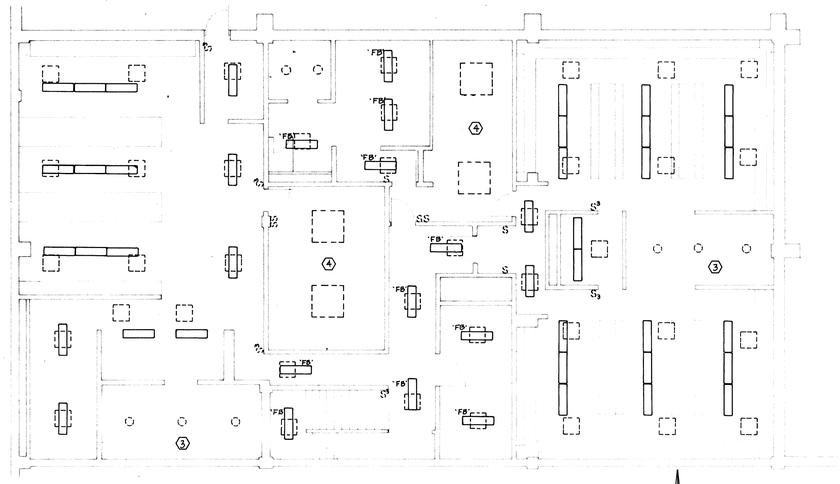
VIRGIL NICHOLAS MUSSETT REGISTERED No. 7951 PROFESSIONAL ENGINEER INDIANA
CERTIFIED BY

SHEET
M6.10
OF



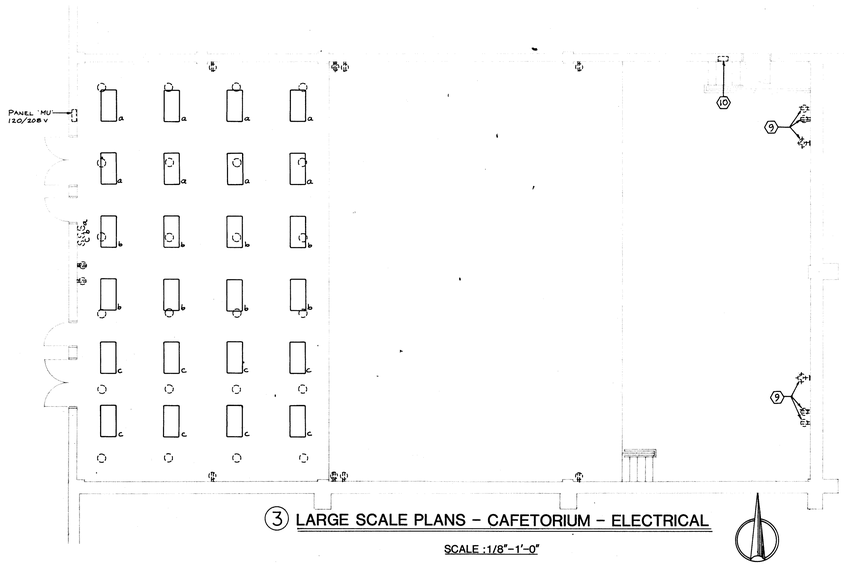
① LARGE SCALE PLAN – KITCHEN & BOILER ROOM – ELECTRICAL

SCALE :1/8"=1'-0"



② LARGE SCALE PLAN – BASEMENT – ELECTRICAL

SCALE :1/8"=1'-0"



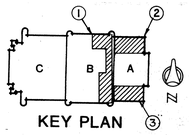
③ LARGE SCALE PLANS – CAFETORIUM – ELECTRICAL

SCALE :1/8"=1'-0"

NOTES:

1. REMOTE COOLING UNIT (RCU) AND EXHAUST FAN (EF) TO BE CONNECTED TO EXISTING 120/208 VOLT PANEL IN JANITOR'S CLOSET. INSTALL 20A-1P BREAKER IN SPARE SPACE TO FEED RCU AND EF. CONNECT WITH #12 WIRE. E.C. SHALL INSTALL CORD AND PLUG ON RCU.
2. EXISTING 2' X 2' FIXTURES SHOWN WITH DASHED LINES ON BASEMENT PLAN ARE TO BE REMOVED AND TURNED OVER TO OWNER.
3. EXISTING INCANDESCENT FIXTURES IN SHOWER AREAS ARE TO BE REMOVED AND THEN REINSTALLED ON NEW CEILING.
4. EXISTING 4' X 4' FIXTURES ARE TO REMAIN.
5. NEW 1' X 4' FIXTURES SHALL BE TYPE 'FD' UNLESS OTHERWISE NOTED OR INDICATED. THESE FIXTURES ARE IN AREAS WHERE NEW CEILINGS ARE BEING INSTALLED.
6. NEW LIGHT FIXTURES IN BASEMENT AREA SHALL BE CONNECTED TO EXISTING CIRCUITS. CIRCUITS IN THIS AREA ARE 120 VOLT.
7. IN CAFETORIUM, INCANDESCENT FIXTURES WHICH ARE SHOWN WITH DASHED LINES SHALL BE REMOVED AND TURNED OVER TO OWNER. OTHER EXISTING FIXTURES IN CAFETORIUM ARE TO REMAIN.
8. NEW 2' X 4' FIXTURES IN CAFETORIUM SHALL BE TYPE 'FC'. THESE FIXTURES SHALL BE CONNECTED TO EXISTING CIRCUITS FROM PANEL 'MU', BUT EXISTING WIRING SHALL BE REWORKED TO GIVE SWITCHING ARRANGEMENT SHOWN ON PLAN. EXISTING INCANDESCENT FIXTURES ARE SWITCHED IN A RANDOM PATTERN.
9. EXISTING OUTLETS AT EAST END OF CAFETORIUM SHALL BE RAISED TO +12" ABOVE NEW PLATFORM.
10. EXISTING AMPLIFIER SHALL REMAIN.

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED



KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

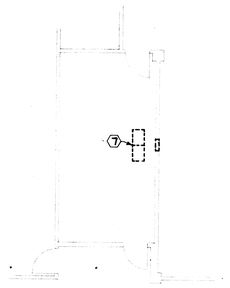
GROUND FLOOR LARGE SCALE PLANS –ELECTRICAL

CRAIG MIDDLE SCHOOL – BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

NO.	DATE	REVISIONS DESCRIPTION	
		COMM. NO.	8404
		DATE	3-29-84
		DRAWN BY	MWP
		CHECKED BY	MWP

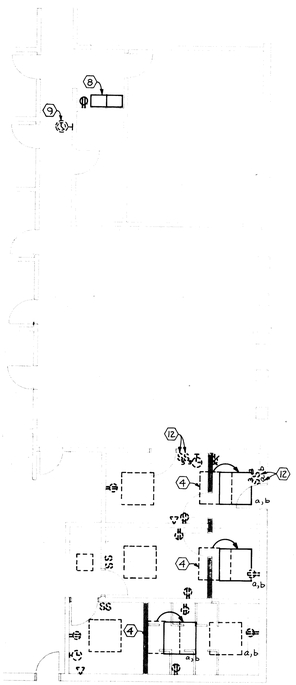
VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET
E6.05
OF



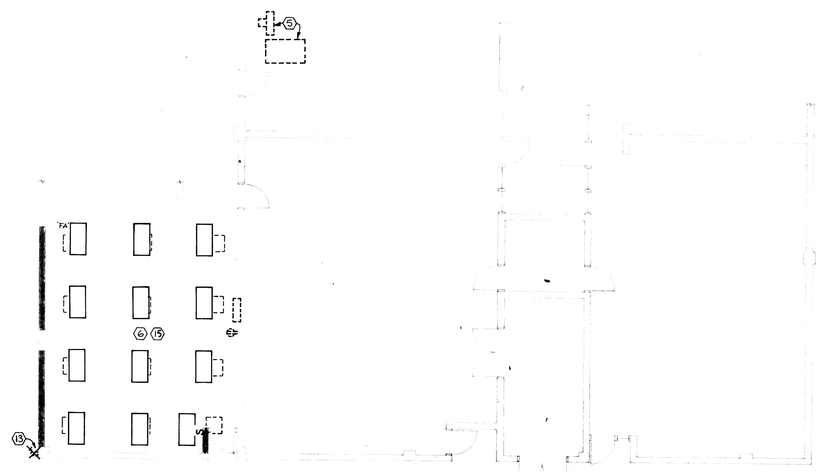
1 LARGE SCALE PLAN – COMMUNICATION ROOM– ELECTRICAL

SCALE :1/8"–1'–0"



2 LARGE SCALE PLAN – OFFICE – ELECTRICAL

SCALE :1/8"–1'–0"



3 LARGE SCALE PLAN – SOUTH LOCKER AREA & ROOMS 107.109 & 117 – ELECTRICAL

SCALE :1/8"–1'–0"

LIGHT FIXTURE SPECIFICATIONS

'FA' UNIT: 2' X 4' SURFACE OR PENDANT MOUNTED FLUORESCENT.

HOUSING: RECTANGULAR SECTION SOLID METAL SIDES, 20 GAUGE COLD ROLLED STEEL, U.L. LISTED FOR DIRECT MOUNTING ON LOW DENSITY CEILINGS.

