HEWLETT PACKARD

invent

1000 N.E. CIRCLE BLVD. CORVALLIS, OR. 97330
Phone: (541) 715-2000

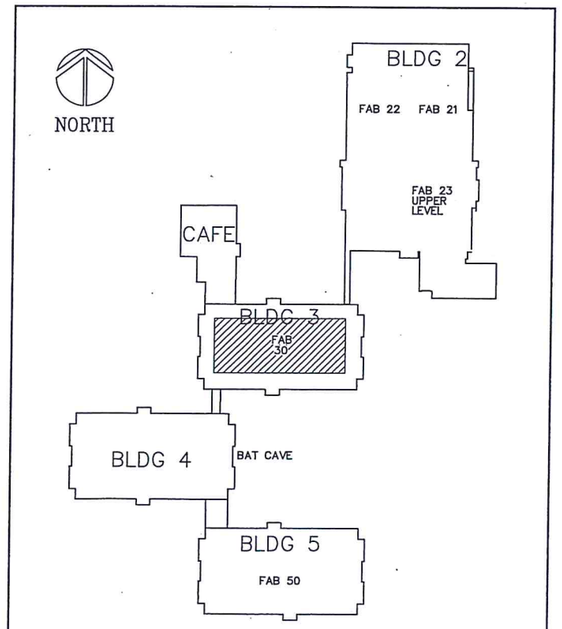
APPROVED T.W JAN 30 2014 DEVELOPMENT SERVICES CITY OF CORVALLIS

TO BE SCANNED

FILE COPY

B3 FAB30 – LCFA WIRE BOND

ISSUED FOR CONSTRUCTION 10/01/13



KEY PLAN

INDEX

DRAWING	DRAWING TITLE		REV.	DATE
GENERAL				
G100 463124–22G100	B3 – FAB30	COVER SHEET	0	10/01/13
G101 463124–22G101	B3 – FAB30	GENERAL NOTES	0	10/01/13
TOOL INSTALL				
D200 463124–22D200	B3 – FAB30	FAB DEMO PLAN	0	10/01/13
M100 463124–22M100	B3 – FAB30	YES PLASMA SCHEMATIC	0	10/01/13
M101 463124–22M101	B3 – FAB30	TOOL SCHEMATIC	0	10/01/13
M200 463124–22M200	B3 – FAB30	FAB LEVEL TOOL LAYOUT PLAN	0	10/01/13
M201 463124–22M201	B3 – FAB30	FAB LEVEL TOOL LAYOUT PLAN	0	10/01/13
M202 463124–22M202	B3 – FAB30	INTERSTITIAL PLAN	0	10/01/13
M203 463124–22M203	B3 – FAB30	BASEMENT PLAN	0	10/01/13
E300 463124–22E300	B3 – FAB30	PANEL SCHEDULES	0	01/01/13
STRUCTURAL				
	SEISMIC ANCHORAGE SPREADSHEET		0	10/01/13

RECEIVED JAN 09 2014 DEVELOPMENT SERVICES

BW14-00021

CH2MHILL
Corvallis Office
1100 NE Circle Boulevard
Suite 300
Corvallis, OR 97330

HP PROJ: NO. HPM 3637

CH2M PROJ: NO. 463124.22

SHEET NO. G 100

GENERAL NOTES–INSTALLATION:

A. SERVICES TO BE INSTALLED STRICTLY PER HP STANDARD, UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

B. VACUUM AND WIPE DOWN AREA UNDER ACCESS FLOOR (WITHIN SURROUNDING AREA OF TOOL) PRIOR TO BEGINNING WORK, AFTER COMPLETING WORK AND DAILY DURING THE CONSTRUCTION PHASE OF THE PROJECT.

C. CONTRACTORS ARE RESPONSIBLE FOR KEEPING WORK AREAS NEAT AND CLEAN. TOOLS, PARTS, LADDERS, CARTS AND OTHER MISCELLANEOUS MATERIAL MUST BE MOVED TO AN APPROVED LOCATION AT THE END OF EACH WORK DAY.

D. RIGGING CONTRACTOR TO TAPE EQUIPMENT LOCATIONS ON THE FLOOR PER DIMENSIONS SHOWN ON THE DRAWINGS AND NOTIFY HP FOR LAYOUT VERIFICATION.

E. TOOLS ARE TO BE SET WITHIN 1/4" OF DIMENSIONS SHOWN ON DRAWINGS. TOOLS WITHOUT PEDESTALS OR SEISMIC ANCHORS ARE TO BE PLACED IN GENERAL LOCATION SHOWN ON THE DRAWINGS.

F. DIMENSIONS FOR LOCATION OF EQUIPMENT IN FAB ARE REFERENCED FROM THE FLOOR TILE GRID, DIMENSIONS FOR EQUIPMENT IN THE SUBFAB AND BASEMENT ARE REFERENCED FROM THE FACE OF COLUMNS OR WALLS.

G. CUT FLOOR TILES AS REQUIRED FOR UTILITY ROUTING. GAPS BETWEEN UTILITIES AND FLOOR TILES MAY NOT BE LARGER THAN 1 INCH. PROVIDE STAINLESS STEEL TRIM ON CUT EDGES.

H. VACUUM FORELINE INSTALLATIONS SHALL BE 40 FEET IN LENGTH MAXIMUM, WITH NO MORE THAN 360° IN BENDS.

I. VACUUM FITTINGS ON PUMP FORELINES AND EXHAUST LINES SHALL HAVE TOGGLE CLAMPS, LOCK PINS, AND OVERPRESSURE RINGS PER HP STANDARDS.

J. LABEL UTILITY SERVICE PIPES AND DUCTS PER HP STANDARD. LABELS SHALL BE PER HP STANDARD ABBREVIATION LIST.

K. LABEL EXHAUST BRANCH DAMPERS WITH THE TOOL OR UTILITY BEING SERVED. TAG MATERIAL AND WORDING SHALL BE PER HP STANDARD.

L. HP WILL PROVIDE EXHAUST BALANCING FOR TOOLS AND EXHAUST SYSTEMS.

M. VENDOR FURNISHED INFORMATION IS FOR REFERENCE ONLY. DESIGN PACKAGE SUPERCEDES VENDOR SUPPLIED INFORMATION.

N. UTILITY INSTALLATIONS SHALL CONFORM TO APPLICABLE CODES.

P. PROVIDE AT LEAST 3' OF ADDITIONAL FLEXIBLE TUBING AND CORD FOR WORKSTATIONS AND OPERATOR TERMINALS.

Q. CONTRACTORS MUST REMOVE CONSTRUCTION MATERIAL, SIGNS, RIBBONS AND OTHER MISCELLANEOUS MATERIAL AT THE COMPLETION OF THE PROJECT.

R. CONTRACTOR TO CONFIRM WIREWAYS DO NOT EXCEED CODE ALLOWABLE 20% FILL AND CURRENT CARRYING CONDUCTORS DO NOT EXCEED 30% WITHOUT APPLYING DERATING.

GENERAL NOTES–DEMOLITION:

A. AREAS TO BE LEFT NEAT AND CLEAN AFTER REMOVAL OF THE EQUIPMENT. THE FAB AREA UNDER THE RAISED FLOOR SHALL BE VACUUMED AND WIPED DOWN TO REMOVE DEBRIS AND PARTICLES.

B. CUT RAISED FLOOR TILES, STRINGERS AND MODIFIED FLOOR PEDESTALS SHALL BE REPLACED WITH NEW MATERIAL TO RESTORE FLOOR TO ORIGINAL CONDITION.

C. FLOOR AND WALL ANCHOR STUDS LEFT UNUSED BY THIS WORK SHALL BE REMOVED. HOLES SHALL BE PATCHED. SURFACES ARE TO BE PREPARED AND FINISHED TO MATCH SURROUNDING AREA.

D. CONTRACTOR SHALL VERIFY THAT FLUID HAS BEEN REMOVED FROM EQUIPMENT PRIOR TO MOVING AND CRATING. MECHANICAL CONNECTIONS ARE TO BE CAPPED OR PLUGGED.

E. LATERAL POINTS OF CONNECTION FREED UP BY DEMOLITION SHALL BE CAPPED AND MADE READY FOR FUTURE CONNECTION. POC TAGS SHALL BE REMOVED AND DISCARDED.

F. DEMOLISH ELECTRICAL POWER CIRCUITS BACK TO DISTRIBUTION PANEL AND INSTALL KNOCKOUT SEALS AS REQUIRED. LEAVE BREAKER IN PANEL AND MAKE READY FOR FUTURE CONNECTION UNLESS OTHERWISE NOTED. UPDATE PANEL SCHEDULE TO REFLECT CURRENT CONDITION.

G. CONTRACTOR SHALL FOLLOW STANDARD PROCEDURES WHEN DEMOLISHING HPM GAS LINES. PROCEDURES INCLUDE: LOTO, RINGING OF THE LINE, AND VISUAL INSPECTION OF TUBING AND COMPONENTS FOR SIGNS OF CORROSION OR CONTAMINATION. CONTRACTOR SHALL CUT AND BAG 1" SAMPLES FROM BOTH ENDS OF EVERY DEMOLISHED PRIMARY HPM GAS LINE, INCLUDING A WELD, AND DELIVER TO THE OWNER.

