Br 2

March 12,2009

Mr. Thomas Thompson
Senior Health Physicist
U. S. Nuclear Regulatory Commission, Region I
Nuclear Materials Section B
Commercial and R&D Branch
475 Allendale Rd.
King of Russia, PA 19406

Dear Mr. Thomas Thompson,

As part of a reorganization goal and site closing, Invitrogen Corporation (formerly Protometrix, An Invitrogen Company) is requesting to decommission its 688 East Main Street, Branford, Connecticut 06405 facility and terminate its specific research and development NRC license number 06-30693-01, Docket no. 030-35868. As you are aware, Invitrogen plans to vacate the currently leased facility at 688 East Main Street, Branford, Connecticut on March 31,2009.

In an effort to initiate the decommissioning process, a thorough historical review and site characterization of the licensed radioactive materials received, used and/or stored in the two small radioactive materials laboratories, hotlab #1 and hotlab #2, and associated waste storage area were conducted. This review spanned the entire duration of the NRC license number 06-30693-01, from September 10,2002 to present at its 688 East Main Street, Branford, Connecticut 06405 facility.

Invitrogen received approval for its original NRC License Application on September 10, 2002 and began working with radioactive materials involving minimal tracer studies. On October 3,2002, the first radioactive materials shipment, 0.50 milliCuries of phosphorus-33, was received and used. All uses of licensed materials were terminated by mid-January 2009 following the last shipment of licensed radioactive material received, January 7,2009 of 0.25 mCi of phosphorus-33. Small quantities of commercially pre-labeled radioiodine-125 was only briefly ordered, received and used in hotlab #1 only during the period between January 17,2006 and April 3,2006. Therefore, greater than 10 half-lives have elapsed since radioiodine-125 was last used and stored in hotlab #1. In addition, all unsealed radionuclides were purchased and/or received in the bound, nonvolatile form, from vendors.

Upon review of the license history and possession limits, very low levels of radioisotopes having a half-life greater than 65 days, specifically, a total of 7.545 millicuries of tritium and 0.05 mCi of carbon 14 were received, used and/or stored at 688 E. Main St. Branford

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Connecticut 06405 spanning its entire NRC license period to present. Licensed materials having a half-life less than 65 days, specifically, a total 95.70 mCi of Phosphorus-33, 1.25 mCi of Phosphorus-32 and 6.87 mCi of radioiodine-125 were also ordered and received during the entire license period, September 10,2002 through February 28,2008. Sulfur-35 was never ordered or received at this licensed Branford, CT facility. Further, no sealed sources of licensed materials were ordered or received at this facility. Therefore, the NRC license limits were never exceeded during use or storage from September 10,2002 through January 7,2009.

Further, the inventory records indicate that a total quantity of 50 uCi of carbon-14 was received for the entire history of the license. Therefore, the amount used, 7.125 uCi (14.25% of the total received), combined with the residual amount of radioactivity remaining in the stock vial, 42.875 uCi, was ultimately disposed of with the waste vendor totaling 50 uCi. If we assume that 10% of the amount used, 0.7125 uCi, was either ingested or inhaled, no member of the general public would have received greater than a total effective dose equivalent (TEDE) of 25 mrem (NRC limits). (see references below)

The inventory records also indicate that a total quantity of 7.491 mCi of tritium was received for the entire history of the license. The amount used 0.5897 mCi (7.9% of the total received), combined with the residual unused amount of radioactivity remaining in the stock vial, 6.9013 mCi, was ultimately disposed of with the waste vendor totaling 7.491 mCi. If we assume that 10% of the amount used,) 0.050 mCi, was either ingested or inhaled, no member of the general public would have received greater than a total effective dose equivalent (TEDE) of 25 rnrem (NRC limits). (see references below)

ICRP 67, "Age-Dependent Doses to Members of the Public From Intake of Radionuclides: Part 2 Ingestion Dose Coefficients"

ICRP 71, "Age-Dependent Doses to Members of the Public From Inake of Radionuclides: Part 4 Inhalation Dose Coefficients

