State of Idaho
Department of Administration
Division of Public Works

BRAD LITTLE
Governor
STEVEN BAILEY
Director
KELLY BERARD
Administrator

502 North 4th Street
Boise, ID 83720-0072
Telephone (208) 332-1900
www.dpw.idaho.gov

ADDENDUM NO. 1

Date: **May 29, 2026** **Owner:** Division of Public Works
502 N. 4th Street
Boise, ID 83702

Project: DPW PROJECT NO. 25333 – **Design Professional RFQ**

No. of Pages: **39** (including attachments)

NOTICE TO ALL RESPONDERS
You are hereby notified of the following clarifications of and/or revisions to the Request for Qualifications for the above referenced project.

THIS ADDENDUM is hereby made a part of the project requirements and contract documents for referenced project.

BE SURE to acknowledge this Addendum No.1 in your SOQ Cover Sheet.

ITEM NO.

1. **Please note the following clarifications:**

   Page 4, ADD:

   A. Cover Sheet: Include one (1) single sided page with **only** the following information (no photos), it is acceptable to include the project title and number on the cover sheet:

   1. Prime firm name and the office location that will primarily serve this project.
   2. Name and title of the Primary Point of Contact (include no more than one).
      a. Primary Point of Contact phone number (include area code).
      b. Primary Point of Contact email address.
   3. Please acknowledge addenda on the Cover Sheet, if applicable.

2. **Responses to Questions:**

Question #1: Are there any federal funding requirements associated with this project, specifically if an audited overhead rate is required?

Answer #1: No there are not any federal funding requirements or need for an audited overhead rate.

Question #2: Is construction part of the RFQ, and if not how is the construction portion expected to be put out for bid?

Answer #2: Construction is not part of the RFQ and will be bid in a traditional design bid build manner.

Question #3: Will add alternate priority 4 for the vault upgrade to the latest security standard be removed from the scope of work?

Answer #3: Priority 4 for the vault upgrades will remain an add alternate in the scope of work.

Question #4: Does the Idaho Military Division (IMD) have record drawings in DWG format they could provide.

Answer #4: IMD will provided PDF's of the as built drawings as part of this addendum. See attached.

Question #5: Can our team submit sample work documents in our submittal as an appendix? If so would this count toward the final page count?

Answer #5: No please follow the format requested in the RFQ including page counts.

Question #6: In the RFQ, only three copies are asked for of our proposal — can you confirm that this is the case, as opposed to our team providing the standard five copies for each member of the selection committee?

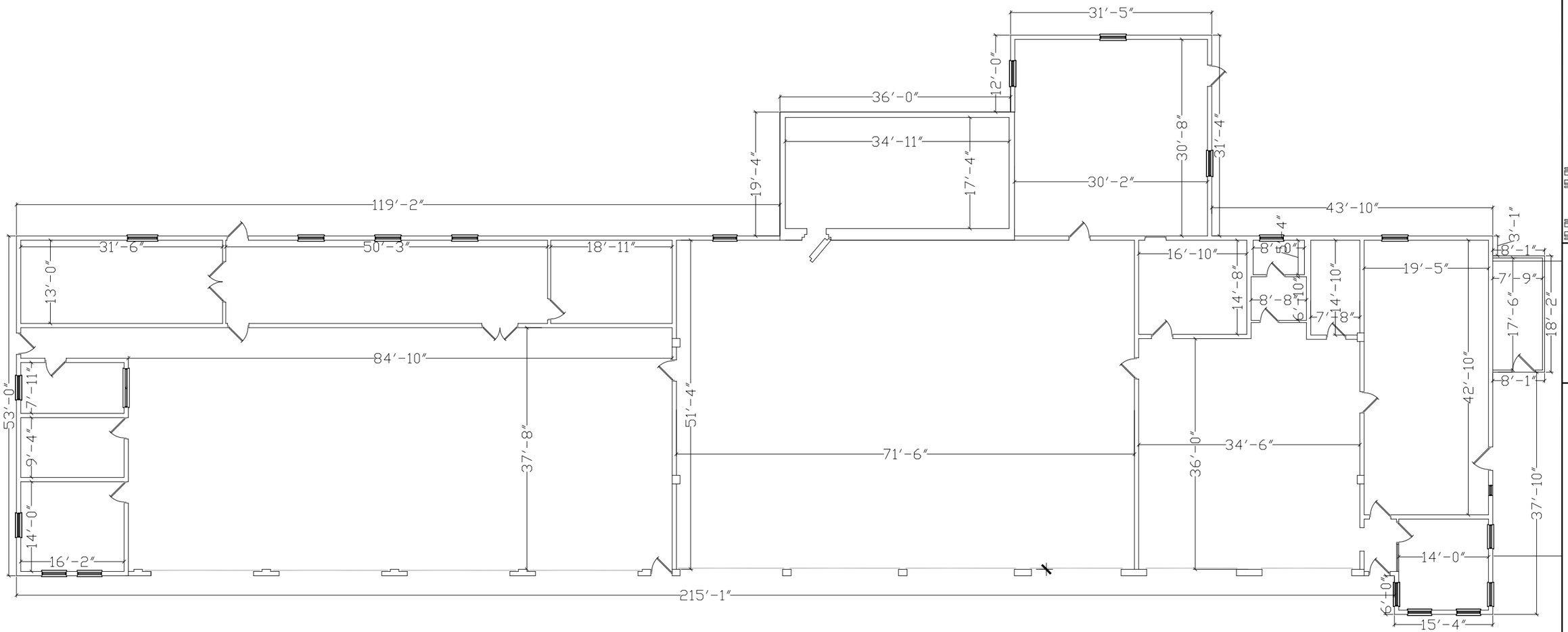
Answer #6: 3 copies and 1 flash drive containing a digital copy of the SOQ is fine for the selection committee.

*****END OF ADDENDUM NO. 1*****

Informational Walk-thru Sign-In Sheet

25333| MIL Building 557 Roof and HVAC Repairs | 5/14/2026 11:00 am

Name	Company	E-mail	Telephone	Signature
Russell Pratt	NWESI	russellp@nwesi.com	208-471-0515	
Austin Hall	Musgrave	austinh@musgrovepa.com	208-384-0585	
Chris Vondemkamp	Design West	cvondemkamp@designwestid.com	208-888-1768	
Thad Mason	Musgrove Eng	thadm@musgrovepa.com	208 724 6646	
JASON RICE	MUSGROVE	jasonr@musgrovepa.com	208 880 0982	
PETERSEN LAMBART	STANTEC	petersen.lambart@stantec.com	206 240 7710	
Chris Dyke	Musgrove	chrisd@musgrovepa.com	208-371-7871	
John Monserrat	WSP	john.monserrat@wsp.com	208-809-8384	
Matt Medrano	CFMO	matthiew.a.medrano.mfg@	208-272-4231	
JUAN PABLO RESINA	CFMO	Juan.P.Resina.mil@army.mil	208-272-4177	
Reid Harrell	DPW	reid.harrell@adm.idaho.gov	208.921.6315	
GARY GLASSING	CUSHING TERRELL	garyg@cushingterrell.com	208 860 4362	
Randall Syphus	TAIT & Assoc.	rsyphus@tait.com	208.514.9102	
Mark Anderson	BRS Architects	mark@brsarchitects.com	208-336-8370	
HARITZ MAILLO	TAIT ARCHITECTURE	hmaillo@tait.com	925-783-4538	
Luis Hernandez	NWESI	luish@nwesi.com	208-346-1476	
GLENN ROBINETTE	HSA	grobinettehsaArchitects.com	208-338-1212	
DAN NORRIGAN	DPW	DAN.NORRIGAN@ADM.IDAHO.GOV	208-969-2409	



DESIGN
DRAWN
REVIEW
ARCH/ENGR
PROJECT MANAGER
SAFETY/ENVIRO
FIRE PROTECTION
BLDG MANAGER
STAFF DIRECTOR
SYM.

DESIGNED & ENGINEERED BY:
JFMD
IDARNG, IDAHO ARMY NATIONAL GUARD

4715 S. BYRD, GOWEN FIELD
BOISE, IDAHO 83705-4507
PHONE: (208) 422-3737
FAX: (208) 422-3736

BOISE, IDAHO

IDAHO ARMY NATIONAL GUARD

BUILDING 557

DIMENSIONS SHEET

STREET ADRESS: ?	SCALE: 1/16″=1′ SIZE: B
CONGRESSIONAL DISTRICT:	
COUNTY:	INSNO # 16A20
CONSTRUCTION AND ACQUISITION DATE	FACNO #
AGREEMENT SUPPORT CODE:	CATCODE
EXISTING (SQ,LN,CU) FT: 14133 SQ	PROJ. #
UIC:	ISR RATING
	SHEET 3 OF 3
	DATE OF DRAWING: 27 JUNE 2005

Idaho Army National Guard

SHEET INDEX

BID ITEM #1

BLDG. 557 RELOCATION TO BLDG. 578
(FARREN ENGINEERING TITLE BLOCK)

GENERAL:

A0 COVER SHEET

ARCHITECTURAL:

A1 BLDG 578 FLOOR PLAN, DETAILS & SCHEDULES
A0.0 DEMO PLAN
A1.0 FLOOR PLAN & GENERAL NOTES
A1.1 DETAILS

MECHANICAL:

M6.0 MECHANICAL DEMO PLAN
M7.0 MECHANICAL PLAN

ELECTRICAL:

R-1	RELOCATION PLAN - 557 & 578	E1.8	NEW ONE LINE DIAGRAM
R-2	RELOCATION PLAN - 578	E1.9	ELECTRICAL SCHEDULES
E1.1	EXISTING ELECTRICAL PLAN	E2.1	EXISTING ELECTRICAL PLAN - 578
E1.2	FIRE ALARM PLAN	E2.2	EXISTING ELECTRICAL PLAN - 578
E1.3	LIGHTING PLAN	E2.3	NEW CANVAS SHOP PLAN
E1.4	ENERGY CODE PLAN	E2.4	NEW MACHINE SHOP PLAN
E1.5	POWER PLAN	E2.5	NEW WELDING SHOP PLAN
E1.6	TELECOM PLAN	E3.0	DETAILS - 578
E1.7	EXISTING ONE LINE DIAGRAM	E4.0	ONE LINE DIAGRAM

BID ITEM #2

BLDG. 557 TENANT IMPROVEMENT
(INSIGHT architects P.A. TITLE BLOCK)

ARCHITECTURAL:

A1.0 ⚠ FLOOR PLAN & GENERAL NOTES
A2.0 ⚠ REFLECTED CEILING PLAN & DETAILS
A5.0 DETAILS
A5.1 DETAILS
A6.0 SCHEDULES & DETAILS
A7.0 INTERIOR ELEVATIONS
A7.1 INTERIOR ELEVATIONS

MECHANICAL:

M1.0 MECHANICAL COVER SHEET
M2.0 ⚠ WASTE AND VENT PIPING PLAN
M3.0 PLUMBING PIPING PLAN
M4.0 MECHANICAL PLAN
M5.0 MECHANICAL SPECIFICATIONS

REVISIONS

⚠ ADDENDUM #01 - 06-08-2007

DESIGN TEAM

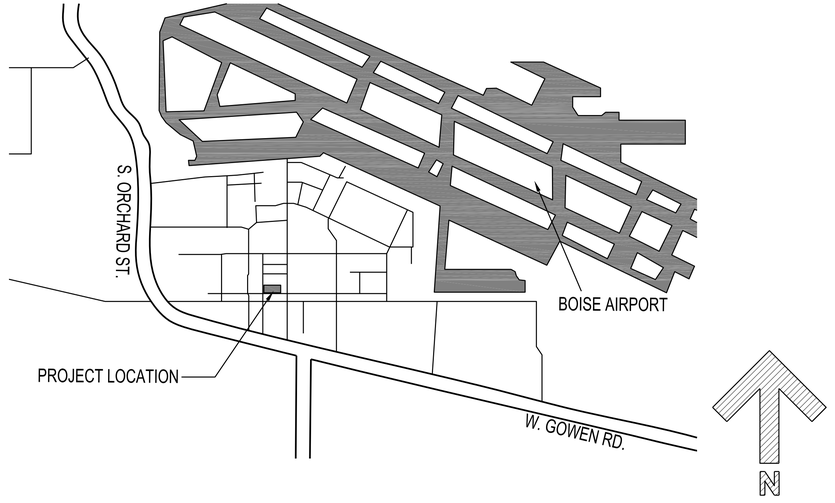
ARCHITECT:
INSIGHT ARCHITECTS
2238 BROADWAY AVE.
BOISE, IDAHO 83706
338-9080 FAX 338-9061
Contact: Dana Kauffman

STRUCTURAL:
AHJ ENGINEERS PC
12501 W. EXPLORER DR. STE. 100
BOISE, IDAHO 83713
323-0199 FAX 375-5251
Contact: Keith Jones

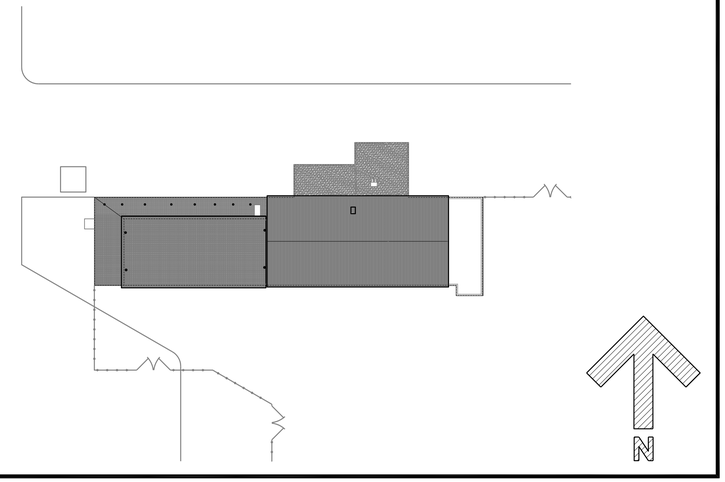
ELECTRICAL:
FARREN ENGINEERING, INC.
600 W. CURLING DR.
BOISE, IDAHO 83702
429-1309 FAX 429-1308
Contact: Jon Farren

MECHANICAL
TIKKER ENGINEERING
9384 W. OVERLAND
BOISE, IDAHO 83709
658-0218 FAX 658-0219
Contact: Bob Tikker

VICINITY MAP N.T.S.



PROJECT AREA N.T.S.



CODE ANALYSIS

GENERAL DATA

RENOVATION OF EXISTING 13,135 s.f. BUILDING CONSISTING OF STORAGE, OFFICE, ASSEMBLY SPACES, & EXTERIOR REMODEL. EXTERIOR WORK INCLUDES CLEANING AND REPAIRING EXISTING MASONRY, REPLACING WINDOWS. MAJORITY OF INTERIOR WORK IS CONTAINED TO OFFICE TOILET FACILITIES AND ASSEMBLY SPACES.

REFERENCES

INTERNATIONAL BUILDING CODE, 2003 EDITION
INTERNATIONAL FIRE CODE, 2003 EDITION
INTERNATIONAL ENERGY CODE, 2003 IECC
INTERNATIONAL MECHANICAL CODE, 2003 EDITION
UNIFORM PLUMBING CODE, 2003 EDITION
NATIONAL ELECTRICAL CODE, 2005 EDITION

SEISMIC ZONE: D

OCCUPANCY DESCRIPTION / LOAD (IBC SEC. 3003): 13,135 sq. ft. total

GROUP B	OFFICE	8,621 sq.ft. @ 1/100 + 86 (ALLOWABLE - 9,500 sq. ft.)
GROUP A-3	ASSEMBLY HALL	3,121 sq.ft. @ 1/1 + 446 (ALLOWABLE -16,000 sq. ft.)
GROUP S-2	STORAGE ROOMS	1,921 sq.ft. @ 1/300 + 6 (ACCESSORY SPACE)

(NON SEPARATED USE PER SEC. 302.3.1)

CONSTRUCTION (IBC TABLE 503)

TYPE IIIB - NON-SPRINKLED - BASIC ALLOWABLE 9,500 sq. ft.
(AREA INCREASE 75% FOR FRONTAGE INCREASE 7,125 sq. ft.
TOTAL ALLOWABLE = 16,675 sq. ft.)
NUMBER OF STORIES: 1
BUILDING AREA: 13,135 SF.

ENERGY CODE

BUILDING ENVELOPE: ALTERATION TO BUILDING ENVELOPE IS LIMITED TO GLAZING UPGRADED TO DOUBLE PANE INSULATED GLASS - U-FACTOR=0.31, ADDITIONAL INSULATION IS ADDED TO THE WALLS AND ROOF THAT IMPROVES THE EXISTING THERMAL PROPERTIES OF THE BUILDING.

HVAC : SEE SHEET M5.0

SYMBOLS

- A0.0 — SECTION
- A0.0 — DETAIL
- 4 / 3 A0.0 1 / 2 — ELEVATION MARK
- # — DOOR TAG
- # — REFERENCE NOTE

ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
d or Ø	DIAMETER OR ROUND
℗	PLATE
#	POUND OR NUMBER
A.B.	ANCHOR BOLT
ACOUS.	ACOUSTICAL
A.C.	AIR CONDITIONING
A.D.	AREA DRAIN
ADJ.	ADJUSTABLE
	SPRINKLER
ALT.	ALTERNATE
ALUM.	ALUMINUM
ANOD.	ANODIZED
APPROX.	APPROXIMATELY
ARCH.	ARCHITECTURAL
ASPH.	ASPHALT
AUTO.	AUTOMATIC
AVE.	AVENUE
BD.	BOARD
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BLVD.	BOULEVARD
BM.	BEAM
B.O.C.	BASE OF CURB
BOTT.	BOTTOM
BUR.	BUILT-UP ROOFING
CAB.	CABINET
C.B.	CATCH BASIN
CEM.	CEMENT
C.J.	CONTROL JOINT
CLG.	CEILING
CLR.	CLEAR
CMU	CONCRETE MASONRY UNIT
C.O.	CLEAN OUT
C.O.C.	CENTER OF COLUMN
COL.	COLUMN
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
C'SK.	COUNTERSUNK
C.T.	CERAMIC TILE
DBL.	DOUBLE
DEPT.	DEPARTMENT
DET.	DETAIL
D.F.	DRINKING FOUNTAIN
DIA.	DIAMETER
DIM.	DIMENSION
DN.	DOWN
DRWG.	DRAWING
DS.	DOWN SPOUT
EA.	EACH
E.B.	EXPANSION BOLT
E.I.F.S.	EXTERIOR INSULATION FINISH SYSTEM
EJ.	EXPANSION JOINT
EL	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATION
E.P.B.	ELECTRICAL PANEL BOARD
EQ.	EQUAL
EXH.	EXHAUST
(E)	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
F.A.	FIRE ALARM
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.H.C.	FIRE HOSE CABINET
FIN.	FINISHED
FLR.	FLOOR
FLSHG.	FLASHING
F.O.	FINISHED OPENING
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
FND.	FOUNDATION
F.P.	FLAT PANEL MONITOR
FT.	FOOT OR FEET
FTG.	FOOTING
FURR.	FURRING
F.V.	FIELD VERIFY
GA.	GAUGE
GALV.	GALVANIZED
G.B.	GRAB BAR
G.I.	GALVANIZED IRON
GYP.	GYPSUM
H.B.	HOSE BIBB
H.C.	HOLLOW CORE
HDWD.	HARDWOOD
HDWR.	HARDWARE
HM	HOLLOW METAL
HORIZ.	HORIZONTAL
H.P.	HIGH POINT
HR.	HOUR
HT.	HEIGHT
I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
JAN.	JANITOR
JT.	JOINT
K.B.	KEYBOARD TRAY
KIT.	KITCHEN
K.O.	KNOCK OUT
LAM.	LAMINATE
LAV.	LAVATORY
L.P.	LOW POINT
MAT.	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MET.	METAL
MFR.	MANUFACTURE
M.H.	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
N	NORTH
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OFF.	OFFICE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OPP.	OPPOSITE
OSB	ORIENTED STRAND BOARD
P.A.	PUBLIC ADDRESS
PL.	PLATE
PLAS.	PLASTIC
P/L	PROPERTY LINE
P. LAM.	PLASTIC LAMINATE
PLUMB.	PLUMBING
PLYWD.	PLYWOOD
PR.	PAIR
PT.	PAINT
R.	RADIUS
RD.	ROOF DRAIN
RDL	ROOF DRAIN LEADER
REF.	REFERENCE
REC.	RECESSED
REFRIG.	REFRIGERATOR
REINF.	REINFORCING
REQ.	REQUIRED
RM.	ROOM
R.O.	ROUGH OPENING
SAC	SUSPENDED ACOUSTICAL CEILING
SANSEW.	SANITARY SEWER
SC.	SOLID CORE
SCHED.	SCHEDULE
S.D.	SOAP DISPENSER
SEAL	SEALANT
SECT.	SECTION
SF	SQUARE FEET
SG	SAFETY GLASS
SHT.	SHEET
SHTHG.	SHEATHING
SHWR.	SHOWER
SIM.	SIMILAR
SM.	SHEET METAL
SMS.	SHEET METAL SCREWS
SPEC.	SPECIFICATIONS
SS.	STAINLESS STEEL
ST.	STREET
STD.	STANDARD
STL.	STEEL
STMSEW.	STORM SEWER
STOR.	STORAGE
STRUCT.	STRUCTURAL
SQ.	SQUARE
SUSP.	SUSPENDED
SYM.	SYMMETRICAL
SYS.	SYSTEM
T.	TREAD
T.B.	TOWEL BAR
TEL.	TELEPHONE
TEMP.	TEMPORARY
T + G	TONGUE AND GROOVE
THK.	THICKNESS
THRESH.	THRESHOLD
T.O.B.	TOP OF BEAM
T.O.C.	TOP OF CURB
T.O.P.	TOP OF PAVEMENT
T.O.S.	TOP OF SLAB
T.O.STL.	TOP OF STEEL
T.O.W.	TOP OF WALL
T.P.D.	TOILET PAPER DISPENSER
T.V.	TELEVISION
TYP.	TYPICAL
VCT	VINYL COMPOSITION TILE
VENT.	VENTILATION
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
VIN.	VINYL
V.W.C.	VINYL WALL COVERING
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
WGL	WIRE GLASS
W/O	WITHOUT
WP.	WATERPROOF
WR.	WATER RESISTANT
WT.	WEIGHT
WWF.	WELDED WIRE FABRIC

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN

LICENSED ARCHITECT
AR-1659
DANA KAUFFMAN
STATE OF IDAHO

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

COVER SHEET

PROJ. NO.:	06-090
DATE:	1/31/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	
⚠ ADD. #01	6-08-07
⚠ ADD #02	6-15-07
⚠ A5.1 #01	7-20-07
⚠ A5.1 #02	8-05-07
⚠ A5.1 #03	9-11-07

SHEET NO.
A0 ⚠

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

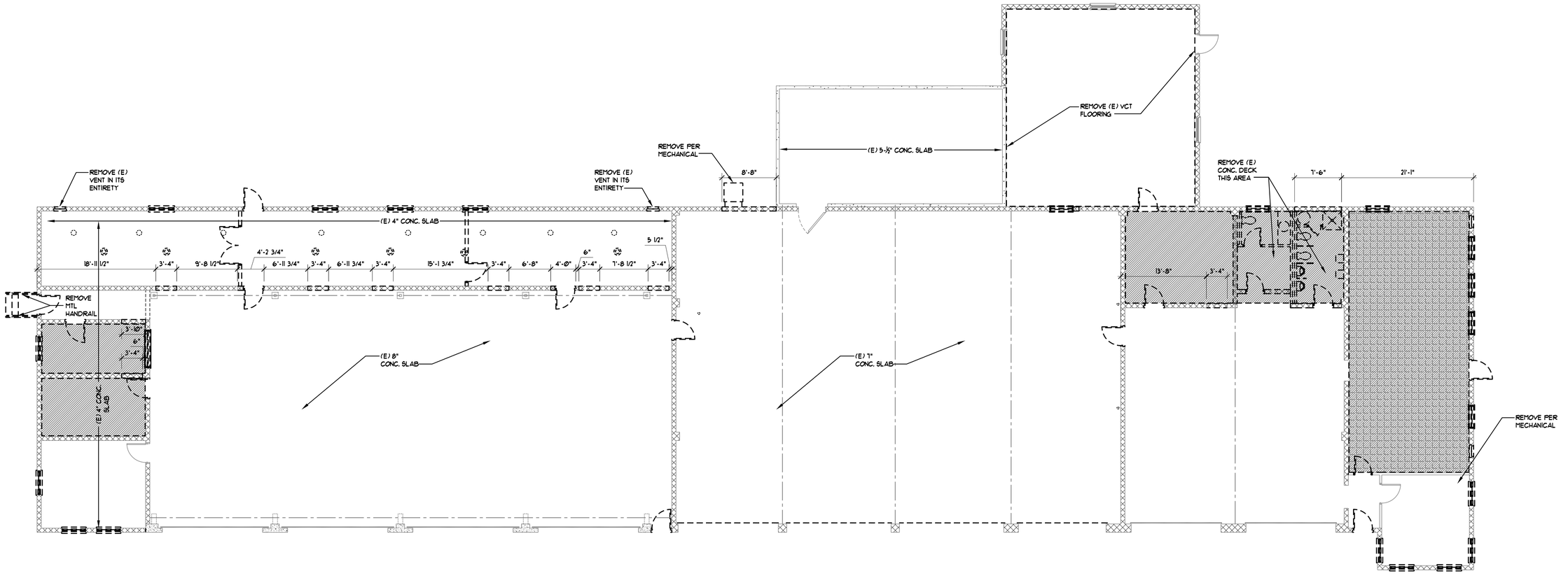
INSIGHTarchitects,p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9061 fax

GENERAL NOTES:

1. PATCH EXISTING WALLS WHERE DISTURBED BY REMODELING TO MAKE UNIFORM IN APPEARANCE (COLOR, TEXTURE, AND FINISH).

2. PATCH AND REPAIR FLOOR AND/OR CEILING AREAS AFFECTED BY WALL DEMOLITION. PREPARE TO ACCEPT NEW CONSTRUCTION.

3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL DRAWINGS.



BUILDING 557 DEMOLITION - AREA OF WORK

1/8" = 1'-0"

DEMOLITION KEY:

- REMOVE (E) 8" CMU WALL ASSY, IN ITS ENTIRETY
- REMOVE (E) 4" STUD WALL ASSY, IN ITS ENTIRETY
- REMOVE (E) WINDOW ASSY, IN ITS ENTIRETY
- REMOVE (E) DOOR ASSY, IN ITS ENTIRETY
- REMOVE (E) SHOWER ENCLOSURE, IN ITS ENTIRETY
- REMOVE (E) CONC FLOOR
- REMOVE (E) SUSPENDED CEILING ASSY, IN ITS ENTIRETY
- REMOVE (E) OVERHEAD DOOR IN ITS ENTIRETY

PROFESSIONAL ENGINEER REGISTERED 8993 STATE OF IDAHO JON P. FARREN

LICENSED ARCHITECT AR-1659

DANA KAUFFMAN STATE OF IDAHO

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

DEMO FLOOR PLAN

PROJ. NO.:	06-090
DATE:	1/31/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

A0.0

INSIGHTarchitects, p.a.
Russ Phillips + Dana Kauffman
2538 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9087 fax

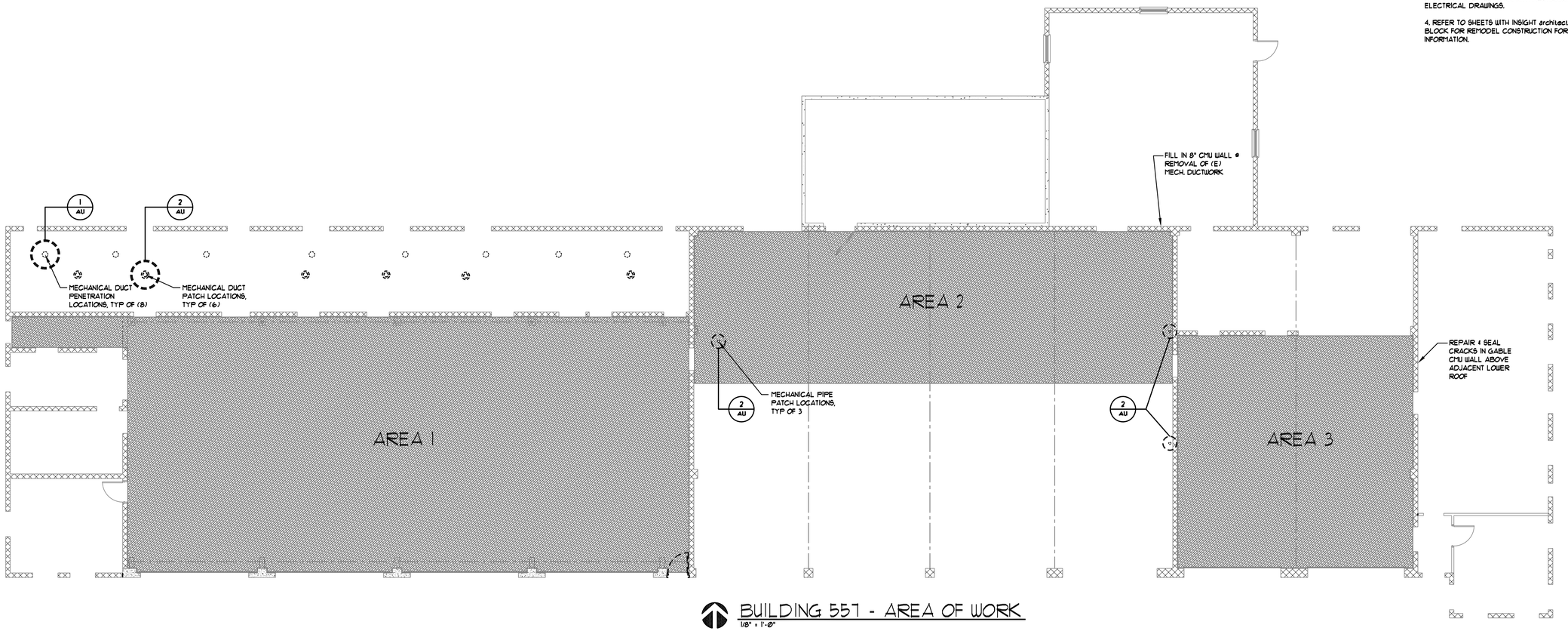
GENERAL NOTES:

1. PATCH EXISTING WALLS WHERE DISTURBED BY REMODELING TO MAKE UNIFORM IN APPEARANCE (COLOR, TEXTURE, AND FINISH).

2. PATCH AND REPAIR FLOOR AND/OR CEILING AREAS AFFECTED BY WALL DEMOLITION. PREPARE TO ACCEPT NEW CONSTRUCTION.

3. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL DRAWINGS.

4. REFER TO SHEETS WITH INSIGHT architects, P.A. TITLE BLOCK FOR REMODEL CONSTRUCTION FOR FURTHER INFORMATION.

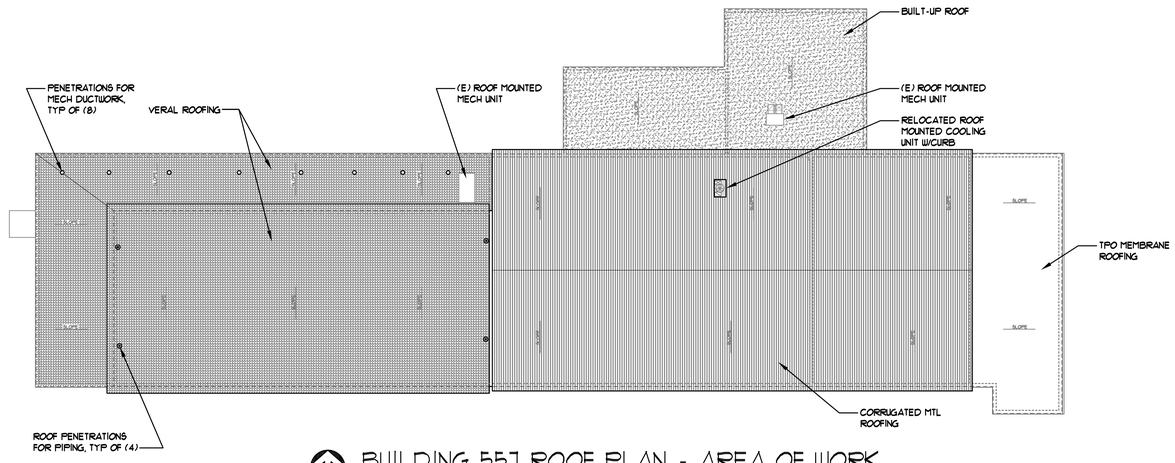


BUILDING 557 - AREA OF WORK

1/8" = 1'-0"

RETRO PLATE (E) CONCRETE SLAB ON GRADE

8X8X16" CMU INFILL



BUILDING 557 ROOF PLAN - AREA OF WORK

1/8" = 1'-0"

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN

LICENSED ARCHITECT AR-1659

DANA KAUFFMAN
STATE OF IDAHO

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION FROM BUILDING 557 TO BUILDING 578 IDAHO ARMY NATIONAL GUARD

COMEN FIELD, BOISE, IDAHO

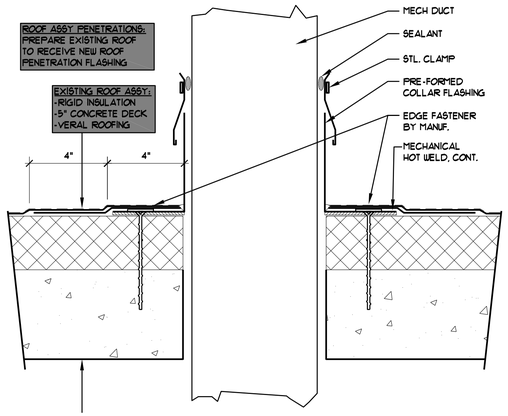
FLOOR PLAN, KEY PLAN, ROOF PLAN

PROJ. NO.:	06-090
DATE:	1/31/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

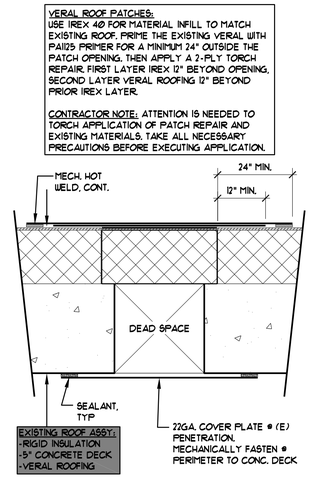
INSIGHTarchitects,p.a.
Russ Phillips + Dana Kauffman
2538 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9087 fax

SHEET NO.