H. DECONTAMINATE DEMOLISHED EQUIPMENT THAT HAS HAD CONTACT WITH HAZARDOUS MATERIALS. EQUIPMENT INCLUDES TOOL MAINFRAME, GAS LINES, PUMPED CHEMICAL SUPPLY WASTE LINES, VACUUM FORELINES, ACID EXHAUST AND SOLVENT EXHAUST LINES. REFER TO HP DECONTAMINATION GUIDELINES.

I. CONTRACTOR SHALL VERIFY IMPACT ON OTHER TOOLS PRIOR TO DEMOLITION OF ANY SERVICE OR TOOL. CONTRACTOR SHALL NOTIFY HP OF IMPACTS BEFORE BEGINNING WORK.

J. CONTRACTOR SHALL FILL CORE HOLES IN CONCRETE SLABS AFTER THE DEMOLITION OF SERVICES. FLOOR AND COATINGS ARE TO BE RESTORED PER HP STANDARDS.

SYMBOLS LEGEND:

- KEYED NOTE
- MECHANICAL SERVICE IDENTIFIER
- ELECTRICAL SERVICE IDENTIFIER
- CONNECT TO EXISTING
- XXX COMPONENT TAG (VALVE, REGULATOR, FLOWMETER ETC.)
- (D) DEMOLISH
- (E) EXISTING
- (F) FUTURE
- (N) NEW
- (R) RELOCATE OR RELOCATED
- * OWNER FURNISHED/CONTRACTOR INSTALLED (OFCI)
- ** OWNER FURNISHED/OWNER INSTALLED (OFOI)
- HEAT TRACE

REGISTERED PROFESSIONAL ENGINEER 17277 OREGON JULY 19, 1994 BYRON L. RAMOS

EXPIRES: 12-31-2014

invent CORVALLIS CAMPUS

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ALL INFORMATION DISCLOSED THROUGH DELIVERY OF THESE FILES IS CONFIDENTIAL AND PROPRIETARY. THE INTENDED USE OF THESE DRAWINGS ARE SPECIFICALLY FOR THIS PROJECT. THE USE OF THESE DOCUMENTS FOR OTHER THAN THEIR INTENDED USE SHALL BE AT THE SOLE RISK OF THE RECIPIENT.

CH2MHILL
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Corvallis, OR 97330

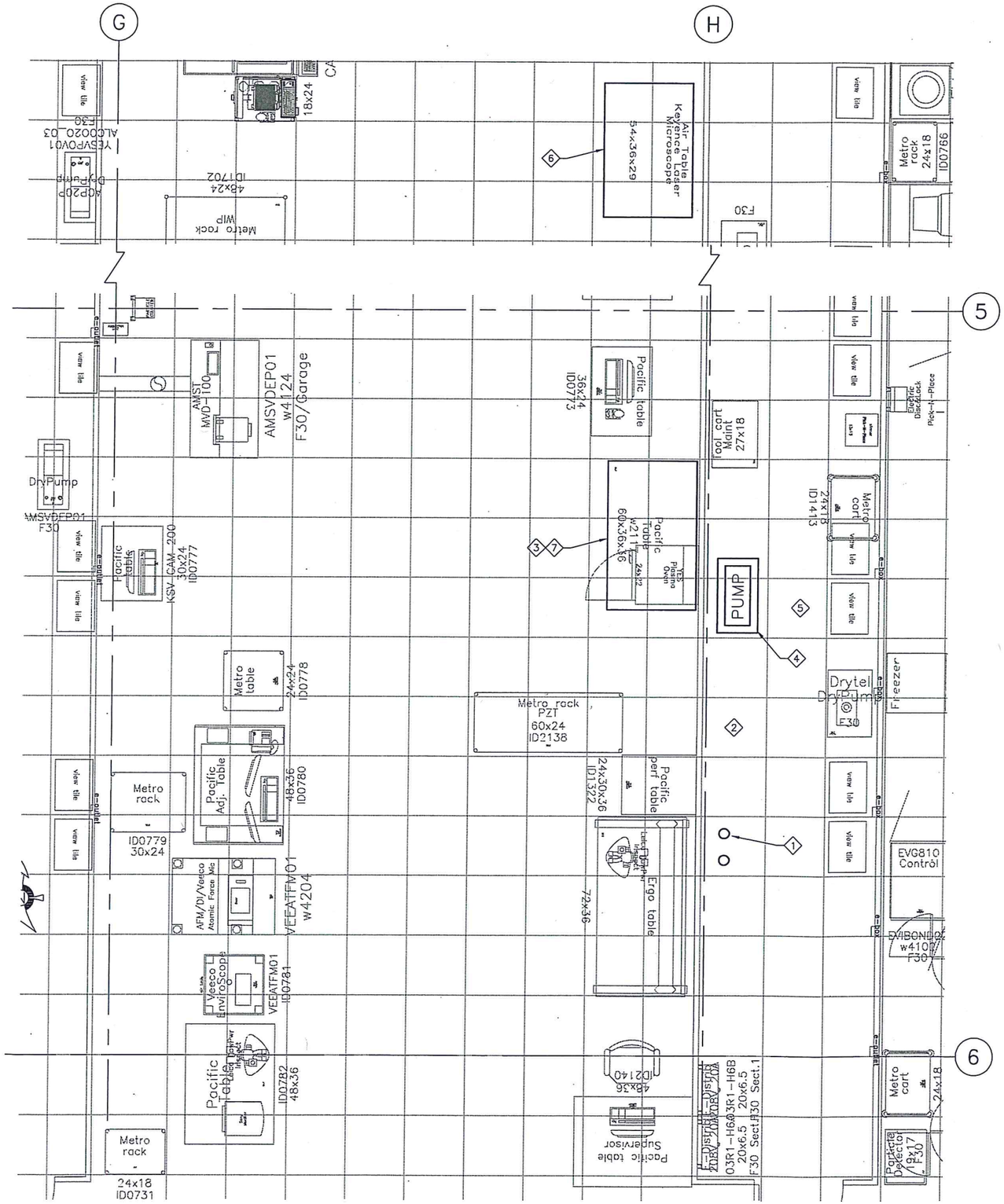
NO.	REVISION OR ISSUE	DATE	BY
0	ISSUED FOR CONSTRUCTION	10/01/13	JAJ

LCFA WIRE BOND

ORIGINATION DATE: 09/09/13
CLIENT PROJECT NUMBER: HPM 3637
CLIENT PROJECT MANAGER: J. KLEIN
PROJECT MANAGER: J. JUROSKY
DESIGNED: G. BRADSHAW
DRAWN: G. BRADSHAW
REVIEWER: B. RAMOS
PROJECT NUMBER: 463124.22
FILE NAME: 463124–22G101

TITLE: B3 - FAB30 GENERAL NOTES
SHEET NUMBER: G101
TOOL INSTALL

HP SYSTEM FILE: FOR REFERENCE ONLY
USER NO: --
PLOT SCALE: ---
HPCPD-P-11117 (9/23/11)
FILE: -



CONSTRUCTION SHEET NOTES (X)

1. EXISTING CEILING PENETRATION FOR EXHAUST DUCT.
2. 02 POC LOCATED UNDER TILE.
3. YES PLASMA TOOL WITH TABLE TOP CORNER SEISMIC BRACKETS AND RF GENERATOR TO BE RELOCATED WITHIN FAB 30. PACIFIC TABLE (60x36) TO BE DEMOLISHED FROM FAB. HP TO DETERMINE DISPOSITION OF TABLE.
4. RELOCATE PUMP AND STAND. POWER RECEPTACLE TO REMAIN IN PLACE FOR FUTURE USE.
5. CDA AND N2P POC LOCATION.
6. KEYENCE SCOPE AND TABLE TO BE RELOCATED WITHIN FAB 30.
7. POWER RECEPTACLE TO REMAIN IN PLACE. IF TWO TWIST-LOCKS ARE SHARED BETWEEN A SINGLE CIRCUIT, THEN REMOVE TWIST-LOCK SO A SINGLE RECEPTACLE IS DEDICATED TO A SINGLE CIRCUIT.

REGISTERED PROFESSIONAL ENGINEER 17277 OREGON JULY 19, 1994 BYRON L. RAMOS

EXPIRES: 12-31-2014

NORTH

0 1' 2' 4'

SCALE: 1/4" = 1'-0"
SCALE BAR = 1" @ FULL SIZE

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NO.	REVISION OR ISSUE	DATE	BY
0	ISSUED FOR CONSTRUCTION	10/01/13	JAJ

