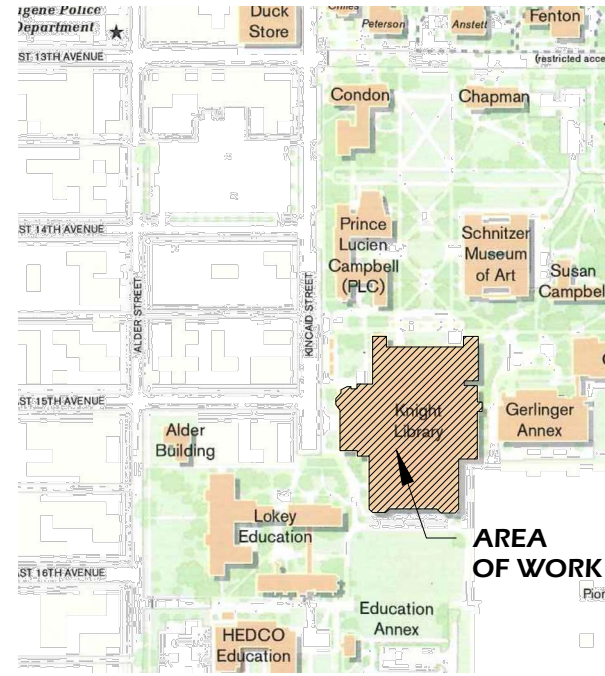


PROJECT DESCRIPTION:

PRIMARILY LAMP BALLAST REPLACEMENT. FIXTURES WITH SIX FOOT AND EIGHT FOOT LAMPS WILL BE REPLACED IN THE STACK DECKS.

RETROFIT FIXTURE QUANTITY:
 NEW FIXTURE QUANTITY:
 NUMBER OF LIGHTING CIRCUITS: 68



LOCATION MAP

DRAWING INDEX

- 18.0 TITLE SHEET
- 18.B BASEMENT FLOOR PLAN
- 18.1M FIRST FLOOR MEZZANINE PLAN - AREA "A"
- 18.1A FIRST FLOOR PLAN - AREA "A"
- 18.1B FIRST FLOOR PLAN - AREA "B"
- 18.2M SECOND FLOOR MEZZANINE PLAN - AREA "A"
- 18.2A SECOND FLOOR PLAN - AREA "A"
- 18.2B SECOND FLOOR PLAN - AREA "B"
- 18.3A THIRD FLOOR PLAN - AREA "A"
- 18.3B THIRD FLOOR PLAN - AREA "B"
- 18.4A FOURTH FLOOR PLAN - AREA "A"
- 18.4B FOURTH FLOOR PLAN - AREA "B"

ADDRESS: KNIGHT LIBRARY
 1501 KINCAID STREET
 EUGENE, OR 97403

PROJECT AREA: XX SF
 BUILDING FOOTPRINT AREA: XX SF

LIGHTING LEGEND

- \$ SWITCH
- \$₃ 3 WAY SWITCH
- \$_D DIMMER SWITCH
- OS OCCUPANCY SENSOR
- 1'x4' FLUORESCENT FIXTURE
- NOT IN SCOPE OF WORK