Although the facility is approximately, 13,787 square feet, very small quantities (primarily uCi levels) of licensed radioactive byproduct materials were restricted to and only used within two small designated laboratories (please see diagram, attachment 1). The low level radioactive waste storage closet was immediately adjacent to and accessible within hotlab #1 via a locked door. More specifically, licensed materials were used, stored and secured in either hot lab #1 or hot lab #2 with card key access only. The following licensed materials were used in Hot lab #1 tritium (3H), radioiodine-125, carbon 14, phosphorus 33, phosphorus 32. Hot lab #2 was only used for phosphorus-33, and it was surveyed and closed out approximately 2 years earlier in August 2007. Therefore, greater than 10 half-lives have elapsed since phosphorus-33 was last used and stored in hotlab #2.

Further, a review of the following records was performed at part of the overall decommissioning process. Specifically, a review of research protocols, description of the property, facilities and equipment, RSO and/or authorized user radiation safety surveys,

purchase orders and receipt of licensed by-product materials, radioisotope inventories, transfers of radioisotopes, radiation safety training, emergency response or spill history, waste storage and disposal records was conducted.

Further, there were no spills that occurred in the radioactive materials hot lab at the Branford, Connecticut site. Any minor radioactive contamination detected during routine work or during radiation safety surveys was promptly decontaminated to levels well below the NRC's release guidance criteria listed in NUREG 1556, volume 7, 1999, appendix Q, NRC license requirements, Regulatory Guide 8.23 limit, and/or less than or equal to 200 dpm/100 cm2, along with documentation. Radioactive materials use and storage was performed in the approved radioactive materials research laboratory hot lab number one and hot lab number two only and according to the procedures listed in the NRC license.

Planning for the decommissioning process began in January 2009. During February 2009, extensive decommissioning radiation safety surveys of the entire facility were initiated and performed by teams of Invitrogen authorized user personnel. RSO confirmatory radiation surveys were subsequently performed. The results of the final decommissioning surveys were well below the NRC's release guidance criteria listed in NUREG 1556, volume 7, 1999, appendix Q, NRC license requirements, Regulatory Guide 8.23 limit, and/or less than or equal to 200 dpm/100 cm2.