DOOR: FLAT STEEL WITH SPRING OR CAM ACTION LATCHES, GASKETED TO PREVENT LIGHT LEAKS.

SHIELDING: CLEAR PRISMATIC ACRYLIC PLASTIC.

OPTIONS: KSH-12 0.125" THICK LENS.

LAMPS: 4-F40CW

MANUFACTURER: BENJAMIN #CMS
DAY-BRITE #CS
LITHONIA #2M

'FB' SIMILAR TO TYPE 'FA' EXCEPT 1' X 4'.

LAMPS: 2-F40CW

MANUFACTURER: BENJAMIN #CMS
DAY-BRITE #CS
LITHONIA #M

'FC' UNIT: 2' X 4' RECESSED FLUORESCENT

HOUSING: RIBBED AND EMBOSSED DIE FORMED COLD ROLLED STEEL, DESIGNED TO PREVENT LIGHT LEAKS.

DOOR: FLAT STEEL WITH SPRING OR CAM ACTION LATCHES.

SHIELDING: CLEAR PRISMATIC ACRYLIC PLASTIC

OPTIONS: 'KSH-12', 0.125" THICK LENS

LAMPS: 4-F40CW FLUORESCENT

MANUFACTURER: BENJAMIN #AGR
DAY-BRITE #SG
LITHONIA #2GP

'FD' UNIT: 1' X 4' RECESSED FLANGED FLUORESCENT

HOUSING: RIBBED AND EMBOSSED DIE FORMED COLD ROLLED STEEL, DESIGNED TO PREVENT LIGHT LEAKS.

DOOR: FLAT STEEL WITH SPRING OR CAM ACTION LATCHES.

SHIELDING: CLEAR PRISMATIC ACRYLIC PLASTIC.

OPTIONS: 'KSH-12', 0.125" THICK LENS

LAMPS: 2-F40CW FLUORESCENT

MANUFACTURER: BENJAMIN 'AF'
DAY-BRITE 'SF'
LITHONIA 'FS'

'A' UNIT: LIGHTING TRACK

HOUSING: EXTRUDED ALUMINUM, TWO CIRCUIT, PENDANT MOUNTED, LENGTH AS INDICATED ON DRAWINGS.

FINISH: MATTE BLACK

OPTIONS: ALL COUPLINGS, END PLATES, FEED-IN BOXES, STEMS, HANGERS, ETC., NECESSARY TO PROVIDE TRACK CONFIGURATION AS SHOWN ON DRAWINGS.

LUMINAIRE: FULLY ADJUSTABLE TRACK MOUNTED CYLINDER. PROVIDE A TOTAL OF TEN (10) UNITS.

FINISH: MATTE BLACK.

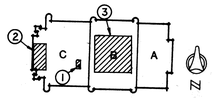
LAMP: 150 WATT, R-40 INCANDESCENT FLOOD, 150R/FL

MANUFACTURER: CAPRI 'TRAC' WITH #CT-140 LUMINAIRE
HALO 'MINIATURE TRAC' WITH #L1543 LUMINAIRE

NOTES

1. ELECTRICAL DEVICES AND LIGHT FIXTURES SHOWN DASHED ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED OR INDICATED.
2. SHADED WALLS INDICATE NEW CONSTRUCTION.
3. ELECTRICAL DEVICES SHOWN X'ED OUT ARE TO BE REMOVED.
4. RELOCATE EXISTING 4' X 4' LIGHT FIXTURE TO NEW LOCATION SHOWN AND RECONNECT TO EXISTING CIRCUIT.
5. EXISTING FANS TO BE DISCONNECTED.
6. ALL EXISTING 2' X 2' LIGHT FIXTURES IN THIS ROOM ARE TO BE REMOVED.
7. EXISTING PUBLIC ADDRESS SYSTEM EQUIPMENT TO BE REMOVED UNDER BASE BID. EXISTING EQUIPMENT TO BE RELOCATED TO NEW LOCATION SHOWN ON LARGE SCALE PLAN #2 THIS SHEET UNDER ALTERNATE #E-6.02.
8. NEW PUBLIC ADDRESS SYSTEM EQUIPMENT SPECIFIED IN SECTION 16770 OF SPECIFICATIONS TO BE INSTALLED AT LOCATION SHOWN. EXTEND EXISTING SPEAKER, MICROPHONE, AUXILIARY, AND ANTENNA LINES FROM EXISTING EQUIPMENT LOCATION TO NEW EQUIPMENT LOCATION. INSTALL DUPLEX RECEPTACLE AT LOCATION SHOWN AND CONNECT TO DEDICATED CIRCUIT FOR MASTER CLOCK.
9. REMOVE EXISTING MASTER CLOCK AND INSTALL NEW MASTER CLOCK SPECIFIED IN SECTION 16730.
10. ALL NEW 2' X 4' LIGHT FIXTURES ARE TO BE TYPE 'FA'. SEE LIGHT FIXTURE SPECIFICATIONS THIS SHEET.
11. CONNECT NEW TYPE 'FA' LIGHT FIXTURES TO EXISTING CIRCUIT IN THIS AREA.
12. EXISTING 3-WAY SWITCHES TO BE REMOVED AND NEW 1-POLE SWITCHES TO BE INSTALLED IN THE SAME LOCATIONS.
13. EXISTING KEY SWITCH TO BE REMOVED. NEW LIGHTS TO BE SWITCHED FROM NEW SWITCH IN ROOM.
14. REFER TO SHEET E6.07 FOR CONNECTION TO PAINT BOOTH FANS. FAN TO BE CONTROLLED FROM SWITCH IN HOOD. CONNECT LIGHTS IN HOOD TO SAME CIRCUIT AS FAN.
15. WORK SHOWN IN SOUTH LOCKER AREA SHALL BE DUPLICATED IN THE NORTH LOCKER AREA.