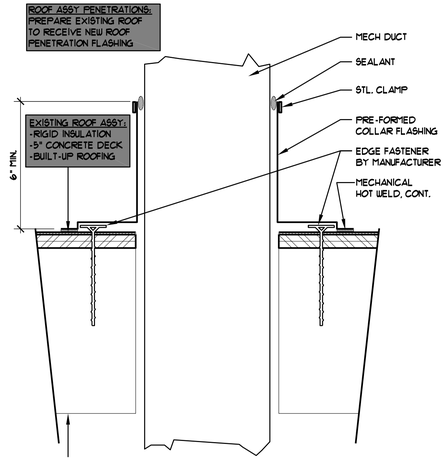
A1.0



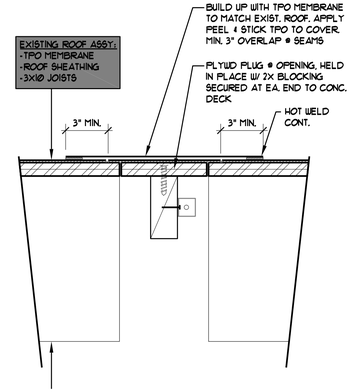
1 DUCT PENETRATION DETAIL
3"=1'-0" (VERAL ROOFING)



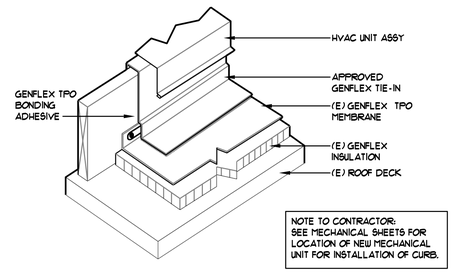
2 PATCH DETAIL
3"=1'-0" (VERAL ROOFING)



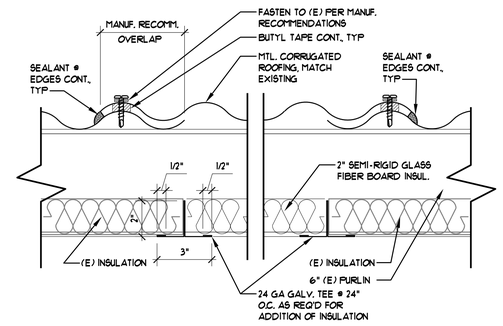
3 DUCT PENETRATION DETAIL
3"=1'-0" (GENFLEX-TPO ROOFING)



4 PATCH DETAIL
3"=1'-0" (GENFLEX-TPO ROOFING)



5 MECHANICAL PENETRATION DETAIL
NOT TO SCALE (GENFLEX-TPO ROOFING)



6 PATCH DETAIL
3"=1'-0" (METAL ROOFING)

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN

LICENSED ARCHITECT
AR-1659
DANA KAUFFMAN
STATE OF IDAHO

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
Boise Bomb Shelter
600 W. Curling Drive, Boise, Idaho 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO
DETAILS

PROJ. NO.: 06-090
DATE: 1/31/07
DRAWN BY: BAH
CHECKED BY: JPF
FILE:
REVISION:

SHEET NO.
A1.1

INSIGHTarchitects,p.a.
Russ Phillips + Dana Kauffman
5526 Broadway Avenue Boise, Idaho 83703 208.336.9080 208.336.9087 fax

WALL TYPES

1"=1'-0"

A -TILE IN TOILET & SHOWER AREAS
-(E) 8" CMU BLOCK WALL

B -⅝" GYP BD
-5-½" 22 GA MTL STUDS @ 16" O.C.
-⅝" GYP BD

C -⅝" GYP BD
-3-½" 22 GA MTL STUDS @ 16" O.C.
-⅝" GYP BD

D -⅝" GYP BD
-3-½" 22 GA MTL STUDS @ 16" O.C.
-R-11 BATT INSULATION
-⅝" GYP BD

E NOTE: TO 6" ABOVE ADJ. CEILING
-⅝" GYP BD
-5-½" 22 GA. MTL STUDS @ 16" O.C.
-⅝" GYP BD

F -(E) 8" CMU BLOCK WALL
-1.5" RIGID INSULATION
-1-½" 22 GA. MTL STUDS AT 16" O.C.
-VAPOR BARRIER
-⅝" GYP. BD. (½" CEMENT BD. @ TILE)

G -8X8X16" CMU BLOCK WALL
-1.5" RIGID INSULATION
-1-½" 22 GA. MTL STUDS AT 16" O.C.
-VAPOR BARRIER
-⅝" GYP. BD. (½" CEMENT BD. @ TILE

H -(E) 8" CMU BLOCK WALL
-R-11 BATT INSULATION
-3-½" 22 GA. MTL STUDS @ 16" O.C.
-VAPOR BARRIER
-⅝" GYP. BD. (½" CEMENT BD. @ TILE

I -CERAMIC TILE
-10 MIL. VAPOR BARRIER
-½" CEMENT BACKER BOARD
-3-½" 22 GA MTL STUDS @ 16" O.C.
-R-11 BATT INSULATION
-½" CEMENT BACKER BOARD
-10 MIL. VAPOR BARRIER
-CERAMIC TILE

J -ACCORDIAN DOOR

K -6X8X16" CMU BLOCK WALL
-2" AIRSPACE
-R-11 BATT INSULATION
-3-½" 22 GA. MTL STUDS AT 16" O.C.
-VAPOR BARRIER
-½" CEMENT BACKER BOARD
-CERAMIC TILE

L -6X8X16" CMU BLOCK WALL

M -(E) 6" CONCRETE WALL
-(E) 2" RIGID INSULATION

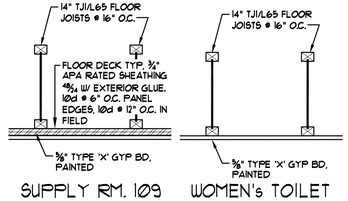
N -⅝" GYP. BD.
-VAPOR BARRIER
-3-½" 22 GA. MTL STUDS @ 16" O.C.
-R-11 BATT INSULATION
-(E) 8" CMU BLOCK WALL
-R-11 BATT INSULATION
-3-½" 22 GA. MTL STUDS @ 16" O.C.
-VAPOR BARRIER
-⅝" GYP. BD.

O -TILE IN TOILET & SHOWER AREAS
-8" CMU BLOCK WALL

P -CERAMIC TILE
-VAPOR BARRIER
-½" CEMENT BD.
-3-½" 22 GA MTL STUDS @ 16" O.C.
-½" AIRSPACE
-⅝" GYP BD
-3-½" 22 GA MTL STUDS @ 16" O.C.
-R-11 BATT INSULATION
-⅝" GYP BD

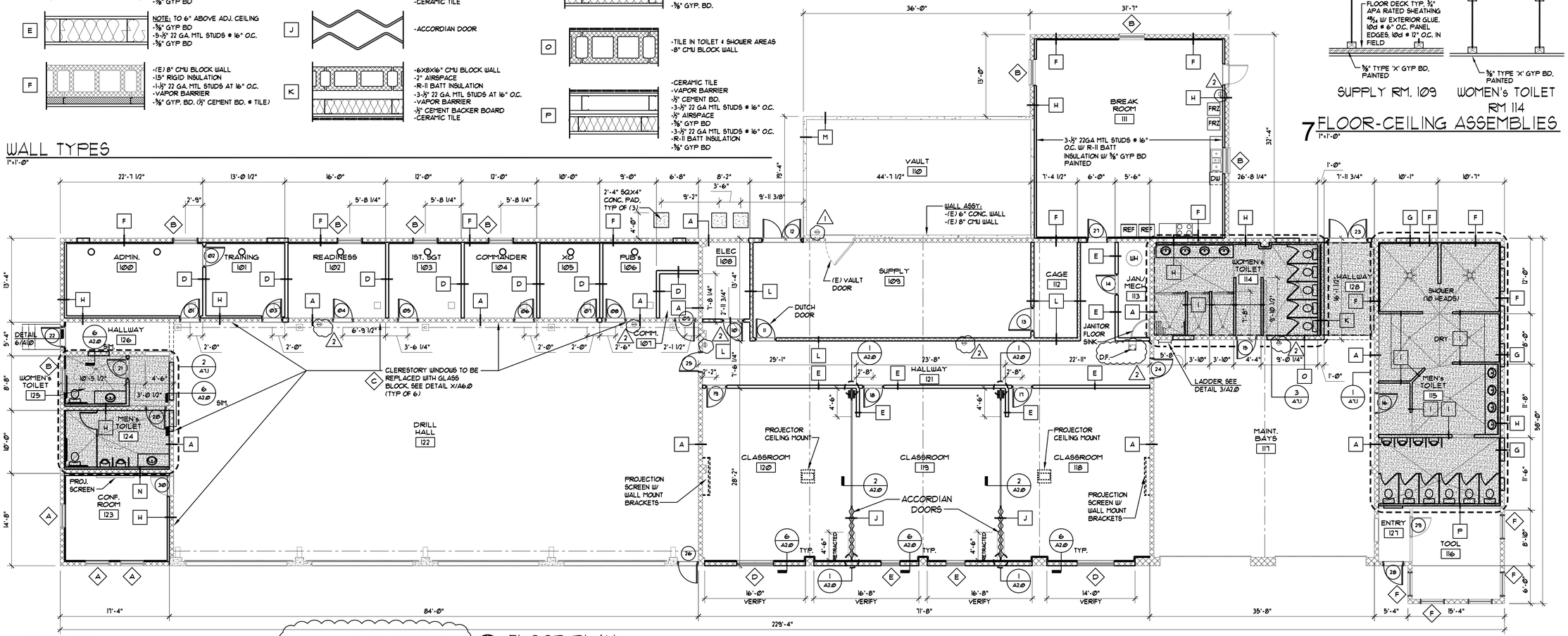
GENERAL NOTES:

1. SEE SHEET A6.0 FOR WINDOW TYPES AND SIZES.
2. SEE SHEET A6.0 FOR NEW INSTALLATION DOOR TYPES AND SIZES.
3. ALL CONDITIONS ARE EXISTING UNLESS OTHERWISE NOTED.
4. PATCH, REPAIR, & FINISH ALL AREAS EXPOSED FROM REMOVED ITEMS.
5. CLEAN, PREP, & PAINT ALL EXPOSED TECTUM CEILINGS - SEE SPEC FOR RECOMMENDATIONS.
6. PATCH & REPAIR TO MATCH EXISTING ALL LOCATIONS WHERE HVAC ITEMS ARE REMOVED. SEE MECH. & PLUMBING SHEETS FOR ITEMS & LOCATIONS.
7. SEE SHEET A6.0 FOR ROOM FINISH SCHEDULE.



7 FLOOR-CEILING ASSEMBLIES

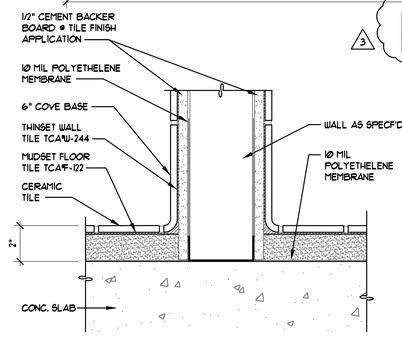
1"=1'-0"



FLOOR PLAN

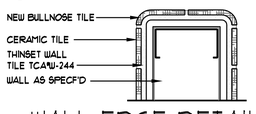
1/8"=1'-0"

3 NEW 4" CONCRETE FLOOR SLAB. RECESS AT AREAS RECEIVING MUD SET TILE. SEE SHEET A6.0 ROOM FINISH SCHEDULE.



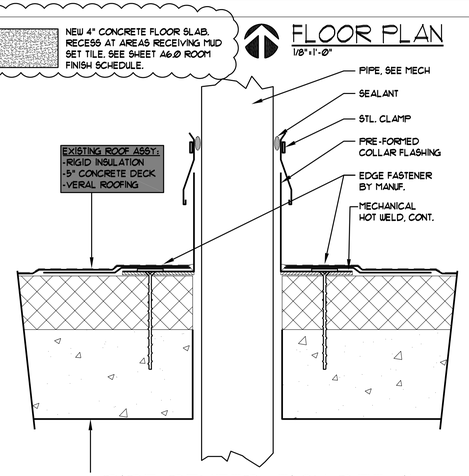
1 WALL BASE DETAIL

3" = 1'-0"



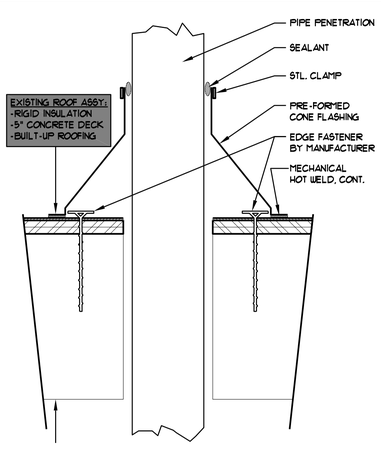
2 WALL EDGE DETAIL

3" = 1'-0"



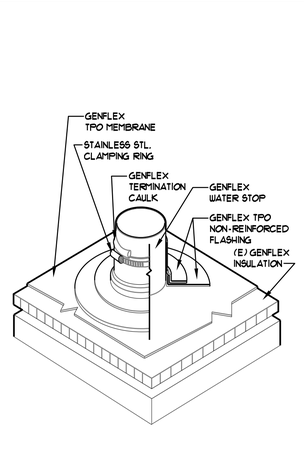
3 PIPE PENETRATION DETAIL

3"=1'-0" (VERAL ROOFING)



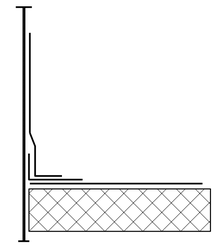
4 PIPE PENETRATION DETAIL

3"=1'-0" (GENFLEX-TPO ROOFING)

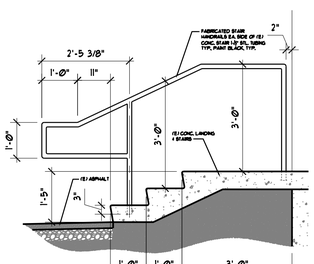


5 PIPE PENETRATION DETAIL

3"=1'-0" (GENFLEX-TPO ROOFING)



BASE WRAP TO EXTEND 1" MIN. UP VERTICAL SURFACE OF PIPE AND 2" MIN. ONTO FIELD MEMBRANE WITH A SOLID HOT AIR WELD TO THE DECK MEMBRANE. UPPER WRAP TO EXTEND 1-1/2" ONTO BASE WRAP AND 8" MIN. UP PIPE AND SEALED INTO A BEAD OF GENFLEX WATER STOP WITH A STAINLESS STEEL COMPRESSION BAND.



6 STAIR DETAIL

1/2"=1'-0"

INSIGHT architects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
IF NOT 1 INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

ARCHITECT STAMP
LICENSED ARCHITECT AR-1659
DANA KAUFFMAN STATE OF IDAHO

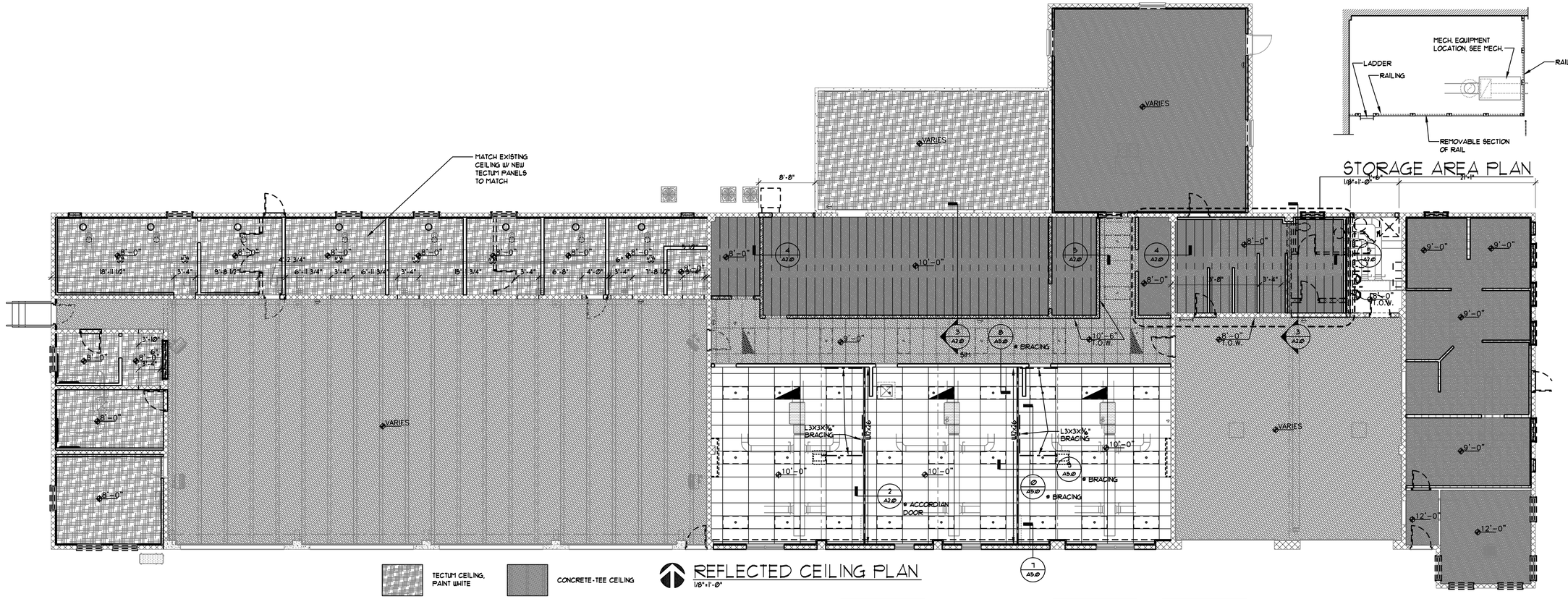
IDAHO ARMY NATIONAL GUARD
BUILDING #557 REMODEL
GOWEN FIELD
BOISE, IDAHO
FLOOR PLAN

REVISIONS	
NO.	REMARKS
1	6-8-07 ADDENDUM 01
2	6-15-07 ADDENDUM 02
3	6-18-07 ADDENDUM 03

CHECKED	DKAUFFMAN
DATE	05-15-07
DRAWN	rstewart
JOB NO.	06052

SHEET NUMBER
A1.0

P:\06 Projects\06052 Idaho Army National Guard Bldg 557\NationalGuard-Bldg 557&558 - As-Built\Cad files\557\06052 A10 FF-557.dwg, 5/16/2008 1:46:15 PM, rstewart



REFLECTED CEILING PLAN
1/8"=1'-0"

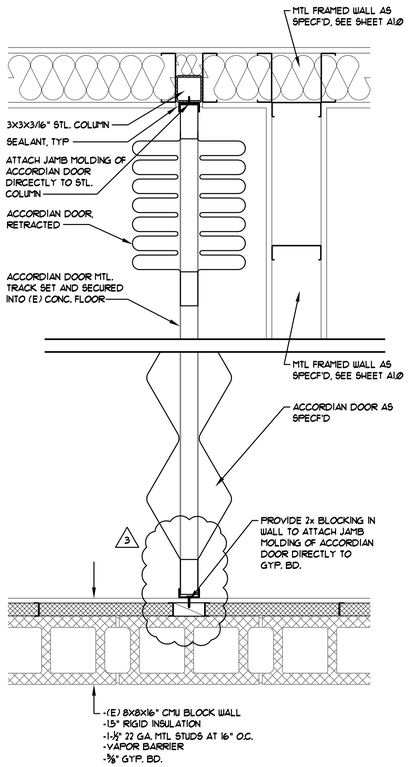
STORAGE AREA PLAN
1/8"=1'-0"

TECTUM CEILING, PAINT WHITE

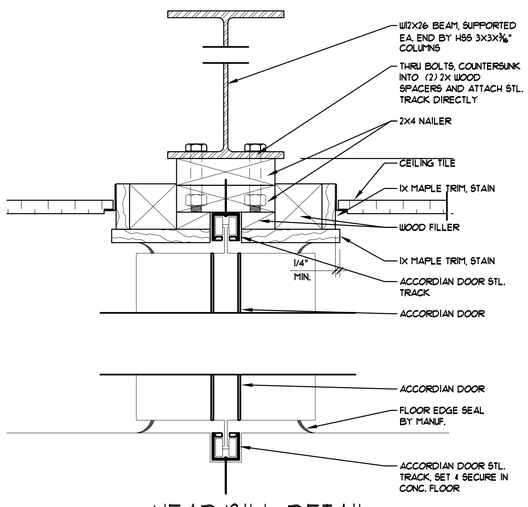
CONCRETE-TEE CEILING

GYPSUM BOARD CEILING, PAINT WHITE

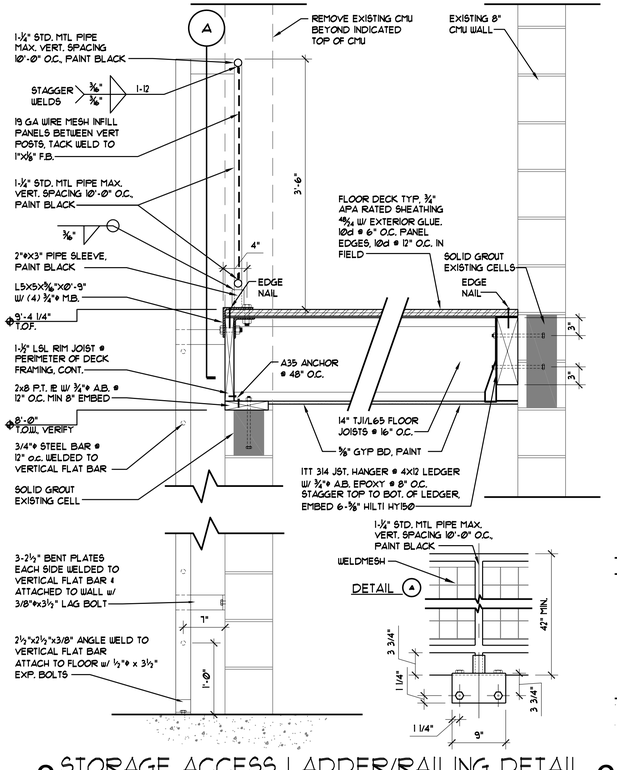
2'X4' SUSPENDED ACOUSTICAL LAY-IN CEILING



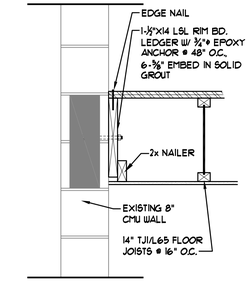
1 JAMB DETAILS
1-1/2" = 1'-Ø"



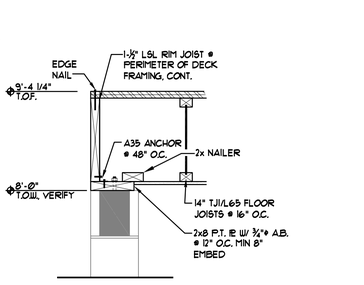
2 HEAD/SILL DETAIL
3" = 1'-Ø"



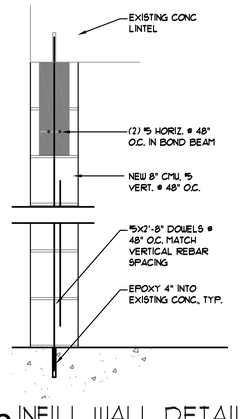
3 STORAGE ACCESS LADDER/RAILING DETAIL
SCALE: 1"=1'-Ø"



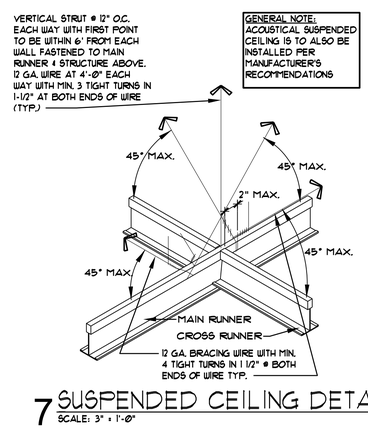
4 LEDGER DETAIL
1"=1'-Ø"



5 RIM JOIST DETAIL
1"=1'-Ø"



6 INFILL WALL DETAIL
1"=1'-Ø"



7 SUSPENDED CEILING DETAIL
SCALE: 3" = 1'-Ø"

INSIGHT architects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

ARCHITECT STAMP
LICENSED ARCHITECT AR-1659
DANA KAUFFMAN STATE OF IDAHO

IDAHO ARMY NATIONAL GUARD
BUILDING #557 REMODEL
GOWEN FIELD
BOISE, IDAHO

REFLECTED CEILING PLAN

REVISIONS	
NO.	REMARKS
3	ASI-01 7-20-07

CHECKED	DKAUFFMAN
DATE	05-15-07
DRAWN	rstewart
JOB NO.	06052

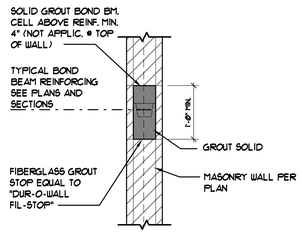
SHEET NUMBER
A2.0

F:\06 Projects\06052 Idaho Army National Guard Bldg 557\WorkingIdaho Army National Guard Bldg 557A538 - As-Built\Cad files\557\06052 A2Ø FP-557.dwg, 5/16/2008 1:26:20 PM, rstewart

GENERAL NOTES:

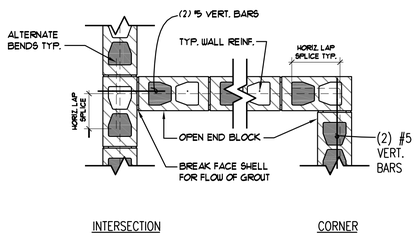
1. SEE SHEET A5.1 FOR GENERAL STRUCTURAL NOTES & SPECIAL INSPECTION REQUIREMENTS.

NOTE: 1.) BUILDING PAPER IS NOT ALLOWED AS GROUT STOP.
2.) CONTRACTORS OPTION: ADDITIONAL 4" GROUT NOT REQUIRED IF ADEQUATE COVERAGE OF HORIZONTAL BARS IS PROVIDED.

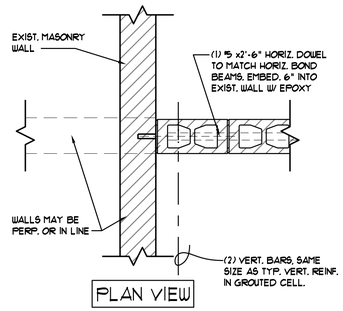


1 MASONRY BOND BEAM
3/4"=1'-0"

NOTE: LAP SPLICE = 48 DIAMETERS AT SINGLE CURTAIN



2 WALL INTERSECT. DETAIL
3/4"=1'-0"

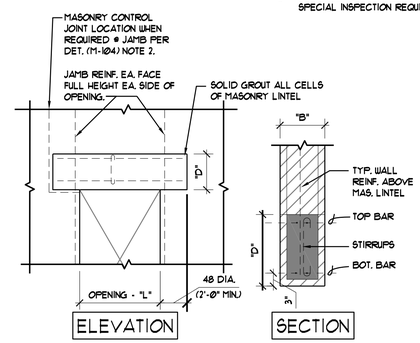


3 NEW TO EXIST. WALL DETAIL
3/4"=1'-0"

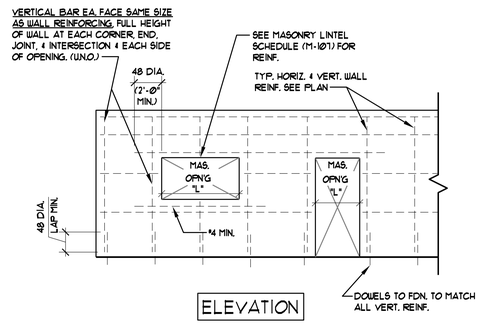
MASONRY LINTEL SCHEDULE

OPENING SIZE	LINTEL SIZE "B" x "D"	REINFORCEMENT BOTTOM BARS	STIRRUPS	TOP BARS
4'-0" OR LESS	8" x 16"	(1) #5		
	12" x 16"	(1) #5		
4'-1" TO 6'-0"	8" x 16"	(2) #5		
	12" x 16"	(2) #5		
6'-1" TO 8'-0"	8" x 16"	(2) #5	#3 @ 8" O.C.	(2) #5
	12" x 16"	(2) #5	#3 @ 8" O.C.	(2) #5

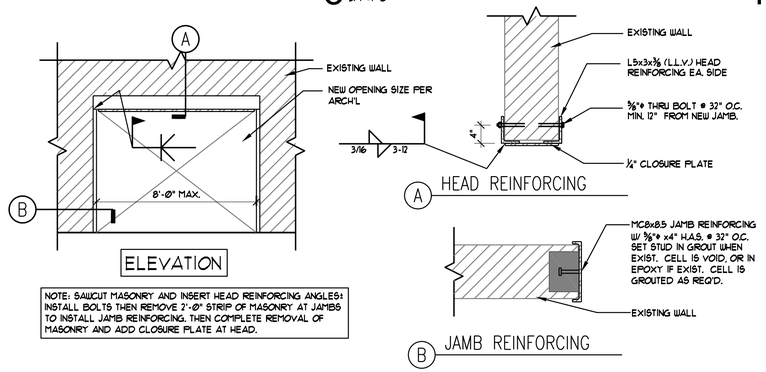
4 LINTEL REINFORCEMENT DETAIL
3/4"=1'-0"



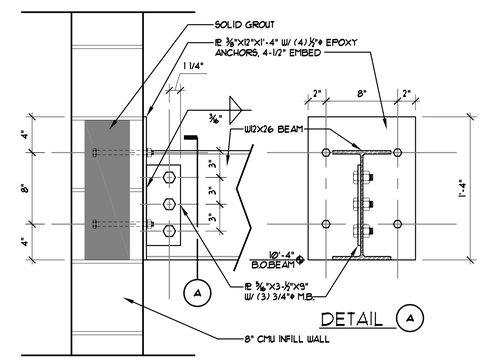
NOTE: FOR PIERS 4'-0" & LESS W/ LINTELS ON EA. SIDE, PROVIDE COMPLETE LAP OF BOTTOM BARS (1.e. 48 DIAM.)



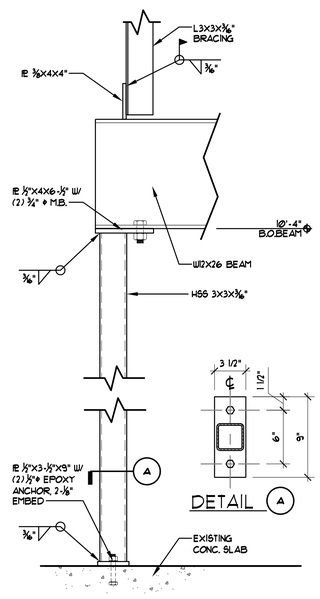
5 MASONRY WALL REINFORCEMENT
3/4"=1'-0"



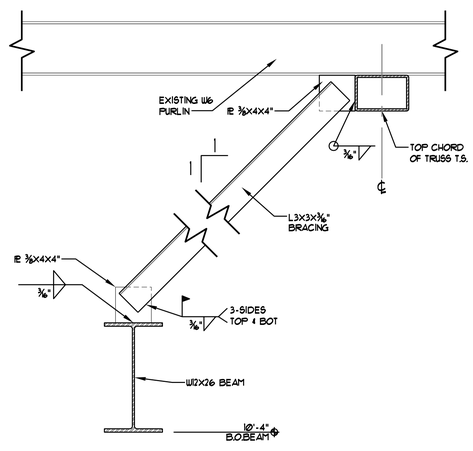
6 NEW OPENING DETAIL
3/4"=1'-0"



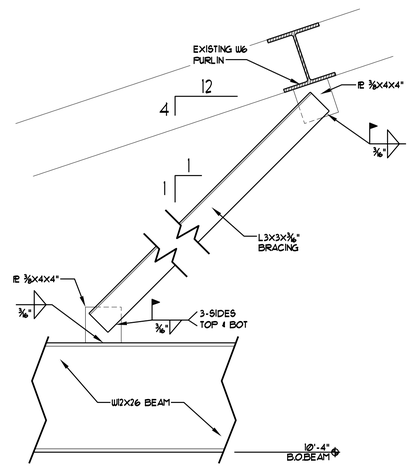
7 BEAM TO CMU WALL DETAIL
1-1/2"=1'-0"



8 BEAM @ COLUMN DETAIL
1-1/2"=1'-0"



9 BRACE @ BEAM DETAIL
1-1/2"=1'-0"



10 BRACE @ BEAM DETAIL
1-1/2"=1'-0"

INSIGHT architects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
0 1"
IF NOT 1 INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

ARCHITECT STAMP
LICENSED ARCHITECT AR-1659
DANA KAUFFMAN STATE OF IDAHO

IDAHO ARMY NATIONAL GUARD
BUILDING #557 REMODEL
GOWEN FIELD
BOISE, IDAHO

DETAILS

REVISIONS	
NO.	REMARKS

CHECKED	DKAUFFMAN
DATE	05-15-07
DRAWN	rstewart
JOB NO.	06052

SHEET NUMBER
A5.0

P:\06 Projects\06052 Idaho Army National Guard Bldg 557\NationalGuard-Bldg 557&558 - As-Built\Cad Files\557\06052 A50 FP-557.dwg, 5/16/2008 1:55:48 PM, rstewart

GENERAL STRUCTURAL NOTES (G.S.N.)

GENERAL

The General Contractor shall verify all dimensions and site conditions before starting work. The Architect and Structural Engineer shall be notified of any discrepancy. These structural drawings are intended to present sufficient dimensions to indicate major plan sizes and to locate primary structural components. The contractor shall coordinate location of secondary elements, walls, or members related to other disciplines. Use details marked "Typical" wherever applicable. Changes, omissions or substitutions are not permitted without the written approval of the Architect and Structural Engineer. Refer to specifications for further requirements. All materials and workmanship shall conform to the 2003 International Building Code. The design, adequacy and safety of erection bracing, shoring, temporary supports, etc., is the sole responsibility of the Contractor, and has not been considered by the Structural Engineer. The Contractor is responsible for the stability of the structure prior to the completion of all shear walls, roof and floor diaphragms and finish materials. The Contractor shall provide the necessary bracing to provide stability prior to the application of the above-mentioned components.
Observation visits to the site by the Structural Engineer shall not include inspection of the above items.

SHOP DRAWINGS

Shop drawings are to be checked and approved by the General Contractor prior to submitting for Architect and Structural Engineer review. Any request for modification to the drawings must be submitted in writing. This may be accomplished through the shop drawings only if the change is clearly represented, clouded and noted as being a requested change requiring the Structural Engineer approval. Changes to the drawings by way of the shop drawings that are not clearly noted as stated above, do not constitute an authorized change even though the drawings have been stamped with the Structural Engineer review stamp. General Contractor is responsible for verification and coordination of dimensions and details for each Subcontractor.

DESIGN LOADS

Snow Load----------25 PSF
Floor Live Load----------100 PSF
Office Partition Dead Load ----------20 PSF
Mezzanine Live Load ----------125 PSF
Corridor and Stair Live Load ---------- 100 PSF
Mechanical Room Live Load ---------- 125 PSF
Building Category per IBC ---------- II
Basic Wind Speed per IBC ---------- 90 (MPH, 3 Sec Gust), Exposure C
Importance Factor (Wind) IW---------- 1.0
Seismic Use Group ---------- Category I
Importance Factor (Seismic) IE---- 1.0
SDS ---------- 0.353
SD1 ---------- 0.169
Site Class ---------- D
Seismic Design Category ---------- C
See plans for special mechanical unit loading.

FOUNDATION

Design allowable soil bearing pressure = 1500 PSF. Bottom of all footings to bear on native, inorganic, undisturbed soil 1'-0" minimum below existing grade. Extend all exterior footings 2'-6" minimum below finished grade. No footing shall bear higher than a 1 vertical to 1.5 horizontal slope above any excavation, existing or planned. Contractor shall provide temporary shoring to prevent movement of walls if backfill is placed before floor system is in place. There shall be 95% compaction (ASTM D1557 Modified Proctor Density) of all backfill soil under slabs on grade.

CAST-IN-PLACE CONCRETE

Attain the following minimum compressive strength at 28 days:
* 3000 PSI---Footings and interior slabs on grade.
* 4000 PSI---Exposed concrete slabs, stem walls, columns, and beams.
MAXIMUM SLUMP: 3" for slabs and footings; 4" for walls, columns and beams.
Construction to be in accordance with ACI 318-02 (R-02), "Part 2 - Standards For Tests and Materials" and "Part 3 - Construction Requirements". Location of construction or pour joints must be approved by the Architect and Structural Engineer if different from that shown on plans.

MASONRY

CONCRETE MASONRY UNITS: ASTM C90, Grade N-1, running bond. f'm = 1500 PSI
MORTAR: ASTM C270, Type S, minimum compressive strength of 1800 PSI at 28 days.
GROUT: ASTM C476 with a min. compressive strength of 2500 PSI at 28 days (See Masonry Wall Strengths below).
Fill all cells containing reinforcing with grout in lifts not exceeding 4'-0" in height. Fill other cells with grout as indicated on drawings. All reinforcement shall be in place prior to grouting with vertical bars held at top, bottom and 192 diameters maximum on center. Grout shall be consolidated by mechanical vibration during placing and re-consolidated by mechanical vibration to minimize voids due to water loss. Contractor shall provide temporary bracing for masonry walls, as required, until connections to floor and/or roof diaphragms are completed.

REINFORCING STEEL

WELDED WIRE FABRIC: ASTM A82 and A185.
DEFORMED BARS: ASTM A615, Grade 40 for #3; Grade 60 for #4 & larger; ASTM A706 for welded conditions.
LAP SPLICES:

* Masonry: 48-bar dia. at cells with single bar reinf. (horizontal and vertical).
64 bar dia. at cells with two bars reinf. (horizontal and vertical).

* Concrete: 40-bar dia., typical unless noted otherwise.

WELDED WIRE FABRIC SPLICES: Wire spacing ÷ 2".
CONCRETE COVER:
Unless otherwise noted on these drawings, provide clear embedment at reinforcing bars as follows:

Concrete cast against soil = 3".
Formed concrete against soil = 2".
Walls, columns and beams exposed to weather = 2".
Walls, columns and beams not exposed to weather = 1 ½".
Slab on grade = 2".

Use only A706 steel for all welded reinforcing. Securely tie all reinforcing in place with double annealed 16-gauge iron wire or approved clips. Submit shop drawings of reinforcing steel for review by the Architect and Structural Engineer prior to fabrication.

STRUCTURAL AND MISC. STEEL

WIDE FLANGE SHAPES: ASTM A992.
CHANNELS, ANGLES, PLATES AND BARS: ASTM A36, Fy = 36 KSI minimum.
PIPE: ASTM A53 OR A501, Fy = 35 KSI minimum.
TUBING: ASTM A500, Grade B, Fy = 46 KSI.
BOLTS: ASTM A325 high strength bolts (H.S.B.) unless noted as ASTM A307 machine bolts (M.B.). Where high strength bolts are used, they shall be installed with load indicator devices (load indictor washers or snap-off heads). Where an oversized or short slotted hole occurs in an outer ply of any connection, a hardened washer shall be used.
ANCHOR BOLTS (A.B.): ASTM F1554. Provide double nut for leveling at columns or beam base plates.
EXPANSION BOLTS (E.B.): Hilti "Kwik Bolt III" or approved equivalent. Expansion bolts in grouted masonry shall be sleeve type.
FLUSH EXPANSION ANCHORS: Hilti "Drop in Anchor" or approved equivalent.
EPOXY ANCHORS: Hilti "HY-150" or approved equivalent.
HEADED ANCHOR STUD (H.A.S.) and Threaded Anchor Stud (T.A.S.): ASTM A108-69T, Fy = 50 KSI, end welded per manufacturer's recommendations.
DEFORMED BAR ANCHORS (D.B.A.): ASTM A496, Fy = 70 KSI, attached with Nelson Stud Gun or ASTM A706, Fy = 60 PSI end welded with 3/16" fillet all-around.
POWDER DRIVEN FASTENERS (PDF): ESR-1663, X-EDNI by Hilti for attachment to structural steel; NC (.145 ϕ) by Hilti for attachment to concrete.
WELDING ELECTRODES OR WIRES: AWS A5.1 or A5.5, E70XX; AWS A5.18, E70S-X; AWS A5.20, E7XT-X.
Erection and fabrication in accordance with AISC "Specifications for Design, Fabrication, and Erection of Structural Steel for Buildings". Welding shall conform to AWS "Code for Arc and Gas Welding in Building Construction". All welding shall be performed by AWS Certified Welders. All columns and beams to be from unspliced lengths unless noted otherwise on the drawings. Submit shop drawings showing sizes, dimensions and required connection details for review by the Architect and Structural Engineer prior to fabrication.
COMPLETE JOINT PENTRATION WELD (C.J.P.): Provide backer bars, run off tabs, and access holes per AWS D1.1. Backer bars shall be removed after welding, the root weld back gouged and repaired if necessary and reinforced with a fillet. Run off tabs shall be removed after welding with the flange edge ground smooth.