F30 LCFA WIRE BOND

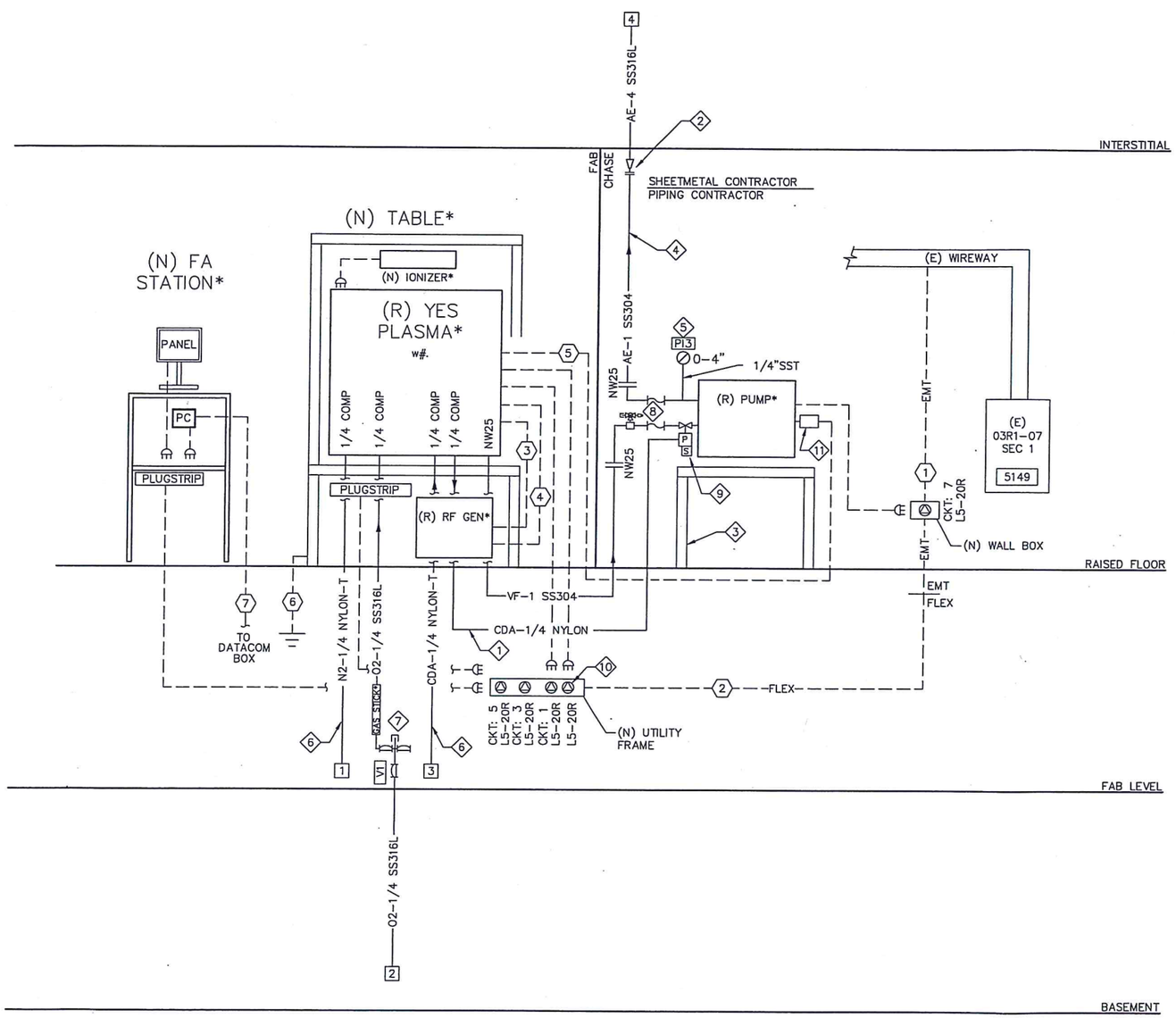
ORIGINATION DATE: 09/09/13
CLIENT PROJECT NUMBER: HPM 3637
CLIENT PROJECT MANAGER: J. KLEIN
PROJECT MANAGER: J. JUROSKY
DESIGNED: S. VANDERZANDEN
DRAWN: S. VANDERZANDEN
REVIEWER: B. RAMOS
PROJECT NUMBER: 463124.22
FILE NAME: 463124–22D200

TITLE: B3 - FAB 30 FAB DEMO PLAN

SHEET NUMBER: D200

TOOL INSTALL

HP SYSTEM FILE: NONE
FOR REFERENCE ONLY
USER NO: –
PLOT SCALE: ---
HPGVD-B-11317 (9/22/11)
FILE: –



CIRCUIT AND RACEWAY SCHEDULE				
#	FROM	TO	CONDUIT/CONDUCTOR	REMARKS
1	03R1-07 CKT: 1,3,5,7	(N)WALL BOX	(N) 1"C, 8#10, 4#10G	(4)120V, 1ø, 20A CB
2	(N)WALL BOX .	(N)UTILITY FRAME	3/4"C, 6#10, 3#10G .	(3) 120V, 1ø, 20A .
3	YES PLASMA .	RF GEN .	INTERCONNECT BELDEN CABLE	(E) CABLE, HP TO CONNECT .
4	YES PLASMA .	RF GEN .	INTERCONNECT BELDEN CABLE	(E) CABLE, HP TO CONNECT .
5	YES PLASMA .	PUMP .	INTERCONNECT BELDEN CABLE	(E) CABLE, HP TO CONNECT CONTRACTOR TO ROUTE
6	YES PLASMA TABLE	BUILDING GROUND	1#10G .	. .
7	FA STATION PC	DATACOM BOX	FAB LAN – BLUE .	. .

Nylon

CONSTRUCTION SHEET NOTES (X)

1. ROUTE NEW PVDF INTERCONNECTING PNEUMATIC TUBING FROM YES PLASMA TOOL TO PUMP SOLENOID. CONNECT PVDF PNEUMATIC TUBING TO SMALL LENGTH OF TYGON TUBING FROM YES PLASMA TOOL.
2. INSTALL 4" SST DUCT TAPER WITH NW50 FLANGE AND NW50xNW25 REDUCER.
3. EXISTING PUMP STAND.
4. ROUTE AND ATTACH PUMP EXHAUST ALONG CHASE WALL WINDOW AND CONNECT TO EXHAUST DUCT, PER F30 STANDARD.
5. INSTALL MAGNEHELIC, PROVIDE 1/4"SST COMP. FITTING IN EXHAUST LINE. MOUNT MAGNEHELIC TO CHASE WALL SUPPORT, PER F30 STANDARD
6. RE-USE COMPONENTS FROM PREVIOUS INSTALLATION.
7. PROVIDE LATERAL POC MODULE PER STANDARD F30-UHP-02. SEE DRAWING M200 FOR LOCATION.
8. THERMOCOUPLE AND PUMP FLEX CONNECTORS ARE OFCI.
9. EXISTING PNEUMATIC VALVE. OFOI.
10. TWO L5-20 RECEPTACLES, SHARED CIRCUIT
11. PUSH BUTTON CONTROL STATION. OFCI.

POINT OF CONNECTION TABLE						
#	SERVICE	VALVE OR TAP	STANDARD	FLOW	PRESSURE	COMMENTS
1	N2	P1S-036W	F30-N2-01	·	·	1/2" POC (COMP)
2	O2	SEE M203	F30-UHP-01	·	·	1/4" POC (VCR)
3	CDA	P1S-036W	F30-CDA-01	·	·	1/2" POC (COMP)
4	AE	01-039	F30-EX-AE-01	·	·	NW25

REGISTERED PROFESSIONAL ENGINEER 17277 OREGON JULY 19, 1994 BYRON L. RAMOS

EXPIRES: 12-31-2014

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NO.	REVISION OR ISSUE	DATE	BY
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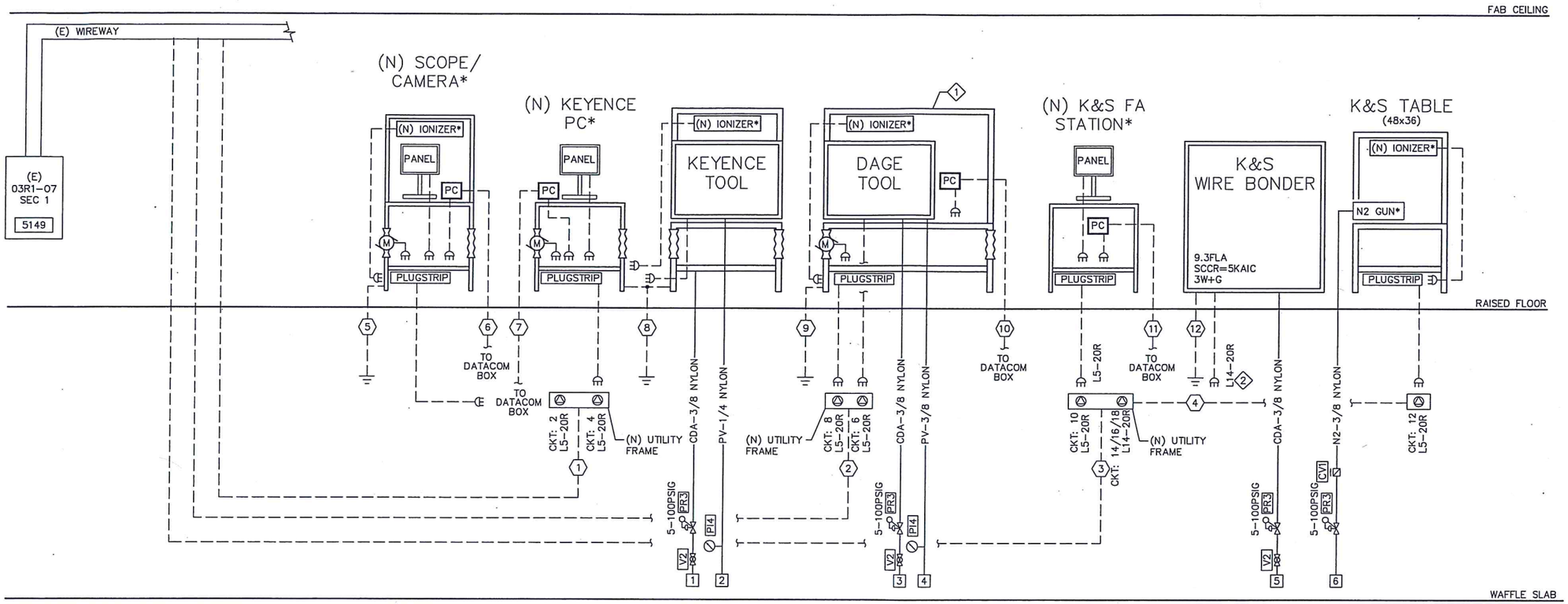
F30 LCFA WIRE BOND