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED



KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

FIRST FLOOR LARGE SCALE PLANS – ELECTRICAL

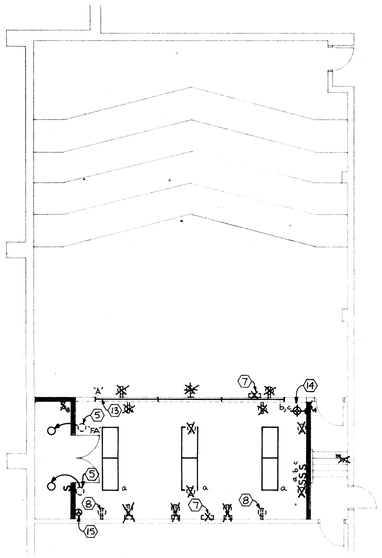
CRAIG MIDDLE SCHOOL – BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

REVISIONS		
NO. DATE	DESCRIPTION	

COMM. NO.	84004
DATE	3-29-84
DRAWN BY	SEP
CHECKED BY	MOP

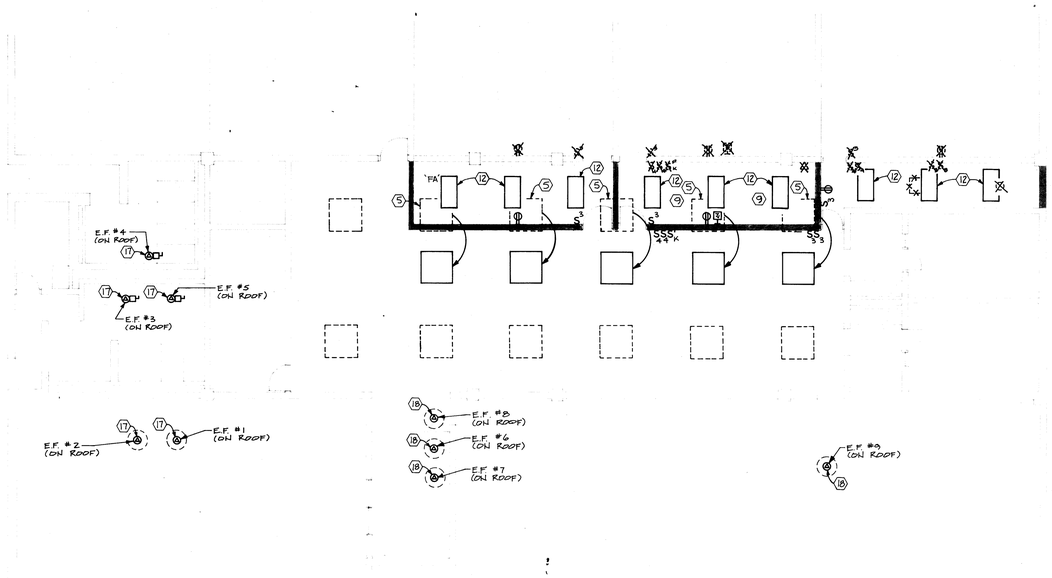
VIRGIL NICHOLAS REGISTERED No. 7951 PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET
E6.06
OF



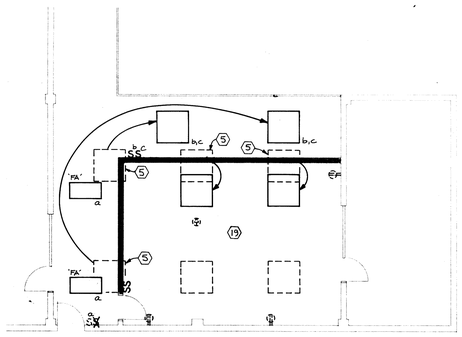
1 LARGE SCALE PLAN – ROOM 219 – ELECTRICAL