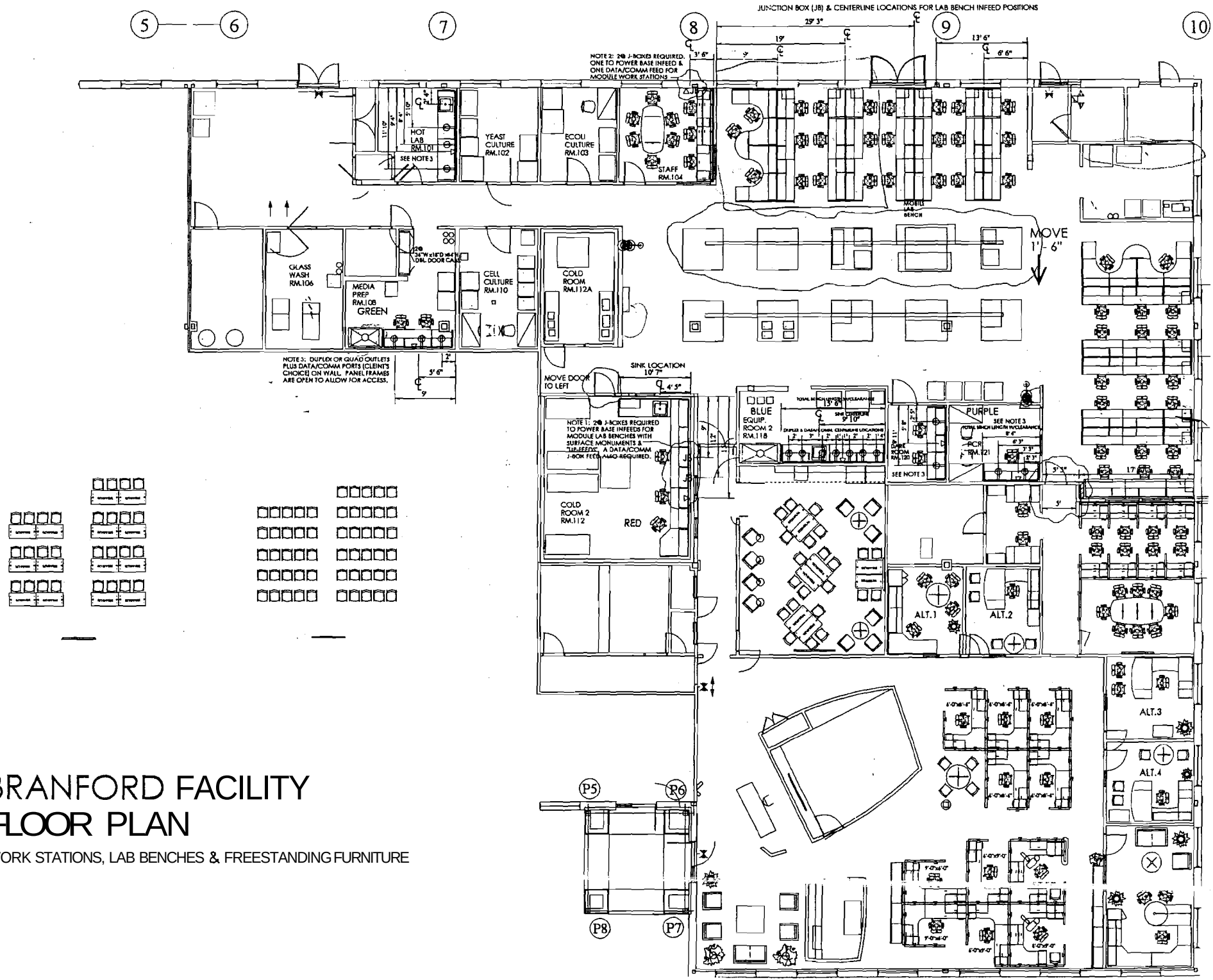
On February 20,2009, and March 10,2009, radioactive waste shipments were conducted to remove all remaining radioactive materials from the Branford Connecticut site. The exterior surfaces of all radioactive waste drums were surveyed with a GM survey meter and wipe tests. The results were indistinguishable from background. In addition, there were no sanitary sewer disposals of liquid radioactive waste in either of the two designated hot lab sinks. A final decommissioning radiation safety survey was performed of the pathway that followed the approved vendors exit of the building during transportation of the sealed radioactive waste containers to their truck (i.e. path of egress). Radiological surveys indicated there was no residual radioactive contamination present. The building remained in the secured state.

If you require additional information or any have questions, please contact Mr. Greg Waterbury at (203) 848–1104 until March 31,2009 or (203) 605-0559 ongoing. In addition, you may also contact Mr. Leif Olsen at 760-268-8696, EH&S Manager, RSO, Invitrogen - Part of Life Technologies, Corporate Headquarters, 5781 Van Allen Way, Carlsbad, CA 92008 for further correspondence after March 31,2009. The NRC radiation safety program, decommissioning and related documents for the 688 East Main Street, Branford, Connecticut 06405 facility will be sent to and subsequently maintained by Mr. Leif Olsen on March 31, 2009. Since there is an urgency associated with this license amendment request, any consideration you can give us in expediting the above request would be greatly appreciated.

Thank you,

Mr. Greg Waterbury
Facilities Manager and Radiation Safety Officer.
Invitrogen Corporation.
688 East Main St.
Branford, Connecticut 06405

CC: Mr. Barry Schweitzer, Ph.D., Management Representative



BRANFORD FACILITY
FLOOR PLAN

WORK STATIONS, LAB BENCHES & FREESTANDING FURNITURE

143541

From: Origin ID: RSPA (203) 848-1104
Greg Waterbury
Life Technologies
688 East Main Street

Branford, CT 06405

FedEx Express

J9011890138202 3

Ship Date: 12MAR09
ActWgt: 0.5 LB
CAD: 5131137/INET9011
Account#: S *********

Delivery Address Bar Code

SHIP TO: (610) 337-5075 BILL SENDER
Mr. Thomas Thompson
US Nuclear Regulatory Commission
475 ALLENDALE RD
NUCLEAR MATERIALS SECTION B
KING OF PRUSSIA, PA 19406

Ref # 10085018.62711
Invoice #
PO #
Dept #

FRI - 13MAR A2
FIRST OVERNIGHT

TRK# 0201 7974 1281 2388

19406
PA-US
PHL

E9 KPDA

This is to acknowledge the receipt of your letter/application dated

3/12/2009, and to inform you that the initial processing which includes an administrative review has been performed.