General Notes		
No.	Revision/Issue	Date



TITLE SHEET

UNIVERSITY OF OREGON

DESIGN SERVICES GROUP
 1295 FRANKLIN BOULEVARD
 EUGENE, OREGON 97403-12176
 (541) 346-2270

FACILITIES SERVICES
 1276 UNIVERSITY OF OREGON
 EUGENE, OREGON 97403-12176

PROJECT NAME:
**T-12 LIGHTING
 SYSTEM IMPROVE-
 MENTS - PHASE 2D:
 KNIGHT LIBRARY**

PROJECT NO.:
WK193368

DATE:
05/01/2012

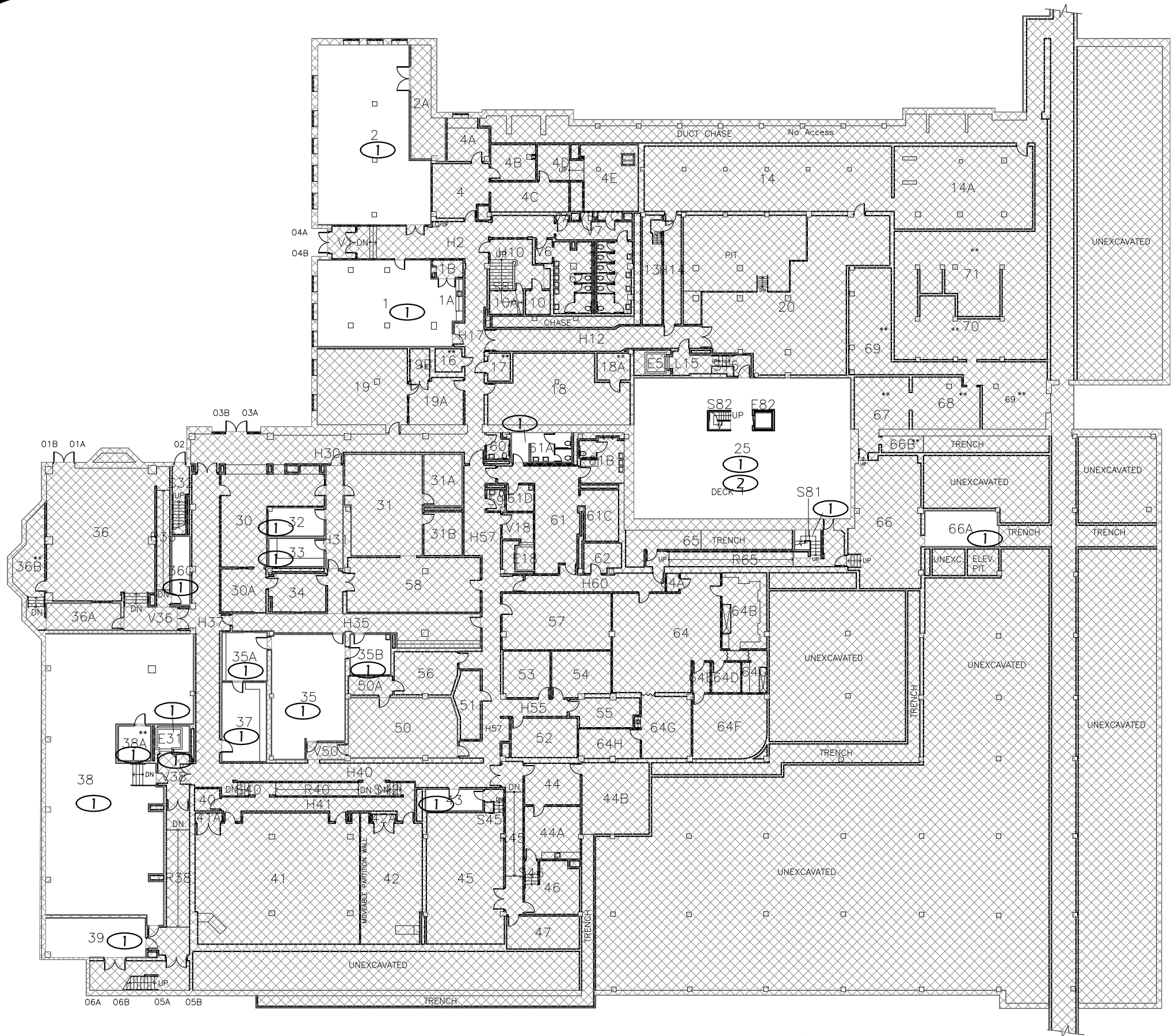
DESIGN/DRAWN BY:
JPK/JNC

SCALE:
1"=1'-0"

DRAWING NO.:

18.0

Paradigm Engineering
 85193 Appletree Drive, Eugene OR 97405
 James Krumsick PE LEED AP
 541 285 1680
 jkrumsick@q.com



FLOOR PLAN KEYED NOTES

- ① RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.
- ② REPLACE FIXTURES WITH 6' AND 8' LAMPS IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.