ORIGINATION DATE: 09/09/13
CLIENT PROJECT NUMBER: HPM 3637
CLIENT PROJECT MANAGER: J. KLEIN
PROJECT MANAGER: J. JUROSKY
DESIGNED: S. VANDERZANDEN
DRAWN: S. VANDERZANDEN
REVIEWER: B. RAMOS
PROJECT NUMBER: 463124.22
FILE NAME: 463124-22M100

TITLE: B3 - FAB30 YES PLASMA SCHEMATIC
SHEET NUMBER: M100
TOOL INSTALL

HP SYSTEM FILE: FOR REFERENCE ONLY NONE
USER NO: –
PLOT SCALE: –
HPCVG-B-11X17 (9/23/11)
FILE: –



POINT OF CONNECTION TABLE						
#	SERVICE	VALVE OR TAP	STANDARD	FLOW	PRESSURE	COMMENTS
1	CDA	P1S-012W	F30-CDA-01	–	–	AIR TABLE CONNECTION
2	PV	P1S-012W	F30-PV-01	–	–	–
3	CDA	P1S-020W	F30-CDA-01	–	–	–
4	PV	P1S-020W	F30-PV-01	–	–	–
5	CDA	P1S-028W	F30-CDA-01	≤5.5 SCFM	60 PSI	MIN 55 PSI, MAX 80 PSI
6	N2	P1S-028W	F30-N2-01	–	20 PSI	VENT

CIRCUIT AND RACEWAY SCHEDULE				
#	FROM	TO	CONDUIT/CONDUCTOR	REMARKS
1	03R1-07 CKTS: 2, 4	UTILITY FRAME	3/4"C, 4#10, 2#10G –	(2) 120V, 1ø, 20A C.B. –
2	03R1-07 CKTS: 6, 8	UTILITY FRAME	3/4"C, 4#10, 2#10G –	(2) 120V, 1ø, 20A C.B. –
3	03R1-07 CKTS: 14/16/18 CKTS: 10, 12	UTILITY FRAME	1"C, 7#10, 3#10G –	208V, 3ø, 20A C.B (2) 120V, 1ø, 20A C.B.
4	UTILITY FRAME	L5-20R –	3/4"C, 2#10, 1#10G –	120V, 1ø, 20A –
5	SCOPE/CAMERA TABLE	BUILDING GROUND	1#10G –	– –
6	SCOPE/CAMERA PC	DATACOM BOX	FAB LAN – BLUE –	– –
7	KEYENCE PC	DATACOM BOX	FAB LAN – BLUE –	– –
8	KEYENCE TABLES	BUILDING GROUND	1#10G –	– –
9	DAGE TABLE	BUILDING GROUND	1#10G –	– –
10	DAGE PC	DATACOM BOX	FAB LAN – BLUE –	– –
11	K&S PC	DATACOM BOX	FAB LAN – BLUE –	– –
12	K&S BONDER	BUILDING GROUND	1#10G –	– –

CONSTRUCTION SHEET NOTES (X)

1. PROVIDE UNISTRUT RACK TO SUPPORT (N) IONIZER UNIT. COORDINATE WITH HP IF RACK IS TO BE ATTACHED TO TABLE OR ANCHORED TO WAFFLE SLAB.
2. PROVIDE AND INSTALL POWER CORD.

REGISTERED PROFESSIONAL ENGINEER 17277 OREGON JULY 19, 1994 BYRON L. RAMOS

EXPIRES: 12-31-2014

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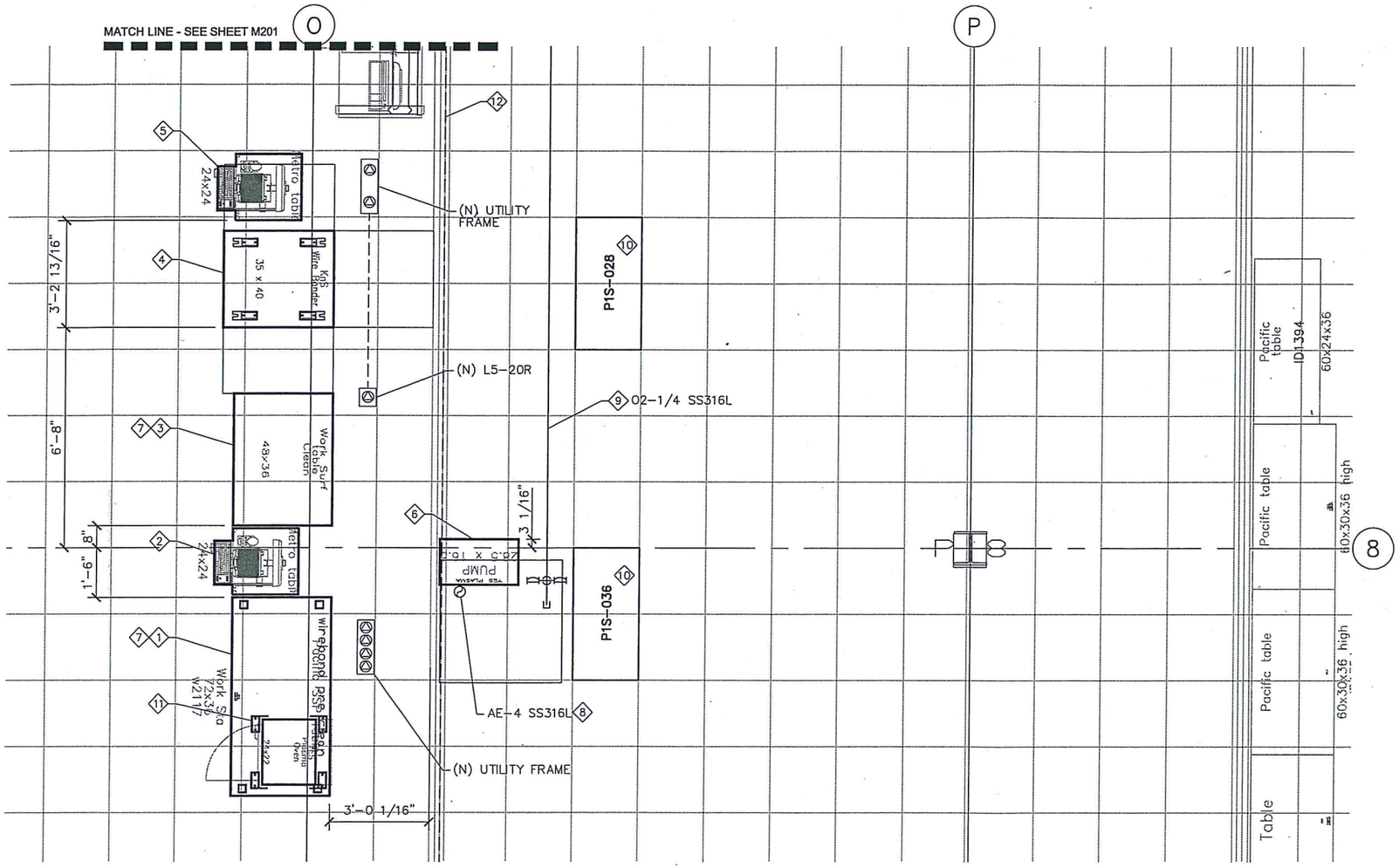
F30 LCFA WIRE BOND

ORIGINATION DATE: 09/09/13
CLIENT PROJECT NUMBER: HPM 3637
CLIENT PROJECT MANAGER: J. KLEIN
PROJECT MANAGER: J. JUROSKY
DESIGNED: S. VANDERZANDEN
DRAWN: S. VANDERZANDEN
REVIEWER: B. RAMOS
PROJECT NUMBER: 463124.22
FILE NAME: 463124-22M101

TITLE: B3 - FAB30 TOOL SCHEMATIC
SHEET NUMBER: M101

TOOL INSTALL

HP SYSTEM FILE: FOR REFERENCE ONLY NONE
USER NO. -/-/-
PLOT SCALE: -=-
REF: NEPHO-9-11N17 (9/23/11)



CONSTRUCTION GENERAL NOTES

A. SEE EQUIPMENT ANCHORAGE SPREADSHEET FOR ADDITIONAL EQUIPMENT RESTRAINT INFORMATION.

CONSTRUCTION SHEET NOTES (X)

1. LOCATE (R) YES PLASMA ETCHER WITH TABLE AS SHOWN.
2. LOCATE (N) FA STATION WITH TABLE FOR YES PLASMA AS SHOWN.
3. LOCATE (N) K&S WORK TABLE AS SHOWN.
4. LOCATE (N) K&S WIRE BONDER AS SHOWN.
5. LOCATE (N) FA STATION WITH TABLE FOR K&S WIRE BONDER AS SHOWN.
6. LOCATE (R) YES PLASMA ETCHER PUMP AS SHOWN.
7. INSTALL IONIZER PER OWNER DIRECTION. (OFCI)
8. ROUTE AE-4 SS316L EXHAUST DUCT THROUGH BLANK CEILING TILE.
9. ROUTE O2-1/4 SS316L TUBING APPROXIMATELY AS SHOWN PER STANDARD F30-POC-11.
10. HP TO PROVIDE LATERAL POC MODULE.
11. RE-USE CORNER SEISMIC BRACKETS TO ATTACHED YES PLASMA ETCHER TO (N) TABLE.
12. ROUTE #10 GROUND WIRE UNDER RAISED FLOOR APPROXIMATELY AS SHOWN. MATCH PREVIOUS INSTALLATION.