COLD FORMED STRUCTURAL STEEL MEMBERS

33 & 43 MILS MATERIAL: ASTM C955 Grade 33 for painted carbon sheet steel or ASTM A653/A653M for galvanized steel (Fy=33 KSI).
54, 68 & 97 MILS MATERIAL: ASTM C955 Grade 50 for painted carbon sheet steel or ASTM A653/A653M for galvanized steel (Fy=50 KSI).
Carbon sheet steel must be coated with a rust inhibitive paint. Galvanized coatings shall meet ASTM A924/A924M.
All structural properties computed in accordance with AISI "Specifications for the Design of Cold Formed Steel Structural Members". Designations on the drawings are Steel Stud Manufacturer's Association (S.S.M.A.). Approved equivalent products may be permitted upon review of the Architect and Structural Engineer. Install members in accordance with industry standards. Unless otherwise noted on these drawings, stud wall track to be of the same material and gauge as studs. Provide horizontal bridging at 5'-0" o.c. maximum at non-bearing walls and 3'-4" o.c. maximum at bearing walls. Bearing walls to be erected with stud ends seated against track web top and bottom . All welding to be performed by AWS Certified Welders experienced in this type of construction.

WOOD

GENERAL:
All wood bearing on concrete or masonry, if less than 4'-0" above grade, shall be pressure treated Douglas Fir. Structural members shall not be cut for pipes, etc., unless specifically noted or detailed.
SAWN LUMBER: No. 2 & better Douglas Fir-Larch, WWPA grading rules.
SHEATHING: APA rated sheathing, APA rated Sturd-I-Floor, exposure-1, NER-108.
FRAMING ANCHORS AND CONNECTORS: "Simpson Strong Tie" or approved equivalent as indicated on drawings. Install and connect per manufacturer's requirements.
NAIL GUNS: All nailed roof or floor diaphragms and shear walls are designed using allowable I.B.C. shear values which are based on conventional common nail sizes. Use of pneumatic nail guns or staples is acceptable only with engineer approval of type of fastener and spacing in order to meet intended design loads. For nailing not shown on drawings, use IBC Fastening Schedule, Table 2304.9.1.

Fasteners in contact with pressure preservative-treated (PPT) and fire-retardant-treated wood are to be hot-dipped galvanized steel, stainless steel, silicon bronze or copper. Connections should not incorporate dissimilar metals or metallic coatings in contact with each other. Products in which the coatings have been damaged or compromised during shipping, storage or installation should be discarded or otherwise effectively restored (IBC Section 2304.95, IRC Section R319.3).

PROPRIETARY PRODUCTS

Pre-manufactured wood I-joists, beams, and trusses to have I.C.B.O. acceptance, and be of the same depths and spacing as noted on the framing plans. Manufacturer's published load tables to confirm design load carrying capabilities. Install the product per manufacturer's recommendations. Submit shop drawings of layout and required connection details for review by the Architect and Structural Engineer prior to fabrication.

GROUT AND EPOXY RESIN

NON-SHRINK GROUT: "Masterflow 928" as manufactured by Master Builders Inc. or approved equivalent.
EPOXY ANCHORS: For anchoring deformed or smooth rebar into existing or hardened concrete or solid grouted masonry use Hilti "HY-150" system or approved equivalent.

SPECIAL STRUCTURAL INSPECTIONS

The owner shall employ a special inspection service to perform inspections in accordance with Chapter 17 of the 2003 International Building Code. Inspection reports for the following shall be furnished to the Structural Engineer of Record in a timely manner.

SPECIAL STRUCTURAL INSPECTION SCHEDULE

INSPECTION TASK	FREQUENCY*	REFERENCE
EARTHWORK		
Special grading, excavation and filling (as required by the Geotechnical Report dated XX XX, 2005, By XXXX)		
CONCRETE CONSTRUCTION (IBC TABLE 1704.4)		
Other than sampling and testing, special inspection is not required for footings and slabs on grade (f'c = 2500 psi for design).		
1 Inspection of reinforcing steel, including prestressing tendons, and placement.	P	IBC 1903.5, 1907.1, 1907.7, 1914.4 ACI-318 3.5, 7.1–7.7
2 Inspection of reinforcing steel welding:		
a Material verification of weld filler materials:		
1) Identification markings to conform to AWS specification in the approved construction documents.	–	AISC ASD A3.6 AISC LRFD A3.5
2) Manufacturer's certificate of compliance required.	–	–
b Inspection of welding:	–	
1) Verification of weldability of reinforcing steel other than ASTM A706.	P	IBC 1903.5.2 AWS D1.4 ACI-318 3.5.2
3) Shear reinforcement.	C	
4) Other reinforcing steel.	P	
3 Inspect bolts to be installed in concrete prior to and during placement of concrete where indicated on plans.	C	IBC 1912.5
4 Verify use of required design mix.	P	IBC 1904, 1905.2–1905.4, 1914.2, 1914.3 ACI-318 Ch. 4, 5.2–5.4
5 At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	C	IBC 1905.6, 1914.10 ASTM C172, C31 ACI-318 5.6, 5.8
6 Inspection of concrete and shotcrete placement for proper application techniques.	C	IBC 1905.9, 1905.10, 1914.6–1914.8 ACI-318 5.9 , 5.10
7 Inspection for maintenance of specified curing temperature and techniques.	P	IBC 1905.11, 1905.13, 1914.9 ACI-318 5.11–5.13
MASONRY CONSTRUCTION – LEVEL 1 (IBC TABLE 1704.5.1)		
1 As masonry construction begins, the following shall be verified to ensure compliance:		
a Proportions of site-prepared mortar.	P	ACI-530.1/ASCE-6/TMS-602 2.6A
b Construction of mortar joints.	P	ACI-530.1/ASCE-6/TMS-602 3.3B
c Location of reinforcement and connectors.	P	ACI-530.1/ASCE-6/TMS-602 3.4, 3.6A
2 The inspection program shall verify:		
a Size and location of structural elements.	P	ACI-530.1/ASCE-6/TMS-602 3.3G
b Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	P	ACI-530/ASCE-5/TMS-402 1.2.2(e), 2.1.4, 3.1.6
c Specified size, grade and type of reinforcement.	P	ACI-530/ASCE-5/TMS-402 1.12 ACI-530.1/ASCE-6/TMS-602 2.4, 3.4
d Welding of reinforcing bars.	C	ACI 530/ASCE-5/TMS-402 2.1.10.6.2, 3.2.3.4(b)
e Protection of masonry during cold weather (temperature below 40° F) or hot weather (temperature above 90° F).	P	IBC 2104.3, 2104.4 ACI-530.1/ASCE-6/TMS-602 1.8C, 1.8D
3 Prior to grouting, the following shall be verified to ensure compliance:		
a Grout space is clean.	P	ACI-530.1/ASCE-6/TMS-602 3.2D
b Placement of reinforcement and connectors and anchorages.	P	ACI-530/ASCE-5/TMS-402 1.12 ACI-530.1/ASCE-6/TMS-602 3.4
c Proportions of site-prepared grout	P	ACI-530.1/ASCE-6/TMS-602 2.6B
d Construction of mortar joints.	P	ACI-530.1/ASCE-6/TMS-602 3.3 B
4 Grout placement shall be verified to ensure compliance with code and construction document provisions.	C	ACI-530.1/ASCE-6/TMS-602 3.5
a Grouting of prestressing bonded tendons.	C	ACI-530.1/ASCE-6/TMS-602 3.6C
5 Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.	C	IBC 2105.2.2, 2105.3 ACI-530.1/ASCE-6/TMS-602 1.4
6 Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.	P	ACI-530.1/ASCE-6/TMS-602 1.5
STEEL CONSTRUCTION (IBC TABLE 1704.3)		
1 Material verification of high-strength bolts, nuts and washers:		
a Identification markings to conform to ASTM standards specified in the approved construction documents.	P	Applicable ASTM material specifications AISC ASD A3.4 AISC LRFD A3.3
b Manufacturer's certificate of compliance required.	P	–
2 Inspection of high-strength bolting:		
a Bearing-type connections.	P	IBC 1704.3.3
b Slip-critical connections.	C/P	AISC LRFD M2.5
3 Material verification of structural steel:		
a Identification markings to conform to ASTM standards specified in the approved construction documents.	–	IBC 1708.4 ASTM A 6 or ASTM A 568
b Manufacturers' certified mill test reports.	–	
4 Material verification of weld filler materials:		
a Identification markings to conform to AWS specification in the approved construction documents.	–	AISC ASD A3.6 AISC LRFD A3.5
b Manufacturer's certificate of compliance required.	–	–
5 Inspection of welding of structural steel:		
a Complete and partial penetration groove welds.	C	IBC 1704.3.1 AWS D1.1
b Multipass fillet welds.	C	
c Single-pass fillet welds > 5/16"	C	
d Single-pass fillet welds <= 5/16"	P	
6 Inspection of steel frame joint details for compliance with approved construction documents:	P	IBC 1704.3.2
a Details such as bracing and stiffening.	–	
b Member locations.	–	
c Application of joint details at each connection.	–	

* P = PERIODIC INSPECTION REQUIRED
C = CONTINUOUS INSPECTION REQUIRED

ABBREVIATIONS

#	Pounds or Number
@	At
A.B.	Anchor Bolts
A.F.F.	Above Finish Floor
ADD'L	Additional
APPLIC.	Applicable
ARCH'L	Architectural
B.N.	Boundary Nailing
B.O.D.	Bottom of Deck
BLKG	Blocking
BM.	Beam
BOT.	Bottom
BRG.	Bearing
BTWN.	Between
C	Camber
C.J.P.	Complete Joint Penetration
CL.	Centerline
CLR.	Clear
CMU	Concrete Masonry Unit
COL.	Column
CONC.	Concrete
CONN.	Connection
CONT.	Continuous
D.B.A.	Deformed Bar Anchor
DBL.	Double
DET.	Detail
DL	Dead Load
DP.	Deep
DWLS.	Dowels
E.A.	Epoxy Anchor
E.B.	Expansion Bolt
E.N.	Edge Nailing
EA.	Each
ELEV.	Elevation
EMBED.	Embedment
EXIST.	Existing
EXT.	Exterior
F.N.	Field Nailing
FDN.	Foundation
FIN.	Finish
FLR.	Floor
FRMG.	Framing
FTG.	Footing
G.S.N.	General Structural Notes
GA.	Gauge
GLB	GLU-LAM Beam
H.A.S.	Headed Anchor Stud
H.S.B.	High Strength Bolt
HORIZ.	Horizontal
IBC	International Building Code
INFO.	Information
INT.	Interior
J.B.	Joist Bearing
JST.	Joist
LL	Live Load
LLH	Long Leg Horizontal
LLV	Long Leg Vertical
LSL	Laminated Strand Lumber
LVL	Laminated Veneer Lumber
K	Kips
M.B.	Machine Bolt
MAS.	Masonry
MAX	Maximum
MECH'L	Mechanical
MFR.	Manufacturer
MIN	Minimum
MISC.	Miscellaneous
N.T.S.	Not To Scale
NO.	Number
O.A.	On Center
O.H.	Opposite Hand
O.W.J.	Open Web Steel Joist
OPNG.	Opening
P.T.	Pressure Treated
PERP.	Perpendicular
PL.	Plate
PSF	Pounds Per Square Foot
PSI	Pounds Per Square Inch
PT.	Point
REINF.	Reinforcing
REQ'D	Required
SCHED.	Schedule
SHT.	Sheet
SHTG.	Sheathing
SIM.	Similar
SJ	Slab Joint
SPECS	Specifications
SQ.	Square
STAGG.	Staggered
STD.	Standard
STIFF.	Stiffener
STL.	Steel
T.A.S.	Threaded Anchor Stud
T.O.F.	Top of Footing
T.O.M.	Top of Masonry
T.O.S.	Top of Steel
TYP.	Typical
U.N.O.	Unless Noted Otherwise
VERT.	Vertical
W.F.	Wide Flange (Beam)
W.P.	Work Point
W/	With
W/O	Without
WD.	Wood
W.W.F.	Welded Wire Fabric

INSIGHT architects, p.a.
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax
Russ Phillips + Dana Kauffman

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
0 1" IF NOT 1 INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

ARCHITECT STAMP
LICENSED ARCHITECT AR-1659
DANA KAUFFMAN STATE OF IDAHO

IDAHO ARMY NATIONAL GUARD
BUILDING #557 REMODEL
GOWEN FIELD
BOISE, IDAHO

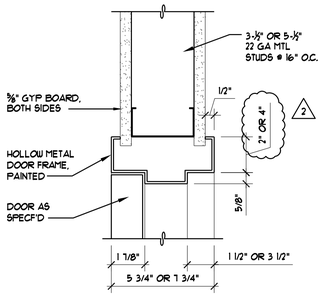
GENERAL STRUCTURAL NOTES

REVISIONS	
NO.	REMARKS

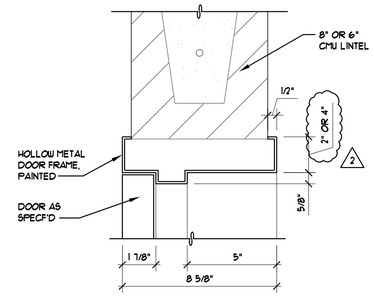
CHECKED	DKAUFFMAN
DATE	05-15-07
DRAWN	rstewart
JOB NO.	06052

SHEET NUMBER
A5.1

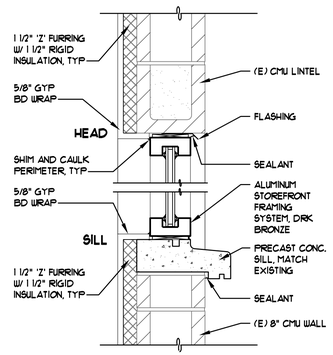
P:\06 Projects\06052 Idaho Army National Guard Bldg 557\NationalGuard-Bldg 557&558 - As-Built\Cad files\557\06052 ASD PP-557.dwg, 5/16/2008 1:56:52 PM, rstewart



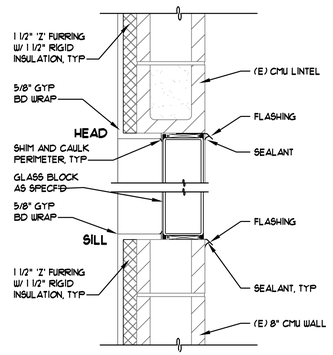
1 HEAD/JAMB DETAIL
SCALE: 3" = 1'-0"



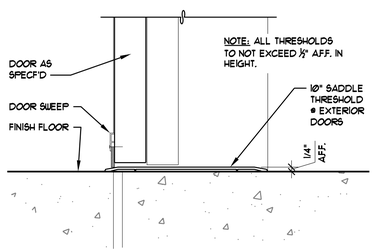
2 HEAD/JAMB DETAIL
SCALE: 3" = 1'-0"



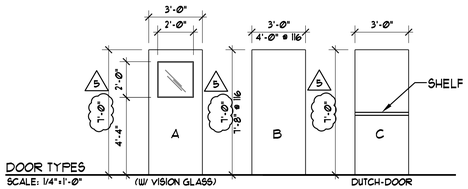
WINDOW REPLACEMENT
3 HEAD/SILL DETAIL
SCALE: 1 1/2" = 1'-0"



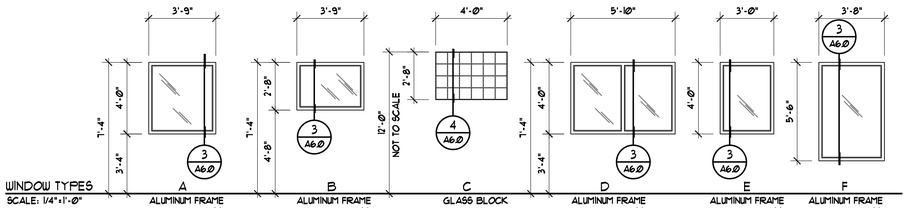
WINDOW REPLACEMENT
4 HEAD/SILL DETAIL
SCALE: 1 1/2" = 1'-0"



5 THRESHOLD DETAIL
SCALE: 3" = 1'-0"



DOOR TYPES
SCALE: 1/4"=1'-0" (W/ VISION GLASS) DUTCH-DOOR



WINDOW TYPES
SCALE: 1/4"=1'-0"
A ALUMINUM FRAME W/ LOW-E GLASS
B ALUMINUM FRAME W/ LOW-E GLASS
C GLASS BLOCK
D ALUMINUM FRAME W/ LOW-E GLASS
E ALUMINUM FRAME W/ LOW-E GLASS
F ALUMINUM FRAME W/ LOW-E GLASS

ABBREVIATIONS

AC	ACOUSTIC TILE
ALUM	ALUMINUM
CB	COVE BASE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE (SEALED)
CPT	CARPET
EGYP	EXISTING GYPSUM BOARD
EM	ENTRANCE MAT
FACT	FACTORY FINISH
FRP	FIBERGLASS REINFORCED PANEL
FT	FLOOR TILE
GYP	GYPSUM BOARD
HM	HOLLOW METAL
INSUL	INSULATION
PT	PAINT
RB	RUBBER BASE
RP	RETRO PLATE
SAC	SUSPENDED ACOUSTICAL CEILING
SGYP	SUSPENDED GYPSUM BOARD CEILING
ST	STAIN
STL	STEEL
T	EXISTING TECTUM
TB	TILE BASE
TEMP	TEMPERED SAFETY GLASS
WD	WOOD (SOLID CORE)
WT	WALL TILE
VIN	VINYL
VCT	VINYL COMPOSITE TILE

ROOM FINISH SCHEDULE

NO.	NAME	FLOOR		BASE		WALLS NORTH		WALLS EAST		WALLS SOUTH		WALLS WEST		CEILING			REMARKS
		MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	HT.	
100	ADMINISTRATION	CPT	FACT	RB	FACT	GYP	PT	GYP	PT	GYP	PT	GYP	PT	T	PT	VARIES	
101	TRAINING	CPT	FACT	RB	FACT	GYP	PT	GYP	PT	GYP	PT	GYP	PT	T	PT	VARIES	
102	READINESS	CPT	FACT	RB	FACT	GYP	PT	GYP	PT	CMU	PT	GYP	PT	T	PT	VARIES	
103	1ST SGT	CPT	FACT	RB	FACT	GYP	PT	GYP	PT	CMU	PT	GYP	PT	T	PT	VARIES	
104	COMMANDER	CPT	FACT	RB	FACT	GYP	PT	GYP	PT	CMU	PT	GYP	PT	T	PT	VARIES	
105	XO	CPT	FACT	RB	FACT	GYP	PT	GYP	PT	CMU	PT	GYP	PT	T	PT	VARIES	
106	PUB's	CPT	FACT	RB	FACT	GYP	PT	GYP	PT	CMU	PT	GYP	PT	T	PT	VARIES	
107	COMM	CONC	SEAL	RB	FACT	GYP	PT	CMU	PT	CMU	PT	GYP	PT	T	PT	VARIES	
108	ELECTRICAL	CONC	RP	RB	FACT	CMU	PT	CMU	PT	CMU	PT	CMU	PT	GYP	PT	8'-0"±	
109	SUPPLY	CONC	RP	--	--	CMU	PT	CMU	PT	CMU	PT	CMU	PT	GYP	PT	10'-0"±	
110	VAULT	CONC	RP	--	--	CONC	PT	CONC	PT	CMU	PT	CONC	PT	--	--	VARIES	5-1/2" thick existing slab
111	BREAK ROOM	VCT	FACT	RB	FACT	GYP	PT	GYP	PT	GYP	PT	GYP	PT	EGYP	PT	VARIES	
112	CAGE	CONC	RP	--	--	CMU	PT	CMU	PT	CMU	PT	CMU	PT	GYP	PT	10'-0"±	
113	JANITOR/MECH	CONC	SEAL	RB	FACT	CMU	PT	CMU	PT	GYP	PT	GYP	PT	GYP	PT	8'-0"±	
114	WOMENS TOILET	TILE	FACT	--	--	TILE	--	TILE	--	TILE	--	TILE	--	TILE	--	8'-0"±	
115	MENS TOILET	TILE	FACT	--	--	TILE	--	TILE	--	TILE	--	TILE	--	SGYP	--	8'-0"±	
116	TOOL ROOM	CONC	RP	--	--	GYP	PT	CMU	PT	CMU	PT	CMU	PT	GYP	PT	8'-0"±	
117	MAINT. BAYS	CONC	RP	--	--	CMU	PT	CMU	PT	CMU	PT	CMU	PT	--	--	19'-0"±	1" existing slab
118	CLASSROOM	CPT	FACT	RB	FACT	GYP	PT	CMU	PT	GYP	PT	--	--	SAC	FACT	10'-0"±	
119	CLASSROOM	CPT	FACT	RB	FACT	GYP	PT	--	--	GYP	PT	--	--	SAC	FACT	10'-0"±	
120	CLASSROOM	CPT	FACT	RB	FACT	GYP	PT	--	--	GYP	PT	CMU	PT	SAC	FACT	10'-0"±	
121	HALLWAY	CONC	RP	RB	FACT	CMU	PT	CMU	PT	GYP	PT	CMU	PT	SAC	FACT	9'-0"±	
122	DRILL HALL	CONC	RP	--	--	CMU	PT	CMU	PT	CONC	PT	CMU	PT	--	--	VARIES	8" existing slab
123	CONF. ROOM	CPT	FACT	RB	FACT	GYP	PT	GYP	PT	GYP	PT	GYP	PT	GYP	PT	8'-0"±	
124	MENS TOILET	TILE	FACT	--	--	TILE	--	TILE	--	TILE	--	TILE	--	GYP	PT	8'-0"±	
125	WOMENS TOILET	TILE	FACT	--	--	TILE	--	TILE	--	TILE	--	TILE	--	GYP	PT	8'-0"±	
126	HALLWAY	CONC	RP	--	--	CMU	PT	--	--	CMU	PT	GYP	PT	GYP	PT	8'-0"±	
127	ENTRY	CONC	RP	--	--	GYP	PT	GYP	PT	CMU	PT	CMU	PT	GYP	PT	8'-0"±	
128	HALLWAY	CONC	RP	--	--	CMU	PT	CMU	PT	--	--	CMU	PT	GYP	PT	8'-0"±	

5 122 DRILL HALL CONC RP -- -- CMU PT CMU PT CONC PT CMU PT -- -- VARIES 8" existing slab
5 123 CONF. ROOM CPT FACT RB FACT GYP PT GYP PT GYP PT GYP PT GYP PT 8'-0"±

HARDWARE SETS:

1. THRESHOLD
PUSH / PULL HANDLES
(3) PIVOT HINGES PER DOOR
KEYLESS ENTRY/EXIT DEVICES
CLOSER(S) PER DOOR
WEATHER STRIPPING

2. LEVER OPERATED
OFFICE FUNCTION LOCKSET
(1 1/2 PR.) BALL BEARING HINGES
WALL MOUNTED DOOR BUMPER

3. LEVER OPERATED
RESTROOM FUNCTION LOCKSET
(1 1/2 PR.) BALL BEARING HINGES
CLOSER

4. THRESHOLD
LEVER OPERATED W/ PANIC BAR
PANIC FUNCTION LOCKSET
(1 1/2 PR.) BALL BEARING HINGES
CLOSER
WEATHER STRIPPING

5. LEVER OPERATED
PASSAGE LOCKSET
(1½ PR.) BALL BEARING HINGES
CLOSER
DOOR STOP

6. LEVER OPERATED
CLASSROOM FUNCTION
(1½ PR.) BALL BEARING HINGES
CLOSER
DOOR STOP
(2 FLUSH BOLTS @ DUTCH DOOR * 109)

7. LEVER OPERATED
STOREROOM FUNCTION
(1½ PR.) BALL BEARING HINGES

2 DOOR AND FRAME SCHEDULE

ROOM NO.	ROOM NAME	DOOR MARK	DOOR TYPE	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR MATL.	DOOR FIN.	FRAME TYPE	FRAME MATL.	FRAME DETAIL HEAD	FRAME DETAIL JAMB	FRAME DETAIL SILL	LABEL	HDW.	REMARKS
100	ADMINISTRATION	01	A	3'-0"	7'-0"	HM	FACT	--	HM/PT	--		--	--	2	4" HEAD @ FRAME
		02	A	3'-0"	7'-0"	HM	FACT	--	HM/PT			--	--	2	
101	TRAINING	03	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	2	4" HEAD @ FRAME
102	READINESS	04	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	2	4" HEAD @ FRAME
103	1ST SGT	05	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	2	4" HEAD @ FRAME
104	COMMANDER	06	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	2	4" HEAD @ FRAME
105	XO	07	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	2	4" HEAD @ FRAME
106	PUB's	08	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	2	4" HEAD @ FRAME
107	COMM	09	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	2	4" HEAD @ FRAME
108	ELECTRICAL	10	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	2	
109	SUPPLY	11	C	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	6	DUTCH DOOR
		12	B	PR 3'-0"	7'-0"	HM	ST	--	HM/PT			--	--	1	
111	BREAK ROOM	27	B	3'-0"	7'-0"	WD	ST	--	EXIST			--	--	2	
112	CAGE	13	B	4'-0"	7'-0"	WD	ST	--	HM/PT			--	--	6	
113	JANITOR/MECH	14	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	7	
114	WOMENS TOILET	15	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	5	
115	MENS TOILET	16	B	3'-0"	7'-0"	HM	PT	--	HM/PT			--	--	5	BLOCK OPENING FOR NEW FRAME
116	TOOL	29	B	3'-0"	7'-0"	HM	PT	--	EXIST			--	--	7	
118	CLASSROOM	17	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	6	
119	CLASSROOM	18	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	6	
120	CLASSROOM	19	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	6	
121	HALLWAY	25	B	3'-0"	7'-0"	HM	PT	--	HM/PT			--	--	5	4" HEAD @ FRAME
122	DRILL HALL	26	A	3'-0"	7'-0"	HM	PT	--	HM/PT			--	--	4	4" HEAD @ FRAME
123	CONFERENCE RM.	30	B	3'-0"	7'-0"	WD	ST	--	EXIST			--	--	2	4" HEAD @ FRAME
124	MENS TOILET	20	C	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	5	
125	WOMENS TOILET	21	B	3'-0"	7'-0"	WD	ST	--	HM/PT			--	--	3	
126	HALLWAY	22	B	3'-0"	7'-0"	4 HM	PT	--	HM/PT			--	--	4	4" HEAD @ FRAME
127	ENTRY	28	A	3'-0"	7'-0"	HM	PT	--	EXIST			--	--	4	
128	HALLWAY	23	B	PR 3'-0"	7'-0"	4 HM	PT	--	HM/PT			--	--	1	
4 121	HALLWAY	24	B	3'-0"	7'-0"	HM	PT	--	HM/PT			--	--	5	4" HEAD @ FRAME

WINDOW SCHEDULE

TYPE	WINDOW SIZE	STYLE	LABEL	GLAZING TYPE	GLAZING THK	GLAZING UV	GLAZING SHGC	FRAME MAT.	FRAME FIN.	DETAIL HEAD/	DETAIL SILL	REMARKS
A	3'-9"X4'-1"	FIXED	-	LOW E	1"	.31	.40	ALUM	FACT	3/A6.0	3/A6.0	
B	3'-9"X2'-8"	FIXED	-	LOW E	1"	.31	.40	ALUM	FACT	3/A6.0	3/A6.0	
C	4'-0"X2'-8"	FIXED	-	LOW E	1"	.31	.40	ALUM	FACT	4/A6.0	4/A6.0	
D	6'-0"X4'-0"	FIXED	-	LOW E	1"	.31	.40	ALUM	FACT	3/A6.0	3/A6.0	
E	3'-0"X4'-0"	FIXED	-	LOW E	1"	.31	.40	ALUM	FACT	3/A6.0	3/A6.0	
F	3'-8"X5'-5"	FIXED	-	LOW E	1"	.31	.40	ALUM	FACT	3/A6.0	3/A6.0	

NOTE: FIELD VERIFY ALL WINDOW SIZES

GLAZING REQUIREMENTS

ORIENTATION	GLAZING TYPE	GLAZING THK	GLAZING UV	GLAZING SHGC	REMARKS
SOUTH & WEST	LOW E	1"	.35	.28	SOLARBAN 60, GRAY, 35% VLT
NORTH & EAST	LOW E	1"	.35	.38	SOLARBAN 60, CLEAR, 70% VLT
CLERESTORY	LOW E	1"	.35	.38	SOLARBAN 60, CLEAR, 70% VLT

NOTES:
1. ALUMINUM FRAME WINDOWS
2. U-FACTOR BETTER THAN .035
3. SHGC BETTER THAN .040
4. WINDOWS MUST BE NFRC RATED

INSIGHTarchitects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.8067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
IF NOT 1 INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY
© COPYRIGHT

CONSULTANT STAMP

ARCHITECT STAMP
LICENSED ARCHITECT AR-1659
DANA KAUFFMAN STATE OF IDAHO

IDAHO ARMY NATIONAL GUARD
BUILDING #557 REMODEL
GOWEN FIELD
BOISE, IDAHO
SCHEDULES & DETAILS

REVISIONS

NO.	REMARKS
2	6-15-07 ADDENDUM 02
4	8-5-07 ASI 02

CHECKED	DKAUFFMAN
DATE	05-15-07
DRAWN	rstewart
JOB NO.	06052

SHEET NUMBER
A6.0

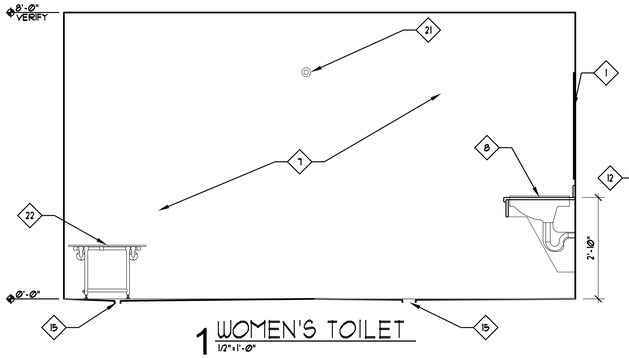
P:\06 Projects\06052 Idaho Army National Guard Bldg 557\NationalGuard-Bldg 557\5568 - As-Built\Cad files\557\06052 A60 FP-557.dwg, 5/16/2008 1:59:33 PM, rstewart

REFERENCE NOTES:

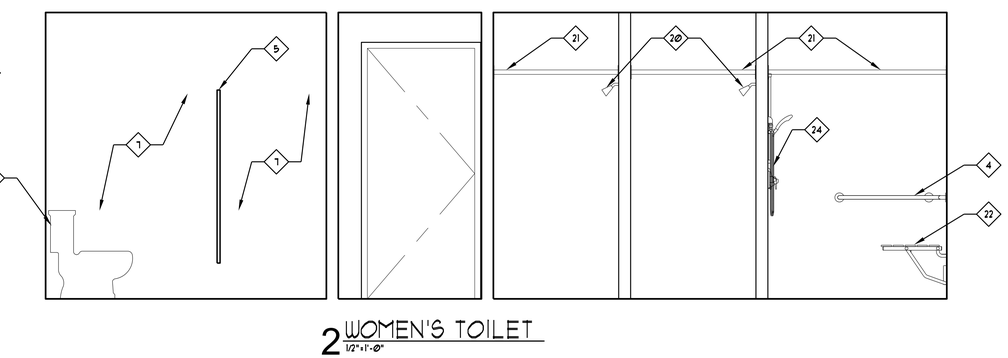
1. 2'-Ø" X 3'-Ø" MIRROR
2. SOAP DISPENSER.
3. PAPER TOUEL DISPENSER.
4. GRAB BAR.
5. TOILET PARTITION.
6. TOILET PAPER HOLDER
7. CERAMIC TILE
8. STAINLESS STEEL COUNTERTOP W/ 4" INTEGRAL BACKSPLASH
9. SURFACE MOUNT LAVATORY
10. 6" COVE BASE
11. URINAL
12. TOILET
13. 4" RUBBER BASE.
14. LOWER URINAL FOR ADA COMPLIANCE
15. FLOOR DRAIN
16. OUTLET-SEE ELEC.
17. SURFACE MOUNTED END STALL SANITARY NAPKIN DISPOSAL UNIT
18. NOT USED
19. (2) 3/4" PARTICLE BOARD COUNTER w/ PLASTIC LAMINATE ON FACE, EDGES, & ALL EXPOSED SURFACES
20. SHOWER HEAD
21. SHOWER ROD
22. SHOWER SEAT
23. MAPLE BENCH SEAT W/ FABRICATED METAL SUPPORT BRACKETS, PAINT BLACK
24. SHOWER CONTROL: SEE MECH

GENERAL NOTES:

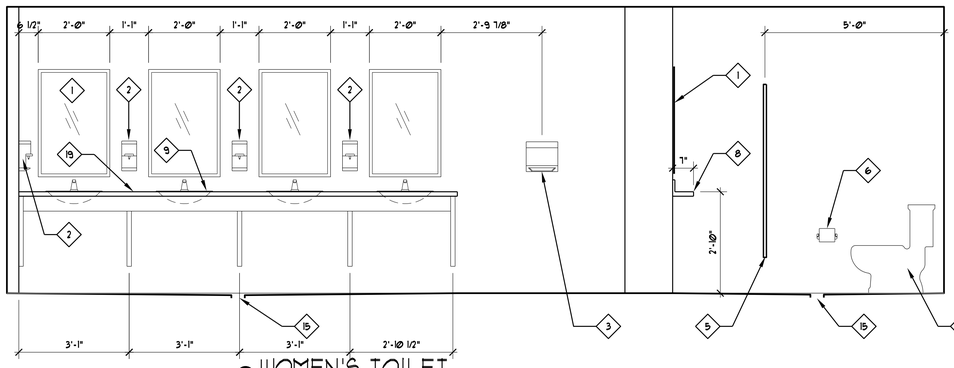
1. SEE TYP. FXT. ELEVATIONS, THIS SHEET FOR FIXTURE HEIGHTS.