General Notes		
No.	Revision/Issue	Date



DRAWING TITLE: **BASEMENT FLOOR PLAN - AREA "A"**
UNIVERSITY OF OREGON
 FACILITIES SERVICES
 1276 UNIVERSITY OF OREGON
 EUGENE, OREGON 97403-1216
 DESIGN SERVICES GROUP
 1295 FRANKLIN BOULEVARD
 EUGENE, OREGON 97401-2270
 (541) 346-2270

PROJECT NAME:
**T-12 LIGHTING
 SYSTEM IMPROVE-
 MENTS - PHASE 2D:
 KNIGHT LIBRARY**

PROJECT NO.:
WK193368
 DATE:
05/01/2012
 DESIGN/DRAWN BY:
JPK/JNC
 SCALE:
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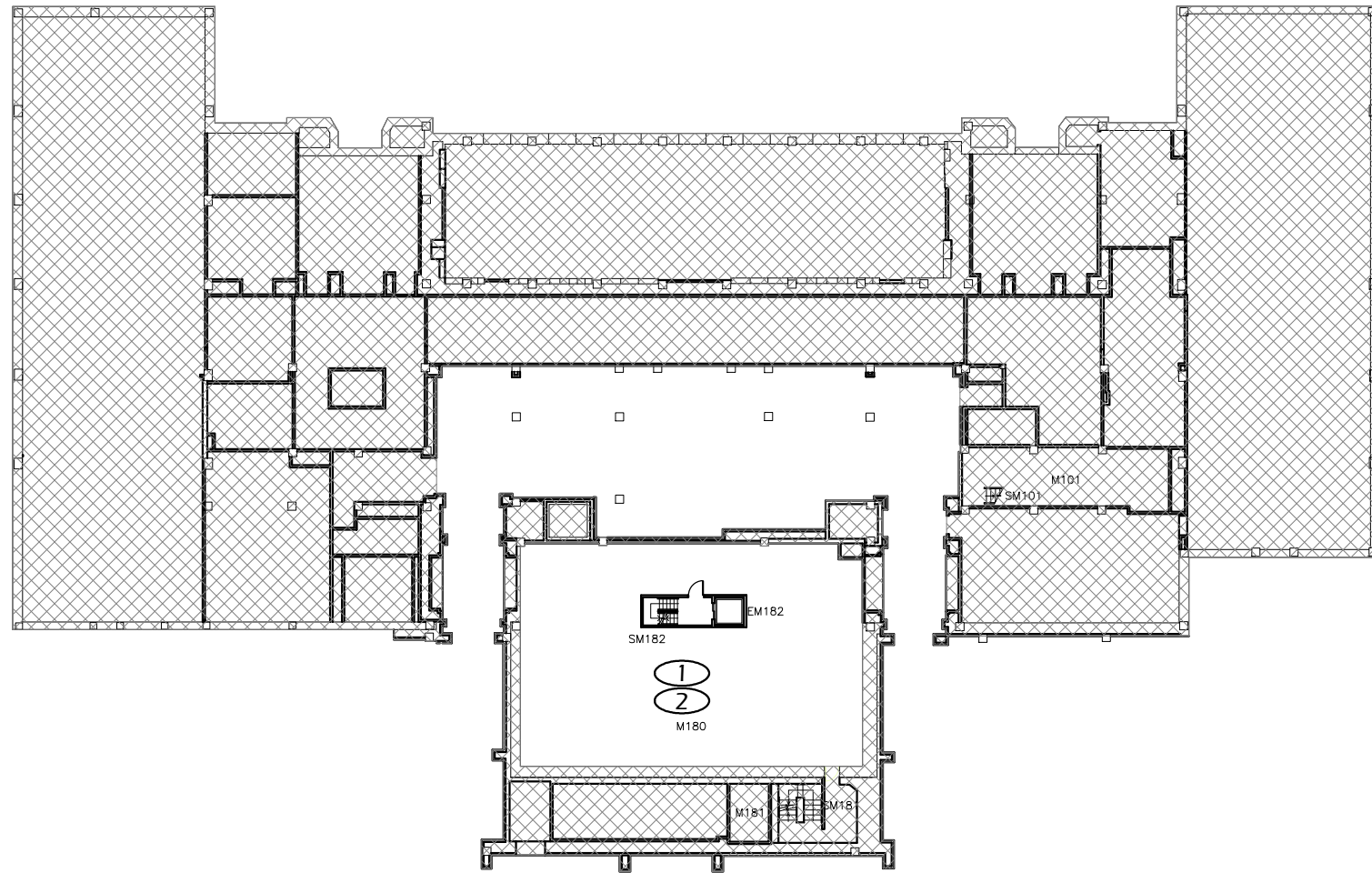
DRAWING NO.:
18.B

1 BASEMENT FLOOR PLAN - AREA "A"
 Scale: 1/32" = 1'-0"

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 jkrumsick@q.com

FLOOR PLAN KEYED NOTES

- ① RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.
- ② REPLACE FIXTURES WITH 6' AND 8' LAMPS IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.