SCALE :1/8"–1'–0"



2 LARGE SCALE PLAN – ROOMS 232, 234 & 236 – ELECTRICAL

SCALE :1/8"–1'–0"



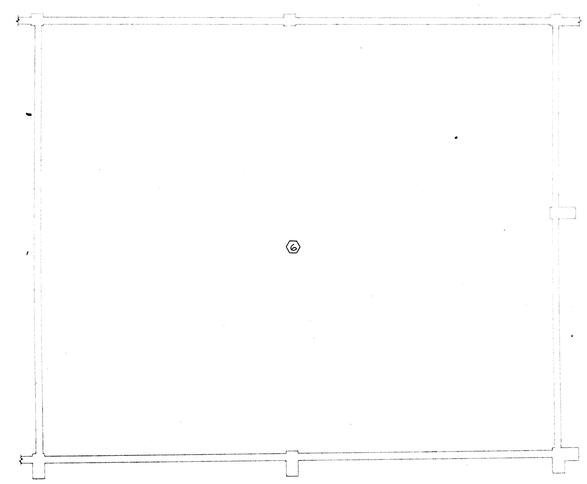
3 LARGE SCALE PLAN – SOUTH STUDY BALCONY – ELECTRICAL

SCALE :1/8"–1'–0"

NOTES:

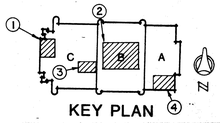
1. WALLS SHOWN DASHED ARE EXISTING TO BE REMOVED.
2. SHADED WALLS INDICATE NEW CONSTRUCTION.
3. ELECTRICAL DEVICES AND LIGHT FIXTURES SHOWN DASHED ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED OR INDICATED.
4. EXISTING ELECTRICAL DEVICES AND LIGHT FIXTURES SHOWN X'ED OUT ARE TO BE REMOVED.
5. RELOCATE EXISTING LIGHT FIXTURE TO NEW LOCATION SHOWN. RECONNECT TO EXISTING CIRCUIT.
6. EXISTING LIGHTING IN CAFETORIUM TO REMAIN.
7. CONTROL PANEL FOR PROJECTOR TO BE REMOVED.
8. EXISTING RECEPTACLES TO BE RAISED TO +12" ABOVE FLOOR OF STAGE.
9. DISCONNECT POWER TO RECEPTACLES ON LAB BENCHES.
10. NEW 2' X 4' LIGHT FIXTURES TO BE TYPE 'FA'.
11. REFER TO SHEET E6.06 FOR LIGHT FIXTURE SPECIFICATIONS.
12. NEW TYPE 'FA' FIXTURES TO BE SWITCHED WITH EXISTING 2' X 2' FIXTURES IN CLASSROOMS.
13. CONNECT TYPE 'A' TRACK LIGHTING TO EXISTING RECIPTACLE CIRCUIT IN THIS AREA.
14. CONNECT MICROPHONE OUTLET TO BUILDING P.A. SYSTEM.
15. INSTALL "LIFTING JACK" TO ALLOW CONNECTION OF PORTABLE AMPLIFIER TO EXISTING SPEAKERS IN THIS ROOM. INSERTION OF PLUG SHALL DISCONNECT SPEAKERS FROM BUILDING P.A. SYSTEM AND CONNECT THEM TO PORTABLE AMPLIFIER.
16. INSTALL SIX (6) NEW 20A-1P CIRCUIT BREAKERS IN EXISTING PANEL 'SS'. PANEL IS LOCATED IN MECHANICAL ROOM ADJACENT TO ROOM 214.
17. EXHAUST FANS (EF) #1,2,3,4, AND 5 SHALL EACH BE CONNECTED TO A 20A-120V DEDICATED CIRCUIT FROM PANEL 'SS'.
18. EXHAUST FANS (EF) #6,7,8, AND 9 SHALL BE CONNECTED TO A 20A-120V DEDICATED CIRCUIT FROM PANEL 'SS' (ALL FANS ON THE SAME CIRCUIT).
19. WORK SHOWN IN SOUTH STUDY BALCONY SHALL BE DUPLICATED IN THE NORTH STUDY BALCONY.