REGISTERED PROFESSIONAL ENGINEER 17277 OREGON JULY 19, 1994 BYRON L. RAMOS

EXPIRES: 12-31-2014

NORTH

0 1' 2' 4'

SCALE: 1/4" = 1'-0"
SCALE BAR = 1" @ FULL SIZE

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CORVALLIS CAMPUS

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NO.	REVISION OR ISSUE	DATE	BY
0	ISSUED FOR CONSTRUCTION	10/01/13	JAJ

B3 F30 LCFA WIRE BOND

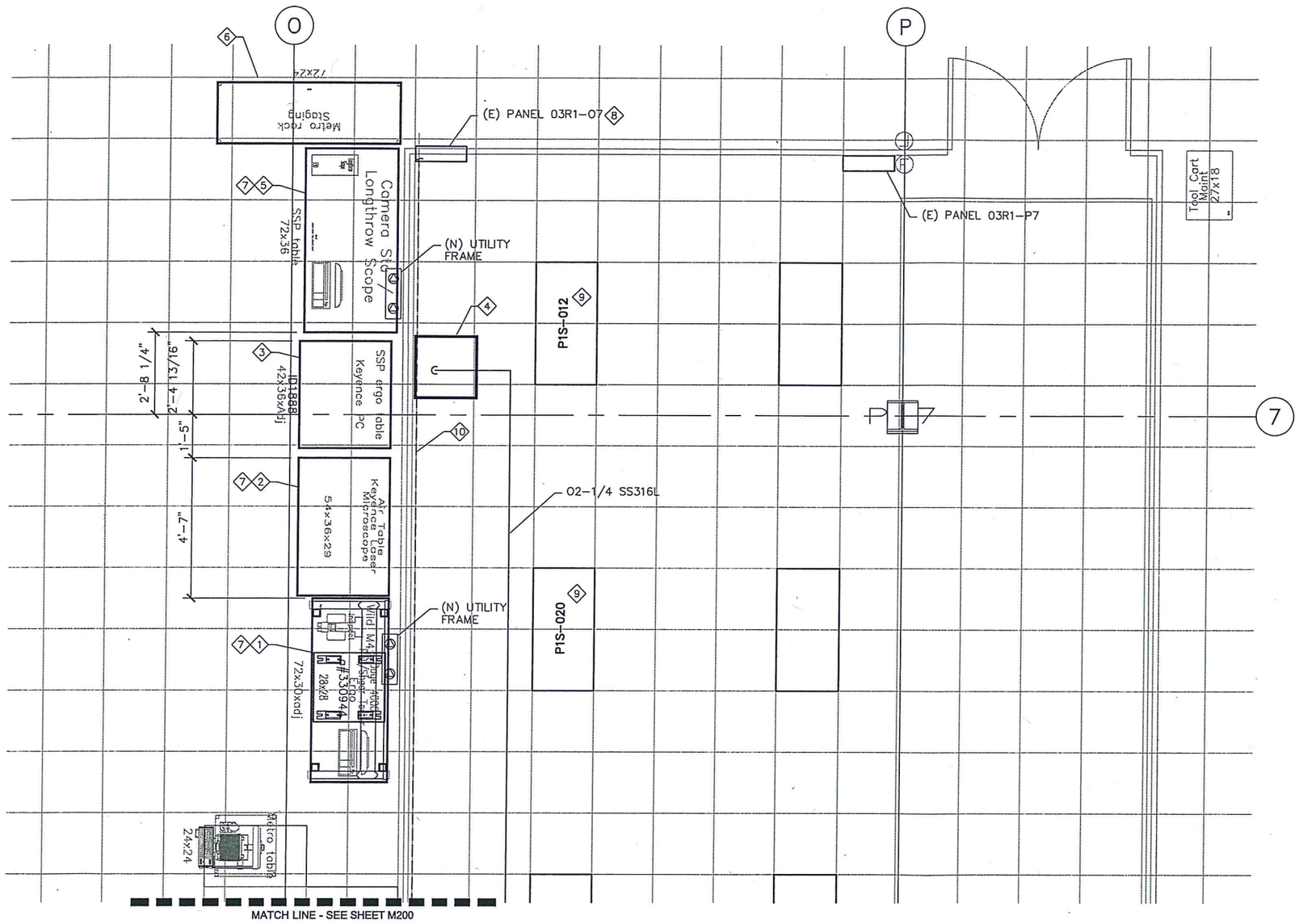
ORIGINATION DATE: 09/13/2013
CLIENT PROJECT NUMBER: HPM 3637
CLIENT PROJECT MANAGER: J. KLEIN
PROJECT MANAGER: J. JUROSKY
DESIGNED: S. VANDERZANDEN
DRAWN: S. VANDERZANDEN
REVIEWER: B. RAMOS
PROJECT NUMBER: 463124.22M200
FILE NAME: 463124.22M200

TITLE: B3 - FAB30 FAB LEVEL TOOL LAYOUT

SHEET NUMBER: M200

TOOL INSTALL

HP SYSTEM FILE: NONE
FOR REFERENCE ONLY
USER NO. -
PLOT SCALE: ---
HPCAD-B-11X17 (9/23/11)
FILE: -



CONSTRUCTION GENERAL NOTES

A. SEE EQUIPMENT ANCHORAGE SPREADSHEET FOR ADDITIONAL EQUIPMENT RESTRAINT INFORMATION.

B. PROVIDE UL LISTED FIRESTOP ASSEMBLIES FOR ALL THROUGH AND MEMBRANE PENETRATIONS THROUGH FIRE-RESISTIVE BARRIERS IN ACCORDANCE WITH SPECIFICATION 07840, FIRESTOPPING AND THE FIRESTOPPING SCHEDULE. THE CONTRACTOR SHALL PROVIDE FIRESTOPPING SUBMITTAL(S) FOR ALL PENETRATION CONDITIONS FOR CH2MHILL REVIEW PRIOR TO BEGINNING WORK. LABEL ALL FIRESTOPPING ASSEMBLIES IDENTIFYING THE UL LISTING NUMBER, MANUFACTURER, F AND T RATING, DATE OF INSTALLATION AND INSTALLER'S NAME.

CONSTRUCTION SHEET NOTES (X)

1. LOCATE (N) DAGE TOOL AND 72X36 ERGO TABLE AS SHOWN.
2. LOCATE (N) KEYENCE TOOL AND AIR TABLE AS SHOWN.
3. LOCATE (N) KEYENCE PC AND 42X36 ERGO TABLE AS SHOWN.
4. CORE DRILL AND ROUTE THE FOLLOWING SERVICE THROUGH THIS WAFFLE PAN:
   02-1/4 SS316L
   1-HOUR FIRE STOP REQUIRED, SEE GENERAL NOTE B.
5. LOCATE (N) SCOPE/CAMERA EQUIPMENT AND TABLE AS SHOWN.
6. LOCATE (N) WIP RACK APPROXIMATELY AS SHOWN.
7. INSTALL IONIZER PER OWNER DIRECTION. (OFCI)
8. (E) ELECTRICAL PANEL IS LABELED AS 03R1-08. INSTALL NEW EQUIPMENT ID TO MATCH PANEL SCHEDULE AS 03R1-07.
9. HP TO PROVIDE LATERAL POC MODULE.
10. ROUTE #10 GROUND WIRE UNDER RAISED FLOOR APPROXIMATELY AS SHOWN. MATCH PREVIOUS INSTALLATION.

REGISTERED PROFESSIONAL ENGINEER 17277 OREGON JULY 19, 1994 BYRON L. RAMOS

EXPIRES: 12-31-2014

NORTH

0 1' 2' 4'