☑ TERM 06-306 F3-01 There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

_____.

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 143541.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

NRC FORM **532** (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader

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7.1
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9
RECEIVING 100
WASTE 101
WASTE 102
HOT LAB 111
YEAST CULTURE 112
E.COLI CULTURE 113
STAFF 104
MAIN LAB 114
RADIOISOTOPE RESTRICTED ACCESS
CARDKEY SECURED
HALL
AUTHORIZED PERSONNEL
CARDKEY SECURED ACCESS
MECHANICAL 105
GLASS WASH 106
TOILET 107
CELL CULTURE 110
COLD ROOM 1 111
OPEN 109
MEDIA PREP 108
COLD ROOM 2 112
EQUIP 2 118
EQUIP 2A 119
DARK RM 120
FCR 121
SERVER 124
BREAK 123
IT 122
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7.1

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HOT LAB 101

YEAST CULTURE 102

ECOLI CULTURE 103

STAFF 104

HALL

MAIN LAB 114

ENTRY 115

ELEC 116

EQUIP 117

RADIOISOTOPE RESTRICTED ACCESS
CARDKEY SECURED

AUTHORIZED PERSONNEL
CARDKEY SECURED ACCESS

TOILET 107

CELL CULTURE 110

OPEN 109

COLD ROOM 1 112

MEDIA PREP 108

COLD ROOM 2 112

EQUIP 2 118

EQUIP 2A 119

DARK RM 120

P/R 121

SERVER 124

BREAK 128

IT 125

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12'-1"