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED



4 LARGE SCALE PLAN – CAFETORIUM – ELECTRICAL

SCALE :1/8"–1'–0"



KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS/ENGINEERS
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

SECOND FLOOR LARGE SCALE PLANS – ELECTRICAL

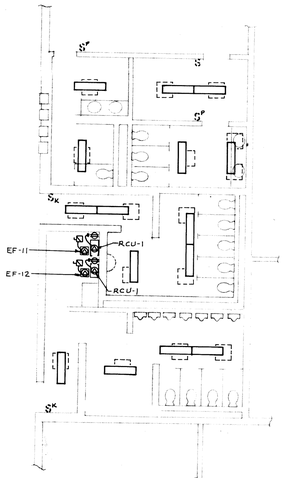
CRAIG MIDDLE SCHOOL – BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V, 1984 PROJECTS

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	8400.4
DATE	3-29-84
DRAWN BY	S.C.
CHECKED BY	WLP

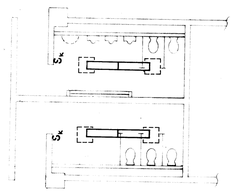
VIRGIL NICHOLAS REGISTERED No. 7951 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET
E6.07
OF



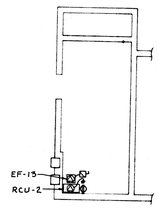
TOILET ROOM PLAN 149C-151C

SCALE :1/8"=1'-0"



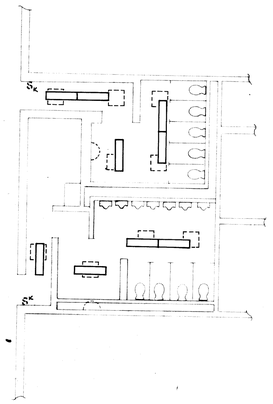
TOILET ROOM PLAN 117B - 118B

SCALE :1/8"=1'-0"



GROUND STORAGE ROOM PLAN

SCALE :1/8"=1'-0"

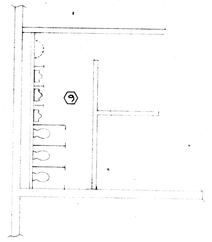


TOILET ROOM PLAN 225B-227B

SCALE :1/8"=1'-0"

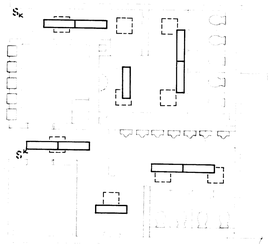
NOTES

1. LIGHT FIXTURES AND ELECTRICAL DEVICES SHOWN DASHED ARE EXISTING.
2. EXISTING LIGHT SWITCHES ARE TO REMAIN.
3. ALL EXISTING LIGHT FIXTURES SHOWN DASHED ARE TO BE REMOVED.
4. REMOVE ALL EXISTING LIGHT FIXTURES IN THE CEILING FROM THIS AREA.
5. NO ELECTRICAL WORK IS TO BE DONE IN THIS AREA.
6. ALL NEW 1' X 4' FIXTURES TO BE TYPE 'FB'.
7. CONNECT NEW LIGHT FIXTURES TO EXISTING LIGHT FIXTURE CIRCUITS IN THAT AREA.
8. REFER TO SHEET E6.06 FOR LIGHT FIXTURE SPECIFICATIONS.
9. REFER TO PLAN #2 ON SHEET E6.05 FOR ELECTRICAL WORK IN THIS AREA.
10. EXHAUST FANS (EF) AND REMOTE COOLING UNITS (RCU) TO BE CONNECTED TO NEAREST RECEPTACLE CIRCUIT IN THAT AREA. EF AND RCU TO BE ON SEPARATE CIRCUITS.



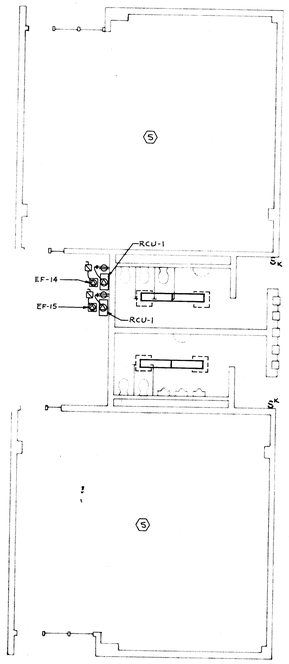
TOILET ROOM PLAN B04A

SCALE :1/8"=1'-0"



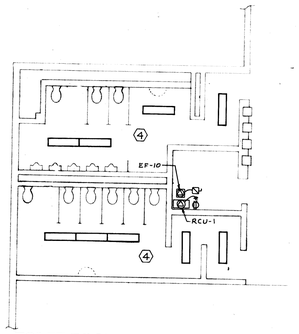
TOILET ROOM PLAN 235C-236C

SCALE :1/8"=1'-0"



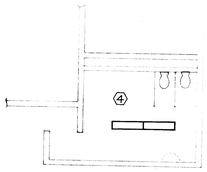
ART ROOM PLAN 111-121
TOILET ROOM PLAN 134B-135B