General Notes		
No.	Revision/Issue	Date



DRAWING TITLE: FIRST FLOOR MEZZANINE PLAN - AREA "A"

UNIVERSITY OF OREGON

DESIGN SERVICES GROUP
1295 FRANKLIN BOULEVARD
EUGENE, OREGON 97403-12176
(541) 346-2270

FACILITIES SERVICES
1276 UNIVERSITY OF OREGON
EUGENE, OREGON 97403-12176

PROJECT NAME:
**T-12 LIGHTING
SYSTEM IMPROVE-
MENTS - PHASE 2D:
KNIGHT LIBRARY**

PROJECT NO.:
WK193368

DATE:
05/01/2012

DESIGN/DRAWN BY:
JPK/JNC

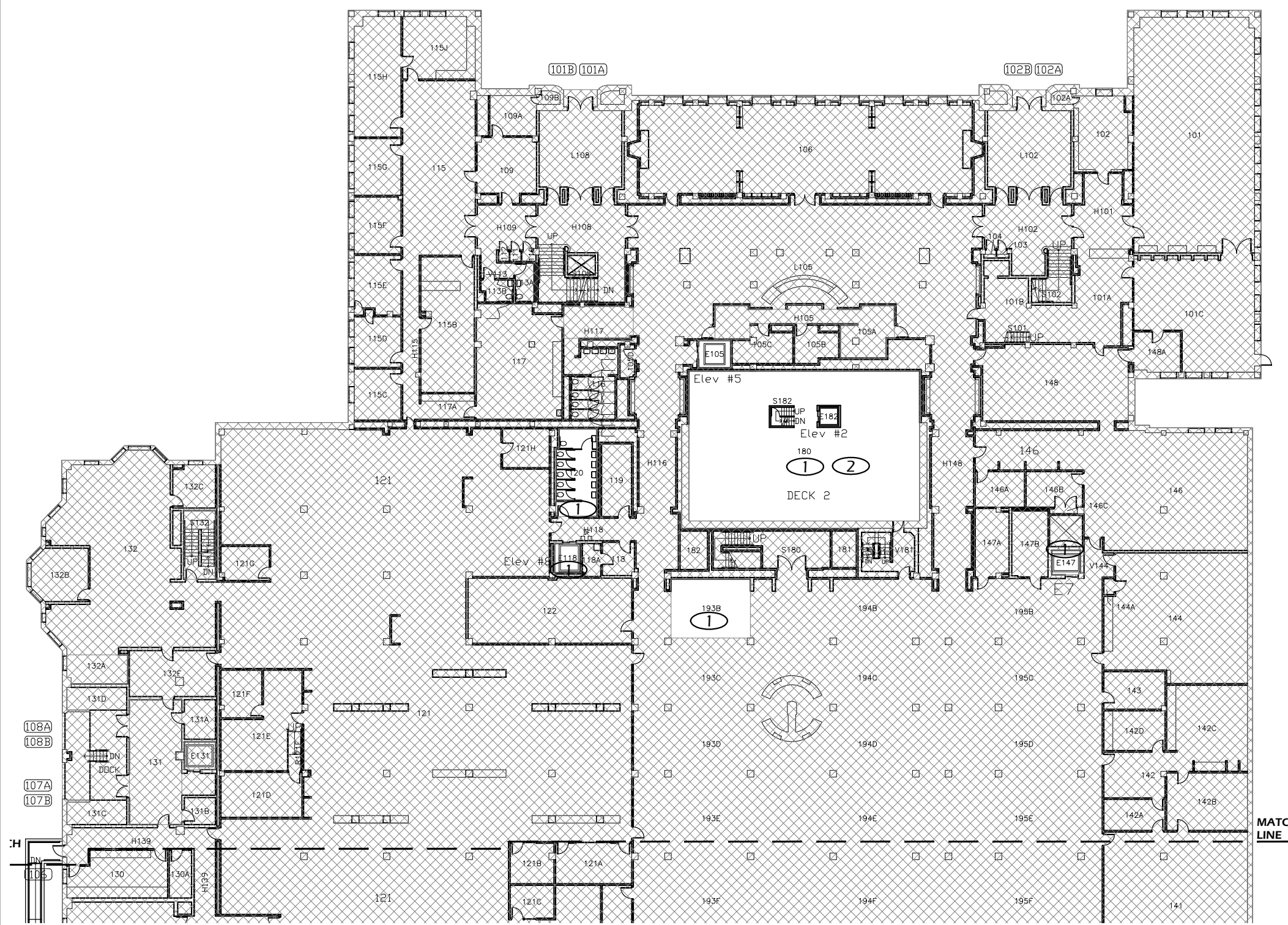
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DRAWING NO.:
18.1M