SCALE: 1/4" = 1'-0"
SCALE BAR = 1" @ FULL SIZE

invent
CORVALLIS CAMPUS

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F30 LCFA WIRE BOND

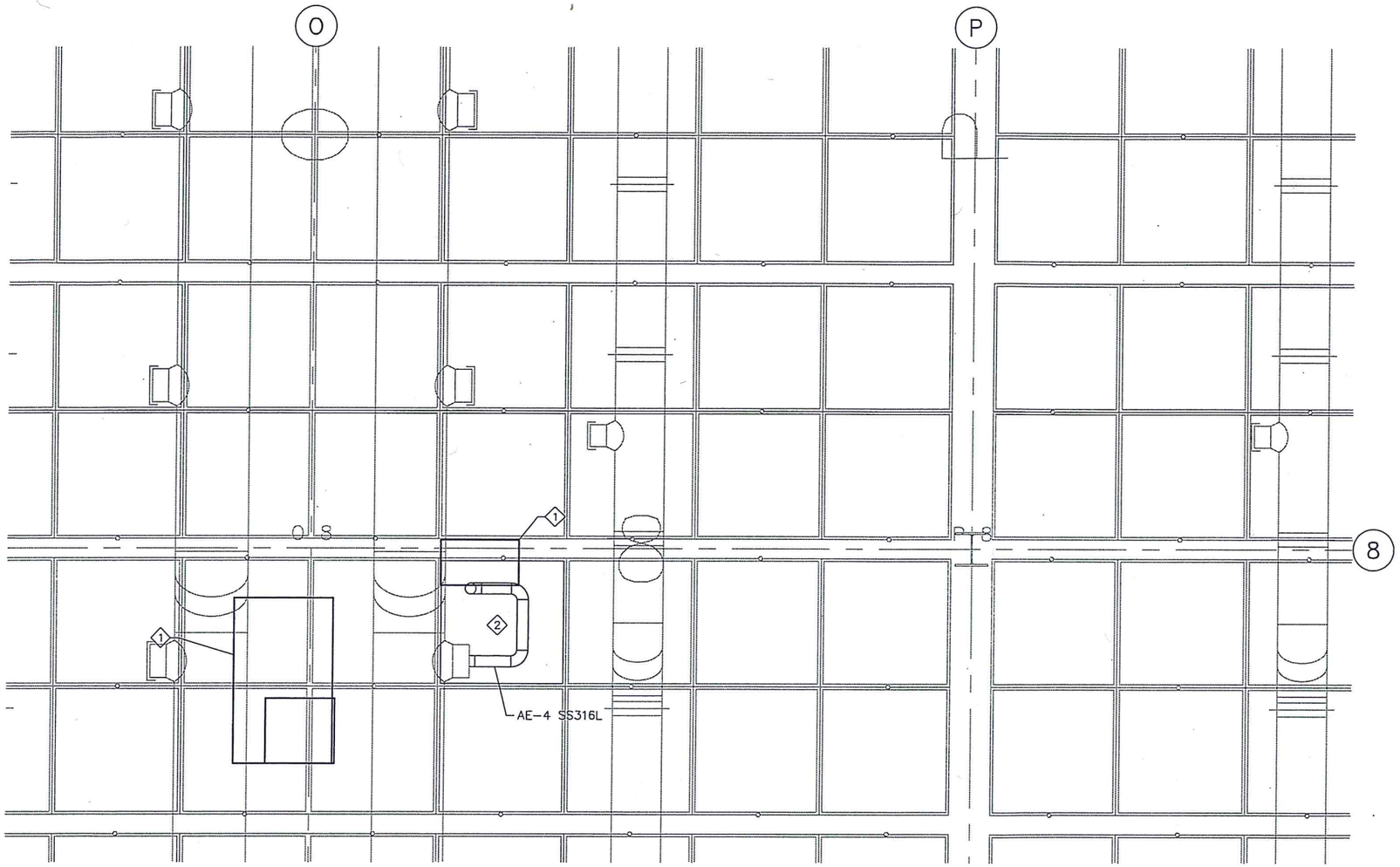
ORIGINATION DATE:	09/09/13
CLIENT PROJECT NUMBER:	HPM 3637
CLIENT PROJECT MANAGER:	J. KLEIN
PROJECT MANAGER:	J. JUROSKY
DESIGNED:	S. VANDERZANDEN
DRAWN:	S. VANDERZANDEN
REVIEWER:	B. RAMOS
PROJECT NUMBER:	463124.22
FILE NAME:	463124-22M201

TITLE: B3 - FAB30
FAB LEVEL TOOL LAYOUT

SHEET NUMBER: M201

TOOL INSTALL

HP SYSTEM FILE: NONE
FOR REFERENCE ONLY
USER NO: -
PLOT SCALE: ---
HPCVO-B-11X17 (9/23/11)
FILE: -



CONSTRUCTION SHEET NOTES

1. YES PLASMA ETCHER AND PUMP SHOWN BELOW FOR REFERENCE.
2. ROUTE 4" SS316L EXHAUST DUCT THROUGH THIS CEILING BLANK AS SHOWN.

REGISTERED PROFESSIONAL ENGINEER 17277 OREGON JULY 19, 1994 BYRON L. RAMOS

EXPIRES: 12-31-2014

NORTH

0 1' 2' 4'

SCALE: 1/4" = 1'-0"
SCALE BAR = 1" @ FULL SIZE

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CORVALLIS CAMPUS

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CH2MHILL
Corvallis Office
1100 NE Circle Boulevard
Suite 300
Corvallis, OR 97330

NO.	REVISION OR ISSUE	DATE	BY
0	ISSUED FOR CONSTRUCTION	10/01/13	JAJ

B3 F30 LCFA WIRE BOND

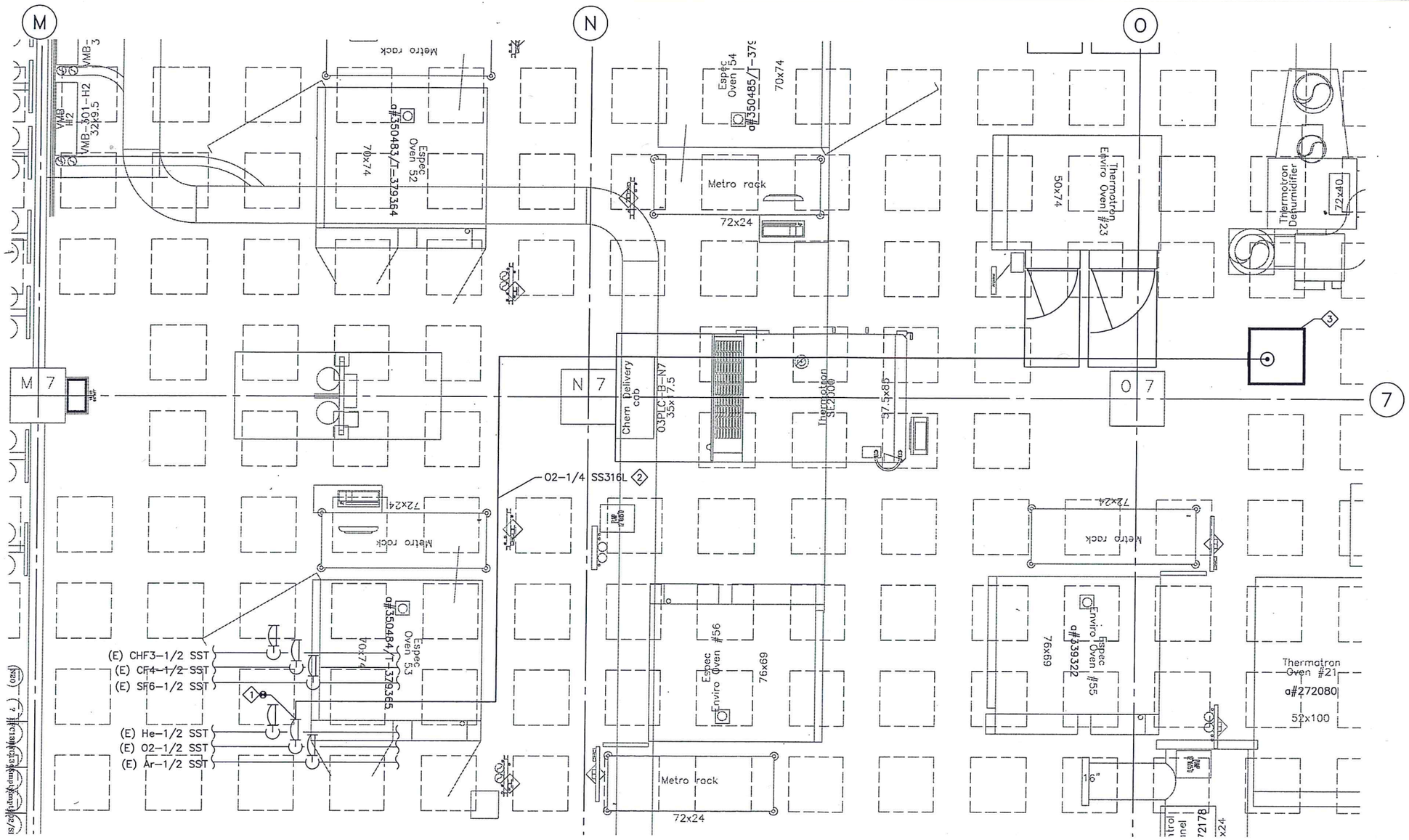
ORIGINATION DATE: 09/13/2013
CLIENT PROJECT NUMBER: HPM 3637
CLIENT PROJECT MANAGER: J. KLEIN
PROJECT MANAGER: J. JUROSKY
DESIGNED: S. VANDERZANDEN
DRAWN: S. VANDERZANDEN
REVIEWER: B. RAMOS
PROJECT NUMBER: 463124.22M200
FILE NAME: 463124.22M202

TITLE: B3 - FAB30 INTERSTITIAL PLAN

SHEET NUMBER: M202

TOOL INSTALL

HP SYSTEM FILE: FOR REFERENCE ONLY NONE
USER NO: -/-/-
PLOT SCALE: ---
HPCVD-B-11X17 (9/23/11)
FILE: -



CONSTRUCTION SHEET NOTES

1. APPROXIMATE LOCATION OF O2 POC.
2. ROUTE (N) O2-1/4 SS316L TUBING APPROXIMATELY AS SHOWN. INSTALL PER HP ROUTING STANDARDS.
3. ROUTE (N) O2-1/4 SS316L TUBING THROUGH THIS WAFFLE PENETRATION. SEE DRAWING M201 FOR CONTINUATION.