SCALE :1/8"=1'-0"



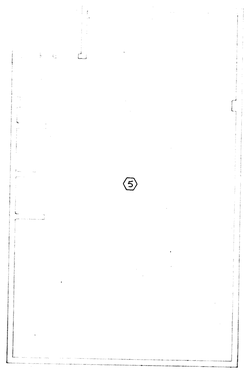
TOILET ROOM PLAN G16B-G17B

SCALE :1/8"=1'-0"



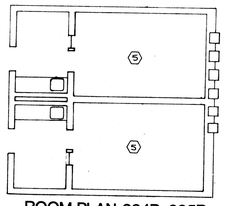
TOILET ROOM PLAN G07B

SCALE :1/8"=1'-0"



HOME EC. ROOM PLAN

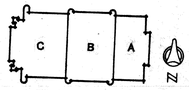
SCALE :1/8"=1'-0"



ROOM PLAN 234B-235B

SCALE :1/8"=1'-0"

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED



KEY PLAN

WRIGHT/PORTEOUS & LOWE, INC.
INDIANAPOLIS, INDIANA/TAMPA, FLORIDA
ARCHITECTS/ENGINEERS

MUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

CRAIG MIDDLE SCHOOL - BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

LARGE SCALE FLOOR PLANS - ELECTRICAL

REVISIONS		
NO.	DATE	DESCRIPTION

COMM. NO.	8402
DATE	3-23-84
DRAWN BY	PEO
CHECKED BY	MOP

WILLIAM NICHOLAS No. 7951 STATE INDIANA REGISTERED PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET
E6.08
OF

NOTES

1. INSTALL CONTACTORS AND CONTROL SWITCHING FOR SINGLE SWITCH CONTROL OF ROOMS B427 AND B433. ELECTRICAL DEVICES AND EQUIPMENT SHOWN DASHED ARE EXISTING TO REMAIN.

2. 30A-4P MECHANICALLY HELD CONTACTOR SIMILAR TO SQUARE D TYPE S IN NEMA 1 ENCLOSURE. UNIT TO BE MOUNTED ABOVE CEILING. CONNECT CONTACTOR CONTROLS TO CIRCUIT BREAKER 2L7-1.

3. 30A-3P MECHANICALLY HELD CONTACTOR SIMILAR TO SQUARE D TYPE S IN NEMA 1 ENCLOSURE. UNIT TO BE MOUNTED ABOVE CEILING. CONNECT CONTACTOR CONTROLS TO CIRCUIT BREAKER 2L8-3.