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14'-3"
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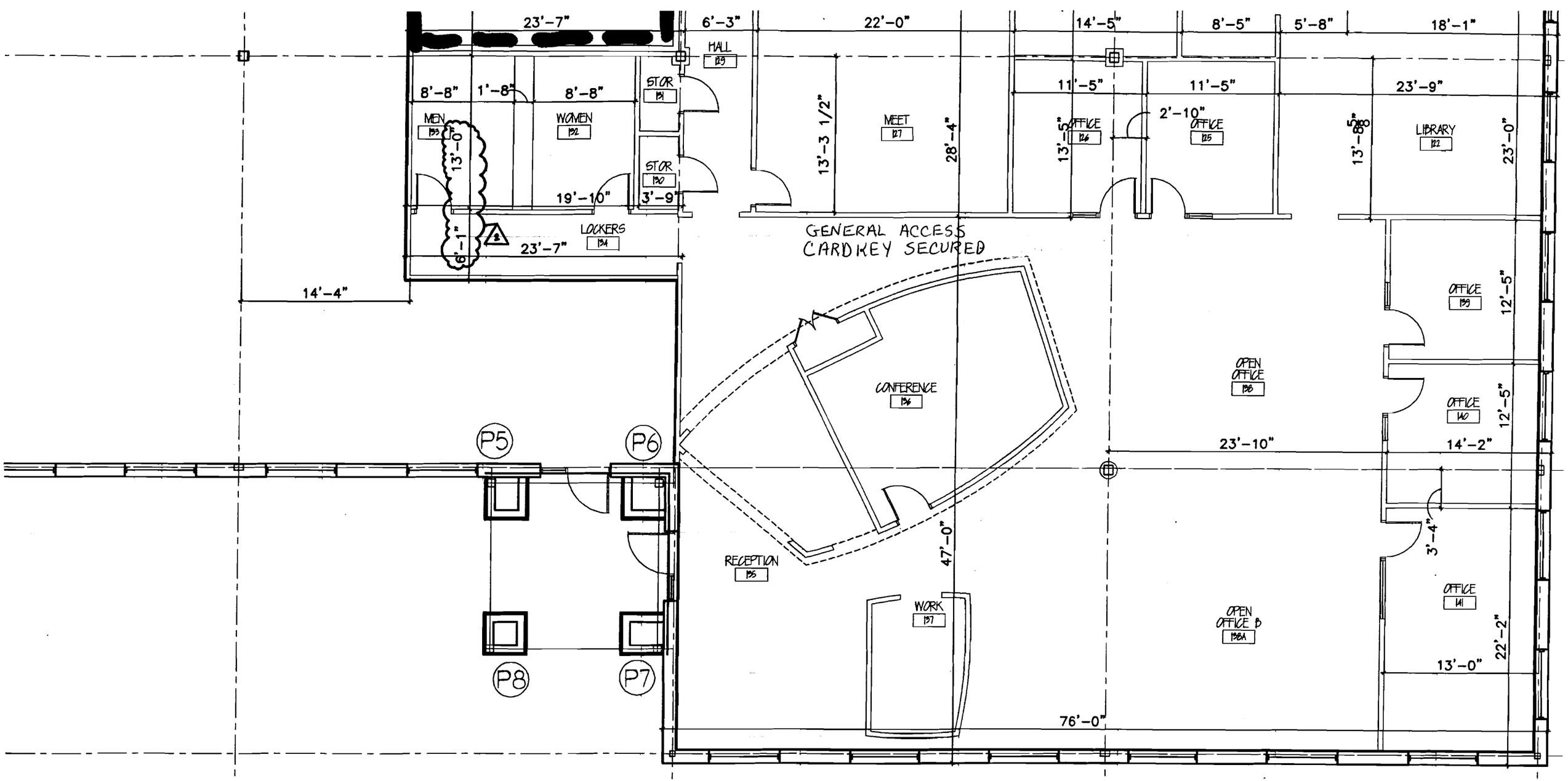
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8'-8"
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MEN
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WOMEN
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13'-0"
STOR
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6'-1"
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14'-4"
13'-3 1/2"
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2'-10"
13'-5"
OFFICE
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OFFICE
125
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LIBRARY
122
23'-9"
23'-0"
GENERAL ACCESS
CARDKEY SECURED
OFFICE
139
12'-5"
CONFERENCE
136
OPEN
OFFICE
138
OFFICE
140
12'-5"
P5
P6
23'-10"
14'-2"
3'-4"
RECEPTION
135
47'-0"
WORK
137
OPEN
OFFICE D
138A
OFFICE
141
22'-2"
13'-0"
P8
P7
76'-0"

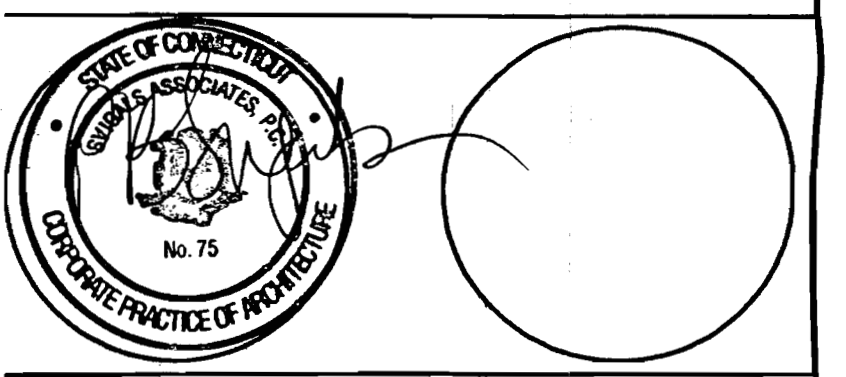
LABORATORY AND OFFICE FOR
PROTOMETRIX, INC.
688 EAST MAIN STREET
BRANFORD, CONNECTICUT

REVISIONS

No.	By	Description	Date
1		REVISION #1	5/24/02
2		REVISION #2	7/19/02

LABO
PRO
688
BRAN

FOR CONSTRUCTION



S V I G A L S

+ P A R T N E R S

ARCHITECTS

84 Orange Street
New Haven
Connecticut 06510
203 786-5110

DIMENSION PLAN

DRAWING TITLE

SCALE: AS NOTED

DATE: 5-6-02

DRAWN BY:

JOB NO: 0201

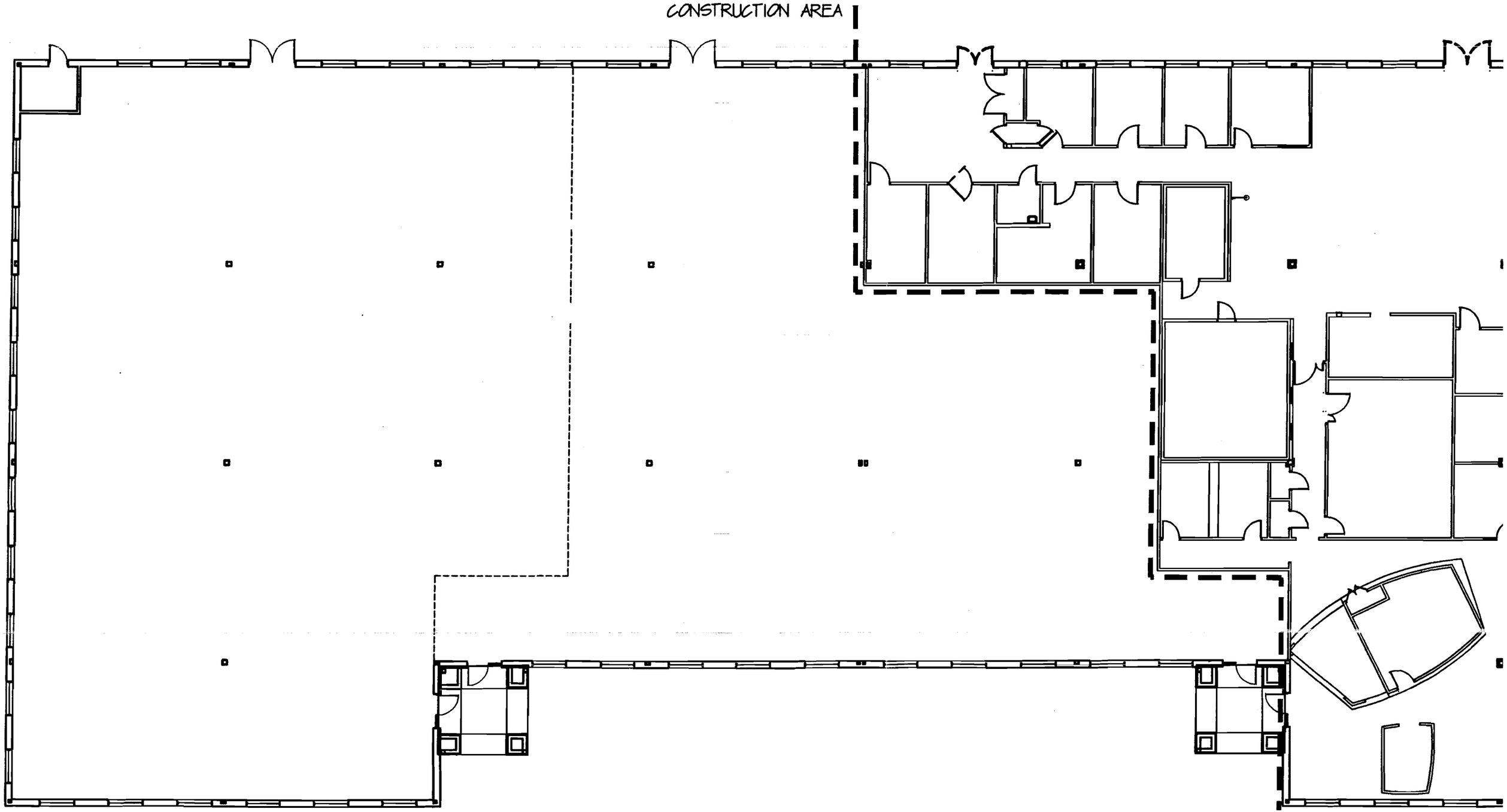
FILE NO:

DRAWING NO.

A-101

DIMS

CONSTRUCTION AREA



CONSTRUCTION AREA