REGISTERED PROFESSIONAL ENGINEER 17277 OREGON JULY 19, 1994 BYRON L. RAMOS

EXPIRES: 12-31-2014

NORTH

0 1' 2' 4'

SCALE: 1/4" = 1'-0"
SCALE BAR = 1" @ FULL SIZE

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NO.	REVISION OR ISSUE	DATE	BY
0	ISSUED FOR FINAL CONSTRUCTION	10/01/13	JAJ

F30 LCFA WIRE BOND

ORIGINATION DATE:	09/09/13
CLIENT PROJECT NUMBER:	HPM 3637
CLIENT PROJECT MANAGER:	J. KLEIN
PROJECT MANAGER:	J. JUROSKY
DESIGNED:	S. VANDERZANDEN
DRAWN:	S. VANDERZANDEN
REVIEWER:	B. RAMOS
PROJECT NUMBER:	463124.22
FILE NAME:	463124-22M203

TITLE: B3 - FAB30 BASEMENT PLAN

SHEET NUMBER: M203

TOOL INSTALL

HP SYSTEM FILE: FOR REFERENCE ONLY NONE

USER NO: -

PLOT SCALE: ---

HPCVO-B-11X17 (9/23/11)
FILE: -

PANEL: 5149-03R1-D7
LOCATION: FAB30
FED FROM: RB-P8
INCIDENT ENERGY: 0.48 Cal/cm2 @18.00(in)
250AF/225AT SFHA MAIN

DC DEVICE TYPE: Breaker
DEVICE FAMILY: Plug In

ENCLOSURE: NEMA 1
MOUNTING: Surface
VOLTAGE: 208/120
BOUNDARY: 9.61(in)

MAINS(A): BKR
WIRING: 3-Phase 4-Wire

PPE Category: 0
PTW FILE: B3480K12

CONTINUOUS(A): 225
BUS SC RATING(A) 22000
FAULT CURRENT(A): 7352

DC AMPS	P	NOTES	DESCRIPTION	DEMAND CODE	VA	CKT	PHASE LOADS VA A	B	C	CKT	VA	DEMAND CODE	DESCRIPTION	NOTES	DC AMPS	P
20	1	36S, 2W (2)L5-2	YES PLASMA	RECEPTA	168	1	1129			2	961	RECEPTA	SCOPE/CAMERA TABLE	6S, 2W	20	1
20	1	36S, 2W	YES PLAMA PLUGSTRIP	RECEPTA	360	3		1561		4	1201	RECEPTA	KEYENCE & PC TABLE	6S, 2W	20	1
20	1	36S, 2W	YES PLASMA FA STA.	RECEPTA	360	5			1081	6	721	PROCESS	DAGE TOOL	18S, 2W	20	1
20	1	36S	YES PLASMA VAC PUMP	LARGEST	1150	7	1871			8	721	RECEPTA	DAGE TOOL TABLE	18S, 2W	20	1
20	1		SPARE	SPARE	0	9		360		10	360	RECEPTA	K&S FA STATION	24S, 2W	20	1
20	1		SPARE	SPARE	0	11			360	12	360	RECEPTA	K&S TABLE	28S, 2W	20	1
						13	1117			14	1117	PROCESS	K&S WIRE BONDER	24S, 2W	20	3
						15		1117		16	1117		"		"	
						17			1117	18	1117		"		"	
						19				20						
						21				22						
						23				24						
						25				26						
						27				28						
						29				30						
						31				32						
						33				34						
						35				36						
						37				38						
						39				40						
						41				42						

ALL CONNECTED	KVA	MAX PH AMPS	* PHASE TOTALS	VA	AMPS	BUS TOTALS	KVA
TOTAL CONNECTED	9.71	34.3	* A-N	4116.2	34.3	CONNECTED	9.71
TOTAL DEMAND	8.29	31.0	* B-N	3038.2	25.3	DEMAND	8.29
TOTAL DESIGN	8.29	31.0	* C-N	2557.9	21.3	DESIGN	8.29

DATE: Oct 01, 2013
TIME: 12:50:31

FED FROM RB-P8, BUS# 5140. (SWBD 480K1)
REFERENCE SYSTEM ONE-LINE DIAGRAM: 03__N-EL-DL016.DWG
THHQL BRANCH BREAKERS ONLY!

PANEL: 2066-03R1-H6B
LOCATION: FAB
FED FROM: 2060 208DP3
INCIDENT ENERGY: 1.82 Cal/cm2 @18.00(in)
225A THQD MAIN BREAKER

DC DEVICE TYPE: Breaker
DEVICE FAMILY: Plug In

ENCLOSURE: NEMA 1
MOUNTING: Surface
VOLTAGE: 208/120
BOUNDARY: 23.84(in)

MAINS(A): BKR
WIRING: 3-Phase 4-Wire

PPE Category: 1
PTW FILE: B3480J12

CONTINUOUS(A): 225
BUS SC RATING(A) 10000
FAULT CURRENT(A): 7091

DC AMPS	P	NOTES	DESCRIPTION	DEMAND CODE	VA	CKT	PHASE LOADS VA A	B	C	CKT	VA	DEMAND CODE	DESCRIPTION	NOTES	DC AMPS	P
20	3	6E/22N	DATBOND01 XFORMER	PROCESS	1167	1	2368			2	1201	PROCESS	HOT PLATE 40N, 5W		20	1
"			"		1167	3		2368		4	1201	PROCESS	HOT PLATE 40N, 5W		20	1
"			"		1167	5			2848	6	1681	PROCESS	OVEN 40N, 5W		20	1
20	1	(D)10/01/13 1	(YES PLASMA PMP)	PROCESS	1261	7	1621			8	360	RECEPTA	RCPT 44N, 5W		20	1
20	1		SPARE	SPARE	0	9		360		10	360	RECEPTA	COMET/MEI TRACKNG.	L5-20R TRACK1	20	1
20	1	28N, 4W	ZIEMAVI-II TABLE	RECEPTA	360	11			528	12	168	PROCESS	(YES PLASMA CHAMBER)	(D)10/01/13 15	20	1
20	1	28N, 4W	TABLE RCPT	RECEPTA	360	13	2522			14	2162	PROCESS	EVIPLASMA01	38N, 6E	30	3
20	1	35N, 4W	L5-20R	RECEPTA	360	15		2522		16	2162		"		"	
20	1	22N/8E, L5-20R	DATBOND01 FA	RECEPTA	360	17			2522	18	2162		"		"	
30	2	15N, 6E	ASYM720	PROCESS	1872	19	2593			20	721	PROCESS	(EVCFBOL01)	(D)10/4/11 46	20	1
"			"		1872	21		2593		22	721	RECEPTA	(2)RCPTS CHASEWALL	12N, 4E (CHASE	20	1
20	1	46N, 4W	EVCFBOL01 CONTROLLER	PROCESS	600	23			1321	24	721	RECEPTA	(2)RCPTS CHASEWALL	56N, 6E (CHASE	20	1
30	3	51'N, 82' OF #	ALTURA-855 PUMP	LARGEST	2882	25	2882			26	0	SPARE	SPARE		20	1
"			"		2882	27		3062		28	180	RECEPTA	L5-20 RCPT	2S/8E	20	1
"			"		2882	29			4563	30	1681	PROCESS	L5-20R, CANDFCT01	2S/8E	20	1
30	2	57'N. VIA PDW	ALTURA-855 SEM	PROCESS	2400	31	2760			32	360	RECEPTA	L5-20R, CANDFCT01 FA	2N/8E	20	1
"			"		2400	33		2580		34	180	RECEPTA	L5-20 RCPT	2N/8E	20	1
20	1	63'N/2'W	TABLE RCPT	RECEPTA	360	35			360	36						
20	1	61'N	QUAD RECPT	RECEPTA	360	37	360			38						
20	2	50'N, FOR ALT	NESLAB CHILLER	PROCESS	1000	39		1000		40						
"			"		1000	41			1000	42						

ALL CONNECTED	KVA	MAX PH AMPS	* PHASE TOTALS	VA	AMPS	BUS TOTALS	KVA
TOTAL CONNECTED	42.73	125.8	* A-N	15105.8	125.8	CONNECTED	42.73
TOTAL DEMAND	32.96	94.4	* B-N	14484.6	120.6	DEMAND	32.96
TOTAL DESIGN	32.96	94.4	* C-N	13142.8	109.4	DESIGN	32.96

DATE: Oct 01, 2013
TIME: 12:29:04

OVERSIZED NEUTRAL, FEED THRU LUGS, BOTTOM FED, 1000APSI CU BUS, DOOR-IN-DOOR PANEL COVER
FED FROM 208DP3, BUS# 2060. (SWBD 480J1)
FIELD VERIFIED: 12/19/05

= AREA OF WORK

REGISTERED PROFESSIONAL ENGINEER 17277 OREGON JULY 19, 1994 BYRON L. RAMOS

EXPIRES: 12-31-2014

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CH2MHILL
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Suite 200
Corvallis, OR 97330

NO.	REVISION OR ISSUE	DATE	BY
0	ISSUED FOR CONSTRUCTION	10/01/13	JAJ

F30 LCFA WIRE BOND

ORIGINATION DATE: 10/01/13
CLIENT PROJECT NUMBER: HPM 3637
CLIENT PROJECT MANAGER: J. KLEIN
PROJECT MANAGER: J. JUROSKY
DESIGNED: S. VANDERZANDEN
DRAWN: G. BRADSHAW
REVIEWER: B. RAMOS
PROJECT NUMBER: 463124.22
FILE NAME: 463124-22E300

TITLE: B3 F30 PANEL SCHEDULES
SHEET NUMBER: E300
TOOL INSTALL

HP SYSTEM FILE: FOR REFERENCE ONLY
USER NO.: -/-/-
PLOT SCALE: -*-
HPDWG-9-11X17 (9/23/11)
FILE:

CH2M HILL - EQUIPMENT SEISMIC ANCHORAGE SPREADSHEET

FAB 30 LCFA WIRE BOND - HEWLETT PACKARD, CORVALLIS, OR - BUILDING 3

#	CLIENT ID NUMBER	EQUIPMENT NAME	APPROXIMATE LOCATION			EQUIPMENT DIMENSION (IN)			C.G. ABOVE FLR (IN)	WEIGHT Wp (LBS)	Rp	a_p	I_p	SEISMIC FORCE F_p	BRACKET TYPE	ANCHOR TYPE	ANCHOR DIA (IN)	MIN EMBED FOR CONCRETE ANCHORS	WHERE ANCHORED ?	NUMBER OF BRACKETS RESISTING		BRACKET FORCE		BRACKET CHECK (OKAY, NA, OR NG)			ANCHOR DETAIL NUMBER	TOTAL NUMBER RESTRAINTS	BRACKET DETAIL NUMBER	BRACKET LAYOUT	REMARKS
			BLDG	LEVEL	GRIDS	WIDTH	DEPTH	HEIGHT												HORIZ	UPLIFT	F_{HORIZ} (LBS)	F_{VERT} (LBS)	PLATE BENDING	FASTENER TO EQUIP	BASE MATERIAL					
1	NA	ICONN	B3	LOWER	O8	28	27	71	22	1,300	2.5	1.0	1.5	0.28 x Wp= 367	NARROW Z	BOLT-RAF	1/2	NA	RAISED ACCESS FLOOR	2	2	184	0	OKAY	NA	OKAY	GUS-STA-01	4	GUS-STB-02	S200	
2	NA	DAGE TESTER	B3	LOWER	O7	12	23	33	17	200	2.5	1.0	1.5	0.28 x Wp= 57	NARROW Z	BOLT-PLATE	3/8	NA	STEEL PLATE	2	2	28	0	OKAY	NA	OKAY	-	4	SIM GUS-STB-02	S201	THROUGH BOLT BRACKET TO TABLE. BRACKET MAY BE 2" WIDE AND HAVE A BOLT SPACING OF 3"
3	NA	TABLE FOR DAGE TESTER	B3	LOWER	O7	72	30	42	42	400	2.5	1.0	1.5	0.28 x Wp= 113	1-BOLT ANGLE	BOLT-RAF	1/2	NA	RAISED ACCESS FLOOR	4	2	28	2	OKAY	OKAY	OKAY	GUS-STA-01	4	GUS-STB-03	S201	
4	NA	TABLE FOR YES PLASMA	B3	LOWER	O8	72	30	42	42	400	2.5	1.0	1.5	0.28 x Wp= 113	1-BOLT ANGLE	BOLT-RAF	1/2	NA	RAISED ACCESS FLOOR	4	2	28	2	OKAY	OKAY	OKAY	GUS-STA-01	4	GUS-STB-03	S201	

ANCHOR ASSEMBLY TYPES

#	DESCRIPTION
1	SST Hex Head Cap Screw to steel plate
2	SST Hex Head Cap Screw to aluminum floor
4	Hilti HIT-RE 500-SD Adhesive Anchor w/ ASTM F593, CW Stainless Steel Threaded Rod
5	Hilti Kwikbolt TZ Wedge Anchor
6	Powers PE1000+ Adhesive Anchor w/ Threaded Rod
7	Powers Power-Stud+ SD2 Wedge Anchor
8	Simpson SET-XP Adhesive Anchor w/ ASTM A193 Grade B6 Stainless Steel Threaded Rod
9	Simpson Strong-Bolt Wedge Anchor
10	Simpson Titen HD Screw Anchor
11	Powers Wedge-Bolt+ Screw Anchor

GENERAL UTILITY STANDARDS

DET #	DESCRIPTION	REV#	REV DATE
GUS-STA-01	RAISED FLOOR BRACKET ANCHORAGE	B	4/7/06
GUS-STA-02	RAISED FLOOR TENSION ROD ANCHOR	B	4/7/06
GUS-STB-01	WIDE Z-BRACKET	A	7/20/05
GUS-STB-02	NARROW Z-BRACKET	A	7/20/05
GUS-STB-03	ANGLE BRACKET	A	7/20/05
GUS-STB-04	CORNER BRACKET	A	7/20/05
GUS-STB-05	SWING GATE BRACKET	A	7/20/05
GUS-STS-01	ANCHOR ASSEMBLY SEALING DETAIL	A	7/20/05

REGISTERED PROFESSIONAL ENGINEER
58426PE
OREGON
Jan. 14, 2003
JOSEPH K. STITH
EXPIRES: 6/30/14

CH2MHILL

BY: J. STITH
DATE: 9/13/2013
PROJECT NO: 463124-22

NO SPECIAL INSPECTION REQUIRED

STRUCTURAL GENERAL NOTES

1. THIS PROJECT TAKES PLACE WITHIN AN OPERATING CLEANROOM FABRICATION FACILITY. COORDINATE ACTIVITIES AND PROCEDURES WITH OWNER IN ORDER TO PREVENT DISRUPTION OF OPERATIONS.
2. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2010 OREGON STRUCTURAL SPECIALTY CODE.
3. WHERE NEW CONSTRUCTION INTERFACES WITH EXISTING, AS-BUILT CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR. DIMENSIONS AND ELEVATIONS LOCATING EXISTING SYSTEMS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
4. DESIGN CRITERIA: SDS = 0.63 Rp = 1.5 (LOW DEFORMABILITY), 2.5 (LIMITED DEFORMABILITY), OR 3.5 (HIGH DEFORMABILITY) ap = 1.0 (RIGID COMPONENTS) OR 2.5 (FLEXIBLE COMPONENTS) Ip = 1.5 (LIFE SAFETY, HAZARDOUS, STORAGE RACKS, FACILITY OPERABILITY) OR 1.0 (ALL OTHERS)
5. TUBES SHALL BE ASTM A500 GRADE B. STEEL SHAPES, PLATES AND BARS SHALL BE ASTM A36. BOLTS, NUTS, ALL THREAD, SHIMS, WASHERS AND HARDWARE SHALL BE TYPE 18-8 STAINLESS STEEL. BRACKETS SHALL BE TYPE 304 STAINLESS, UNLESS NOTED OTHERWISE.
6. ALL STEEL (EXCEPT STAINLESS STEEL AND STRUT AS NOTED) SHALL BE PAINTED WITH A SELF PRIMING POLYAMINE EPOXY, 2 COATS, 5 MDFT PER COAT, WHITE IN COLOR. PREPARE SURFACE PER SSPC-SP6, "COMMERCIAL BLAST CLEANING".
7. FABRICATION SHALL BE IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", CURRENT EDITION.
8. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 "STRUCTURAL WELDING CODE: STEEL". WELDING OF ASTM A36 STEEL SHALL BE WITH AWS A5.1 OR A5.5 E70XX MATERIAL. WELDING OF 304 STAINLESS STEEL SHALL BE WITH E308 MATERIAL. WELDERS SHALL BE CERTIFIED. SUBMIT A COPY OF ALL CERTIFICATIONS TO THE ENGINEER PRIOR TO ANY WELDING.
9. ALL CUT EDGES SHALL BE SMOOTHED AND DEBURRED, EXCEPT AS NOTED.
10. PARTICLES WILL BE GENERATED BY CLIP PLACEMENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTAIN, COLLECT AND REMOVE THIS CONTAMINATION.
11. ANCHOR TYPES AND SIZES SHALL BE AS SPECIFIED ON THE CONSTRUCTION DOCUMENTS. ANCHOR HOLES SHALL BE PREPARED, AND ANCHORS INSTALLED PER MANUFACTURER'S REQUIREMENTS.
12. HOLES IN STEEL SHALL BE: 1/4" DIA ANCHOR - 3/8" DIA HOLE 3/8" DIA ANCHOR - 1/2" DIA HOLE 1/2" DIA ANCHOR - 5/8" DIA HOLE 5/8" DIA ANCHOR - 3/4" DIA HOLE 3/4" DIA ANCHOR - 7/8" DIA HOLE
13. LOCATE REINFORCING STEEL IN CONCRETE SLAB PRIOR TO DRILLING HOLES FOR CONCRETE ANCHORS. DO NOT DRILL OR CUT REINFORCING STEEL WITHOUT ENGINEER REVIEW.
14. "UNISTRUT" MAY BE SPECIFIED IN THE CONSTRUCTION DOCUMENTS. ACCEPTABLE ALTERNATIVE MANUFACTURERS INCLUDE "B-LINE", "SUPERSTRUT" AND "POWERSTRUT". ALTERNATIVE STRUT AND FITTINGS SHALL HAVE MATERIAL PROPERTIES AND GEOMETRIES EQUIVALENT TO UNISTRUT. "STRUT SHALL HAVE GREEN BAKED-ON FINISH, EXCEPT IN THE CLEANROOM THE STRUT SHALL HAVE A WHITE POWDER COATED FINISH.
15. CONTRACTOR SHALL COMPLY WITH CONSTRUCTION DOCUMENTS AND CORVALLIS SITE STRUCTURAL AND SEISMIC STANDARDS, GUIDELINES, POLICIES AND PROCEDURES (HP DMS DOCUMENTS 8015fc65, 8015fc66, 8015fc67, 8015fc68, 8015ee20 AND 8015eee7). NOTIFY OWNER / ENGINEER OF DISCREPANCIES.