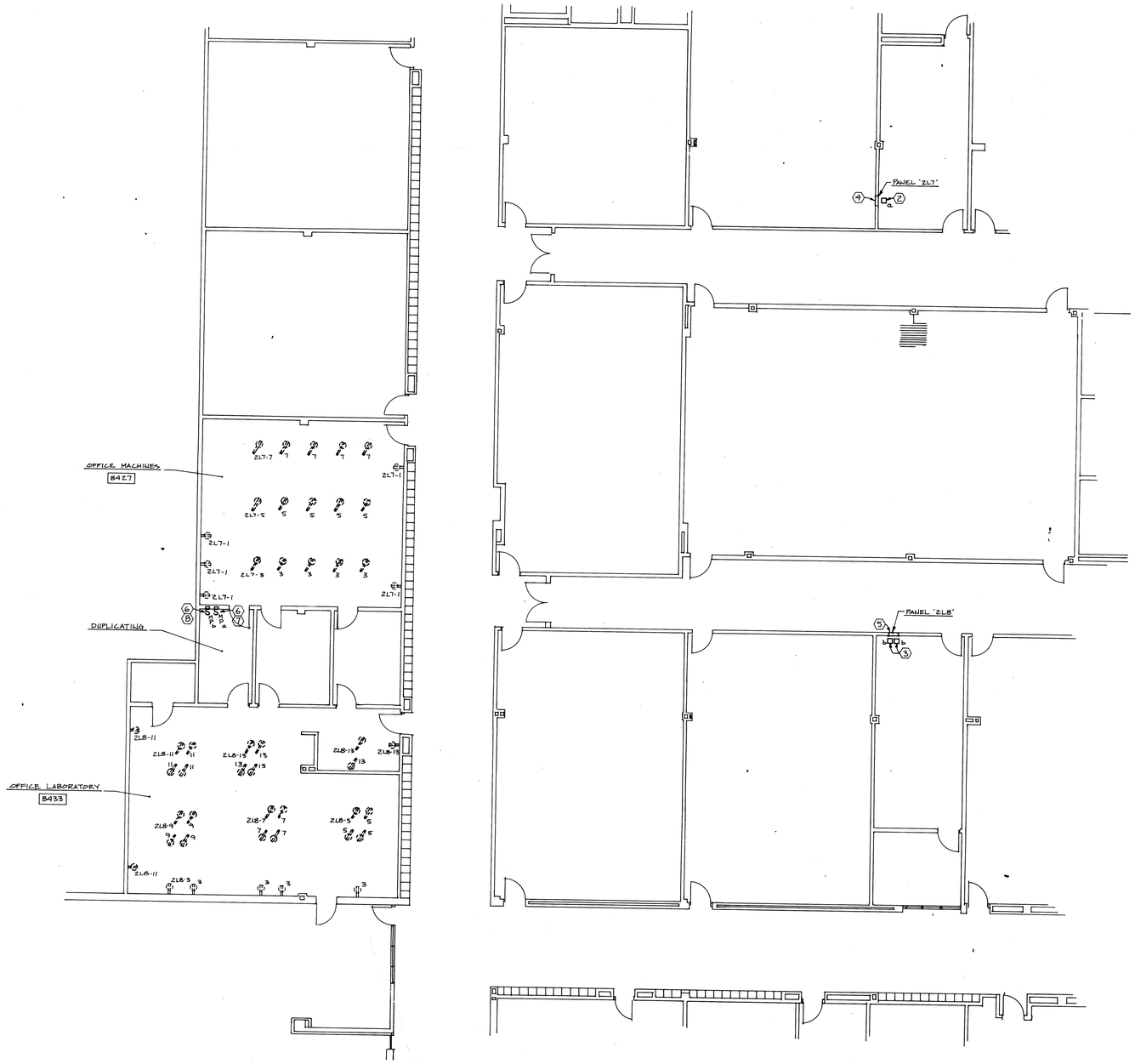
4. DISCONNECT CIRCUITS 1, 3, 5 & 7 FROM BREAKERS IN PANEL 2L7 AND CONNECT TO 30A-4P CONTACTOR ABOVE CEILING. RE-CONNECT CIRCUITS 1, 3, 5 & 7 FROM CONTACTOR BACK TO EXISTING CIRCUIT WIRES IN PANEL 2L7.

5. DISCONNECT CIRCUITS 3, 5, 7, 9, 11 & 13 FROM BREAKERS IN PANEL 2L8 AND CONNECT TO TWO (2) 30A-3P CONTACTORS ABOVE CEILING. RE-CONNECT CIRCUITS 3, 5, 7, 9, 11 & 13 FROM CONTACTORS BACK TO EXISTING CIRCUIT WIRES IN PANEL 2L8.

6. MOMENTARY CONTACT SWITCH AND INDICATING LIGHT FLUSH MOUNTED IN 2-GANG BACK BOX. MOMENTARY CONTACT SWITCH SIMILAR TO HUBBELL #1556-I. INDICATING LIGHT SIMILAR TO G.E. #CR103 TYPE HA WITH RED CROWN LENS.

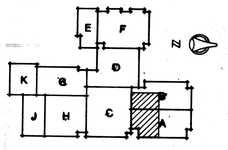
7. INSTALL 3-#12-1/2"C FROM MOMENTARY CONTACT SWITCH TO 30A-4P CONTACTOR FOR CONTROLS. CONNECT INDICATING LIGHT TO CONTACTOR CONTROLLED CIRCUIT 2L7-1.

8. INSTALL 3-#12-1/2"C FROM MOMENTARY CONTACT SWITCH TO 30A-3P CONTACTORS FOR CONTROLS. CONNECT INDICATING LIGHT TO CONTACTOR CONTROLLED CIRCUIT 2L8-11.



PARTIAL SECOND FLOOR PLAN - ELECTRICAL

SCALE :1/8"=1'-0"



KEY PLAN

NOTE:
ALL WORK INDICATED ON THIS DRAWING SHALL BE A PART OF
BID PACKAGE #6
EXCEPT AS OTHERWISE NOTED

WRIGHT/PORTEOUS & LOWE, INC.
ARCHITECTS ENGINEERS
INDIANAPOLIS, INDIANA TAMPA, FLORIDA

HUSSETT NICHOLAS & ASSOCIATES
CONSULTING ENGINEERS

LAWRENCE NORTH - BID PACKAGE #6
LAWRENCE TOWNSHIP M.S.D.
PHASE V. 1984 PROJECTS

PARTIAL SECOND FLOOR PLAN - ELECTRICAL

NO.	DATE	REVISIONS DESCRIPTION

COMM. NO. 8401.4
DATE 3-29-84
DRAWN BY BED
CHECKED BY MWP

VIRGIL WAYNE NICHOLAS REGISTERED No. 7951 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET
E6.09
OF