1 FIRST FLOOR MEZZANINE PLAN - AREA "A"
Scale: 1/32" = 1'-0"



Paradigm Engineering
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jkrumsick@q.com



FLOOR PLAN KEYED NOTES

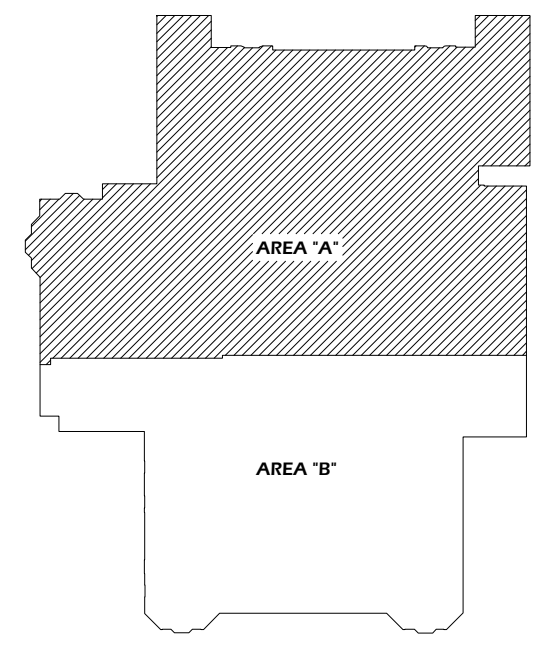
- 1 RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.
- 2 REPLACE FIXTURES WITH 6' AND 8' LAMPS IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.

General Notes

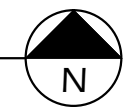
No.	Revision/Issue	Date



FIRST FLOOR KEY PLAN - AREA "A"



1 FIRST FLOOR PLAN - AREA "A"
Scale: 1/32" = 1'-0"



MATCH LINE

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541 285 1680
jkrumsick@q.com

DRAWING TITLE: **FIRST FLOOR PLAN - AREA "A"**

UNIVERSITY OF OREGON

DESIGN SERVICES GROUP
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EUGENE, OREGON 97403-1216
(541) 346-2270