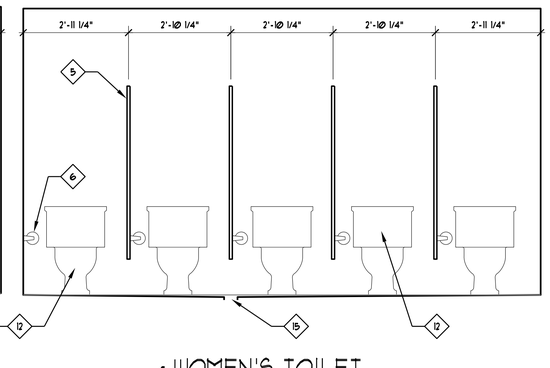
1 WOMEN'S TOILET
1/2"=1'-Ø"



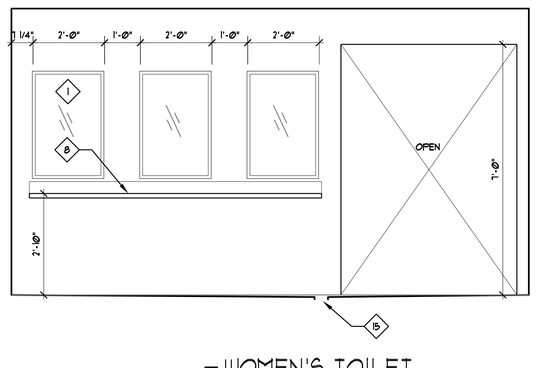
2 WOMEN'S TOILET
1/2"=1'-Ø"



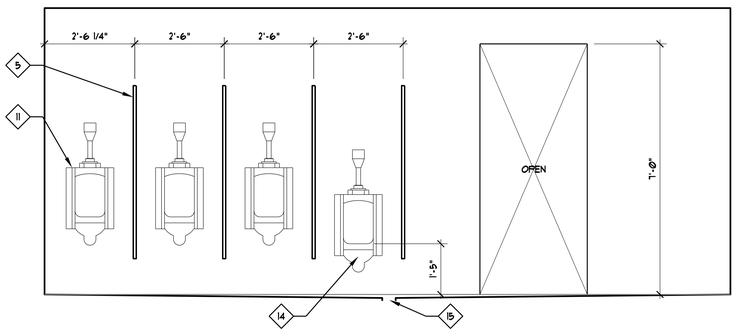
3 WOMEN'S TOILET
1/2"=1'-Ø"



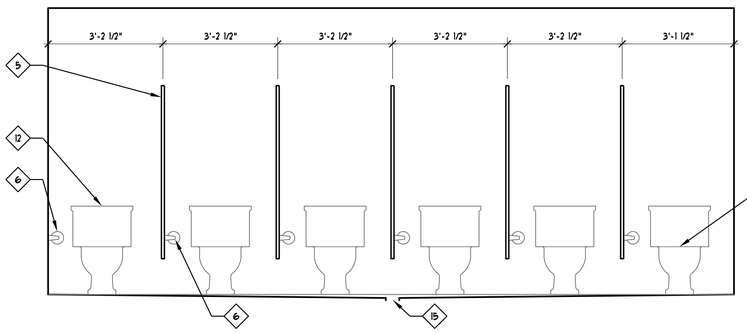
4 WOMEN'S TOILET
1/2"=1'-Ø"



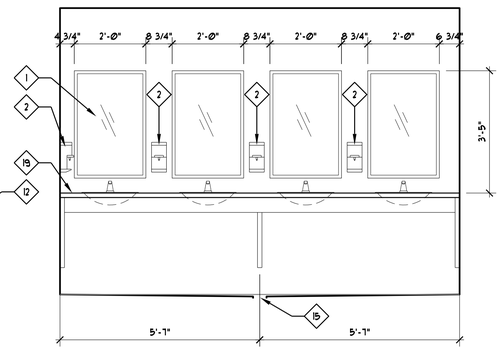
5 WOMEN'S TOILET
1/2"=1'-Ø"



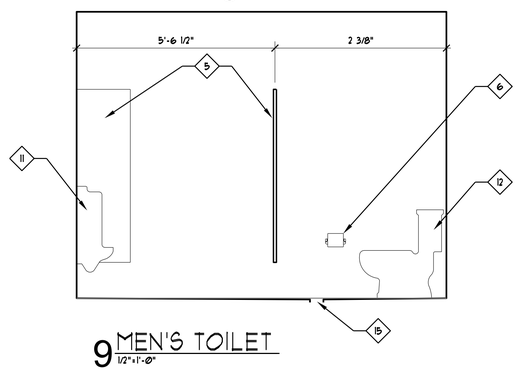
6 MEN'S TOILET
1/2"=1'-Ø"



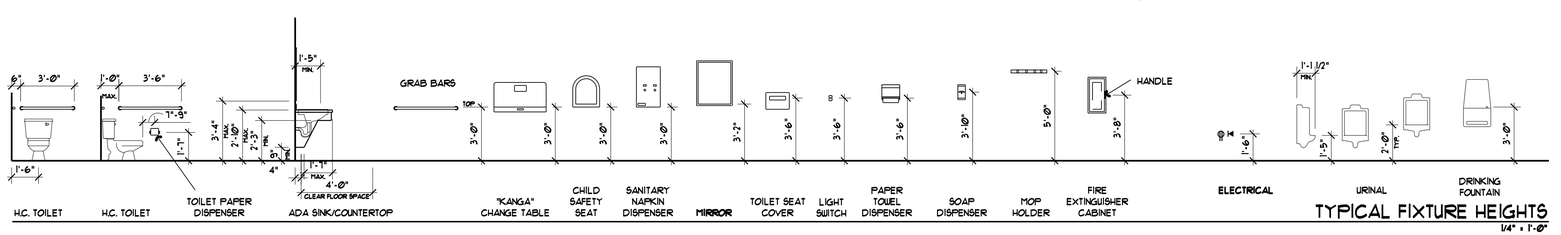
7 MEN'S TOILET
1/2"=1'-Ø"



8 MEN'S TOILET
1/2"=1'-Ø"



9 MEN'S TOILET
1/2"=1'-Ø"



TYPICAL FIXTURE HEIGHTS
1/4" = 1'-Ø"

INSIGHT architects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
0 1"
IF NOT 1 INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

ARCHITECT STAMP
LICENSED ARCHITECT AR-1659
DANA KAUFFMAN STATE OF IDAHO

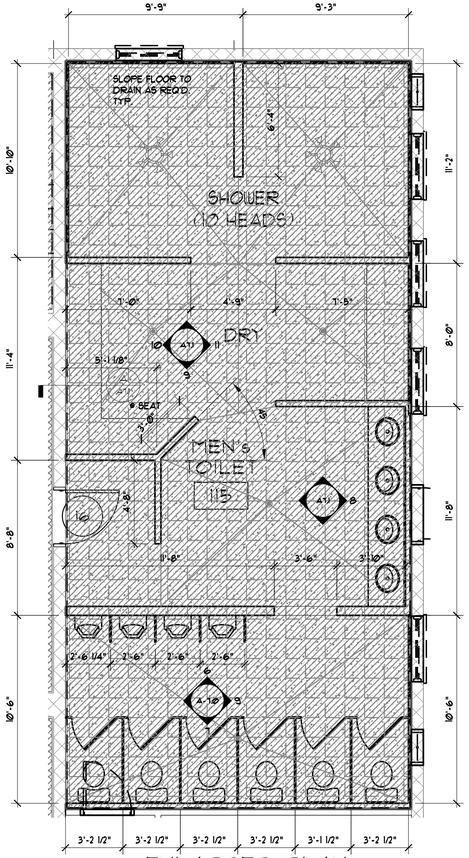
IDAHO ARMY NATIONAL GUARD
BUILDING #557 REMODEL
GOWEN FIELD
BOISE, IDAHO

INTERIOR ELEVATIONS

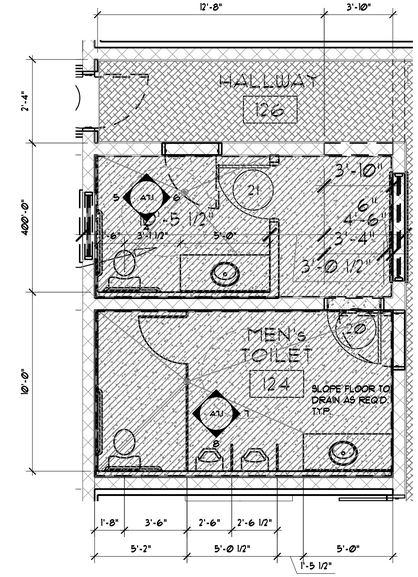
REVISIONS	
NO.	REMARKS

CHECKED	DKAUFFMAN
DATE	05-15-07
DRAWN	rstewart
JOB NO.	06052

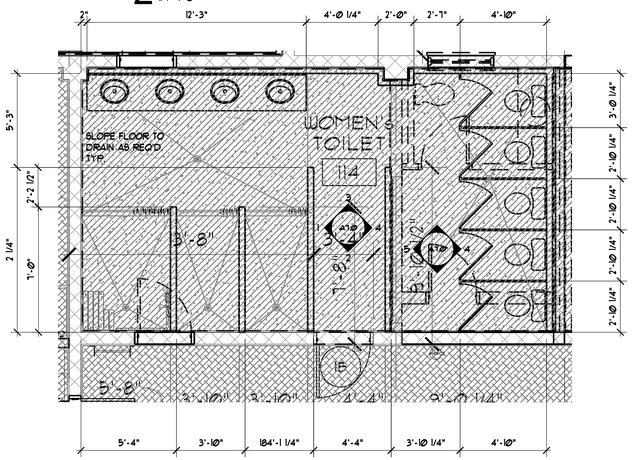
SHEET NUMBER
A7.0



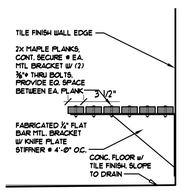
1 ENLARGED PLAN
1/4"=1'-Ø"



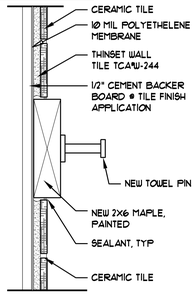
2 ENLARGED PLAN
1/4"=1'-Ø"



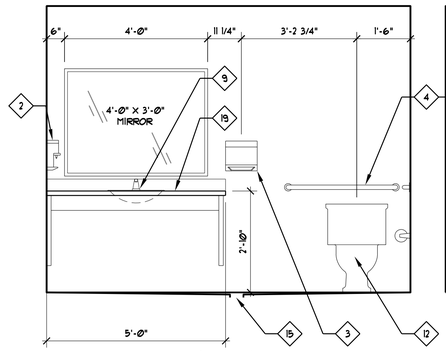
3 ENLARGED PLAN
1/4"=1'-Ø"



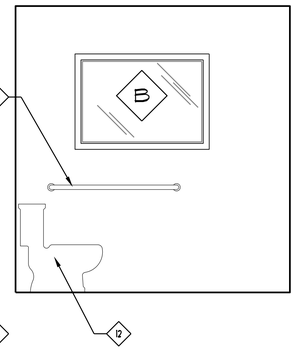
A DETAIL
3/4"=1'-Ø"



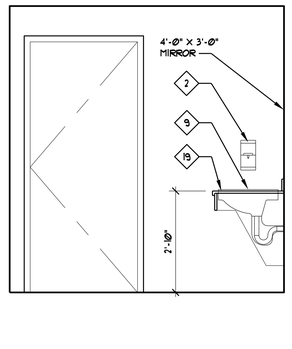
B DETAIL
3"=1'-Ø"



4 MEN'S TOILET
1/2"=1'-Ø"



5 MEN'S TOILET
1/2"=1'-Ø"



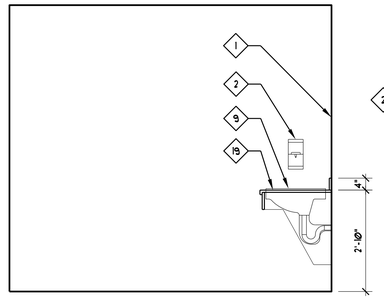
6 MEN'S TOILET
1/2"=1'-Ø"

REFERENCE NOTES:

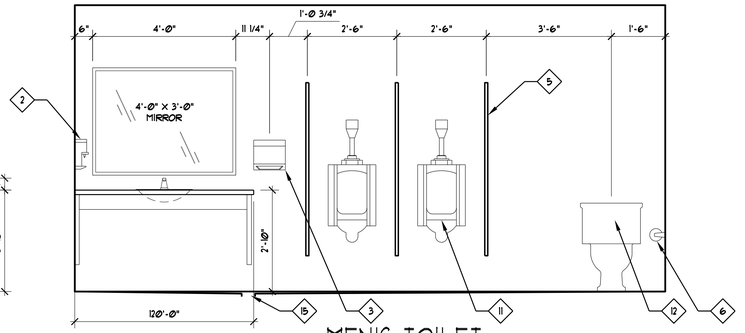
1. 2'-Ø" X 3'-Ø" MIRROR
2. SOAP DISPENSER.
3. PAPER TOUEL DISPENSER.
4. GRAB BAR.
5. TOILET PARTITION.
6. TOILET PAPER HOLDER
7. CERAMIC TILE
8. STAINLESS STEEL COUNTERTOP W/ 4" INTEGRAL BACKSPLASH
9. SURFACE MOUNT LAVATORY
10. 6" COVE BASE
11. URINAL
12. TOILET
13. 4" RUBBER BASE.
14. LOUER URINAL FOR ADA COMPLIANCE
15. FLOOR DRAIN
16. OUTLET-SEE ELEC.
17. SURFACE MOUNTED END STALL SANITARY NAPKIN DISPOSAL UNIT
18. NOT USED
19. (2) 3/4" PARTICLE BOARD COUNTER W/ PLASTIC LAMINATE ON FACE, EDGES, & ALL EXPOSED SURFACES
20. SHOWER HEAD
21. SHOWER ROD
22. SHOWER SEAT
23. MAPLE BENCH SEAT W/ FABRICATED METAL SUPPORT BRACKETS, PAINT BLACK
24. SHOWER CONTROL: SEE MECH
25. 4" RUBBER BASE
26. 3/4" ADJUSTABLE MELAMINE SHELVES
27. DISHWASHER
28. MICROWAVE/RANGE HOOD
29. RANGE
30. PLUMBING-SEE PLUMBING

GENERAL NOTES:

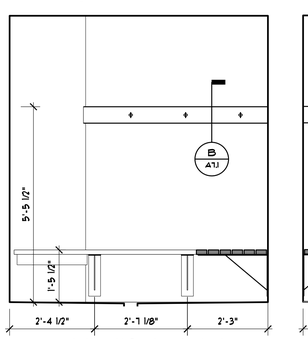
1. SEE TYP. FXT. ELEVATIONS, SHEET A1Ø FOR FIXTURE HEIGHTS.



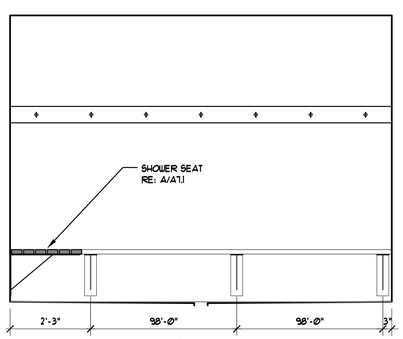
7 MEN'S TOILET
1/2"=1'-Ø"



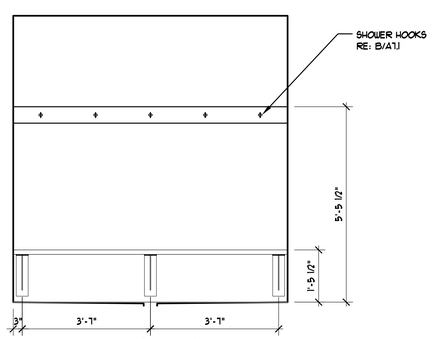
8 MEN'S TOILET
1/2"=1'-Ø"



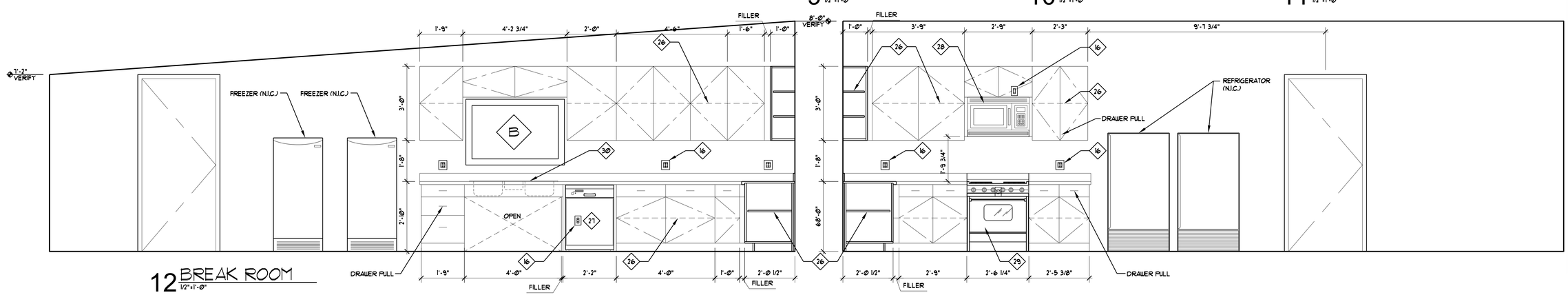
9 MEN'S TOILET
1/2"=1'-Ø"



10 MEN'S TOILET
1/2"=1'-Ø"



11 MEN'S TOILET
1/2"=1'-Ø"



12 BREAK ROOM
1/2"=1'-Ø"

INSIGHT architects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
0 1"
IF NOT 1 INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

ARCHITECT STAMP
LICENSED ARCHITECT AR-1659
DANA KAUFFMAN STATE OF IDAHO

IDAHO ARMY NATIONAL GUARD
BUILDING #557 REMODEL
GOWEN FIELD
BOISE, IDAHO
INTERIOR ELEVATIONS

REVISIONS	
NO.	REMARKS

CHECKED	DKAUFFMAN
DATE	05-15-07
DRAWN	rstewart
JOB NO.	06052

SHEET NUMBER
A7.1

SYMBOLS

EXISTING LOUDSPEAKER RECESSED IN CEILING

EXISTING DUPLEX RECEPTACLE

EXISTING SPECIAL PURPOSE RECEPTACLE
W = WELDER

EXISTING P.A. SPEAKER

SYMBOLS

EXISTING FIRE ALARM PULL STATION

EXISTING SMOKE DETECTOR

EXISTING HORN/STROBE

EXISTING SWITCH

EXISTING SURFACE SQUARE LUMINAIRE

EXISTING SURFACE FLUORESCENT

EXISTING EMERGENCY LIGHT

EXISTING EXIT LIGHT

EXISTING CEILING FAN

GENERAL NOTES

A. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIALS SHOWN, ALONG WITH ASSOCIATED CONDUIT AND CONDUCTORS, UNLESS NOTED OTHERWISE.

B. COMPLY WITH ALL FEDERAL AND STATE REGULATIONS FOR THE REMOVAL, DISPOSAL, INCINERATION AND RECYCLING OF ALL EQUIPMENT AND MATERIALS.

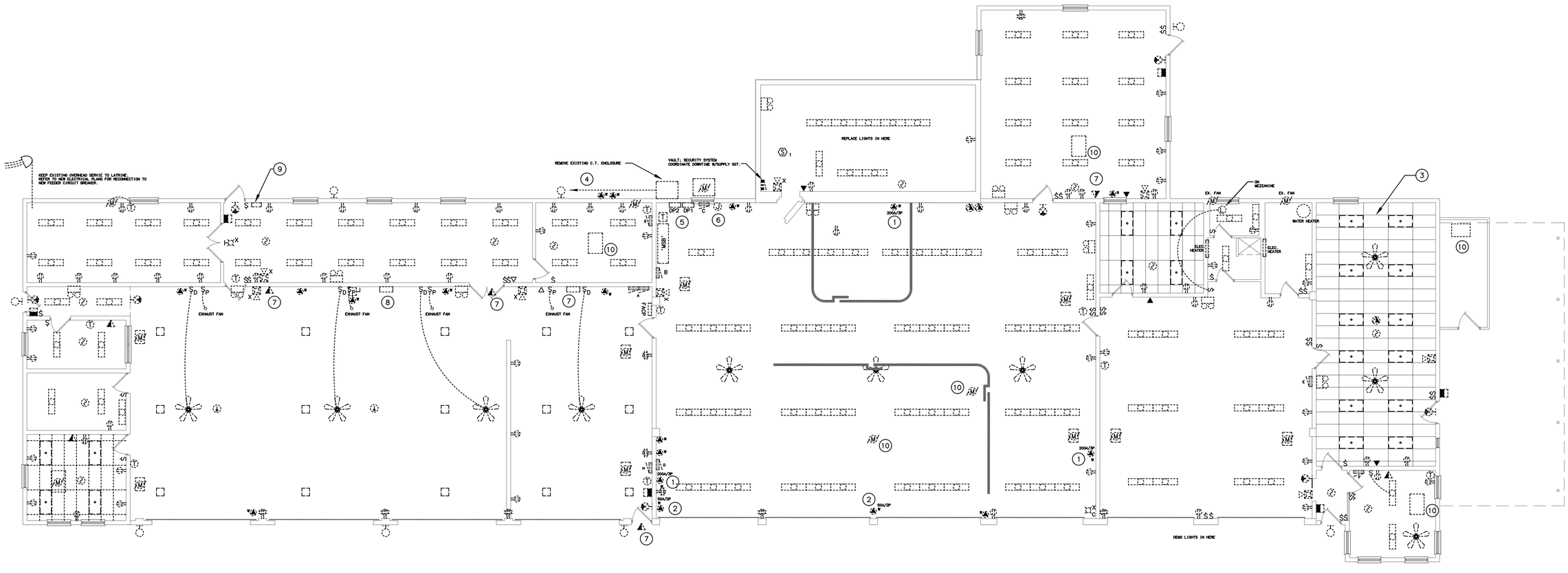
C. DUE TO CONCEALED CONDITIONS, THERE WILL BE UNFORSEEN CONDITIONS DISCOVERED DURING CONSTRUCTION. THE CONTRACTOR SHALL USE THEIR BEST JUDGEMENT AND INCLUDE ALL ACCESS PANELS, RELOCATIONS, REMOVALS, RECONNECTIONS, ETC. IN THEIR BID, AS THESE ITEMS ARE NOT SHOWN ON THE DRAWINGS. NO EXTRA CHARGES WILL BE ALLOWED FOR THIS WORK.

WARNING:

BUILDING OCCUPANTS BELIEVE THERE MAY BE MORE THAN ONE POWER SOURCE SUPPLYING THE BUILDING. CONFIRM ALL ELECTRICAL CIRCUITS ARE DE-ENERGIZED PRIOR TO STARTING ANY DEMOLITION WORK.

KEYNOTES

1. EXISTING WELDER RECEPTACLE: 200A/3P. RELOCATE TO BUILDING 578. REFER TO BUILDING 578 PLANS FOR NEW LOCATION. TYPICAL OF (3).
2. EXISTING WELDER RECEPTACLE: 50A/2P. RELOCATE TO BUILDING 578. REFER TO BUILDING 578 PLANS FOR NEW LOCATION. TYPICAL OF (2).
3. REMOVE EXISTING T-GRID CEILING.
4. EXISTING UNDERGROUND SERVICE LATERAL SHALL BE REPLACED BY IDAHO POWER CO. CONTRACTOR SHALL COORDINATE THIS WORK WITH IDAHO POWER.
5. REMOVE EXISTING TRANSFORMER AND DISTRIBUTION PANELS ALONG WITH ASSOCIATED CONDUITS AND CONDUCTORS.
6. REMOVE EXISTING JUNCTION BOXES SUPPLYING THE HEAT CABLE CIRCUITS. RELOCATE AS SHOWN ON THE NEW POWER PLAN.
7. EXISTING SOUND SYSTEM AND SPEAKERS TO REMAIN.
8. EXISTING DISCONNECTS FOR BOX CRANE TO REMAIN.
9. RELOCATE EXISTING FIBER PATCH PANEL, FIBER PATCH CABLE AND SWITCH TO NEW TELECOM RACK.
10. EXISTING MECHANICAL UNIT TO BE RE-USED. REFER TO NEW POWER PLAN.



N

EXISTING ELECTRICAL PLAN - 557

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

PROFESSIONAL ENGINEER
REGISTERED
8993
DATE SIGNED: 5/15/07
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION FROM BUILDING 557 TO BUILDING 578 IDAHO ARMY NATIONAL GUARD

GOWEN FIELD, BOISE, IDAHO

EXISTING ELECTRICAL PLAN - 557

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

E1.1

FIRE ALARM SYMBOLS

RA	REMOTE ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
RPS	REMOTE POWER SUPPLY
K	KEY BOX AT 72" FURNISHED BY OWNER, INSTALLED BY CONTRACTOR.
	SMOKE DETECTOR
	INDUCT SMOKE DETECTOR IN RETURN DUCT.
	KEYED REMOTE TEST STATION
	MANUAL PULL STATION 48" TO TOP OF OUTLET BOX WITH CLEAR LEXAN COVER AND AUDIBLE SOUNDER
	HORN/STROBE CEILING MOUNTED
	HORN/STROBE, WALL MOUNTED 84" TO TOP OF OUTLET BOX
	STROBE LIGHT, WALL MOUNTED 84" TO TOP OF OUTLET BOX
	STROBE LIGHT ON CEILING
RTU 1	DESIGNATION FOR AIR DISTRIBUTION EQUIPMENT

DESIGN CRITERIA

FUNDAMENTALS

1. FIRE ALARM SYSTEM NOT REQUIRED. IT IS BEING PROVIDED AS SUPPLEMENTARY SYSTEM PER NFPA 72 3.3.197.
2. SMOKE DETECTORS PROVIDED AT THE FIRE ALARM CONTROL PANEL PER NFPA 72 4.4.5.

INITIATION

1. MANUAL FIRE ALARM BOXES LOCATED AT EACH EXIT PER IFC 907.4.
1. SMOKE DETECTION PROVIDED AS SUPPLEMENTARY EQUIPMENT.

NOTIFICATION

1. ALARM NOTIFICATION APPLIANCES PROVIDED PER IFC 907.10.

CODES

APPLICABLE CODES

2003 INTERNATIONAL BUILDING CODE
2003 INTERNATIONAL FIRE CODE
2002 NFPA 72
1998 AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES
1998 ICC/ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

KEYNOTES

1. TO THE FIRE ALARM CONTROL PANEL.
2. TO THE TELEPHONE TERMINAL BOARD.

GENERAL NOTES

A. PRIOR TO BEGINNING INSTALLATION, OBTAIN A SET OF APPROVED/STAMPED SUBMITTAL DOCUMENTS FROM THE AUTHORITY HAVING JURISDICTION.

B. MAINTAIN A SET OF RECORD DRAWINGS ON SITE THAT SHOW THE ACTUAL CONDUIT AND EQUIPMENT INSTALLATION.

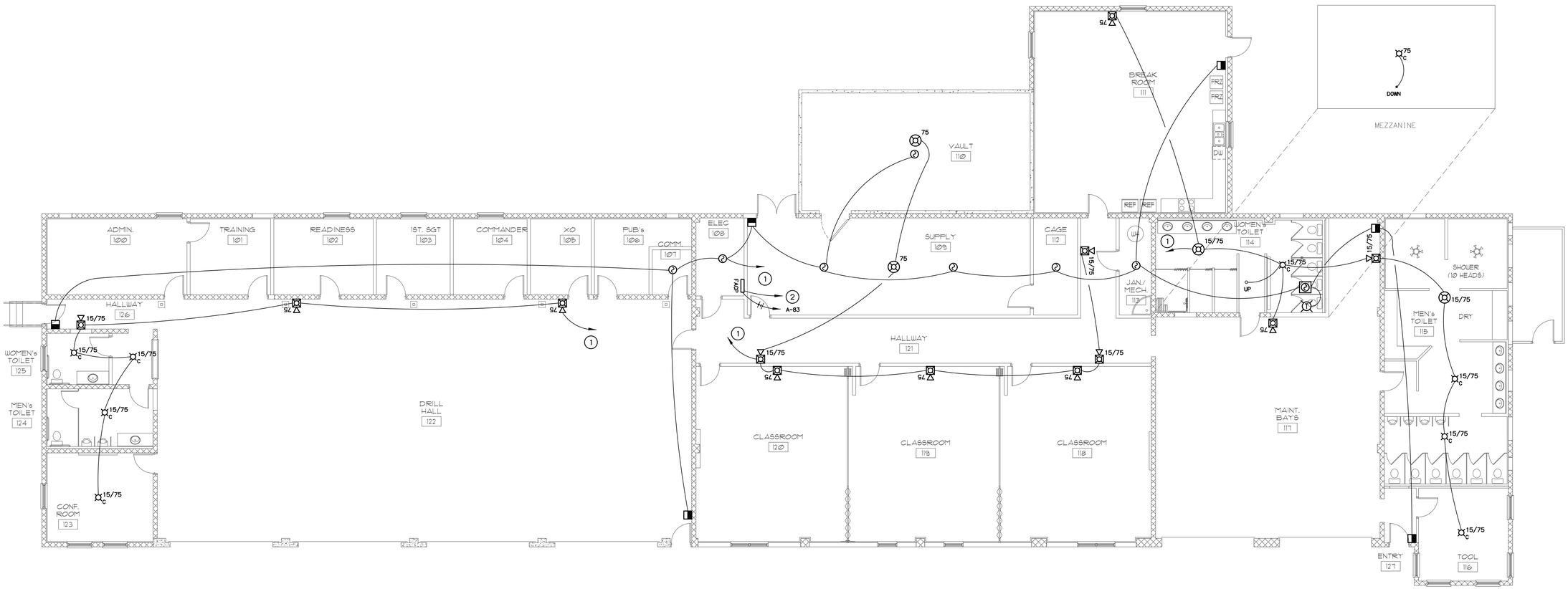
C. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT (3/4" MINIMUM) OR RED COLORED ARMORED CABLE (AC CABLE). AC CABLE IS NOT PERMITTED FOR HOMERUNS. ALL HOMERUNS SHALL BE IN CONDUIT.

D. AC CABLE AND CONDUIT SHALL BE INSTALLED PARALLEL AND PERPENDICULAR TO THE BUILDING STRUCTURE, WALLS AND CEILINGS.

E. ALL CONDUCTORS SHALL BE COPPER. INITIATING CIRCUITS SHALL BE 18 GAUGE MINIMUM. NOTIFICATION CIRCUITS SHALL BE 12 GAUGE MINIMUM.

F. INITIATING CIRCUITS AND NOTIFICATION CIRCUITS SHALL BE INSTALLED IN SEPARATE RACEWAYS.

G. OUTLET, PULL AND JUNCTION BOXES SHALL BE PAINTED RED AND LABELED 'FA'.



N

FIRE ALARM PLAN - 557

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

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

FIRE ALARM PLAN - 557

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

E1.2

OCCUPANCY SENSOR SCHEDULE
IDANG Building 557

	DESCRIPTION	MOUNTING	COVERAGE	MANUFACTURER	NOTES
S	WALL SENSOR Passive infrared, 120-volt, adjustable time delay, adjustable sensitivity	Wall +46"	20' X 25'	Watt Stopper WA - 200 - W	1
S_2	WALL SENSOR Passive infrared, 120-volt, adjustable time delay, adjustable sensitivity, controls lights and exhaust fan independently.	Wall +46"	20' X 20'	Sensor Switch WSD - 2P - W	1

NOTES:

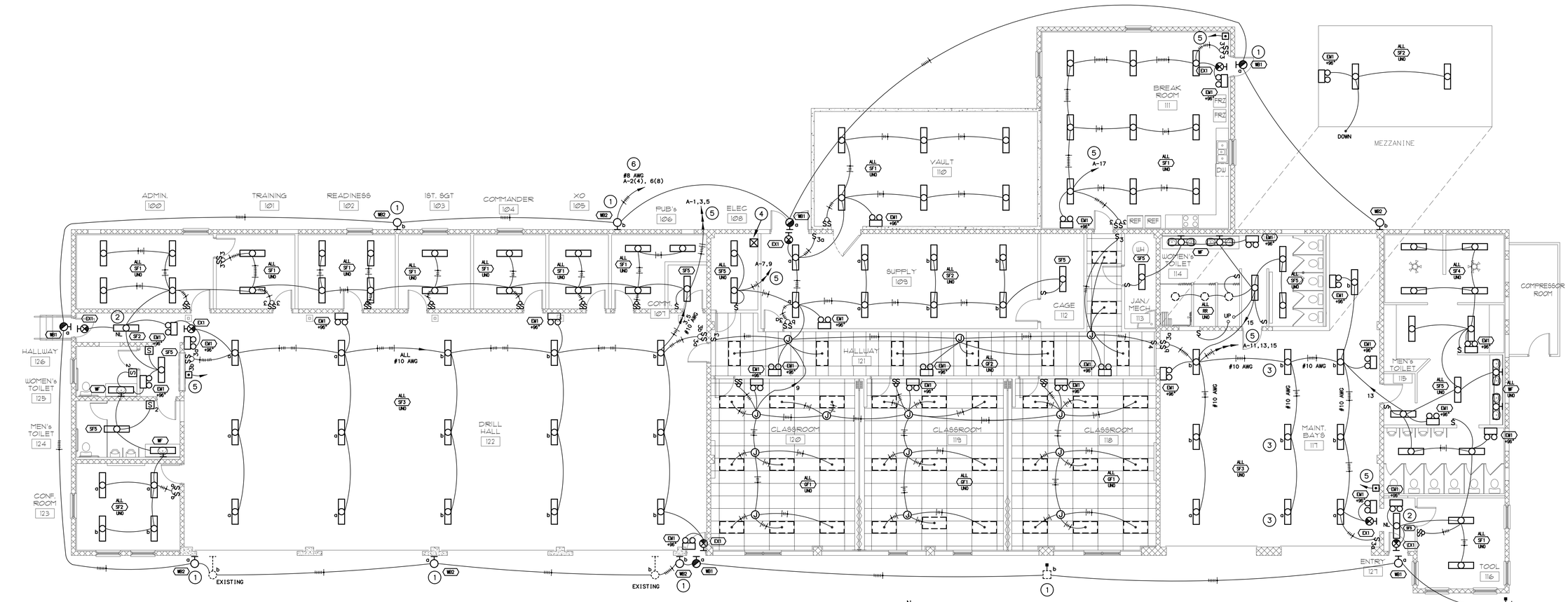
1. Or approved equal in Hubbell or Sensor Switch.

LIGHTING SYMBOLS

- SINGLE POLE SWITCH 48" TO TOP OF OUTLET BOX
- THREE WAY AND FOUR WAY SWITCH 48" TO TOP OF OUTLET BOX
- WALL MOUNTED OCCUPANCY SENSOR 48" TO TOP OF OUTLET BOX
- LIGHTING OUTLET AND LUMINAIRE CEILING OR WALL MOUNTED
- FLUORESCENT LIGHTING OUTLET AND LUMINAIRE RECESSED IN T-GRID CEILING.
- FLUORESCENT LIGHTING OUTLET AND LUMINAIRE SURFACE MOUNTED
- FLUORESCENT LIGHTING OUTLET AND LUMINAIRE WALL MOUNTED
- FLUORESCENT LIGHTING OUTLET AND LUMINAIRE. TWO LAMPS ON EMERGENCY BALLAST.
- EXIT LIGHTING OUTLET AND LUMINAIRE CEILING OR WALL MOUNTED
- EGRESS LIGHTING OUTLET AND LUMINAIRE
- GF2 LUMINAIRE DESIGNATION

KEYNOTES

1. REPLACE EXISTING EXTERIOR LUMINAIRE WITH NEW.
2. UNSWITCHED NIGHT LIGHT.
3. LOCATE THIS LUMINAIRE 24" TO THE SIDE OF THE NEW RADIANT HEATER.
4. LIGHTING CONTROL RELAY PANEL WITH HOLIDAY SCHEDULING AND 2-HOUR OVERRIDE, (24) RELAYS. PCI LITEKEEPER, LEVITON Z-MAX, OR APPROVED EQUAL.
5. 2-HOUR MANUAL OVERRIDE SWTICH WITH CONDUCTORS TO THE LIGHTING CONTROL PANEL.
6. EXTERIOR LIGHTING: TIMECLOCK ON/OFF.



N

NEW ELECTRICAL PLAN - 557

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

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

SHOP RELOCATION FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

LIGHTING PLAN - 557

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

E1.3

COMcheck Software Version 3.3.1

Lighting Compliance Certificate

2003 IECC

Report Date: 05/15/07

Data filename: S:\Projects\06 Projects\06-090 IANG 557-578 Shop Relocation, Boise, ID\ComCheck.cck

Section 1: Project Information

Project Title: IDANG Building 557

Construction Site: Boise, ID

Owner/Agent:

Designer/Contractor: Farren Engineering, Inc. Boise, ID

Section 2: General Information

Building Use Description by: Activity Type
Project Type: New Construction

Activity Type(s)	Floor Area
Office	1800
Classroom/Lecture Hall	5300
Corridor, Restroom, Support Area	5600
Industrial Work, >= 20 ft Ceiling Height	1300

Section 3: Requirements Checklist

Interior Lighting:

☐ 1. Total actual watts must be less than or equal to total allowed watts.

Allowed Watts	Actual Watts	Complies
16650	12160	YES

☐ 2. Exit signs 5 Watts or less per side.

Exterior Lighting:

☐ 3. Efficacy greater than 45 lumens/W.
Exceptions:
Specialized lighting highlighting features of historic buildings; signage; safety or security lighting; low-voltage landscape lighting.

Controls, Switching, and Wiring:

☐ 4. Independent controls for each space (switch/occupancy sensor).
Exceptions:
Areas designated as security or emergency areas that must be continuously illuminated.
Lighting in stairways or corridors that are elements of the means of egress.

☐ 5. Master switch at entry to hotel/motel guest room.

☐ 6. Individual dwelling units separately metered.

☐ 7. Each space provided with a manual control to provide uniform light reduction by at least 50%.
Exceptions:
Only one luminaire in space;
An occupant-sensing device controls the area;
The area is a corridor, storeroom, restroom, public lobby or guest room;
Areas that use less than 0.6 Watts/sq.ft.

☐ 8. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.

☐ 9. Photocell/astronomical time switch on exterior lights.
Exceptions:
Lighting intended for 24 hour use.

☐ 10. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).
Exceptions:
Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.

Section 4: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2003 IECC, Chapter 8, requirements in COMcheck Version 3.3.1 and to comply with the mandatory requirements in the Requirements Checklist.

JON P. FARREN, P.E. — Name - Title
Jon P. Farren — Signature
5/15/07 — Date

COMcheck Software Version 3.3.1

Lighting Application Worksheet

2003 IECC

Report Date:

Data filename: S:\Projects\06 Projects\06-090 IANG 557-578 Shop Relocation, Boise, ID\ComCheck.cck

Section 1: Allowed Lighting Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
Office	1800	1.1	1980
Classroom/Lecture Hall	5300	1.4	7420
Corridor, Restroom, Support Area	5600	0.9	5040
Industrial Work, >= 20 ft Ceiling Height	1300	1.7	2210
Total Allowed Watts =			16650

Section 2: Actual Lighting Power Calculation

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Linear Fluorescent 1: GF1: Grid fluorescent / 48" T8 32W / Electronic	2	27	62	1674
Linear Fluorescent 2: GF2: Grid fluorescent / 48" T8 32W / Electronic	2	8	62	496
Compact Fluorescent 1: RR: Recessed round / Triple 4-pin 18W / Electronic	1	3	20	60
Linear Fluorescent 3: SF1: Surface fluorescent / 48" T8 32W / Electronic	2	36	62	2232
Linear Fluorescent 4: SF2: Surface fluorescent / 48" T8 32W / Electronic	2	15	62	930
Linear Fluorescent 5: SF3: Surface fluorescent / 46" T5 54W / Electronic	4	25	240	6000
Linear Fluorescent 6: SF4: Surface fluorescent / 48" T8 32W / Electronic	1	4	32	128
Linear Fluorescent 7: SF5: Surface fluorescent / 48" T8 32W / Electronic	1	14	32	448
Linear Fluorescent 8: 48" T8 32W / Electronic	1	6	32	192
Total Actual Watts =				12160

Section 3: Compliance Calculation

If the Total Allowed Watts minus the Total Actual Watts is greater than or equal to zero, the building complies.

Total Allowed Watts =	16650
Total Actual Watts =	12160
Project Compliance =	4490

Lighting PASSES: Design 27% better than code.

LUMINAIRE SCHEDULE
Building 557

TYPE	DESCRIPTION	MOUNTING	LAMP	BALLAST	INPUT WATTS	MANUFACTURER	NOTE
EM1	Emergency light, white thermoplastic housing, two heads, NiCad battery, polycarbonate shield	Wall	(2) 12W PAR 36 Halogen 263 LUMENS	n/a	50W 90 MIN.	Lithonia ELM4 - 120/277 - H1212 - N - ELA VS2	
EX1	Exit light, single face with extra face plate and color panel, white thermoplastic housing, universal mounting, NiCad battery	Universal	Green LED	n/a	0.92	Lithonia LQM - S - W - 3 - G - 120/277 - ELN	
GF1	Grid fluorescent, 2x4, flush steel door, prismatic acrylic lens	Grid Recessed	(2) F32 T8 4100 K 85 CRI	electronic	62	Lithonia 2GT8 - 2 - 32 - A12 - MVOLT - GEB10IS	1
GF2	Same as GF1 except single ballast	Grid Recessed	(2) F32 T8 4100 K 85 CRI	electronic	62	Lithonia 2GT8 - 2 - 32 - A12 - MVOLT - GEB10IS	
RR	Recessed round, lensed fluorescent	ceiling recessed	(1) 18 TRT 4100K 85 CRI	electronic	20	Lithonia L7XF - 18TRT - MVOLT - HPF - 6LD2	
SF1	Surface fluorescent, prismatic acrylic wraparound diffuser	Ceiling Surface	(2) F32 T8 4100 K 85 CRI	electronic	32	Lithonia LB - 2 - 32 - 120 - GEB	1
SF2	Same as SF1 except single ballast.					Lithonia LB - 2 - 32 - 120 - GEB	
SF3	Fluorescent high bay, wide distribution with uplight, white housing, chain hung to same level as existing luminaires, wire guard	Chain Hung	(4) T5HO 4100K	electronic	240	Lithonia IB - 454L - WD - MVOLT - wire guard	
SF4	Surface fluorescent, non-metallic housing, DR acrylic wraparound diffuser, wet label	Ceiling Surface	(1) F32 T8 4100 K 85 CRI	electronic	32	Lithonia DMW - 1 - 32 - MVOLT - GEB10IS	
SF5	Surface fluorescent, prismatic acrylic wraparound diffuser	Ceiling Surface	(1) F32 T8 4100 K 85 CRI	electronic	32	Lithonia CB - 1 - 32 - MVOLT - GEB10IS	
WB1	Wall bracket, cast aluminum, cold weather battery pack	wall	(1) MH70 4000 K	mag	90	Lithonia WSQ - 42TRT - WT - MVOLT - ELDWC - DDBT	
WB2	Wall bracket, cast aluminum, prismatic glass lens	wall	(1) MH150 4000 K	mag	175	Lithonia TWH - 150M - TB - SCWA	
WF	Wall fluorescent, clear prismatic acrylic lens	wall above mirror	(1) F32 T8 4100 K 85 CRI	electronic	32	Lithonia WC - 1 - 32 - A12 - MVOLT - GEB10IS	

NOTES

1. Provide with ballast combination suitable for inboard/outboard switching.

PROFESSIONAL ENGINEER REGISTERED 8993 STATE OF IDAHO JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

LIGHTING SCHEDULES - 557

PROJ. NO.: 06-090
DATE: 5/15/07
DRAWN BY: BAH
CHECKED BY: JPF
FILE:
REVISION:

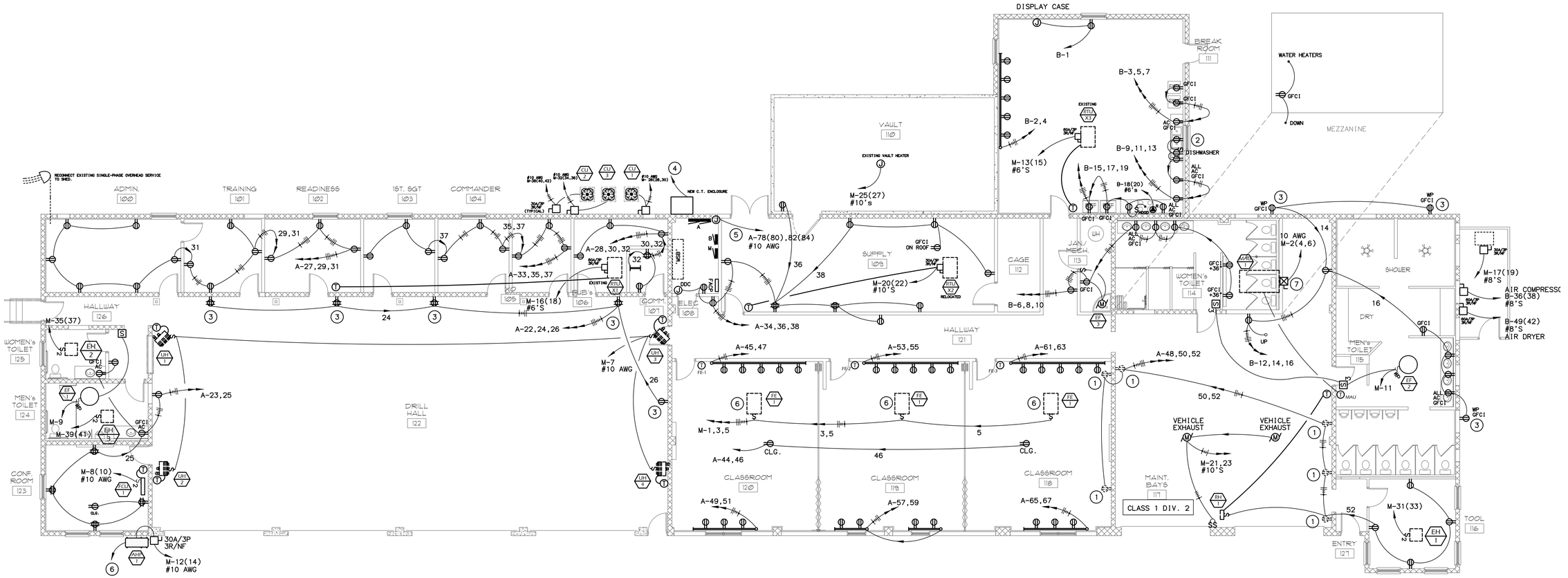
SHEET NO.
E1.4

KEYNOTES

1. REPLACE EXISTING WIRING DEVICE WITH NEW.
2. RECEPTACLE FOR DISPOSER AND DISHWASHER.
3. REPLACE EXISTING WIRING DEVICE AND COVERPLATE WITH NEW. RECONNECT EXISTING CIRCTING, WHERE POSSIBLE.
4. NEW UNDERGROUND SERVICE LATERAL BY IDAHO POWER CO.
5. RECONNECT EXISTING HEAT CABLE CIRCUITS.
6. INSTALL 1/2" EMPTY CONTROL CONDUIT TO RELATED MECHANICAL UNIT.
7. COMBINATION STARTER-DISCONNECT: NEMA SIZE 1, H.O.A SWITCH, FUSES SIZED PER MOTOR NAMEPLATE, AUXILIARY CONVERTIBLE CONTACTS. CONTROLLED VIA DDC SYSTEM.

SYMBOLS

- DUPLEX RECEPTACLE 18" TO TOP OF OUTLET BOX
  - GFCI GROUND FAULT CIRCUIT INTERRUPTER
  - DW DISHWASHER
  - WP WEATHERPROOF WHILE IN USE
  - D DISPOSAL
- DOUBLE DUPLEX RECEPTACLE 18" TO TOP OF OUTLET BOX
- JUNCTION BOX
- MOTOR OUTLET
- THERMOSTAT OUTLET 54" TO TOP OF OUTLET BOX 1/2" EMPTY CONDUIT TO RESPECTIVE MECHANICAL UNIT
- CONTACTOR
- SAFETY DISCONNECT SWITCH
- LIGHTING AND APPLIANCE PANELBOARD TOP AT 78"
- MECHANICAL EQUIPMENT DESIGNATION



N

POWER PLAN - 557

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

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

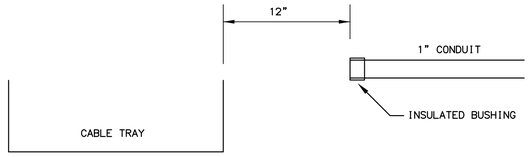
SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

POWER PLAN - 557

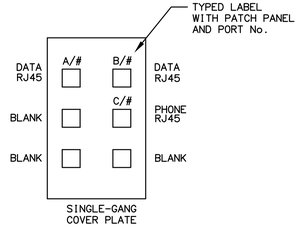
PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

E1.5



CONDUIT TERMINATION
SCALE: NONE



TELECOM COVER PLATE
SCALE: NONE

GENERAL NOTES

A. ALL TELECOM CONDUITS SHALL BE TERMINATED WITH AN INSULATED THROAT CONNECTOR OR BUSHING.

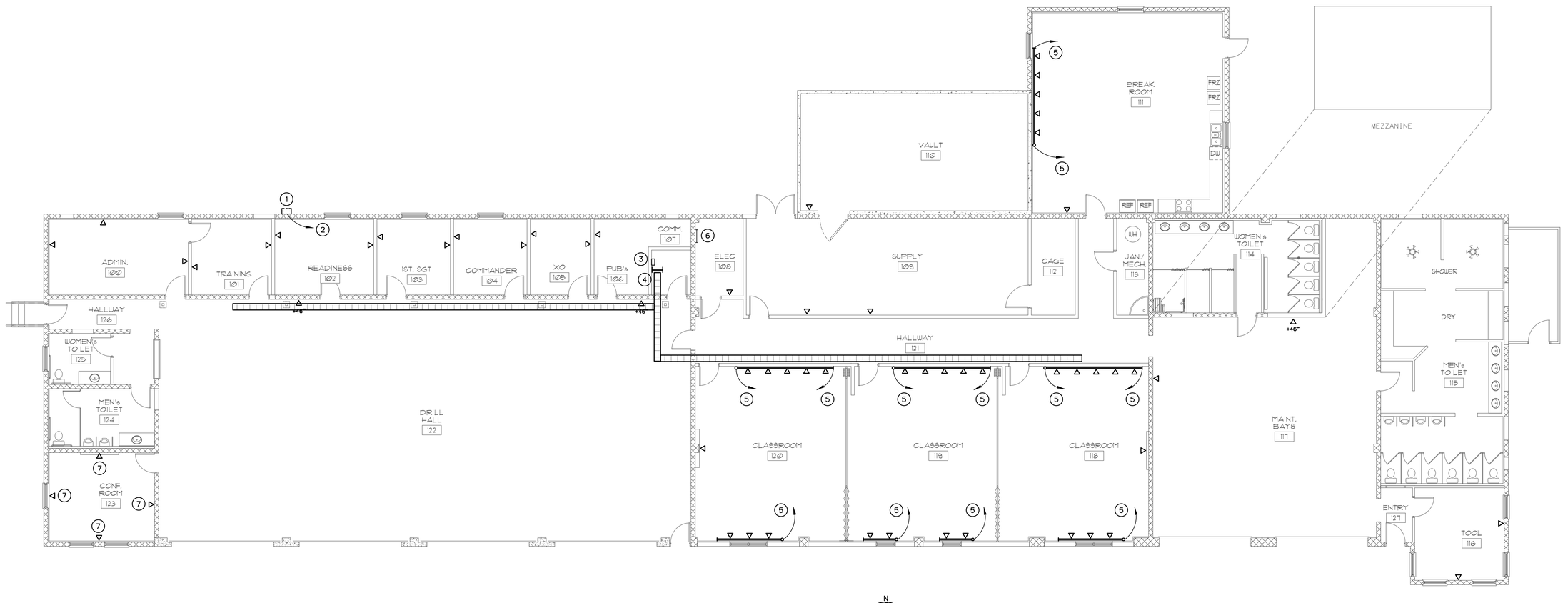
B. ALL CONDUITS ROUTED TO THE CABLE TRAY SHALL BE TERMINATED 12" AWAY FROM THE CABLE TRAY TO ALLOW FUTURE CABLES TO BE INSTALLED FROM THE SIDE.

KEYNOTES

1. FUSION SPLICE NEW FIBER OPTIC CABLE TO EXISTING CABLE IN THE EXISTING PULL BOX.
2. NEW FIBER OPTIC CABLE IN 1" CONDUIT TO THE EXISTING/RELOCATED FIBER PATCH PANEL.
3. EXISTING/RELOCATED FIBER PATCH PANEL WALL MOUNTED ADJACENT TO THE EQUIPMENT RACK.
4. EXISTING/RELOCATED SWITCH MOUNTED IN TOP OF EQUIPMENT RACK.
5. (2) 1" CONDUITS TO THE CABLE TRAY. TERMINATE WITH AN INSULATED BUSHING.
6. MAINTAIN EXISTING TELEPHONE TERMINAL BOARD. PUNCH DOWN A NEW 50-PAIR CABLE AND EXTEND TO A DEDICATED PATCH PANEL IN THE NEW EQUIPMENT RACK.
7. TELECOM OUTLETS WITH (5) CABLES TO ONE DATA PATCH PANEL AND (1) CABLE TO A TELEPHONE PATCH PANEL.

TELECOM SYMBOLS

- (J) JUNCTION BOX
- ▽ TELECOM OUTLET BOX AT 18" (UNO)
  4" SQUARE 2⅛" DEEP OUTLET BOX,
  SINGLE-GANG TRIM RING.
  1" CONDUIT STUBBED TO THE CABLE TRAY.
  COVERPLATE WITH (3) TELECOM CABLES, CONNECTORS.
- CABLETRAY



N

TELECOM PLAN - 557
SCALE: 1/8" = 1'-0"

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN

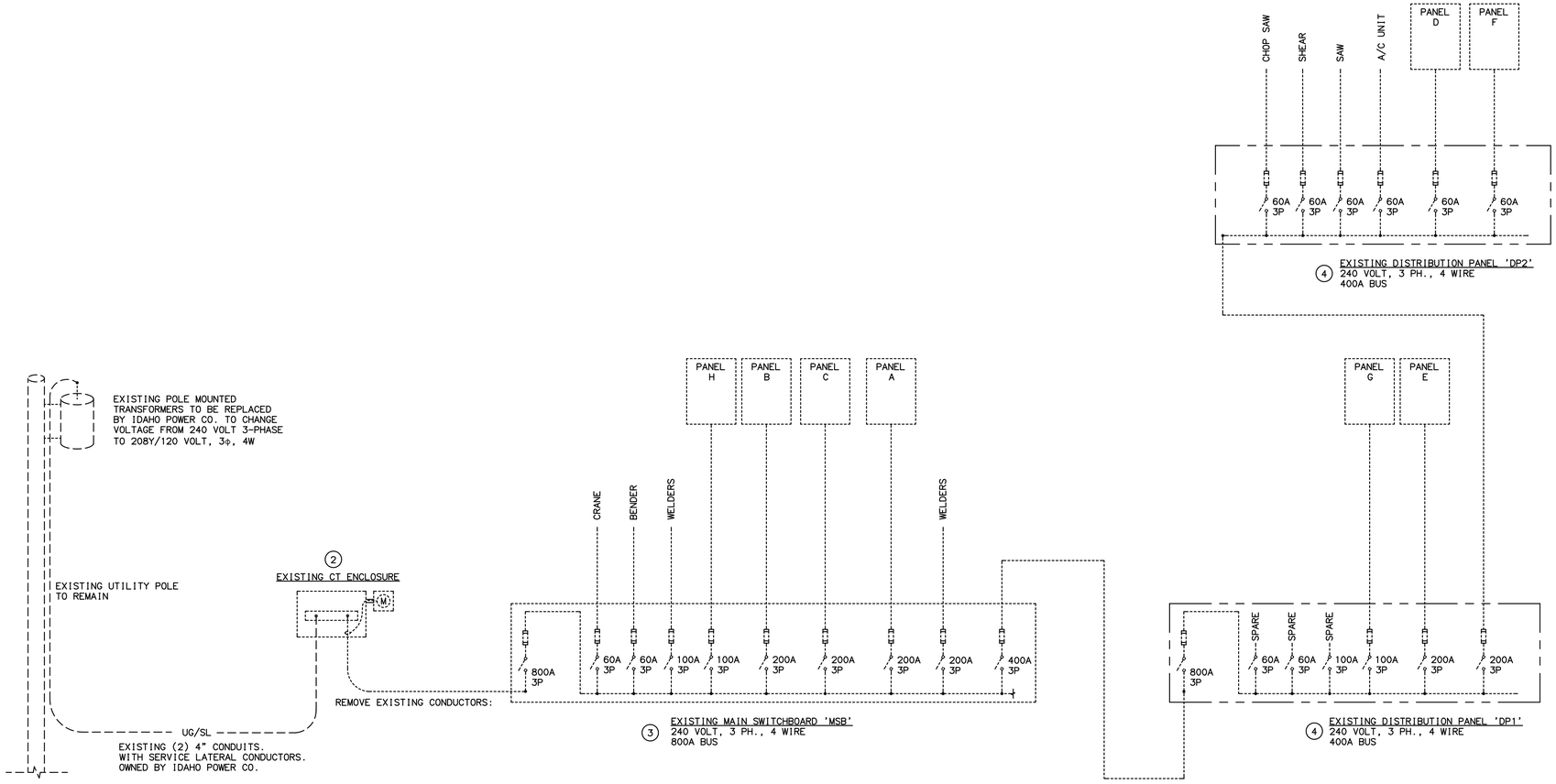
ORIGINALS STORED AT FARREN ENGINEERING

SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

TELECOM PLAN - 557

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.
E1.6



KEYNOTES

1. EXISTING 'MSB' TO BE RE-USED.
2. REPLACE EXISTING C.T. ENCLOSURE WITH NEW.
3. KEEP EXISTING MSB. REMOVE ALL EXISTING FEEDER CONDUITS AND CONDUCTORS.
4. REMOVE EXISTING PANEL ALONG WITH ALL ASSOCIATED CONDUITS AND CONDUCTORS.

GENERAL NOTES

A. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIALS SHOWN, ALONG WITH ASSOCIATED CONDUIT AND CONDUCTORS, UNLESS NOTED OTHERWISE.

B. COMPLY WITH ALL FEDERAL AND STATE REGULATIONS FOR THE REMOVAL, DISPOSAL, INCINERATION AND RECYCLING OF ALL EQUIPMENT AND MATERIALS.

C. DELIVER ALL REMOVED EQUIPMENT AND MATERIALS TO THE OWNER.

D. DUE TO CONCEALED CONDITIONS, THERE WILL BE UNFORSEEN CONDITIONS DISCOVERED DURING CONSTRUCTION. THE CONTRACTOR SHALL USE THEIR BEST JUDGEMENT AND INCLUDE ALL ACCESS PANELS, RELOCATIONS, REMOVALS, RECONNECTIONS, ETC. IN THEIR BID, AS THESE ITEMS ARE NOT SHOWN ON THE DRAWINGS. NO EXTRA CHARGES WILL BE ALLOWED FOR THIS WORK.

PROFESSIONAL ENGINEER REGISTERED 8993 STATE OF IDAHO JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION FROM BUILDING 557 TO BUILDING 578 IDAHO ARMY NATIONAL GUARD

GOWEN FIELD, BOISE, IDAHO

EXISTING ONE LINE DIAGRAM

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

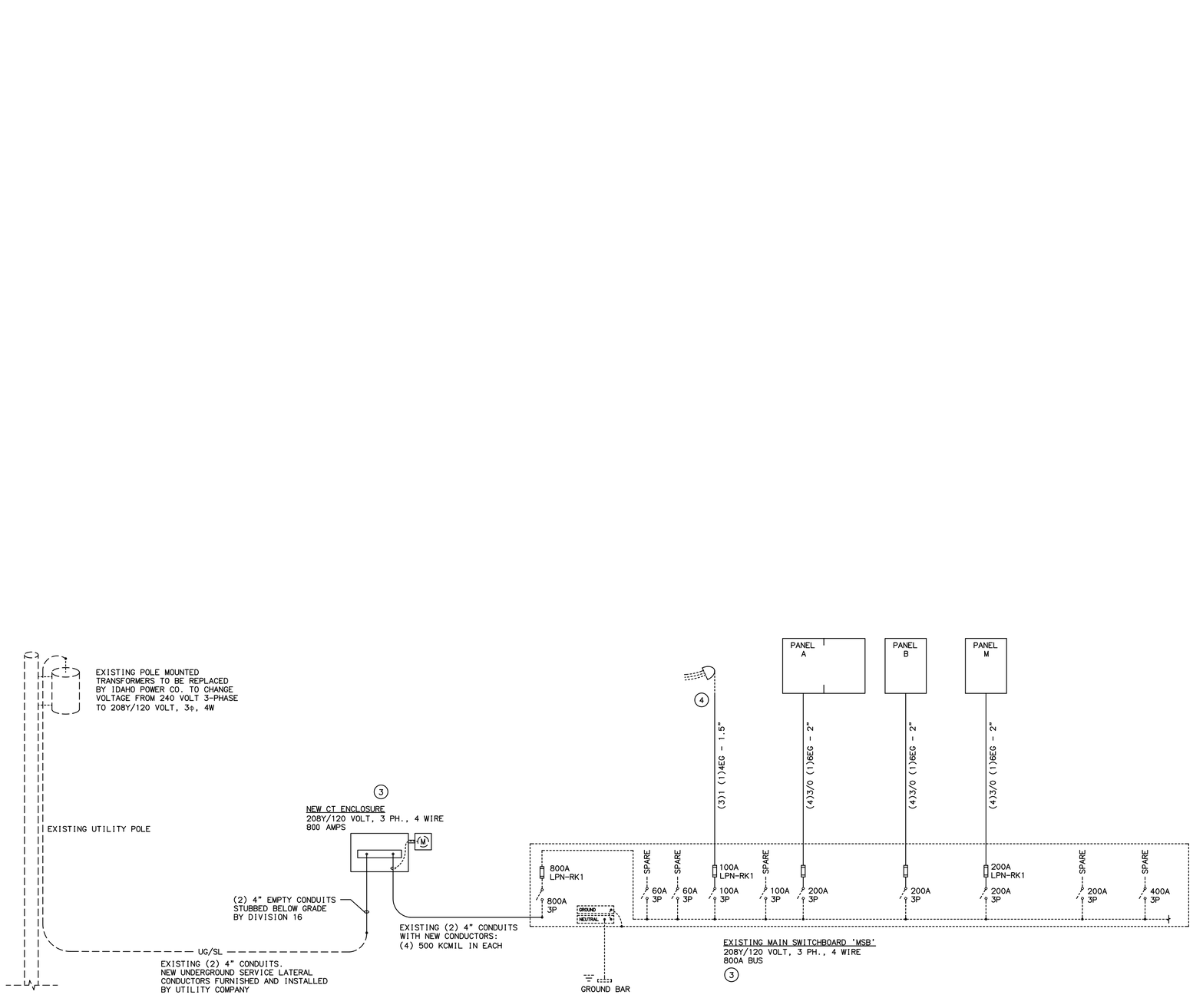
E1.7

EXISTING ONE LINE DIAGRAM

SCALE: NONE

KEYNOTES

1. REPLACE EXISTING C.T. ENCLOSURE WITH NEW.
2. NEW UNDERGROUND SERVICE LATERAL BY IDAHO POWER CO.
3. REPLACE ALL EXISTING FUSES WITH NEW.
4. RECONNECT EXISTING SINGLE-PHASE OVERHEAD SERVICE TO THE SHED ON THE WEST SIDE OF THE BUILDING.



NEW ONE LINE DIAGRAM

SCALE: NONE

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION FROM BUILDING 557 TO BUILDING 578 IDAHO ARMY NATIONAL GUARD

GOWEN FIELD, BOISE, IDAHO

NEW ONE LINE DIAGRAM

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

E1.8

PANELBOARD A

VOLTS: 208Y/120V, 3Ph., 4W | ENCLOSURE: Surface, NEMA 1 | LOCATION: Electrical Room
MAINS: 200A MLO | AIC: 10K | SOURCE: MSB

CCT	POLE	AMP	USE	LOAD	MOTOR	HVAC	KITCHEN	LIGHT	RECEP	MISC	LOAD	USE	AMP	POLE	CCT
1	1	20	Lighting	1.70				2.7			1.00	Exterior Lighting	30	2	2
3	1	30	Lighting	2.20				2.2				-	-	-	4
5	1	30	Lighting	1.50				2.5			1.00	Exterior Lighting	30	2	6
7	1	20	Lighting									-	-	-	8
9	1	20	Lighting									SPARE	30	2	10
11	1	30	Lighting - Maint. Bay	2.40				2.4				-	-	-	12
13	1	20	Lighting	0.80				0.8				BUSSED SPACE			14
15	1	20	Lighting	0.60				0.6				BUSSED SPACE			16
17	1	20	Lighting - break rm.	0.60				0.6				BUSSED SPACE			18
19	1	20	SPARE									BUSSED SPACE			20
21	1	20	SPARE						0.7		0.72	receps	20	1	22
23	1	20	receps	0.72					1.4		0.72	receps	20	1	24
25	1	20	receps	1.4					1.6		0.18	receps	20	1	26
27	1	20	receps	0.54					1.1		0.54	receps	20	1	28
29	1	20	receps	0.72					1.3		0.54	receps - comm room	20	1	30
31	1	20	receps	1.08					2.2		1.08	receps - com rack	20	1	32
33	1	20	receps	0.54					1.9		1.40	receps - supply	20	1	34
35	1	20	receps	0.54					0.7		0.18	receps - vault	20	1	36
37	1	20	receps	0.54					1.1		0.54	receps - supply	20	1	38
39	1	20	SPARE									SPARE	20	1	40
41	1	20	SPARE									SPARE	20	1	42
43	1	20	receps - classroom	0.72					0.7	0.5	0.50	projector	20	1	44
45	1	20	receps - classroom	0.72					0.7	0.5	0.50	projector	20	1	46
47	1	20	receps - classroom	0.72					1.3		0.54	receps - maint. Bay	20	1	48
49	1	20	receps - classroom	0.72					2.3		1.54	receps - maint. Bay	20	1	50
51	1	20	receps - classroom	0.72					1.4		0.72	receps - tool rm	20	1	52
53	1	20	receps - classroom	0.72					0.7			SPARE	20	1	54
55	1	20	receps - classroom	0.72					0.7			SPARE	20	1	56
57	1	20	receps - classroom	0.72					0.7			SPARE	20	1	58
59	1	20	receps - classroom	0.72					0.7			SPARE	20	1	60
61	1	20	receps - classroom	0.72					0.7			SPARE	20	1	62
63	1	20	receps - classroom	0.72					0.7			SPARE	20	1	64
65	1	20	receps - classroom	0.72					0.7			SPARE	20	1	66
67	1	20	receps - classroom	0.72					0.7			SPARE	20	1	68
69			BUSSED SPACE									SPARE	20	1	70
71			BUSSED SPACE									BUSSED SPACE			72
73			BUSSED SPACE									BUSSED SPACE			74
75			BUSSED SPACE									BUSSED SPACE			76
77			BUSSED SPACE							0.5	0.50	heat cable	30	2	78
79			BUSSED SPACE									-	-	-	80
81			BUSSED SPACE							0.5	0.50	heat cable	30	2	82
83	1	20	Fire Alarm	0.10						0.1		-	-	-	84
COLUMN TOTALS				0.0	0.0	0.0	11.8	24.1	2.1						
TOTAL CONNECTED LOAD				KVA:	38.0		AMPS:		105.6						

NOTES
1. Paint the circuit breaker red and provide a non-lockable handle block on fire alarm circuit #83.
2. GFCI with 30 mA trip on heat trace circuits 78,80,82(84).

PANELBOARD M

VOLTS: 208Y/120V, 3Ph., 4W | ENCLOSURE: Surface, NEMA 1 | LOCATION: Electrical Room
MAINS: 200A MLO | AIC: 10K | SOURCE: MSB

CCT	POLE	AMP	USE	LOAD	MOTOR	HVAC	KITCHEN	LIGHT	RECEP	MISC	LOAD	USE	AMP	POLE	CCT
1	1	30	Furnace 1	1.70		4.2					2.50	Make Up Air	20	3	2
3	1	30	Furnace 2	1.70		1.7						-	-	-	4
5	1	30	Furnace 3	1.70		1.7						-	-	-	6
7	1	20	Unit Heaters	0.10		0.2					0.10	FCU	20	2	8
9	1	20	EF-1	0.50		0.5						-	-	-	10
11	1	20	EF-2	0.90		3.5					2.70	AHP	20	2	12
13	2	60	RTU-X3	2.50		2.5						-	-	-	14
15	-	-	-			3.0					3.00	RTU-X1	60	2	16
17	2	40	Existing HVAC Unit	2.50		2.5						-	-	-	18
19	-	-	-			2.0					2.00	RTU-X2	30	2	20
21	1	30	Vehicle Exhaust	1.70						1.7		-	-	-	22
23	1	30	Vehicle Exhaust	1.70						1.7		BUSSED SPACE			24
25	2	30	Vault Heater	2.00		8.4					6.40	CU-1	30	3	26
27	-	-	-									-	-	-	28
29			BUSSED SPACE									-	-	-	30
31	2	20	Electric Heater	2.00		8.4					6.40	CU-2	30	3	32
33	-	-	-									-	-	-	34
35	2	20	Electric Heater	2.00		2.0						-	-	-	36
37	-	-	-			6.4					6.40	CU-3	30	3	38
39	2	20	Electric Heater	2.00		2.0						-	-	-	40
41	-	-	-									-	-	-	42
COLUMN TOTALS				0.0	49.0	0.0	0.0		0.0	3.4					
TOTAL CONNECTED LOAD				KVA:	52.4		AMPS:		145.5						

PANELBOARD B

VOLTS: 208Y/120V, 3Ph., 4W | ENCLOSURE: Surface, NEMA 1 | LOCATION: Electrical Room
MAINS: 200A MLO | AIC: 10K | SOURCE: MSB

CCT	POLE	AMP	USE	LOAD	MOTOR	HVAC	LIGHT	RECEP	MISC	LOAD	USE	AMP	POLE	CCT
1	1	20	display case	0.50				0.7	0.5	0.72	receps - break room	20	1	2
3	1	20	receps - kitchen	0.18				0.9		0.72	receps - break room	20	1	4
5	1	20	Frig	1.00				0.4	1.0	0.36	receps - janitor	20	1	6
7	1	20	Frig	1.00				0.5	1.0	0.54	receps - women	20	1	8
9	1	20	receps - kitchen	0.18				0.4		0.36	receps - women	20	1	10
11	1	20	receps - kitchen	0.18				0.5		0.54	receps - maint. Bay	20	1	12
13	1	20	dishwasher/disposer	1.20					1.2	0.36	receps - exterior	20	1	14
15	1	20	Frig	1.00					1.0	0.90	receps - men locker	20	1	16
17	1	20	Frig	1.00					9.0	8.00	Range	50	2	18
19	1	20	receps - kitchen	0.36				0.4			-	-	-	20
21	1	20	SPARE								SPARE	20	1	22
23	1	20	SPARE								SPARE	20	1	24
25	1	20	SPARE								SPARE	20	1	26
27	1	20	SPARE								SPARE	20	1	28
29	1	20	SPARE								SPARE	20	1	30
31			BUSSED SPACE								BUSSED SPACE			32
33			BUSSED SPACE								BUSSED SPACE			34
35			BUSSED SPACE						3.0	3.00	Air Compressor	40	2	36
37			BUSSED SPACE								-	-	-	38
39			BUSSED SPACE						2.0	2.00	Air dryer for compressor	30	2	40
41			BUSSED SPACE								-	-	-	42
COLUMN TOTALS				0.0	0.0	0.0	3.8		18.7					
TOTAL CONNECTED LOAD				KVA:	22.5			62.4						

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

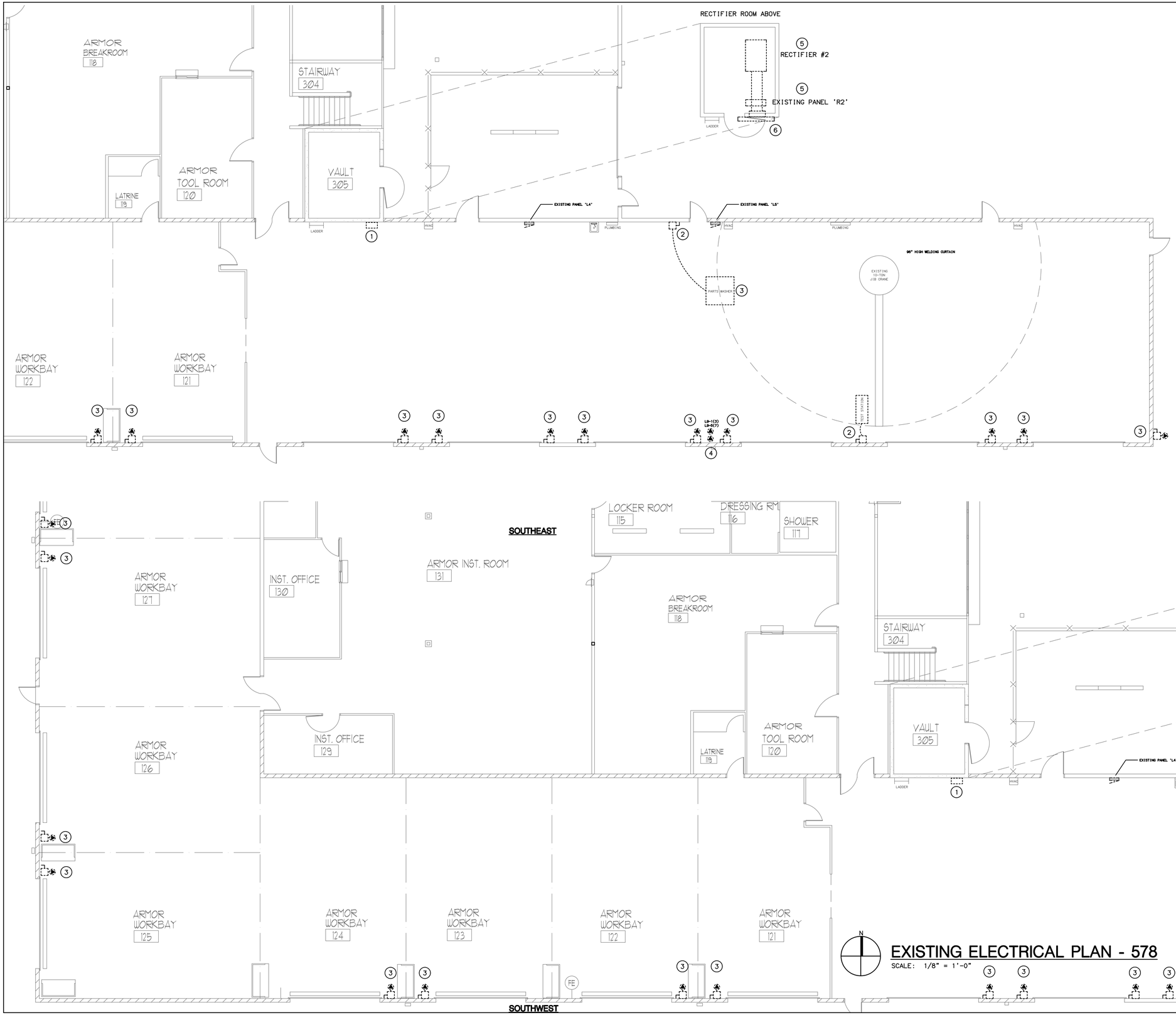
FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
Boise Bomb Shelter
600 W. Curling Drive, Boise, Idaho 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

ELECTRICAL SCHEDULES

PROJ. NO.: 06-090
DATE: 5/15/07
DRAWN BY: BAH
CHECKED BY: JPF
FILE:
REVISION:

SHEET NO.
E1.9



EXISTING ELECTRICAL PLAN - 578

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

KEYNOTES

1. REMOVE EXISTING 'DC' POWER CONTROLLER, ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
2. REMOVE EXISTING DISCONNECT SWITCH, ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS. MACHINE WILL BE REMOVED BY OWNER.
3. REMOVE EXISTING DISCONNECT SWITCH, 'DC' RECEPTACLE AND ASSOCIATED CONDUIT AND CONDUCTORS BACK TO EXISTING PANELBOARD IN THE MEZZANINE. EXISTING UNDERSLAB AND SURFACE MOUNTED CONDUITS IN THE SHOP AREA CAN REMAIN. CAP OPEN ENDS. INSTALL ENGRAVED LABEL ON ALL CONDUIT ENDS "SPARE CONDUIT TO MEZZANINE".
4. REMOVE EXISTING SPECIAL PURPOSE RECEPTACLES, ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
5. REMOVE EXISTING RECTIFIER, PANELBOARD, ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS. REMOVE EXISTING EXHAUST FAN AND DUCTS. CAP DUCT AT CEILING PENETRATION.
6. KEEP EXISTING WIREWAY.