FACILITIES SERVICES
1276 UNIVERSITY OF OREGON
EUGENE, OREGON 97403-1216
(541) 346-2270

PROJECT NAME:
T-12 LIGHTING SYSTEM IMPROVEMENTS - PHASE 2D: KNIGHT LIBRARY

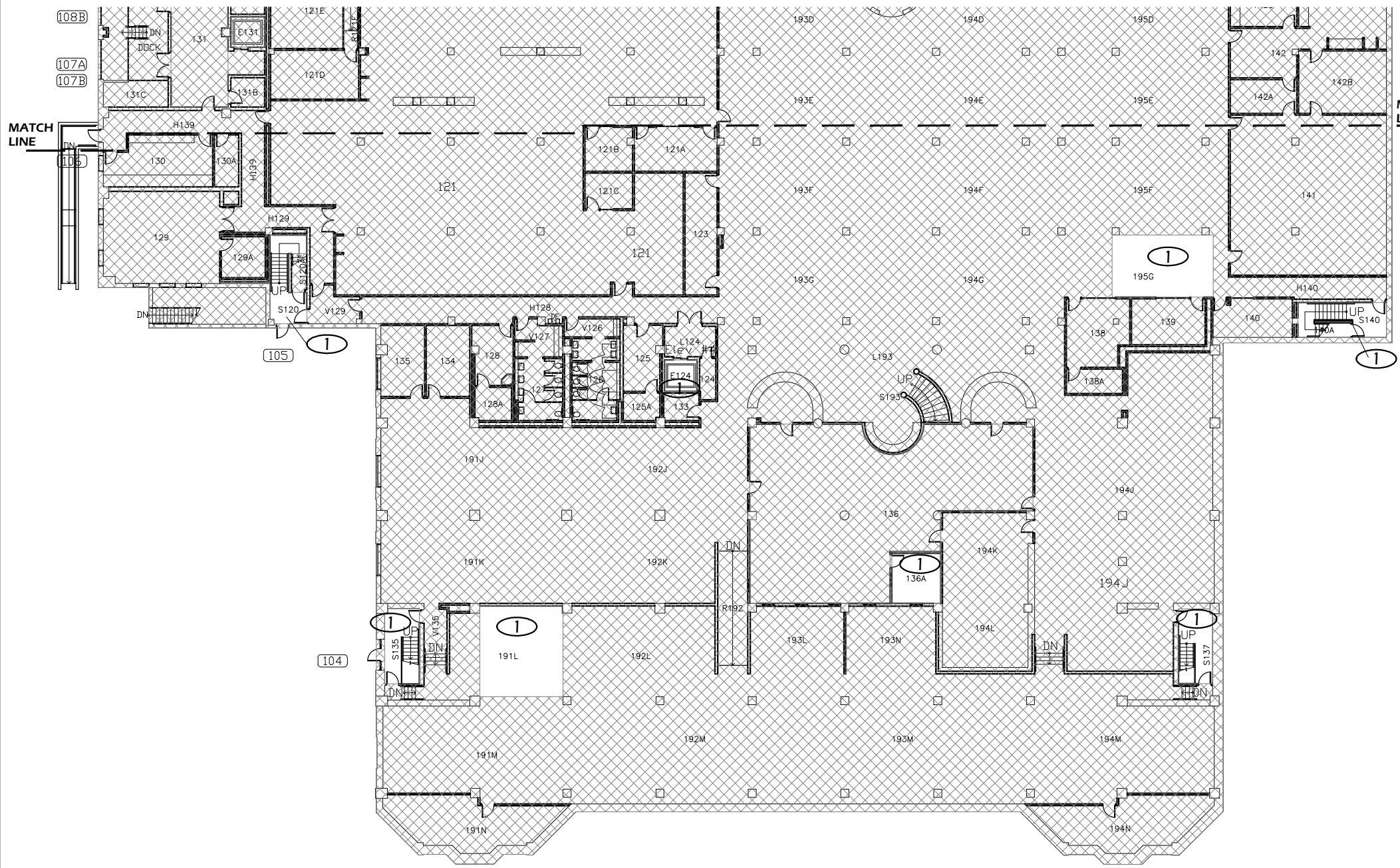
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DATE: **05/01/2012**
DESIGN/DRAWN BY: **JPK/JNC**
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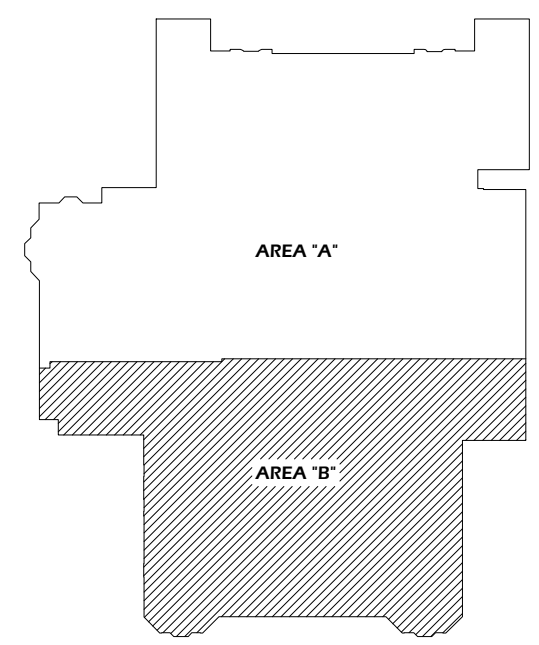
FLOOR PLAN KEYED NOTES

- ① RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.