GENERAL NOTES

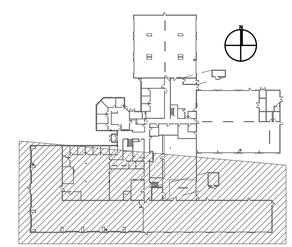
A. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIALS SHOWN, ALONG WITH ASSOCIATED CONDUIT AND CONDUCTORS, UNLESS NOTED OTHERWISE.

B. COMPLY WITH ALL FEDERAL AND STATE REGULATIONS FOR THE REMOVAL, DISPOSAL, INCINERATION AND RECYCLING OF ALL EQUIPMENT AND MATERIALS.

C. DELIVER ALL REMOVED EQUIPMENT AND MATERIALS TO THE OWNER.

D. DUE TO CONCEALED CONDITIONS, THERE WILL BE UNFORSEEN CONDITIONS DISCOVERED DURING CONSTRUCTION. THE CONTRACTOR SHALL USE THEIR BEST JUDGEMENT AND INCLUDE ALL ACCESS PANELS, RELOCATIONS, REMOVALS, RECONNECTIONS, ETC. IN THEIR BID, AS THESE ITEMS ARE NOT SHOWN ON THE DRAWINGS. NO EXTRA CHARGES WILL BE ALLOWED FOR THIS WORK.

KEYPLAN



PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION FROM BUILDING 557 TO BUILDING 578 IDAHO ARMY NATIONAL GUARD

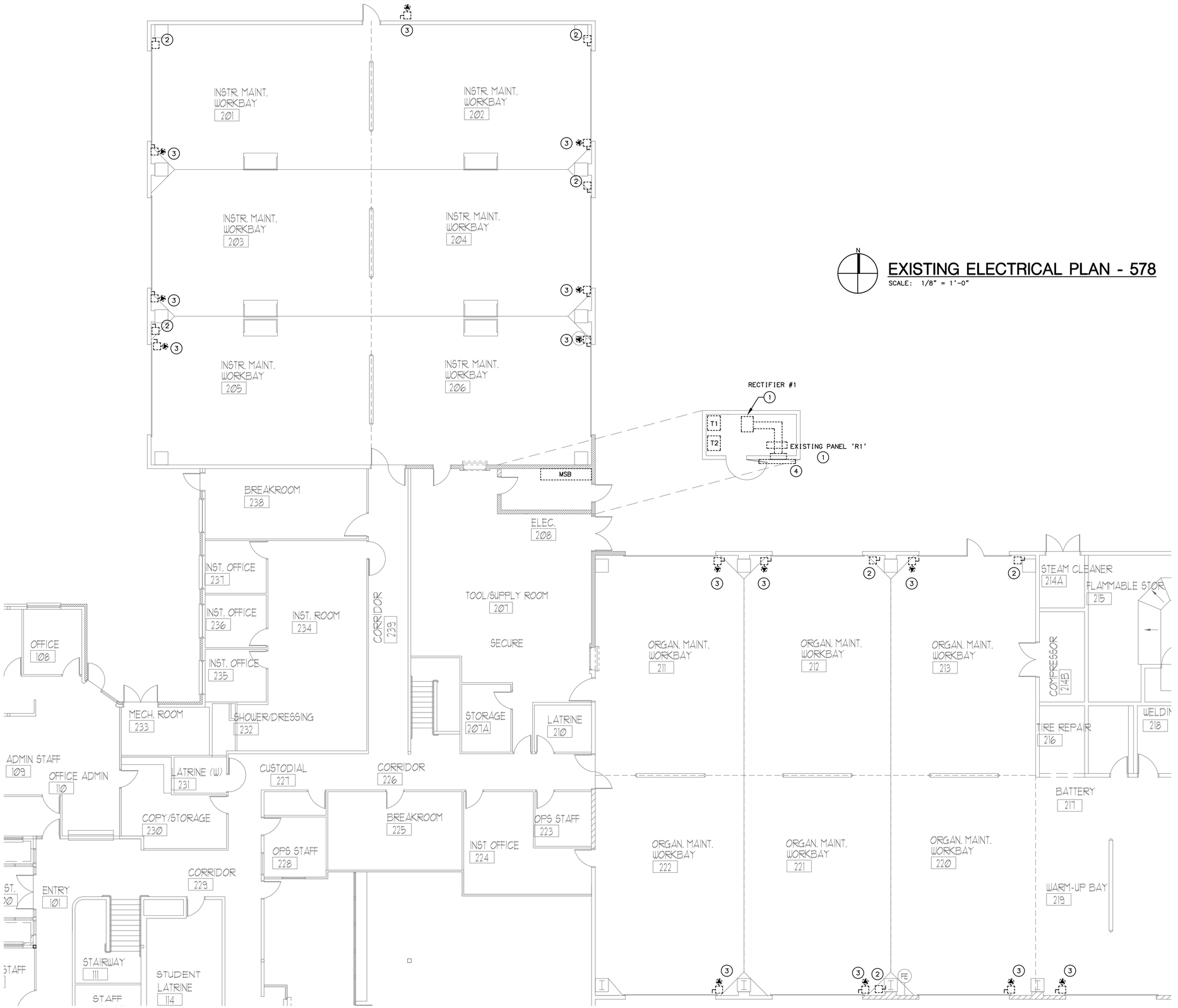
GOWEN FIELD, BOISE, IDAHO

EXISTING ELECTRICAL PLAN - 578

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

E2.1



N

EXISTING ELECTRICAL PLAN - 578

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

KEYNOTES

1. REMOVE EXISTING TRANSFORMERS #1 AND #2, RECTIFIER, PANELBOARD, ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS. AFTER REMOVING CONDUITS, PATCH THE CONCRETE FLOOR BELOW TRANSFORMERS. REMOVE EXHAUST FAN AND DUCTS. CAP DUCT AT CEILING PENETRATION.
2. REMOVE EXISTING DISCONNECT SWITCH ALONG WITH ASSOCIATED CONDUIT AND CONDUCTORS TO 'MSB'.
3. REMOVE EXISTING DISCONNECT SWTICH AND 'DC' RECEPTACLE ALONG WITH ASSOCIATED CONDUIT AND CONDUCTORS BACK TO THE PANELBOARD IN THE MEZZANINE. EXISTING UNDERSLAB AND SURFACE MOUNTED CONDUITS CAN REMAIN. CAP OPEN ENDS. INSTALL ENGRAVED LABEL ON ALL CONDUIT ENDS "SPARE CONDUIT TO MEZZANINE".
4. KEEP EXISTING WIREWAY.

GENERAL NOTES

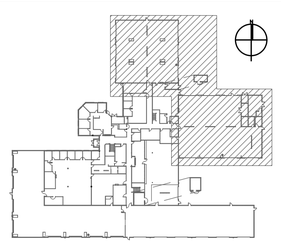
A. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIALS SHOWN, ALONG WITH ASSOCIATED CONDUIT AND CONDUCTORS, UNLESS NOTED OTHERWISE.

B. COMPLY WITH ALL FEDERAL AND STATE REGULATIONS FOR THE REMOVAL, DISPOSAL, INCINERATION AND RECYCLING OF ALL EQUIPMENT AND MATERIALS.

C. DELIVER ALL REMOVED EQUIPMENT AND MATERIALS TO THE OWNER.

D. DUE TO CONCEALED CONDITIONS, THERE WILL BE UNFORSEEN CONDITIONS DISCOVERED DURING CONSTRUCTION. THE CONTRACTOR SHALL USE THEIR BEST JUDGEMENT AND INCLUDE ALL ACCESS PANELS, RELOCATIONS, REMOVALS, RECONNECTIONS, ETC. IN THEIR BID, AS THESE ITEMS ARE NOT SHOWN ON THE DRAWINGS. NO EXTRA CHARGES WILL BE ALLOWED FOR THIS WORK.

KEYPLAN



PROFESSIONAL ENGINEER REGISTERED 8993 DATE SIGNED: 5/15/07 STATE OF IDAHO JON P. FARREN

ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

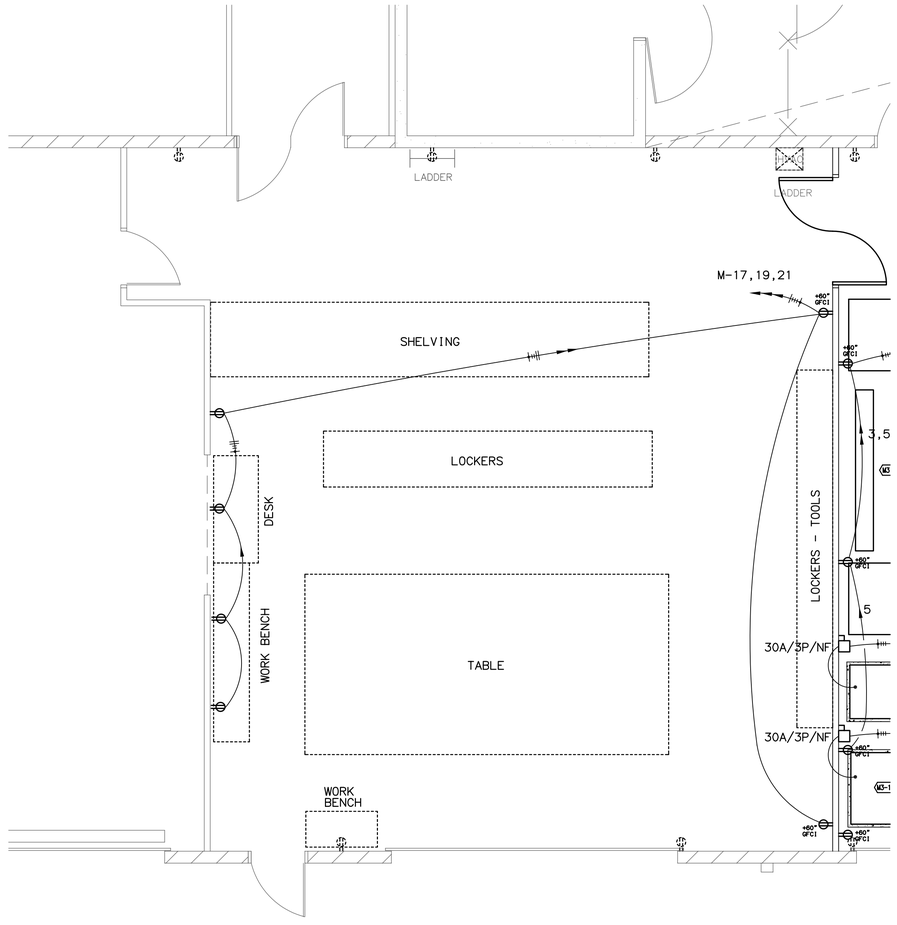
SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

EXISTING ELECTRICAL PLAN - 578

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

E2.2



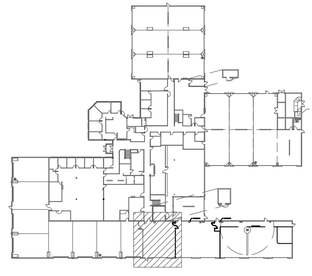
ALL CANVAS SHOP EQUIPMENT
RELOCATED BY OWNER

N

NEW CANVAS SHOP PLAN

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

KEY PLAN



PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN

ORIGINALS STORED
AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD

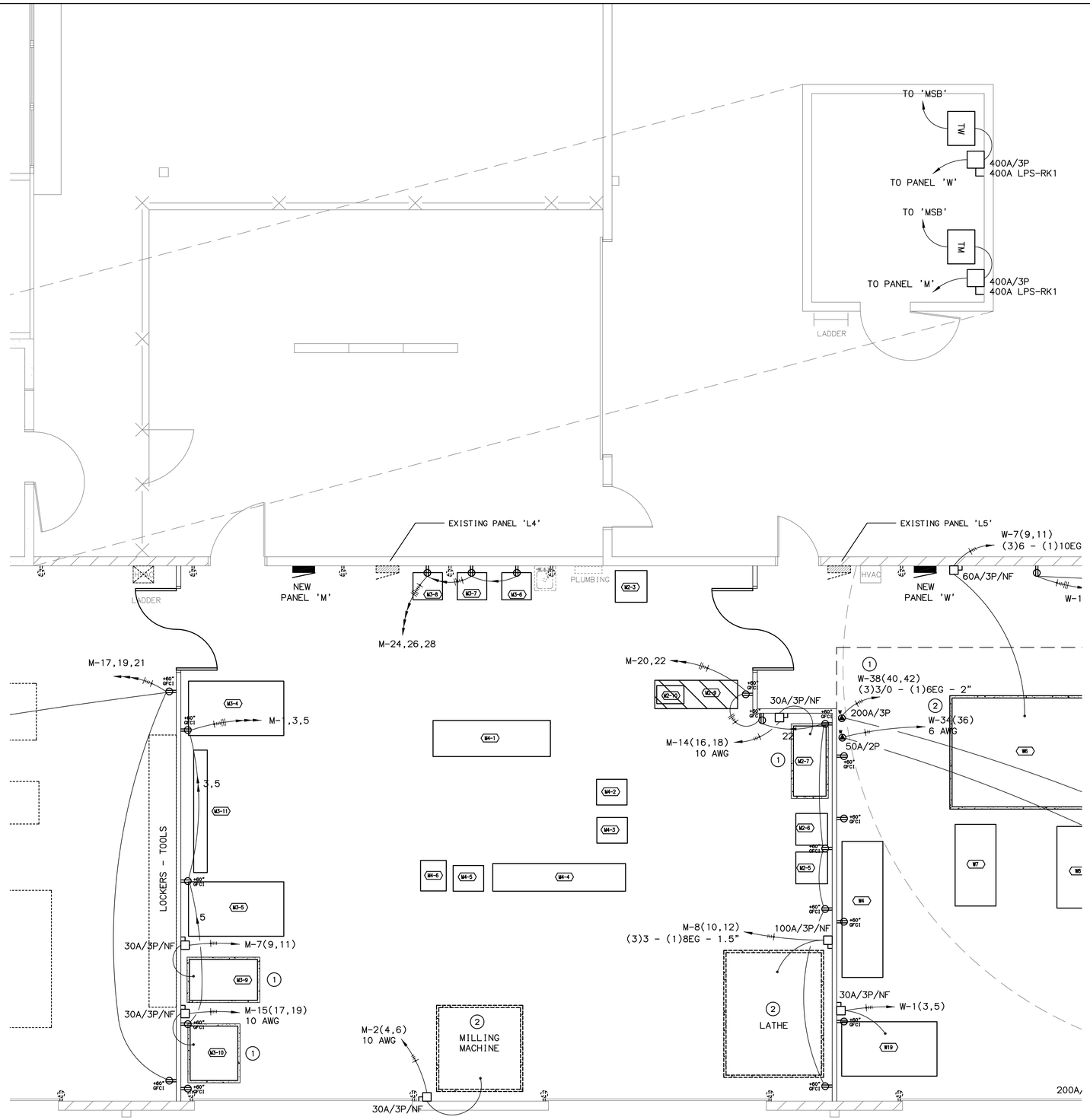
GOWEN FIELD, BOISE, IDAHO

NEW CANVAS SHOP PLAN

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

E2.3



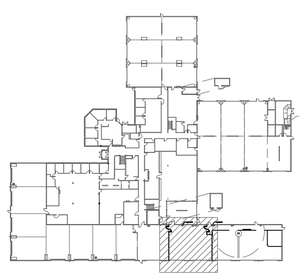
NEW MACHINE SHOP PLAN

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

KEYNOTES

1. INSTALL NEW CONCRETE LEVELING PAD. REFER TO THE DETAIL ON THIS SHEET.
2. THIS EQUIPMENT IS ALREADY IN THIS AREA. CONTRACTOR SHALL MOVE THE MACHINE INTO IT'S NEW LOCATION.

KEY PLAN



PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

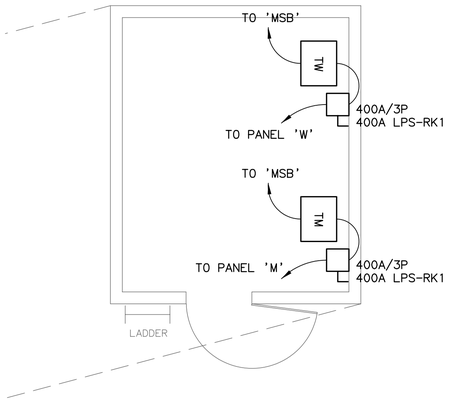
FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

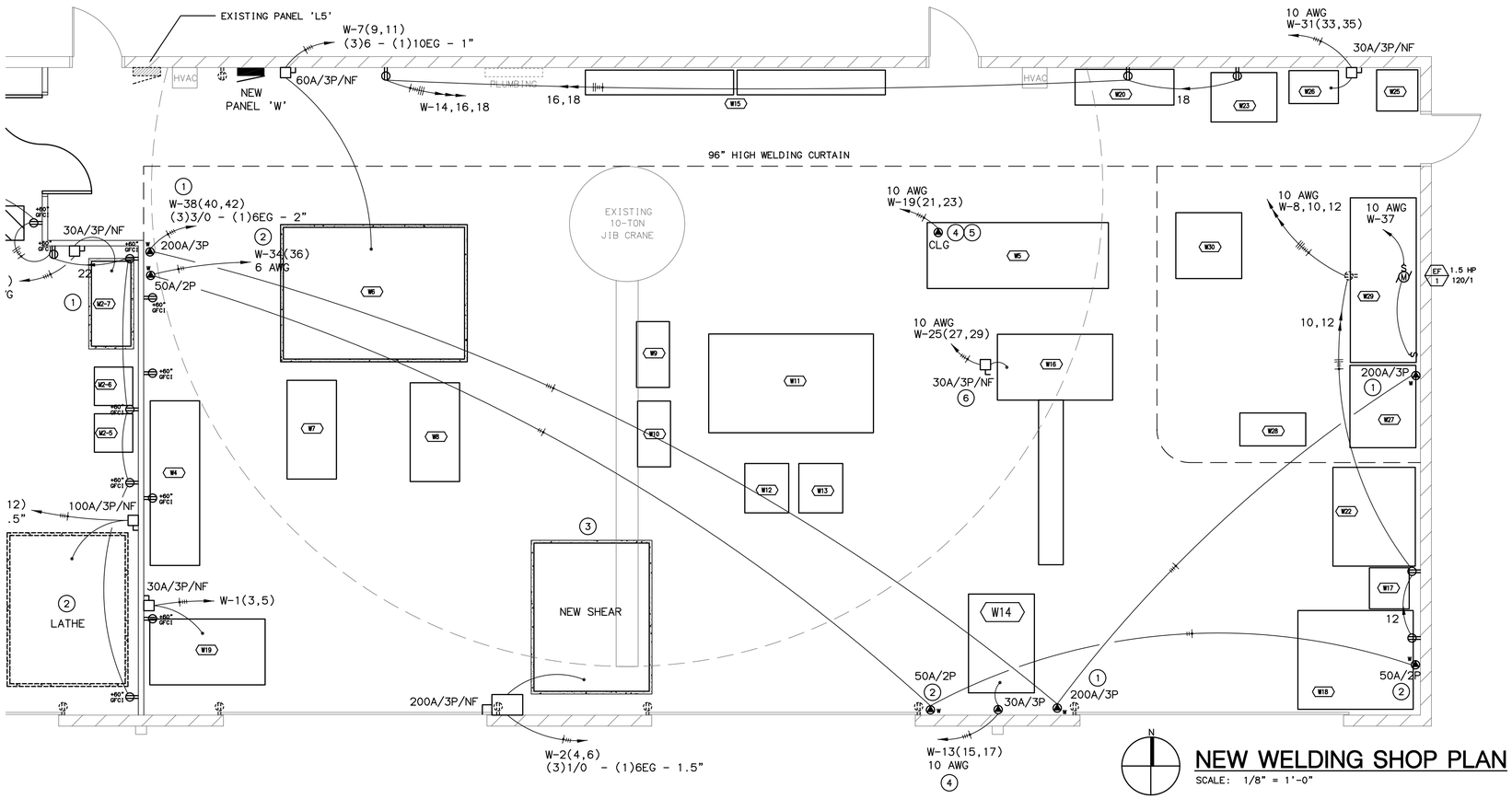
SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

NEW MACHINE SHOP PLAN

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.
E2.4





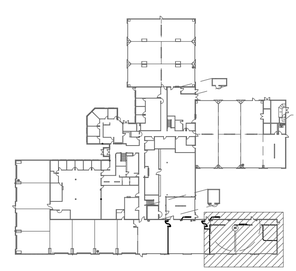
NEW WELDING SHOP PLAN

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

KEYNOTES

1. EXISTING/RELOCATED WELDER RECEPTACLE: 200A/3P. TYPICAL OF (3). PROVIDE JUNCTION BOXES, ETC. TO UTILIZE THE SAME CIRCUIT TO SUPPLY ALL THREE RECEPTACLES.
2. NEW WELDER RECEPTACLE. 50A/2P. TYPICAL OF (3). PROVIDE JUNCTION BOXES, ETC. TO UTILIZE THE SAME CIRCUIT TO SUPPLY ALL THREE RECEPTACLES.
3. INSTALL NEW CONCRETE LEVELING PAD. REFER TO DETAIL XXXX.
4. REUSE EXISTING RECEPTACLE (RELOCATED WITH MACHINE).
5. SUPPORT RECEPTACLE FROM CEILING. COORDINATE EXACT HEIGHT WITH IANG PROJECT MANAGER.
6. CONSTRUCT UNISTRUT FRAME, BOLTED TO FLOOR, TO SUPPORT THE DISONNECT SWTICH.

KEY PLAN



PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD
GOWEN FIELD, BOISE, IDAHO

NEW WELDING SHOP PLAN

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.
E2.5

All work pertaining to the concrete construction shall be in accordance with ACI 318-99, 'Building Code Requirements for Reinforced Concrete' and the latest edition of 'Specifications for Structural Concrete for Buildings', ACI 301.

Concrete mix designs shall be submitted to the Engineer for review. All mix designs shall be designed by a qualified testing laboratory and shall be wet stamped by a Civil Engineer licensed in the State of IDAHO.

Portland cement shall conform to ASTM C150 Type I or II concrete. Use water cement ratio of 0.45.

Lightweight concrete aggregate shall be in accordance with ASTM C330. Lightweight concrete mix designs shall be tested prior to approval, for shrinkage in accordance with ASTM C157. Shrinkage
shall not exceed 0.0005 inches / inch.

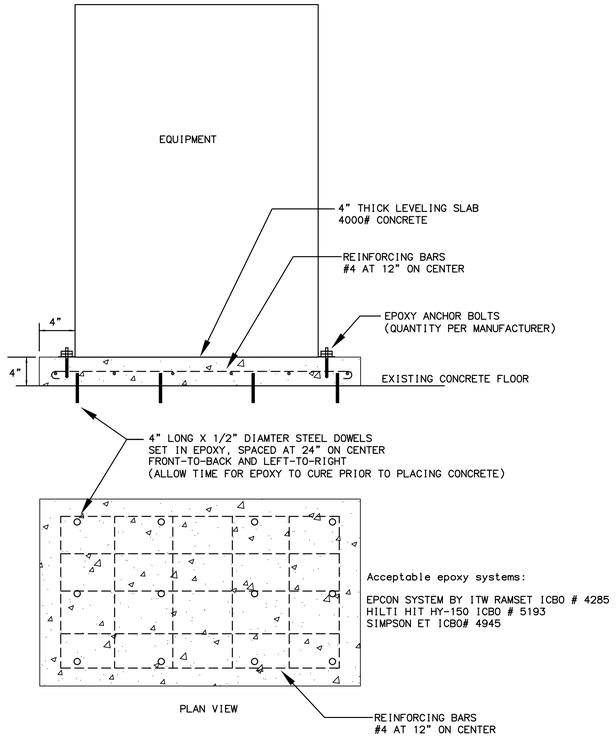
Concrete 28-day strength: 4,000 PSI.

The modulus of elasticity of concrete, when tested in accordance with ASTM C469, shall be at least the value given by the equations in section 8.5.1 of ACI 318 for the specified concrete 28-day strength.

Concrete mixing operations, etc., shall be in accordance with ASTM C94.

Concrete placement shall be in accordance with ACI standard 304. All concrete surfaces against which concrete is to be placed shall be sandblasted.

Maintain concrete above 50 degrees Fahrenheit and in a moist condition for a minimum of 7 days after placement.



CONFIRM EXACT DIMENSIONS WITH RESPECTIVE EQUIPMENT.

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD

GOWEN FIELD, BOISE, IDAHO

DETAILS - 578

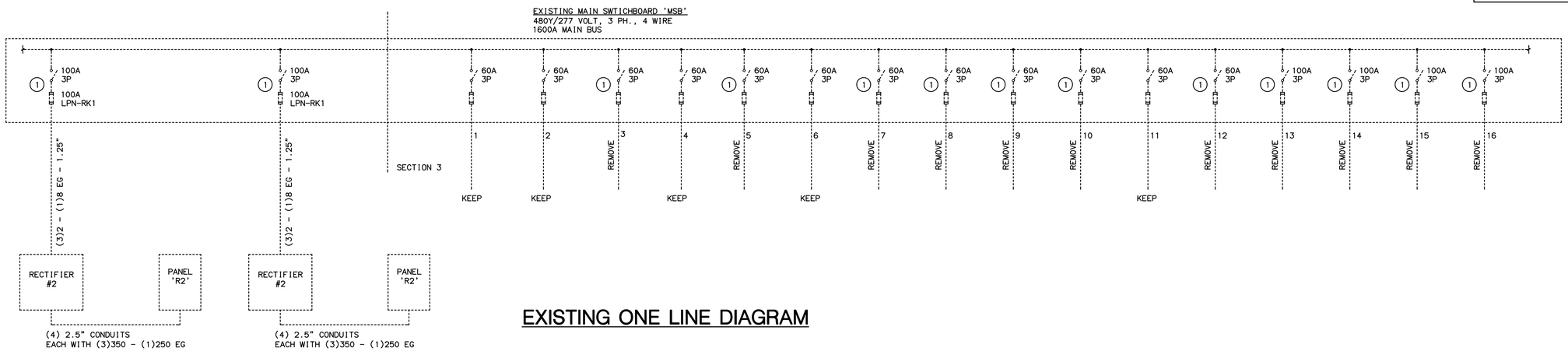
PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

E3.0

KEYNOTES

1. REMOVE EXISTING FUSED SWITCH ALONG WITH ALL ASSOCIATED CONDUITS, CONDUCTORS, DISCONNECTS, ETC. TO CREATE BUSSED SPACE FOR NEW SWITCHES.
2. INSTALL NEW SWITCH IN EXISTING BUSSED SPACE.



EXISTING ONE LINE DIAGRAM

PANELBOARD M

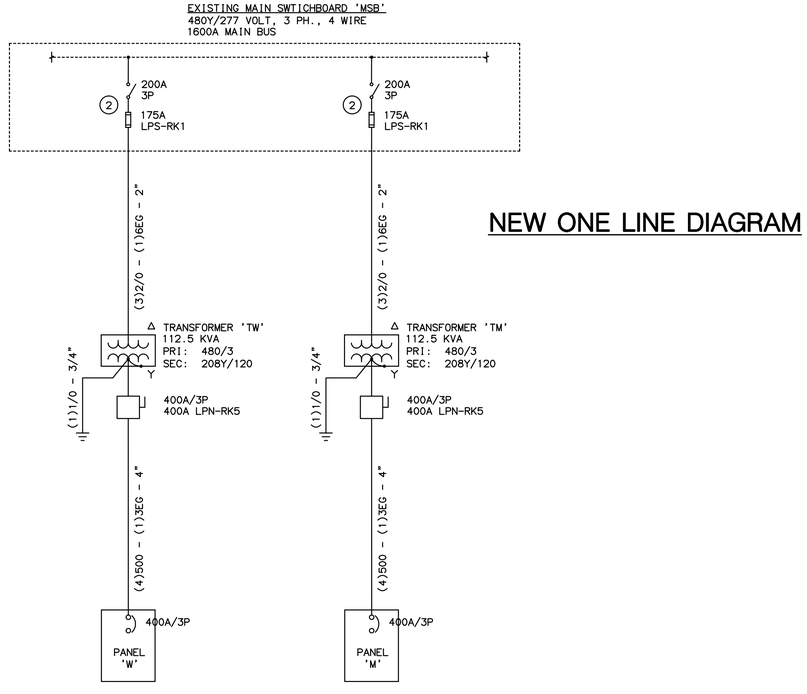
VOLTS: 208Y/120V, 3Ph., 4W | ENCLOSURE: Surface, NEMA 1 | LOCATION: Machine Shop
MAINS: 400A/3P Main Circuit Breaker | AIC: 10K | SOURCE: Transformer 'TM'

CCT	POLE	AMP	USE	LOAD	MOTOR	HVAC	LIGHT	RECEP	MISC	LOAD	USE	AMP	POLE	CCT
1	1	20	Brake Lathe	1.50					10.00	8.50	Milling Machine	30	3	2
3	1	20	Brake Lathe	1.50					1.50		-	-	-	4
5	3	20	Drill Press	5.50					5.50		-	-	-	6
7	-	-	-						23.00	23.00	Lathe	80	3	8
9	-	-	-								-	-	-	10
11	3	30	Surface Grinder	8.50					8.50		-	-	-	12
13	-	-	-						8.50	8.50	Lathe	30	3	14
15	-	-	-								-	-	-	16
17	1	20	receps canvas shop	0.36				0.36			-	-	-	18
19	1	20	receps canvas shop	0.36				0.4	1.00	1.00	receps - drill press	20	1	20
21	1	20	receps canvas shop	0.36				0.4	0.18	0.18	receps - convenience	20	1	22
23	1	20	SPARE						1.00	1.00	Grinder	20	1	24
25	1	20	SPARE						1.00	1.00	Grinder	20	1	26
27	1	20	SPARE						1.00	1.00	Belt Sander	20	1	28
29	1	20	SPARE								SPARE			30
31			BUSSED SPACE								SPARE			32
33			BUSSED SPACE								SPARE			34
35			BUSSED SPACE								SPARE			36
37			BUSSED SPACE								SPARE			38
39			BUSSED SPACE								SPARE			40
41			BUSSED SPACE								SPARE			42
			COLUMN TOTALS		0.0	0.0	0.0	1.1	61.2					
			TOTAL CONNECTED LOAD		KVA:	62.3			172.8					

PANELBOARD W

VOLTS: 208Y/120V, 3Ph., 4W | ENCLOSURE: Surface, NEMA 1 | LOCATION: Welding Shop
MAINS: 400A/3P Main Circuit Breaker | AIC: 10K | SOURCE: Transformer 'TW'

CCT	POLE	AMP	USE	LOAD	MOTOR	HVAC	LIGHT	RECEP	MISC	LOAD	USE	AMP	POLE	CCT
1	3	20	Band Saw	4.00					36.0	32.00	Shear	175	3	2
3	-	-	-								-	-	-	4
5	-	-	-								-	-	-	6
7	3	60	Press Brake	17.00				0.36	17.0	0.36	recep - welding table	20	1	8
9	-	-	-					1.70		1.70	recep - Sand Blaster	20	1	10
11	-	-	-					0.18		0.18	recep - convenience	20	1	12
13	3	30	Iron Worker	8.50				0.18	8.5	0.18	recep - convenience	20	1	14
15	-	-	-					0.18		0.18	recep - convenience	20	1	16
17	-	-	-					1.00		1.00	recep - grinder/drill press	20	1	18
19	3	20	Pipe Bender	2.80					2.8		SPARE	20	1	20
21	-	-	-								SPARE	20	1	22
23	-	-	-								SPARE	20	1	24
25	3	20	Horizontal Band Saw	2.00					2.0					26
27	-	-	-											28
29	-	-	-											30
31	3	20	Grinder	2.70					2.7					32
33	-	-	-						8.0	8.00	Welder receptacles	50	2	34
35	-	-	-								-	-	-	36
37			BUSSED SPACE						54.0	54.00	Welder receptacles	200	3	38
39			BUSSED SPACE								-	-	-	40
41			BUSSED SPACE								-	-	-	42
			COLUMN TOTALS		0.0	0.0	0.0	3.6	131.0					
			TOTAL CONNECTED LOAD		KVA:	134.6			373.7					



NEW ONE LINE DIAGRAM

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

PROFESSIONAL ENGINEER REGISTERED 8993 STATE OF IDAHO JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

SHOP RELOCATION FROM BUILDING 557 TO BUILDING 578 IDAHO ARMY NATIONAL GUARD

GOWEN FIELD, BOISE, IDAHO

ONE LINE DIAGRAM

PROJ. NO.: 06-090
DATE: 5/15/07
DRAWN BY: BAH
CHECKED BY: JPF
FILE:
REVISION:

SHEET NO.
E4.0

LEGEND

- EQUIPMENT RELOCATED AND REINSTALLED IN BUILDING 578.
- EQUIPMENT RELOCATED TO STORAGE IN BUILDING 578.
- EQUIPMENT RELOCATED BY OWNER

STENCIL MACHINES
STEEL TABLE

PARTS TABLE

STENCIL MACHINE

M1-1 M1-2 M1-3 M1-4 M1-5 M1-6 M1-7 M1-8 M1-9 M1-10

M2-1 M2-2 M2-3 M2-4 M2-5 M2-6 M2-7 M2-8 M2-9 M2-10 M2-11 M2-12 M2-13

M3-1 M3-2 M3-3 M3-4 M3-5 M3-6 M3-7 M3-8 M3-9 M3-10 M3-11 M3-12

W1 W2 W3 W4 W21

WELDING
218

PLACE ALL EQUIPMENT ON PALLETS OR WOOD BLOCKS SO OWNER CAN RELOCATE EQUIPMENT AT FUTURE DATE.

FE

BUILDING 578

NEW PANELBOARD

M3-8 M3-7 M3-6 M2-8 M2-3 M2-10 M2-9

NEW PANELBOARD

W15 W20

W23 W26 W25

N

RELOCATION PLAN

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

PROFESSIONAL ENGINEER
REGISTERED
8993
STATE OF IDAHO
JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION
FROM BUILDING 557 TO BUILDING 578
IDAHO ARMY NATIONAL GUARD

GOWEN FIELD, BOISE, IDAHO

RELOCATION PLAN - BLDG. 578

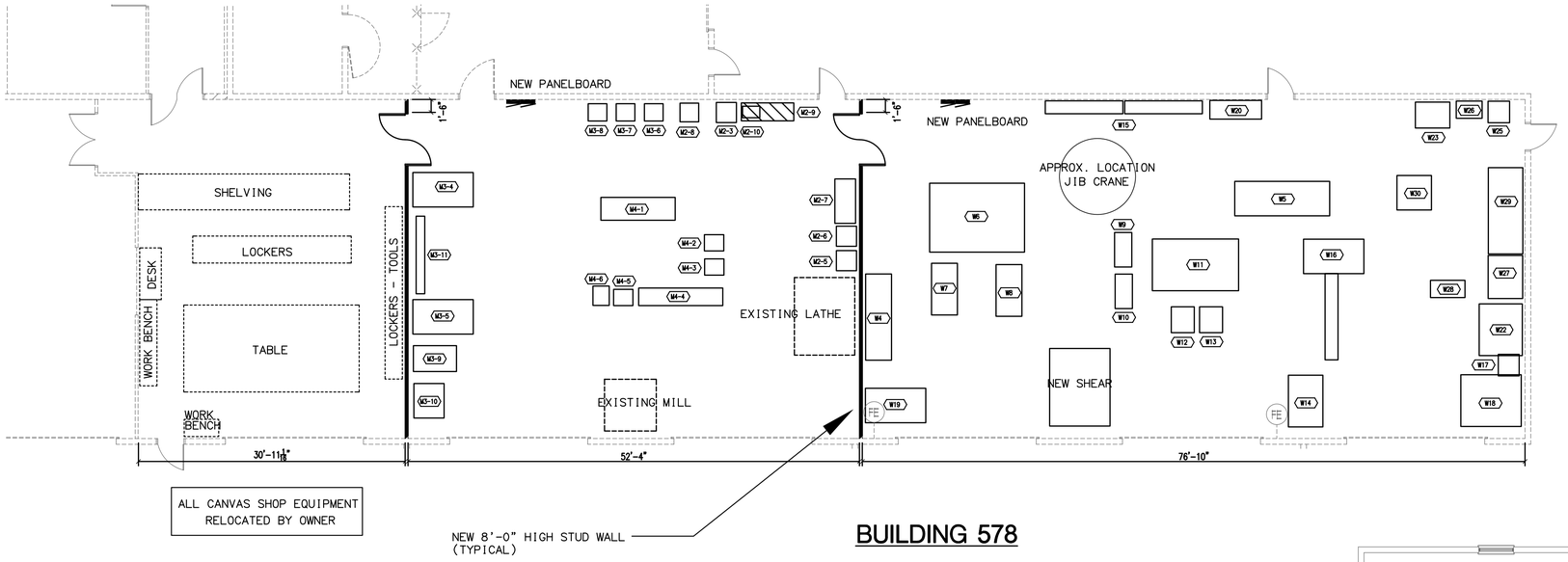
PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

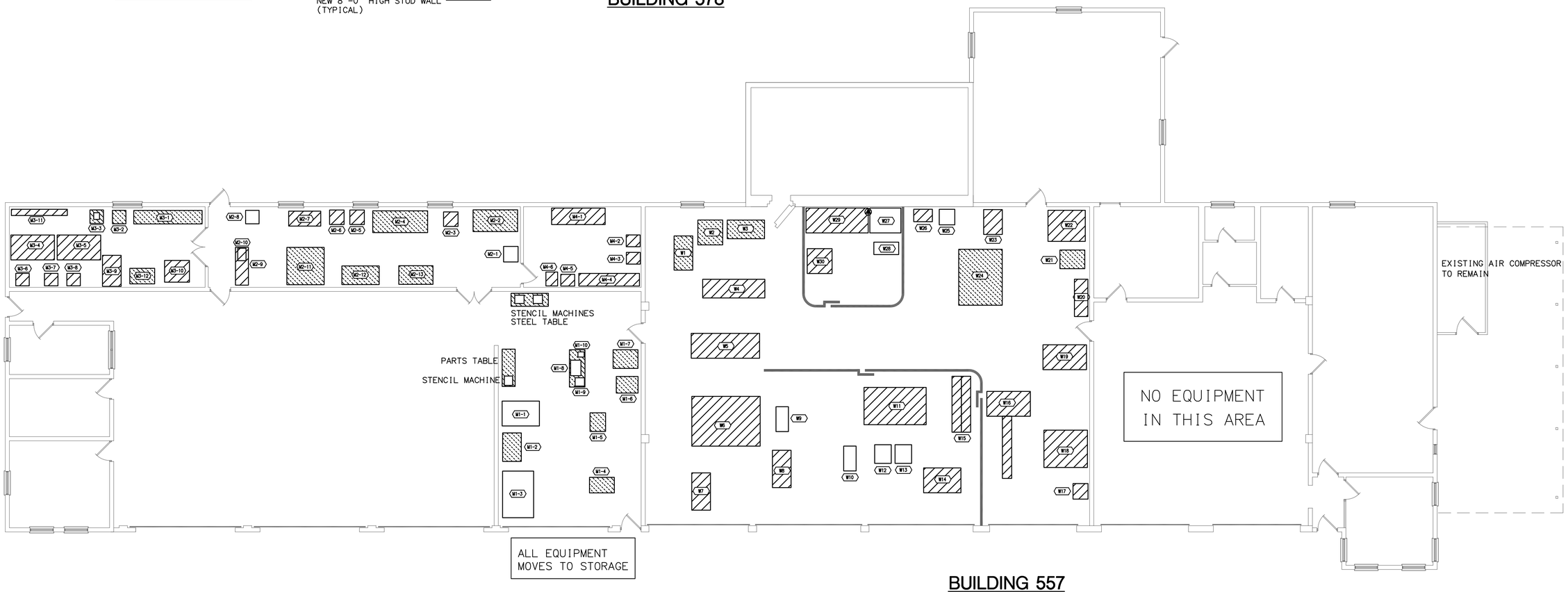
R-2

LEGEND

- EQUIPMENT RELOCATED AND REINSTALLED IN BUILDING 578.
- EQUIPMENT RELOCATED TO STORAGE IN BUILDING 578.
- EQUIPMENT RELOCATED BY OWNER



BUILDING 578



BUILDING 557

N

RELOCATION PLAN

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

PROFESSIONAL ENGINEER REGISTERED 8993 STATE OF IDAHO JON P. FARREN
ORIGINALS STORED AT FARREN ENGINEERING

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
BOISE BOMB SHELTER
600 W. CURLING DRIVE, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

SHOP RELOCATION FROM BUILDING 557 TO BUILDING 578 IDAHO ARMY NATIONAL GUARD

GOWEN FIELD, BOISE, IDAHO

RELOCATION PLAN - BLDG. 557-578

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	BAH
CHECKED BY:	JPF
FILE:	
REVISION:	

SHEET NO.

R-1

FURNACE AND EVAPORATOR SCHEDULE

FE #

NO.	TYPE	CFM	HP	CHAR	SPE	HEATING				COOLING					FRESH AIR	WEIGHT	FURNACE MANUFACTURER	COIL MODEL #	WET COIL DELTA P	CONDENSING UNIT MODEL #
						MBH INPUT	MBH OUTPUT	ENT AIR	LVG AIR	MBH	S/T	ENT AIR	LVG AIR	OUTDOOR AIR						
1	MULTIPOISE – 90%	1600	3/4	120/1ø	.50"	80	75	60°	103°	45.0	1.0	80/62	56/53	95°	400	279	'CARRIER' 58MXB–080–20	'CARRIER' CNPHP48	.29"	'CARRIER' 25ACA3–48
2	MULTIPOISE – 90%	1600	3/4	120/1ø	.50"	80	75	60°	103°	45.0	1.0	80/62	56/53	95°	400	279	'CARRIER' 58MXB–080–20	'CARRIER' CNPHP48	.29"	'CARRIER' 25ACA3–48
3	MULTIPOISE – 90%	1600	3/4	120/1ø	.50"	80	75	60°	103°	45.0	1.0	80/62	56/53	95°	400	279	'CARRIER' 58MXB–080–20	'CARRIER' CNPHP48	.29"	'CARRIER' 25ACA3–48

MAKE-UP AIR UNIT SCHEDULE (GAS FIRED)

MAU #

NO.	TYPE	CFM	HP	CHAR	RPM	SPE	HEATING		EAT	LAT	GAS TYPE	WEIGHT	MANUFACTURER
							MBH INPUT	MBH OUTPUT					
1	INDOOR	2250	1.5	208/3ø	790	.60"	200	160	32°	92°	NATL	500#	'STERLING' ME20A2B01M41D4S – B5 [1]

[1] REFERENCE SPECIFICATIONS FOR SEQUENCE OF OPERATIONS.

FAN COIL UNIT SCHEDULE

FCU #

NO.	TYPE	CFM	HP	CHAR	SPE	COOLING				FRESH AIR CFM	MANUFACTURER
						MBH	S/T	ENT AIR	LVG AIR		
1	WALL MOUNTED	500	1/6	208/1ø	0	19.0	.93	85/62	51/49	0	'CARRIER' 40QAE024

UNIT HEATER SCHEDULE (GAS)

UH #

NO.	TYPE	HEATING		CFM	HP	CHAR	GAS TYPE	SUPPLY SIZE	VENT	WEIGHT	MANUFACTURER
		MBH INPUT	MBH OUPUT								
1	PROPELLER	100	80	1480	1/20	120/1ø	NATL	3/4"	6"	---	'STERLING' QVF100 [1]
2	PROPELLER	100	80	1480	1/20	120/1ø	NATL	3/4"	6"	---	'STERLING' QVF100 [1]
3	PROPELLER	100	80	1480	1/20	120/1ø	NATL	3/4"	6"	---	'STERLING' QVF100 [1]
4	PROPELLER	100	80	1480	1/20	120/1ø	NATL	3/4"	6"	---	'STERLING' QVF100 [1]

[1] REFERENCE SPECIFICATIONS FOR SEQUENCE OF OPERATIONS.

EXHAUST FAN SCHEDULE

EF #

NO.	TYPE	CFM	SPE	HP	CHAR	RPM	WEIGHT	MANUFACTURER	REMARKS
1	ROOF MOUNTED	300	.375"	1/6	120/1ø	1165	---	'COOK' ACRU–B 100R2B	[1]
2	ROOF MOUNTED	2250	.375"	1/3	120/1ø	755	---	'COOK' ACRU–B 180R4B	[1]
3	CEILING MOUNTED	109	.375"	70w	120/1ø	1500	---	'COOK' GC–140	[2]

[1] EXHAUST FAN CONTROLLED BY OCCUPANCY SENSORS IN BOTH THE MEN'S AND WOMEN'S RESTROOMS.
EXHAUST FAN SHALL HAVE A 15 MINUTE (ADJUSTABLE) DELAY TO TURN FANS OFF AFTER SENSING NO OCCUPANTS.

[2] EXHAUST FAN CONTROLLED BY SWITCH WITH PILOT LIGHT.

AIR SIDE HEAT PUMP SCHEDULE

AHP #

NO.	EVAP CFM	MCA	CHAR	MBH	ENT AIR	SEER	WEIGHT	MANUFACTURER
1	500	13.0	208/1ø	19.0	105°	11.0	290	'CARRIER' 38QR018C

RADIANT HEATER SCHEDULE

RH #

NO.	TYPE	MBH INPUT	CHAR	GAS TYPE	LENGTH	FLUE SIZE	CONTROL	MANUFACTURER
1	RADIANT TUBE	130	120/1ø	NATL	30'	6"ø	T–STAT	'SPACE–RAY' LTS 130

[1] REFERENCE SPECIFICATIONS FOR SEQUENCE OF OPERATIONS.

CONDENSING UNIT SCHEDULE

CU #

NO.	EVAP CFM	MCA	CHAR	MBH	ENT AIR	SEER	REFRIGERANT	WEIGHT	MANUFACTURER
1	1600	18.2	208/3ø	45.0	95°	13.0	R–410A	236#	'CARRIER' 25ACA3–48
2	1600	18.2	208/3ø	45.0	95°	13.0	R–410A	236#	'CARRIER' 25ACA3–48
3	1600	18.2	208/3ø	45.0	95°	13.0	R–410A	236#	'CARRIER' 25ACA3–48

ELECTRIC HEATER SCHEDULE

EH #

NO.	TYPE	MBH	KW	CHAR	MANUFACTURER	REMARKS
1	SURFACE MOUNTED	6.8	2	208/1ø	'Q–MARK' CDF–548	[1]
2	SURFACE MOUNTED	6.8	2	208/1ø	'Q–MARK' CDF–548	[1]
3	SURFACE MOUNTED	6.8	2	208/1ø	'Q–MARK' CDF–548	[1]

[1] PROVIDE WITH INTEGRAL THERMOSTAT.

GRILLE AND REGISTER SCHEDULE

SYMBOL	DESCRIPTION	TYPE	FINISH
CD	CEILING DIFFUSER	'TITUS' TDC	OFF WHITE
RCDA	ROUND CEILING DIFFUSER (ADJ.)	'SEIHO' TT	OFF WHITE
RG	RETURN GRILLE	'TITUS' 50F	OFF WHITE
EG	EXHAUST GRILLE	'TITUS' 50F	OFF WHITE

PLUMBING FIXTURE SCHEDULE

SYM	DESCRIPTION	COLD	HOT	WASTE	VENT
P–1	WATER CLOSET (FV, ADA COMPLIANT)	1"	---	4"	2"
P–2	WATER CLOSET (FV)	1"	---	4"	2"
P–3	URINAL (ADA COMPLIANT)	1"	---	2"	2"
P–4	URINAL	1"	---	2"	2"
P–5	OVAL SINK (ADA COMPLIANT)	1/2"	1/2"	1–1/2"	1–1/2"
P–6	COLUMN SHOWER (ADA COMPLIANT)	1"	1"	4"	2"
P–7	COLUMN SHOWER	1"	1"	4"	2"
P–8	SHOWER HEAD (ADA COMPLIANT)	1/2"	1/2"	---	---
P–9	REFRIGERATOR VALVE BOX	1/2"	---	---	---
P–10	BREAKROOM SINK	1/2"	1/2"	2"	1–1/2"
P–11	DISHWASHER	---	1/2"	3/4"	---
P–12	JANITOR SINK	1/2"	1/2"	3"	2"
P–13	FLOOR DRAIN (2")	---	---	2"	2"
P–14	INSTANANEOUS HOT WATER HEATER	1/2"	---	---	---
P–15	WATER HEATER (130 GAL, 400 MBH)	1–1/2"	1–1/2"	---	---
P–16	SHOWER HEAD	1/2"	1/2"	---	---

P- 1 Water Closet (Flush Valve, ADA Compliant): Kohler K-4368 with K-4670-C seat, boltcaps and Sloan Regal Optima Plus 8111-1.6-MC, 1.6 gallon per flush, battery powered,sensor operated flush valve with vandal resistant metal cap. Flush valve handle to beinstalled on wide side of fixture, secure piping in wall serving flush valve. Provide "white"color selection for china.

P- 2 Water Closet (Flush Valve): Kohler K-4350 with bolt caps and K-4670-C seat and SloanRegal Optima Plus 8111-1.6-MC, 1.6 gallon per flush, battery powered, sensor operatedflush valve with vandal resistant metal cap. Secure piping in wall serving flush valve. Provide "white" color selection for china.

P- 3 Urinal (ADA Compliant): Kohler K-4972-T with Sloan Regal Optima Plus 8180-1.0-MC,1.0 gallon per flush, battery powered, sensor operated flush valve with vandal resistantmetal cap. Secure piping in wall serving flush valve. Provide with Jay R. Smith 0637fixture carrier. Provide "white" color selection for china.

P- 4 Urinal: Kohler K-4972-T with Sloan Regal Optima Plus 8180-1.0-MC, 1.0 gallon per flush,battery powered, sensor operated flush valve with vandal resistant metal cap. Securepiping in wall serving flush valve. Provide Jay R. Smith 0637 carrier. Provide "white" colorselection for china.

P- 5 Oval Sink (ADA Compliant): Kohler K-2196-4 with Sloan Optima Plus EBF-650 batterypowered, sensor operated lavatory faucet with .5 gpm vandal proof aerator. Provideflowpower series e450 lavatory tempering valve with integral check stops factory set at105°F. Provide with grid strainer, hose key stops, trap with tailpiece and offsetwheelchair trap. Provide Truebro Inc. Model 103 closed cell vinyl handlicapped insulationkit with offset tailpiece accessory, fasteners for trap and hot and cold water angle stopvalves.

P- 6 Column Shower (Men's 5 Head, ADA Compliant): Acorn752-HC-T25-F2.5-CA-GG-SC-YY ADA compliant Capital 5 station column shower withpressure balancing mixing valve, top supply, integral drain, center vent, lockable universalball joint shower heads with 2.5 GPM flow control, ceiling anchor plate, unit shut-off valve,supply cover to ceiling, soap dish at each station and shower head discharge height of6'-0". Handicapped station includes a weldled vertical 24" grab bar and lever handlediverter valve mounted at 48" above floor for hand shower and fixed upper head. Handshower includes a 60" long stainless steel hose and mounting bracket.

P- 7 Column Shower (Men's 5 Head): Acorn 752-T25-F2.5-CA-GG-SC-YY Capital 5 stationcolumn shower with pressure balancing mixing valve, top supply, integral drain, centervent, lockable universal ball joint shower heads with 2.5 GPM flow control, ceiling anchorplate, unit shut-off valve, supply cover to ceiling, soap dish at each station and showerhead discharge height of 6'-0".

P- 8 Shower Head (ADA Compliant): Symmons Temptrol No. BP56-500-B30-X-V-L-B-131pressure-balancing mixing valve with adjustable stop screw, lever diverter, Integral linecontrol, lever handle, 4-131 shower head with arm and flange, wall/hand shower with 30"flexible metal hose with slide bar and inline vacuum breaker, ADA approved. Provide withall metal trim.

P- 9 Refrigerator Valve Box: Water Tite Model 9000 ice maker valve box.

P- 10 Break Room Sink (Double Bowl with Garbage Disposer, ADA Compliant): ElkayGECR-3321-L, 20 gauge Type 302 stainless steel self-rimming sink with trap, tailpieceand angle stops. Install LK-35 basket strainer in left bowl, in right bowl installIn-Sink-Erator Pro Series 333, ½ HP, 120 volt continuous feed garbage disposer withsplitall, insulated outer shell, plastic grind chamber, stainless steel grinding elements,dishwasher drain connection, overload protector manual reset, antisplash baffle, and fouryear warranty. Provide Delta 2773833 swivel gooseneck faucet with 2.2 gpm vandalresistant flow control aerator and 2½" lever blade handles. Provide Truebro basin guardto be installed below counter.

P- 11 Dishwasher: Provide ½" hot water supply line from nearby sink to dishwasher. Connect¾" waste line from dishwasher to tailpiece of nearby sink

P- 12 Janitor Sink: Fiat MSB-2424 mop service basin with 10" high walls, 3" drain, 830-AAservice faucet with vacuum breaker, integral stops and hose with hose bracket.

P- 13 Floor Drain: Jay R. Smith No. 2005-A05-PB with polished-bronze strainer, trap andprimer. Locate primer with shut-off valve and access panel in wall. Coordinate withGeneral Contractor.

P- 14 Water Heater (Instantaneous electric, 4.6 Kw, 208 Volt, Single Phase): ChronomiteS-46LP, low pressure, Instantaneous hot water heater with .5 GPM flow rate, 103 °F to128 °F adjustable temperature supply, fail safe heating element which will not heat above190 °F with 4600 watt, 208 volt, single phase heating element.

P- 15 Water Heater (130 Gallon, 399 MBH): A.O. Smith Cyclone BTH-400, high efficiencycondensing water heater. 130 gallon glass-lined tank, 399 MBH input, 466 GPH recoveryat 100 °F rise, AGA certified, T&P relief valve, ASHRAE standard insulation, preset powerburner, LED digital display panel with fault display and integrated solid state temperatureand ignition control. Provide and install 4" PVC intake and exhaust air flues inaccordance with manufacturer's requirements. Exhaust air flue shall be provided withmanufacturer's standard muffler to remove 20 dba from discharge noise on exhaust flue.

P- 16 Shower Head: Symmons Temptrol C-96-1-X pressure-balancing mixing valve with 86-1stainless steel piston type cartridge, cast brass adjustable metal shower head mountedat 6'-6" above finished floor, 300S shower arm and flange, handle limit stop, metal leverhandle, integral stops and all metal trim.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
CW	COLD WATER PIPING
HW	HOT WATER PIPING
	WASTE PIPING
GW	GREASE WASTE PIPING
	VENT PIPING
G	LOW PRESSURE GAS PIPING
MPG	MEDIUM PRESSURE GAS PIPING
RDL	ROOF DRAIN LINE
OFL	OVERFLOW DRAIN LINE
P–#	PLUMBING FIXTURE IDENTIFICATION
	PIPE BREAK
	PIPE RISE
	PIPE DROP
	PIPE END CAP
	REDUCER
	PRESSURE RELIEF VALVE
T	THERMOSTAT
	FIRE DAMPER – ONE HOUR
S	FIRE/ SMOKE DAMPER – ONE HOUR
	SMOKE DAMPER
	CONICAL SPIN IN FITTING WITH HAND DAMPER
	ROUND CEILING DIFFUSER
	CEILING DIFFUSER
	RETURN GRILLE
	EXHAUST GRILLE
	SUPPLY DUCT
	RETURN DUCT
	EXHAUST DUCT
	FLEX DUCT
X/X	EQUIPMENT CALLOUT

MECHANICAL ABBREVIATIONS

SYMBOL	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BLDG	BUILDING
BTU	BRITISH THERMAL UNITS
CFM	CUBIC FEET PER MINUTE
CHAR	CHARACTERISTICS
CW	COLD WATER
db	DECIBEL
DN	DOWN
FT	FEET
GPM	GALLONS PER MINUTE
HP	HORSE POWER
HR	HOUR
HW	HOT WATER
Kw	KILOWATT
LB	POUNDS
MAX	MAXIMUM
MBH	BTU'S IN THOUSANDS
MCA	MINIMUM CIRCUIT AMPS
MIN	MINIMUM
NO	NUMBER
NTS	NOT TO SCALE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
REQD	REQUIRED
RPM	REVOLUTIONS PER MINUTE
SF	SQUARE FEET
SP	STATIC PRESSURE
SPE	STATIC PRESSURE EXTERNAL
S/T	SENSIBLE TO TOTAL COOLING RATIO
TYP	TYPICAL
V	VENT
VTR	VENT THROUGH ROOF

DRAWING LEGEND

SHEET	DRAWING TITLE
M1.0	MECHANICAL COVER SHEET
M2.0	WASTE AND VENT PIPING PLAN
M3.0	PLUMBING PIPING PLAN
M4.0	MECHANICAL PLAN
M5.0	MECHANICAL SPECIFICATIONS

INSIGHT architects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

PROFESSIONAL ENGINEER REGISTERED 7009 STATE OF IDAHO ROBERT D. TIKKER

ARCHITECT STAMP

IDAHO ARMY NATIONAL GUARD
BUILDING #557 REMODEL
GOWEN FIELD
BOISE, IDAHO

MECHANICAL COVER SHEET

REVISIONS	
NO.	REMARKS

CHECKED	BT
DATE	05-15-07
DRAWN	OG
JOB NO.	06052

SHEET NUMBER
M1.0

TIKKER ENGINEERING
A MECHANICAL CONSULTING FIRM
9384 W. Overland Rd. Boise, ID 83709
Phone: (208) 658–0218 Fax: (208) 658–0219

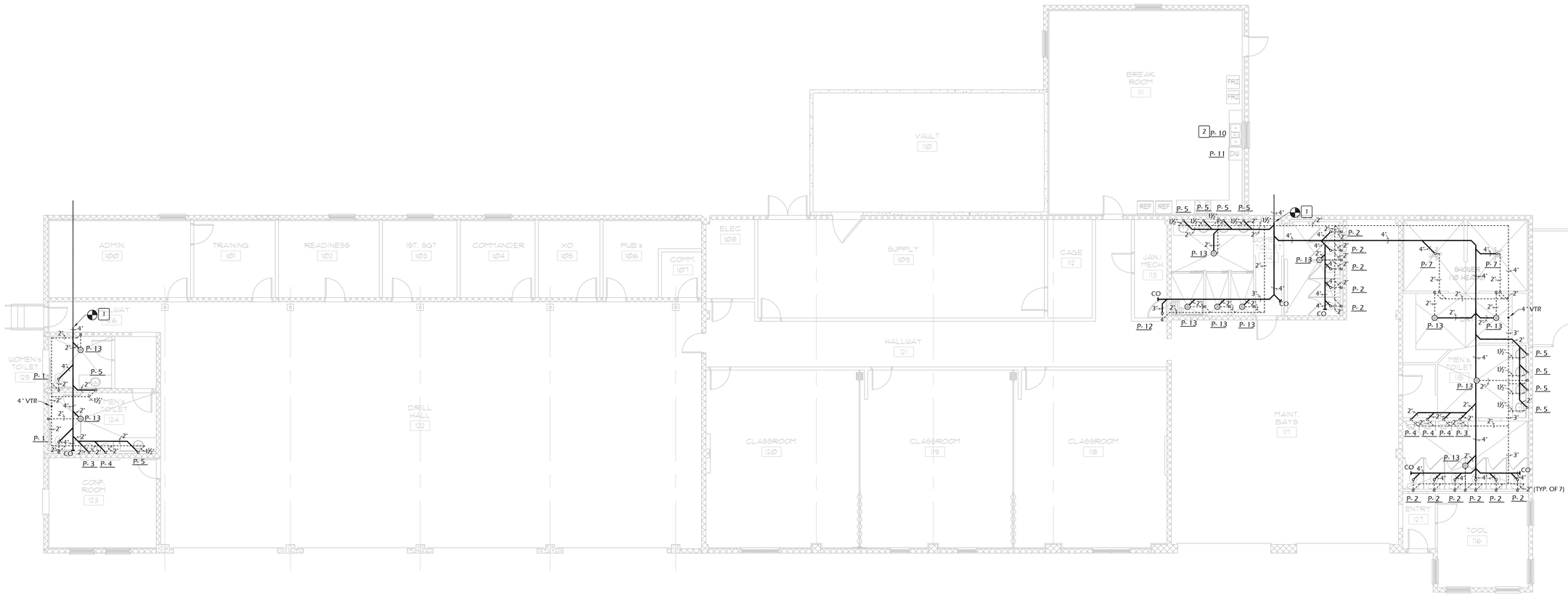
JOB # 07011

GENERAL NOTES:

1. COORDINATE PLUMBING FIXTURES AND PIPING WITH ALL OTHER TRADES AS REQUIRED.
2. REFERENCE ARCHITECTURAL PRINTS FOR EXACT FIXTURE LOCATIONS AND MOUNTING HEIGHTS.
3. WASTE PIPING SMALLER THAN 4" IS TO BE SLOPED AT 1/4" PER FOOT. ALL WASTE PIPING 4" AND LARGER IS TO BE INSTALLED AT 1/8" SLOPE PER FOOT PENDING VERIFICATION WITH LOCAL AUTHORITY HAVING JURISDICTION.

KEY NOTES:

1. NEW 4" WASTE LINE TO BE CONNECTED TO EXISTING 4" WASTE LINE.
2. RECONNECT NEW BREAK ROOM SINK P-10 TO EXISITNG WASTE AND VENT LINES.



NORTH

WASTE & VENT PIPING PLAN

1/8"=1'-0"

8 6 4 2 0 8 16 24

INSIGHT architects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
0 1"
IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

PROFESSIONAL ENGINEER REGISTERED 7009 STATE OF IDAHO ROBERT D. TIKKER

ARCHITECT STAMP

IDAHO ARMY NATIONAL GUARD BUILDING #557 REMODEL

GOWEN FIELD
BOISE, IDAHO

WASTE & VENT PIPING PLAN

REVISIONS	
NO.	REMARKS

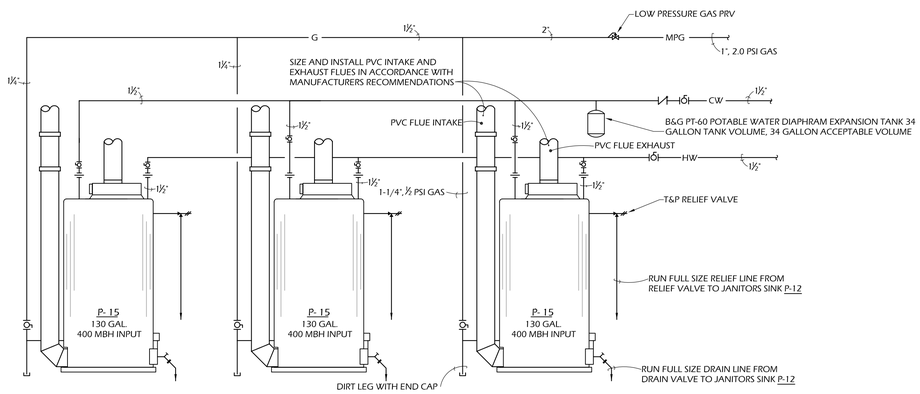
CHECKED	BT
DATE	05-15-07
DRAWN	OG
JOB NO.	06052

SHEET NUMBER

M2.0

TIKKER ENGINEERING
A MECHANICAL CONSULTANT FIRM
9384 W. Overland Rd. Boise, ID 83709
Phone: (208) 658-0218 Fax: (208) 658-0219

JOB # 07011



A / M3.0 **WATER HEATER DETAIL**

SCALE: NTS

GENERAL NOTES:

1. COORDINATE PLUMBING FIXTURES AND PIPING WITH ALL OTHER TRADES AS REQUIRED.
2. REFERENCE ARCHITECTURAL FLOOR PLANS FOR EXACT FIXTURE LOCATIONS & MOUNTING HEIGHTS.
3. LOCATE WATER PIPING IN HEATED AREAS ONLY. DO NOT LOCATE PIPING IN EXTERIOR WALLS OR UNINSULATED ROOF SPACES.
4. PROVIDE WATER HAMMER ARRESTORS FOR ALL FLUSH VALVE FIXTURES. SIZE AND INSTALL PER MANUFACTURER'S REQUIREMENTS.
5. COORDINATE LOCATION OF ACCESS PANELS WITH GENERAL CONTRACTOR.

KEY NOTES:

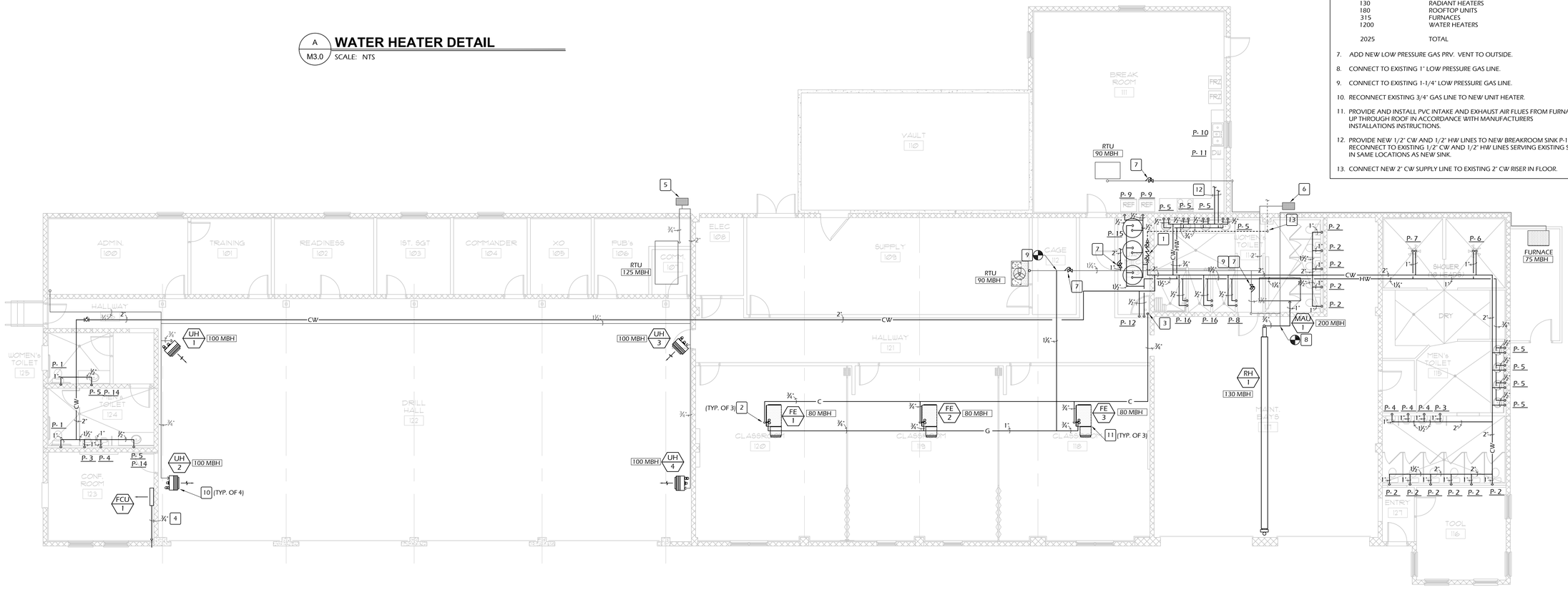
1. PROVIDE 2" DOUBLE CHECK BACKFLOW PREVENTER.
2. PROVIDE 3/4" PVC CONDENSATE LINE FROM EACH DX COOLING COIL AND CONDENSING FURNACE.
3. PROVIDE INDIRECT WASTE FROM 3/4" PVC CONDENSATE LINE INTO JANITORS SINK BELOW.
4. PROVIDE 3/4" COPPER CONDENSATE LINE FROM FCU-1 AND INDIRECT WASTE TO OUTSIDE AT 6" ABOVE GRADE.
5. EXISTING INTERMOUNTAIN GAS METER TO REMAIN WITHOUT MODIFICATIONS. GAS LOADS ARE AS FOLLOWS:

MBH	EQUIPMENT
125	ROOFTOP UNIT
400	UNIT HEATERS
525	TOTAL

6. EXISTING INTERMOUNTAIN GAS METER TO BE CONVERTED FROM A LOW PRESSURE GAS METER TO A 2 PSI GAS METER. GAS LOADS ARE AS FOLLOWS:

MBH	EQUIPMENT
200	MAKE UP AIR UNITS
130	RADIANT HEATERS
180	ROOFTOP UNITS
315	FURNACES
1200	WATER HEATERS
2025	TOTAL

7. ADD NEW LOW PRESSURE GAS PRV. VENT TO OUTSIDE.
8. CONNECT TO EXISTING 1" LOW PRESSURE GAS LINE.
9. CONNECT TO EXISTING 1-1/4" LOW PRESSURE GAS LINE.
10. RECONNECT EXISTING 3/4" GAS LINE TO NEW UNIT HEATER.
11. PROVIDE AND INSTALL PVC INTAKE AND EXHAUST AIR FLUES FROM FURNACE UP THROUGH ROOF IN ACCORDANCE WITH MANUFACTURERS INSTALLATIONS INSTRUCTIONS.
12. PROVIDE NEW 1/2" CW AND 1/2" HW LINES TO NEW BREAKROOM SINK P-10. RECONNECT TO EXISTING 1/2" CW AND 1/2" HW LINES SERVING EXISTING SINK IN SAME LOCATIONS AS NEW SINK.
13. CONNECT NEW 2" CW SUPPLY LINE TO EXISTING 2" CW RISER IN FLOOR.



NORTH

PLUMBING PIPING PLAN

1/8"=1'-0" 8 6 4 2 0 8 16 24

INSIGHT architects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

PROFESSIONAL ENGINEER REGISTERED 7009 STATE OF IDAHO ROBERT D. TIKKER

ARCHITECT STAMP

IDAHO ARMY NATIONAL GUARD
BUILDING #557 REMODEL
GOWEN FIELD
BOISE, IDAHO

PLUMBING PIPING PLAN

REVISIONS	
NO.	REMARKS

CHECKED	BT
DATE	05-15-07
DRAWN	OG
JOB NO.	06052

SHEET NUMBER

M3.0

TIKKER ENGINEERING
A MECHANICAL CONSULTANT FIRM
9364 W. Overland Rd. Boise, ID 83709
Phone: (208) 658-0218 Fax: (208) 658-0219

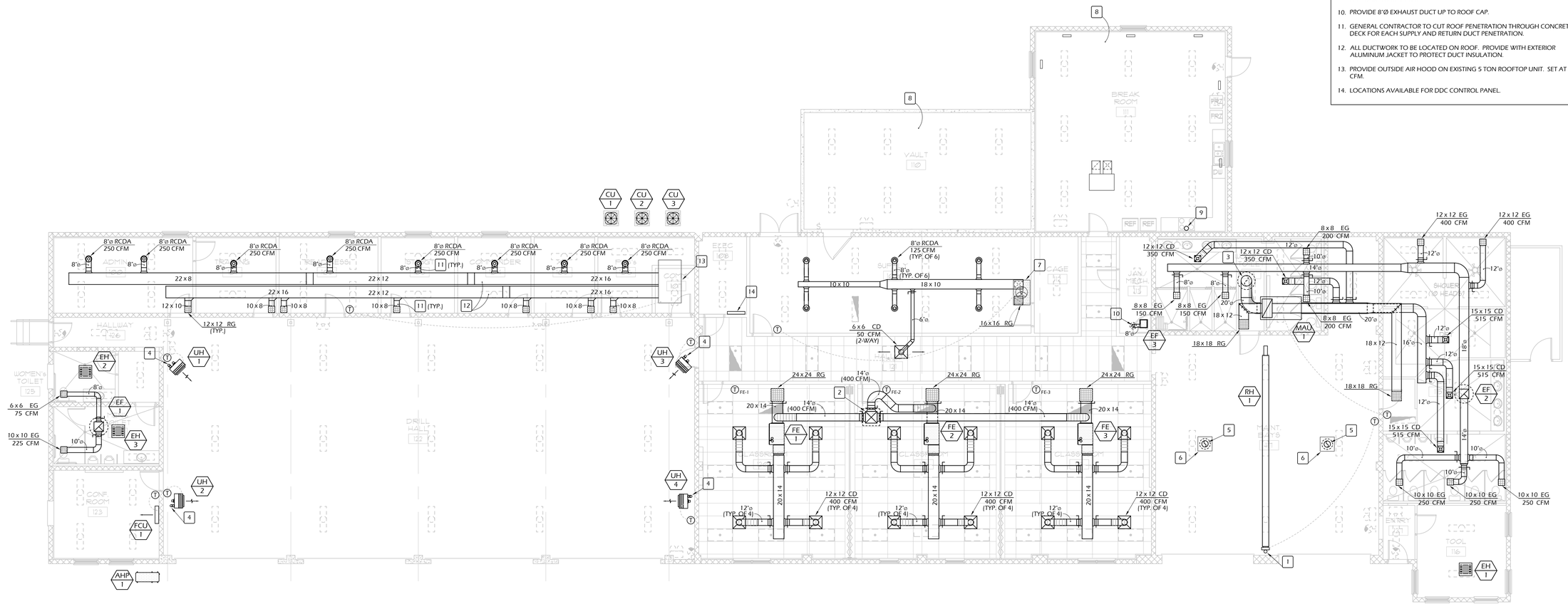
JOB # 07011

GENERAL NOTES:

1. COORDINATE HVAC EQUIPMENT WITH ALL OTHER TRADES AS REQUIRED.
2. LINE ALL SUPPLY & RETURN DUCT MAINS WITH 1-1/2" ACOUSTICAL LINING WITHIN 15'-0" OF ALL HVAC SUPPLY AIR UNITS.
3. ALL DUCT DIMENSIONS SHOWN ARE INTERIOR DIMENSIONS.
4. ALL NEW WORK IS SHOWN IN DARK LINETYPE. ALL EXISTING WORK SHOWN IN LIGHT LINETYPE.

KEY NOTES:

1. PROVIDE 6'Ø TYPE B FLUE UP TO ROOFCAP.
2. 22x22 OUTDOOR AIR HOOD.
3. 20'Ø FRESH AIR DUCT UP TO ROOF.
4. NEW UNIT HEATERS TO REUSE EXISTING FLUES UP THROUGH ROOF. PROVIDE NEW FLUE UP TO EXISTING GAS FLUE.
5. NEW 10'Ø EXHAUST DUCT FROM CAR EXHAUST FAN UP THROUGH ROOF.
6. EXISITNG VEHICLE EXHAUST TO BE RELOCATED TO THIS LOCATION.
7. EXISTING RTU CURRENTLY SERVING C&L AREA TO BE RELOCATED TO THIS LOCATION. CONTRACTOR NOT REQUIRED TO PROVIDE 1 YEAR WARRANTY ON THIS RELOCATED ROOFTOP UNIT.
8. EXISTING HVAC SYSTEMS SERVING VAULT 110 AND BREAK ROOM 111 TO REMAIN.
9. MECHANICAL CONTRACTOR TO PROVIDE 7'Ø EXHAUST DUCT FROM RANGE HOOD UP TO ROOFCAP.
10. PROVIDE 8'Ø EXHAUST DUCT UP TO ROOF CAP.
11. GENERAL CONTRACTOR TO CUT ROOF PENETRATION THROUGH CONCRETE DECK FOR EACH SUPPLY AND RETURN DUCT PENETRATION.
12. ALL DUCTWORK TO BE LOCATED ON ROOF. PROVIDE WITH EXTERIOR ALUMINUM JACKET TO PROTECT DUCT INSULATION.
13. PROVIDE OUTSIDE AIR HOOD ON EXISTING 5 TON ROOFTOP UNIT. SET AT 200 CFM.
14. LOCATIONS AVAILABLE FOR DDC CONTROL PANEL.



NORTH

MECHANICAL PLAN

1/8"=1'-0" 8 6 4 2 0 8 16 24

INSIGHT architects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
IF NOT 1 INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

PROFESSIONAL ENGINEER REGISTERED 7009 STATE OF IDAHO ROBERT D. TIKKER

ARCHITECT STAMP

IDAHO ARMY NATIONAL GUARD BUILDING #557 REMODEL

GOWEN FIELD
BOISE, IDAHO

MECHANICAL PLAN

REVISIONS	
NO.	REMARKS

CHECKED	BT
DATE	05-15-07
DRAWN	OG
JOB NO.	06052

SHEET NUMBER

M4.0

TIKKER ENGINEERING
A MECHANICAL CONSULTANT FIRM
9364 W. Overland Rd. Boise, ID 83709
Phone: (208) 658-0218 Fax: (208) 658-0219

JOB # 07011

MECHANICAL SPECIFICATIONS

Section
Number Title

15010 BASIC MECHANICAL REQUIREMENTS
15060 HANGERS AND SUPPORTS
15081 DUCT INSULATION
15083 PIPE INSULATION
15100 VALVES
15496 NATURAL GAS SYSTEMS
15611 FURNACES - HIGH EFFICIENCY
15620 FUEL-FIRED HEATERS
15670 CONDENSING UNITS
15680 DUCT FREE DX FAN COIL UNITS
15815 METAL DUCTS
15820 DUCT ACCESSORIES
15835 UNIT HEATERS
15870 POWER VENTILATORS
15990 TESTING, ADJUSTING AND BALANCING

15010
BASIC MECHANICAL REQUIREMENTS
GENERAL
All work shall conform to mandated version of IBC, SMACNA, UPC, IMC, NFPA, IFC, IFGC, IECC and all other applicable codes enforced by the authorities having jurisdiction.
The scope of the work shall include mechanical systems as shown on the plans. The Contractor shall provide all supervision, labor, material, equipment, machinery, plant and any and all other items as indicated on the drawings as required for complete systems.
Contractor shall give all necessary notices, obtain and pay for all permits and pay all government sales taxes, fees and other costs incurred in connection with the work, file all necessary plans, prepare all documents and obtain all required certificates of inspections for his work and deliver same to the Engineer before request for acceptance and final payment for the work.
All materials installed shall bear the UL label and shall be new and of the best quality.
The Contractor shall follow drawings in laying out work, check drawings of other trades and verify on-site conditions in which work will be installed.
The Contractor shall protect all work, material and existing furnishings from damage by his work or workmen and shall be liable for all damage thus caused.
Provide two sets of operations and maintenance manual and two sets of as built record drawings within 60 days of substantial completion of project.
All work shall be guaranteed in writing to be free of defective work, materials or parts for a period of one year after substantial completion of work.

15060
HANGERS AND SUPPORTS
GENERAL
Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
Design seismic restraint system per IBC in accordance with SMACNA Seismic Design Guide for service zones as identified by current IBC.
PRODUCTS
Manufactured Units Hangers, Supports and Components: Factory fabricated according to MSS SP-58.
EXECUTION
Hanger and Support applications to comply with MSS SP-69 for pipe hanger selections and applications.
Hanger and Support Installation to comply with MSS SP-69 and SP-89. Install hangers, supports, clamps and attachments as required to properly support piping from building structure.

15081
DUCT INSULATION
GENERAL
Insulation materials shall be Mineral-Fiber Blanket Thermal Insulation; Glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type II, without facing and with all-service jacket manufactured from Kraft paper, reinforcing scrim, aluminum foil and vinyl film.
Field-Applied Jackets to comply with ASTM C 921, Type I. Aluminum Jacket: Smooth finish.
ACCESSORIES AND ATTACHMENTS
Vapor Retarders: Mastics: Materials recommended by insulation material manufacturer.
DUCT SYSTEM APPLICATIONS
Material: Mineral-fiber blanket. One layer. Foil and paper field-applied jacket, vapor retarder is required.
Reference energy code compliance notes for required duct insulation thickness.

15083
PIPE INSULATION
GENERAL
Insulation installed indoors shall have a flame spread rating of 25 or less and a smoke developed rating of 50 or less.
INSULATION MATERIALS
Mineral fiber insulation shall have glass fibers bonded with a thermosetting resin complying with ASTM C 547, type 1, with factory-applied all-purpose vapor retarder jacket.
FIELD APPLIED JACKETS
Provide standard PVC fitting covers.
GENERAL APPLICATION REQUIREMENTS
Apply insulation continuously through hangers, walls and floors in accordance with manufacturers written instructions.
INSULATION APPLICATION SCHEDULE
Domestic hot and hot water return piping up to 1.1/4".
Provide ½" thick, mineral fiber insulation with PVC fitting covers and no vapor retarder.
Domestic hot water piping, 1 ½" and larger.
Provide 1" thick, mineral fiber insulation with PVC fitting covers and no vapor retarder.
Domestic cold water.
None.
Refrigerant Suction
Provide 1/2" thick flexible elastomeric insulation.

15100
VALVES
GENERAL
General duty valves common to most mechanical piping systems.
Comply with ASME B31.9 for building services piping.
Comply with MSS Standard Practices referenced.
PRODUCTS
Ball Valves: MSS SP-110, full port, class 150, 600 psi cwp, bronze body.
Swing Check Valves (2.1/2" and smaller): MSS SP-80, class 125, 200 psi cwp, bronze body.
Swing Check Valves (3" and larger): MSS SP-71, class 125, 200 psi cwp, cast iron body.

15496
NATURAL GAS SYSTEMS
PIPING AND TUBING MATERIALS
Steel Pipe: ASTM A 120, Schedule 40, seamless, black steel pipe, beveled ends.
FITTINGS
Malleable-Iron Threaded Fittings: ANSI B16.3, Class 150, standard pattern.
Steel Flanges and Flanged Fittings: ANSI B16.5.
PIPE APPLICATIONS
Install steel pipe with threaded joints and fittings for 2" and smaller and with welded joints for 2-1/2" and larger.
PIPING INSTALLATIONS
Conform to the requirements of NFPA 54 - National Fuel Gas Code.

15611
FURNACES - HIGH EFFICIENCY
GENERAL FURNACES
Type: Gas-fired, high efficiency.
Gas-Fired Furnaces and Accessory Items: NFPA 54 "National Fuel Gas Code."
AGA Approval: Furnaces shall bear the label of the American Gas Association.
GAS-FIRED FURNACES, HIGH EFFICIENCY
Comply with ANSI Z21.47 "Gas-Fired Central Furnaces."
Efficiency: AFUE 92 percent, minimum.
Automatic Fan Thermal Switch: Delays fan start until discharge air is heated. Delays fan shutdown until air cools to comfort threshold.
Summer Fan Relay: Connected to permit independent remote 24 V a.c. on-off switching of unit fan.
Automatic Gas Control: Single-stage, 24 V a.c. valve.
Ignition: Electric pilot ignition with electric spark igniter.
Venting: PVC intake and exhaust flues.
CONTROLS
Include control components required for satisfactory operation of furnaces and auxiliary equipment in all seasons including:
1. Control Transformer: 24 V a.c. output, factory installed and wired in furnace.
2. Thermostat:Provide 7 day programmable thermostat, Honeywell T7300 or equivalent.
3. Relays: As required to achieve specified operation.
COOLING FEATURES
Evaporator Coil: Conform to ARI 210-240 "Unitary Air Conditioning and Air Source Heat Pump Equipment." Matched with furnace as recommended by furnace manufacturer. Matched with remote condensing unit specified in Division 15 Section "Condensing Units", with type, capacity and pressure drop ratings as indicated. Include condensate drain pan with accessible drain outlet.
Evaporator Coil Enclosure: As recommended by furnace manufacturer to suit furnace and cooling coil. Steel cabinet with access panel and flanges for integral mounting at or on furnace cabinet.

15620
FUEL-FIRED HEATERS
GAS-FIRED UNIT HEATERS, CONVENTIONAL
Comply with ANSI Z83.8 "Gas Unit Heaters."
Housing: Steel with integral draft hood and inserts for suspension mounting rods.
Venting Provision: Gravity with power assist blower.
Burners: Cast-iron or aluminized steel with stainless steel inserts.
Automatic Gas control: Single-stage, 24 V a.c. valve.
Ignition: Electronically-controlled spark with flame sensor.
Discharge Louvers: 4-way, independently-adjustable horizontal and vertical blades.
Thermostat: Single-stage, 24 V a.c., wall-mounting type with 50-90˚F operating range and "fan-only" switch.
GAS FIRED UNIT HEATER SEQUENCE OF OPERATIONS
Unit heaters shall have thermostats set to maintain 55˚F space temperature. Thermostats to have occupancy override button to provide 68˚F space temperature for 3 hours.
MAKE-UP AIR UNITS
Housing: Designed for interior use, with 2" insulation.
Fan: Centrifugal, balanced and belt driven.
Heat Exchanger: Type 304 stainless steel.
Burners: Type 304 stainless steel with electronic modulation.
Filters: 2", 30% throwaway type. Outside Air Damper: Low leak to close on unit shutdown.
Controls: Discharge stat with remote setpoint adjustment and monitor panel.
Electrical: Single-power connection and single-control connection.
Mixing Box: Provide with dampers for outside air or return air supply.
MAKE-UP AIR UNIT SEQUENCE OF OPERATIONS
Make up air unit to turn off during unoccupied periods. If space temperature falls below setpoint during unoccupied hours, outside air damper shall remain closed, fan shall turn on and heater will provide full heat to space until space temperature is satisfied. During occupied hours, make up air unit shall operate continuously. Outside air shall be set at a minimum of 10% of total supply air flow. Discharge duct stat shall maintain discharge air temperature at a minimum of 55˚F. Thermostat within space shall override discharge duct stat when space temperature falls below setpoint. When locker room exhaust fan EF-2 is activated, make-up air unit shall operate with 100% outside air supply to locker areas.
GAS-FIRED UNIT HEATERS, RADIANT
Comply with ANSI Z83.8 "Gas Unit Heaters."
Housing: Steel with integral draft hood and inserts for suspension mounting rods.
Venting Provision: Gravity with power assist blower.
Burners: Cast-iron or aluminized steel with stainless steel inserts.
Automatic Gas control: Single-stage, 24 V a.c. valve.
Ignition: Electronically-controlled spark with flame sensor.
Reflectors: Aluminum with minimum of 97.5% reflectivity.
Emitter Tube: 16-gauge calorized aluminized steel or calorized titanium alloy steel and operate under negative pressure.
Thermostat: Single-stage, 24 V a.c., wall-mounting type with 50-90˚F operating range.
GAS FIRED RADIANT HEATER SEQUENCE OF OPERATIONS
Radiant heater shall have thermostat set to maintain 55˚F space temperature. Thermostat to have occupancy override button to provide 65˚F space temperature for 4 hours.

15670
CONDENSING UNITS
AIR-COOLED CONDENSING UNIT
Factory-assembled and tested air-cooled condensing units consisting of compressor, condenser coil, fan, motor, refrigerant reservoir and operating controls.
Compressor: Hermetically sealed with built-in overloads and vibration isolation.
Condenser: Coil shall have copper tubes and aluminum fins.
Factory or Field Installed Accessories:
1. Low-voltage thermostat and subbase.
2. Head pressure control to modulate condenser fan motor speed for low ambient conditions.
3. Low-voltage control transformer.
4. Coil grounds.
5. Anti cycle timer.
6. Crankcase heater.
7. High and low pressure switches.

15680
DUCT FREE DX FAN COIL UNITS
GENERAL
Indoor, direct-expansion, ceiling-suspended fan coil. Fan coil shall be shipped complete with cooling coil, fan, fan motor, piping connectors and ceiling mounting brackets.
Unit Cabinet: Indoor cabinet shall be zinc-coated bonderized steel finished with a baked enamel paint.
Fans: Indoor fan shall be 3-speed centrifugal blower type with air intake in the bottom rear of the unit and discharge in the front.
Coils: Indoor coils shall be copper tube with aluminum fins and galvanized steel tube sheets. Fins shall be bonded to the tubes by mechanical expansion. A drip pan under the coil shall have a drain connection for hose attachment to remove condensate.
Motors: Motors shall be permanently lubricated ball bearing with inherent overload protection.
Filters: Unit shall have filter rack with factory-supplied cleanable filters.

15815
METAL DUCTS
SHEET METAL MATERIALS
Sheet metal in thickness per SMACNA, packaged and marked as specified in ASTM A 700.
DUCT LINER
Comply with NFPA Standard 90A, 1.1/2", .75 PCF density.
Materials: ASTM C 1071, with coated surface exposed to airstream to prevent erosion of glass fibers.
SEALING MATERIALS
Joint and Seam Tape: 2" wide, glass-fiber-fabric reinforced.
Joint and Seam Sealant: One-part, nonsag, solvent-release-curing, polymerized butyl sealant.
FIRE-STOPPING
Fire-Resistant Sealant: U.L. listed for application one-part elastomeric sealant formulated for use in a through-penetration fire-stop system.
DUCT FABRICATION
Galvanized sheet steel in accordance with SMACNA "HVAC Duct Construction Standards - Metal and Flexible."
HANGING AND SUPPORTING
Support systems indicated in SMACNA "HVAC Duct Construction Standards - Metal and Flexible."
PRESSURE CLASSIFICATION
Design all supply, return and exhaust air systems at 2" w.c.

15820
DUCT ACCESSORIES
DAMPERS
Spin in Damper: Low pressure manual damper with conical inlet fitting, 3/8" bar shaft with locking operator and elevated mounting for 1-1/2" insulation.
TURNING VANES
Fabricated turning vanes in accordance with SMACNA "HVAC Duct Construction Standards - Metal and Flexible."
DUCT ACCESS DOORS
Provide same or greater gauge as ductwork, insulated doors for insulated ductwork.
FLEXIBLE CONNECTIONS
Neoprene-coated flameproof fabric crimped into duct flanges for attachment to duct and equipment.
Flex Duct: Insulated flex for 6" w.g. with liner.
INSTALLATION OF DUCTWORK ACCESSORIES
Install ductwork accessories in accordance with manufacturer's installation instructions, with applicable portions of details of construction as shown in SMACNA Standards and in accordance with recognized industry practices to ensure that products serve intended function.

15835
UNIT HEATERS
ELECTRICAL UNIT HEATERS
Heating Elements: Nickel-chromium heating wire elements. Finish surface temperature does not exceed 550°F at any point during normal operation.
Heating Circuit Protection: One-time fuses in terminal box for over current protection and limit controls.
Fan and Motor: Direct-drive propeller fan and manufacturer's standard motor.
Discharge Configuration: Vertical discharge with radial louver diffuser.
Optional Accessories: Include the following:
1. Time switch
2. Integral thermostat.
3. Safety-switch disconnect on cover of terminal box.
4. Mercury contactors.
5. Fan-delay relay.

15870
POWER VENTILATORS
CENTRIFUGAL ROOF VENTILATORS
Belt-driven or direct-drive centrifugal consisting of housing, wheel, fan shaft, bearings, motor and disconnect switch, drive assembly, curb base and accessories.

15990
TESTING, ADJUSTING AND BALANCING
GENERAL
The requirements and procedures total mechanical systems testing, adjusting and balancing requirements include measurement and establishment of the fluid quantities of the mechanical systems as required to meet design specifications and recording and reporting the results.
Test, adjust and balance the following mechanical systems:
1. Supply air systems, all pressure ranges.
2. Return air systems.
3. Exhaust air systems.
4. Verify temperature control system operation.
QUALITY ASSURANCE
Test and Balance Engineer's Qualifications: An independent consultant registered in the state in which the services are to be performed and having at least 3 years of successful testing, adjusting and balancing experience on projects with testing and balancing requirements similar to those required for this project.
Codes and Standards:
1. AABC: "National Standards for Total System Balance."
PERFORMING TESTING, ADJUSTING AND BALANCING.
Perform testing and balancing procedures on each system identified in accordance with the detailed procedures outlined in the referenced standards.
RECORD AND REPORT DATA
Record all data obtained curing testing, adjusting and balancing in accordance with, and on the forms recommended by the referenced standards, and as approved on the sample report forms.
DEMONSTRATION
Training: Train the Owner's maintenance personnel on trouble-shooting procedures and testing, adjusting and balancing procedures

15995
DDC CONTROLS
Seimens shall be the DDC Contractor selected for this project. Cory Law from Seimens is the point of conection at (208)658-9107.
Items under Seimens control are to include:
All new gas fired unit heaters.
All new classroom furnaces and condensing unit systems.
North office rooftop unit.
Supply room rooftop unit.
Maintenance bay radiant heaters.
Make up air unit serving restrooms.
Items not under Seimens control are to include:
Electric unit heaters with Integral Thermostat.
Conference room minisplit system.
Existing HVAC systems serving vault and break rooms.
All exhaust fans.
Reference equipment specifications for sequence of operations.

COMcheck Software Version 3.3.1

Mechanical Compliance Certificate 2003 IECC

Report Date: 05/14/07
Data filename: S:\TE Jobs\2007 Jobs\07005 - IANG Buildings 557, 558 - Equipment Remodel & Relocation\Calculations\07005cc.ck

Section 1: Project Information
Project Title: ING Building 557 Remodel
Construction Site:
Owner/Agent:
Designer/Contractor: Gowen Field
Boise, ID 83706
Insight Architects
2238 Broadway Ave.
Boise, ID 83706
(208)338-9080
Bob Tikker
Tikker Engineering
9384 W. Overland Rd.
Boise, ID 83709
(208)658-0218
bobt@tikkerengineering.com

Section 2: General Information
Building Location (for weather data):Boise, Idaho Climate Zone:12bHeating Degree Days (base 65 degrees F):5861 Cooling Degree Days (base 65 degrees F):754
Project Type:Addition

Section 3: Mechanical Systems List
Quantity System Type & Description:HVAC System 1: Heating: Central Furnace, Gas/Cooling: Split System, Capacity <65 kBtu/h, Air-Cooled Condenser/Single Zone

Section 4: Requirements Checklist
Requirements Specific To: HVAC System 1 :
☐ 1. Newly purchased heating equipment meets the heating efficiency requirements
☐ 2. Equipment minimum efficiency Split System: 10.0 SEER
Generic Requirements: Must be met by all systems to which the requirement is applicable:
☐ 1. Load calculations per 2001 ASHRAE Fundamentals
☐ 2. Plant equipment and system capacity no greater than needed to meet loads
Exception: Standby equipment automatically off when primary system is operating
Exception: Multiple units controlled to sequence operation as a function of load
☐ 3. Minimum one temperature control device per system
☐ 4. Minimum one humidity control device per installed humidification/dehumidification system
☐ 5. Thermostatic controls has 5 degrees F deadband
Exception: Thermostats requiring manual changeover between heating and cooling
☐ 6. Automatic Controls: Setback to 55 degrees F (heat) and 85 degrees F (cool); 7-day clock, 2-hour occupant override, 10-hour backup
Exception: Continuously operating zones
Exception: 2 kW demand or less, submit calculations
☐ 7. Automatic shut-off dampers on exhaust systems and supply systems with airflow >3,000 cfm
☐ 8. Outside-air source for ventilation; system capable of reducing OSA to required minimum
☐ 9. R-5 supply and return air duct insulation in unconditioned spaces R-8 supply and return air duct insulation outside the building R-8 insulation between ducts and the building exterior when ducts are part of a building assembly
Exception: Ducts located within equipment
Exception: Ducts with interior and exterior temperature difference not exceeding 15 degrees F.
☐ 10. Ducts sealed - longitudinal seams on rigid ducts; transverse seams on all ducts; UL 181A or 181B tapes and mastics
Exception: Continuously welded and locking-type longitudinal joints and seams on ducts operating at static pressures less than 2 inches w.g. pressure classification
☐ 11. Mechanical fasteners and sealants used to connect ducts and air distribution equipment
☐ 12. Hot water pipe insulation: 1 in. for pipes <=1.5 in. and 2 in. for pipes >1.5 in. Chilled water/refrigerant/brine pipe insulation: 1 in. for pipes <=1.5 in. and 1.5 in. for pipes >1.5 in. Steam pipe insulation: 1.5 in. for pipes <=1.5 in. and 3 in. for pipes >1.5 in.
Exception: Piping within HVAC equipment
Exception: Fluid temperatures between 55 and 105 degrees F
Exception: Fluid not heated or cooled
Exception: Runouts <4 ft in length
☐ 13. Operation and maintenance manual provided to building owner
☐ 14. Balancing devices provided in accordance with IMC 603.15
☐ 15. Stair and elevator shaft vents are equipped with motorized dampers

Section 5: Compliance Statement
Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2003 IECC requirements in COMcheck Version 3.3.1 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title _____ Signature _____ Date _____

ENERGY CODE COMPLIANCE NOTES:

1. MECHANICAL SYSTEMS HAVE BEEN DESIGNED UNDER THE 2003 IECC. MECHANICAL SYSTEMS MEET THE REQUIREMENTS OF ASHRAE STD. 90.1-2001ENERGY CODE FOR COMMERCIAL AND HIGH RISE RESIDENTIAL BUILDINGS (IECC 701.1).
2. LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH ASHRAE FUNDAMENTALS HANDBOOK (ASHRAE STD. 90.1 - 6.2.2).
3. DOMESTIC HOT WATER AND HOT WATER RETURN PIPING INSULATION THICKNESS SHALL BE ½" THICK FOR PIPE SIZE UP TO 1¼" AND 1" THICK FOR PIPE SIZE 1½" AND LARGER.(ASHRAE STD. 90.1 TABLE 6.2.4.1.3).
4. REFERENCE DUCT INSULATION SCHEDULE FOR R VALUES OF DUCTWORK REQUIRED.
5. DUCT SEALING SHALL BE PERFORMED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. DUCTWORK WITH A STATIC PRESSURE CLASSIFICATION OF 2" W.G. OR LESS SHALL HAVE A SEAL CLASS 'C' FOR SUPPLY AND RETURN DUCTS WITH TRANSVERSE JOINTS ONLY SEALED. EXHAUST DUCTS SHALL HAVE A SEAL CLASS 'B' WITH ALL TRANSVERSE JOINTS AND LONGITUDINAL SEAMS SEALED. (ASHRAE STD. 90.1 - 6.2.4.2.1).
6. ALL THERMOSTATS CONTROLLING HVAC SYSTEMS SHALL BE 7-DAY, SOLID STATE, PROGRAMMABLE THERMOSTATS WITH NIGHT SETBACK CAPABILITIES.
7. CONTRACTOR SHALL PROVIDE A COMPLETE SET OF OPERATION AND MAINTENANCE MANUALS TO OWNER AFTER SUBSTANTIAL COMPLETION OF PROJECT.

DUCT INSULATION SCHEDULE

AREA	INSULATION
EXTERIOR	R-6
UNCONDITIONED SPACES	R-3.5
EXPOSED LOCATIONS	NONE

TYPICAL DUCT WRAP R VALUES

THICKNESS	DENSITY	INSTALLED R VALUE (AT 25% COMPRESSION)
1"	.75 PCF	2.8
1 ½"	.75 PCF	4.2
2"	.75 PCF	5.6
2 ½"	.75 PCF	6.0

LOAD CALCULATION SUMMARY FORM

ZONE	EQUIPMENT	SF	COOLING LOAD W/ FRESH AIR (MBH)	HEATING LOAD W/ FRESH AIR (MBH)
1	FE-1	700	34.6	58.6
2	FE-2	675	34.6	58.6
3	FE-3	675	34.6	58.6

9˚F - WINTER OUTDOOR AIR DESIGN TEMPERATURE
96˚F - SUMMER OUTDOOR AIR DESIGN TEMPERATURE

LOAD CALCULATIONS HAVE BEEN DETERMINED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN CHAPTER 28 OF THE 2001 ASHRAE HANDBOOK OF FUNDAMENTALS.

TIKKER ENGINEERING
A MECHANICAL CONSULTING FIRM
9384 W. Overland Rd.
Boise, ID 83709
Phone: (208) 658-0218
Fax: (208) 658-0219

JOB # 07011

INSIGHT architects, p.a.
Russ Phillips + Dana Kauffman
2238 Broadway Avenue Boise, Idaho 83706 208.338.9080 208.338.9067 fax

VERIFY SCALES
THIS BAR IS 1 INCH ON ORIGINAL DRAWING
IF NOT 1 INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

CONSULTANT STAMP

PROFESSIONAL ENGINEER REGISTERED 7009 STATE OF IDAHO ROBERT D. TIKKER

ARCHITECT STAMP

IDAHO ARMY NATIONAL GUARD
BUILDING #557 REMODEL
GOWEN FIELD
BOISE, IDAHO

MECHANICAL SPECIFICATIONS

REVISIONS	
NO.	REMARKS

CHECKED	BT
DATE	05-15-07
DRAWN	OG
JOB NO.	06052

SHEET NUMBER
M5.0

DRAWING LEGEND

SHEET	DRAWING TITLE
M6.0	MECHANICAL DEMOLITION PLAN – BUILDING 557
M7.0	MECHANICAL PLAN – BUILDING 579

GENERAL NOTES:

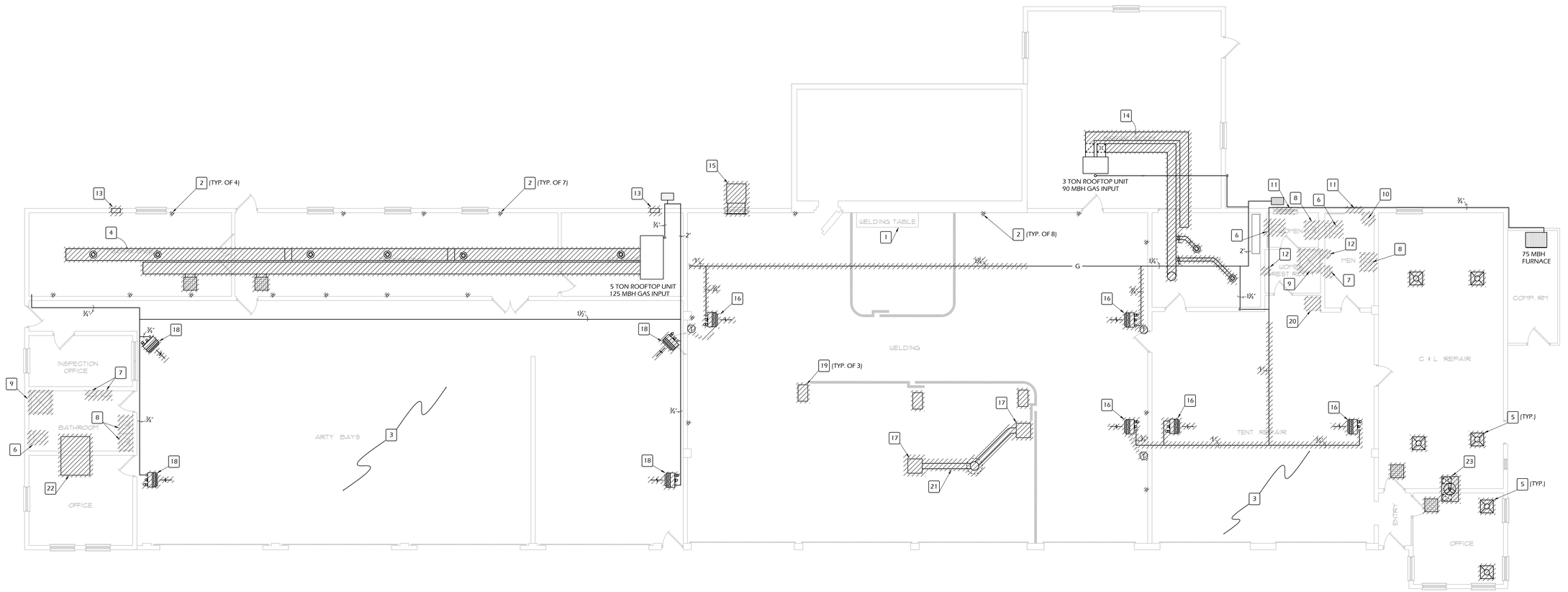
1. ALL PIPING, FIXTURES, DUCTWORK AND EQUIPMENT SHOWN ON THIS PLAN IS EXISTING.
2. ALL PIPING, FIXTURES, DUCTWORK AND EQUIPMENT SHOWN AS HATCHED ON THIS PLAN SHALL BE REMOVED AND LEGALLY DISPOSED OF BY MECHANICAL CONTRACTOR. ALL REMAINING PIPING, FIXTURES, DUCTWORK AND EQUIPMENT SHOWN ON PLANS WITH OUT HATCHING IS EXISTING TO REMAIN.
3. COORDINATE DEMOLITION ACTIVITIES WITH BOTH GENERAL CONTRACTOR AND OWNER. NOTIFY OWNER IN ADVANCE OF ANY DISRUPTION OF MECHANICAL SERVICES PRIOR TO START OF DEMOLITION WORK.
4. MECHANICAL CONTRACTOR TO VERIFY DEMOLITION REQUIREMENTS PRIOR TO BEGINNING ANY DEMOLITION WORK. ANY DISCREPANCIES FOUND ON DRAWINGS SHALL BE REPORTED IMMEDIATELY TO GENERAL CONTRACTOR AND ARCHITECT.
5. IT IS NOT EXPECTED THAT HAZARDOUS MATERIALS WILL BE ENCOUNTERED IN DEMOLITION WORK. IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB AND IMMEDIATELY NOTIFY GENERAL CONTRACTOR AND ARCHITECT.
6. MECHANICAL CONTRACTOR SHALL PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION.

KEY NOTES:

1. EXISTING 10' x 3' WELDING TABLE AND TABLE MOUNTED EXHAUST HOOD TO BE RELOCATED. 14"Ø DUCTWORK FROM TOP OF WELDING HOOD UP TO EXHAUST FAN TO BE REMOVED. GENERAL CONTRACTOR TO COVER EXHAUST FAN CURB AND R-30 INSULATION BELOW COVER. REFERENCE M2.0 FOR NEW LOCATION OF WELDING TABLE AND WELDING HOOD.
2. COMPRESSED AIR OUTLET TO BE REMOVED. COMPRESSED AIR SYSTEM TO REMAIN ACTIVE IN ARMY BAYS AND TENT REPAIR ROOMS. REMOVE COMPRESSED AIR PIPING BACK TO MAIN BRANCH LINES IN ORDER TO KEEP ARMY BAY AND TENT REPAIR COMPRESSED AIR OUTLETS ACTIVE. PROVIDE END CAPS WHERE PIPE HAS BEEN REMOVED.
3. COMPRESSED AIR SYSTEMS TO REMAIN ACTIVE IN ARMY BAY AND TENT REPAIR AREAS.
4. SUPPLY DIFFUSERS AND RETURN GRILLES INTO STORAGE AND MAINTENANCE SHOP AREAS TO BE REMOVED. REMOVE ROOF MOUNTED SUPPLY AND RETURN DUCT. GENERAL CONTRACTOR TO PATCH ALL ROOF PENETRATIONS.
5. REMOVE SUPPLY GRILLES, DUCTWORK, HVAC SUPPLY EQUIPMENT, AND ALL CONTROLS AND ACCESSORIES SERVING C&C REPAIR AREA AND SOUTHEAST OFFICE AREA.
6. REMOVE WATER CLOSET. REMOVE COLD WATER SUPPLY LINE BACK TO BRANCH MAIN. REMOVE VENT LINE UP TO VENT THROUGH ROOF. CAP WASTE LINE BELOW FLOOR SLAB.
7. REMOVE URINAL. REMOVE COLD WATER SUPPLY LINE BACK TO BRANCH MAIN. REMOVE VENT LINE UP TO VENT THROUGH ROOF. CAP WASTE LINE BELOW FLOOR SLAB.
8. REMOVE LAVATORY. REMOVE HOT AND COLD WATER SUPPLY LINES BACK TO BRANCH MAIN. REMOVE VENT LINE UP TO VENT THROUGH ROOF. CAP WASTE LINE BELOW FLOOR SLAB.
9. REMOVE SHOWER. REMOVE HOT AND COLD WATER SUPPLY LINES BACK TO BRANCH MAIN. REMOVE VENT LINE UP TO VENT THROUGH ROOF. CAP WASTE LINE BELOW FLOOR SLAB.
10. REMOVE WATER HEATER ON MEZZANINE ABOVE RESTROOM. REMOVE ALL HOT WATER LINES TO PLUMBING FIXTURES. REMOVE COLD WATER LINE UP TO MAIN BRANCH LINE.

KEY NOTES:

11. REMOVE THROUGH THE WALL EXHAUST FAN. GENERAL CONTRACTOR TO PATCH WALL.
12. REMOVE WALL MOUNTED ELECTRIC HEATER AND ALL RELATED ACCESSORIES.
13. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. GENERAL CONTRACTOR TO PATCH WALL.
14. REMOVE EXISTING SUPPLY AND RETURN DUCTWORK SERVING GLASS STORAGE AREA. PATCH AND RE-SEAL DUCTWORK TO KEEP SUPPLY AND RETURN DROPS THAT SERVE BREAKROOM. GENERAL CONTRACTOR TO PATCH WALL.
15. EXISTING EVAPORATIVE COOLER TO BE REMOVED. GENERAL CONTRACTOR TO PATCH WALL.
16. GAS UNIT HEATER, GAS FLUE AND THERMOSTAT CONTROLS TO BE REMOVED. GENERAL CONTRACTOR TO PATCH ROOF PENETRATION WHERE GAS FLUE HAS BEEN REMOVED.
17. EXISTING VEHICLE EXHAUST SYSTEMS TO BE RELOCATED.
18. EXISTING 100 MBH UNIT HEATER AND CONTROLS TO BE REMOVED. EXISTING 6"Ø GAS FLUE TO REMAIN.
19. REMOVE COMPRESSED AIR SYSTEM FROM HOSE REEL TO MAIN BRANCH LINE. PROVIDE END CAPS WHERE PIPE HAS BEEN REMOVED. DELIVER COMPRESSED AIR HOSE REELS TO ING.
20. REMOVE WALL MOUNTED JANITORS SINK. REMOVE HOT AND COLD WATER SUPPLY LINES BACK TO BRANCH MAIN. REMOVE VENT LINE UP TO VENT THROUGH ROOF. CAP WASTE PIPING BELOW FLOOR SLAB.
21. VEHICLE EXHAUST DUCTWORK TO BE REMOVED. GENERAL CONTRACTOR TO PATCH ROOF PENETRATION WHERE DUCTWORK HAS BEEN REMOVED.
22. EXISTING RTU AND ALL RELATED DUCTWORK TO BE REMOVED. GENERAL CONTRACTOR TO PATCH ROOF PENETRATIONS WHERE DUCTWORK HAS BEEN REMOVED.
23. EXISTING RTU TO BE RELOCATED AND REUSED.



NORTH

MECHANICAL DEMO PLAN - BUILDING 557

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

8 6 4 2 0 8 16 24

FARREN ENGINEERING, INC.
ELECTRICAL ENGINEERS
8058 SHELDON WAY, BOISE, IDAHO 83702
PHONE (208) 429-1309
FAX (208) 429-1308
FARRENENGINEERING.COM

PROFESSIONAL ENGINEER REGISTERED 7009 STATE OF IDAHO ROBERT D. TIKKER

SHOP RELOCATION FROM BUILDING 557 TO BUILDING 578 IDAHO ARMY NATIONAL GUARD

GOWEN FIELD, BOISE, IDAHO

MECHANICAL DEMOLITION PLAN - BUILDING 557

PROJ. NO.:	06-090
DATE:	5/15/07
DRAWN BY:	OG
CHECKED BY:	BT
FILE:	
REVISION:	

TIKKER ENGINEERING
A MECHANICAL CONSULTING FIRM
9364 W. Overland Rd. Boise, ID 83709
Phone: (208) 658-0218 Fax: (208) 658-0219

JOB # 07005

SHEET NO.

M6.0