General Notes		
No.	Revision/Issue	Date



FIRST FLOOR KEY PLAN - AREA "B"



1 FIRST FLOOR PLAN - AREA "B"
Scale: 1/32" = 1'-0"

DRAWING TITLE: **FIRST FLOOR PLAN - AREA "B"**

UNIVERSITY OF OREGON

DESIGN SERVICES GROUP
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EUGENE, OREGON 97403-1216
541.346.2270

FACILITIES SERVICES
1276 UNIVERSITY OF OREGON
EUGENE, OREGON 97403-12176

PROJECT NAME:
**T-12 LIGHTING
SYSTEM IMPROVE-
MENTS - PHASE 2D:
KNIGHT LIBRARY**

PROJECT NO.:
WK193368

DATE:
05/01/2012

DESIGN/DRAWN BY:
JPK/JNC

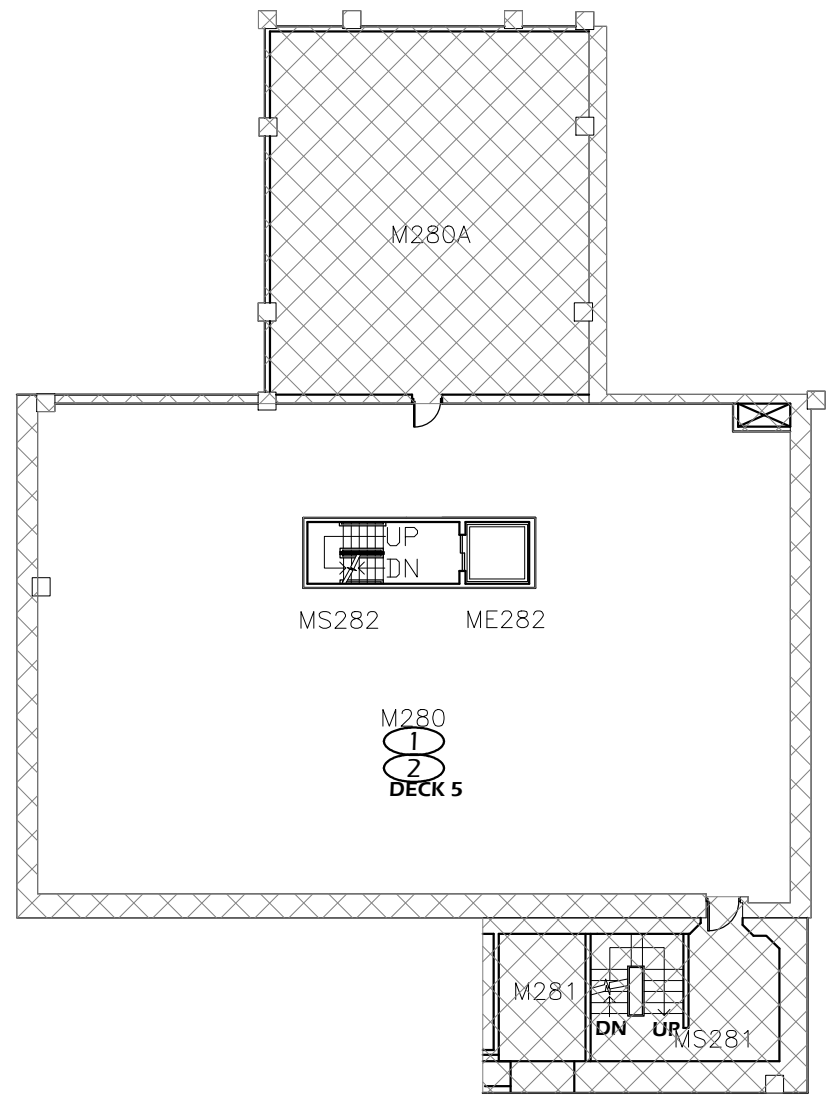
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James Krumsick PE LEED AP
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jkrumsick@q.com

DRAWING NO.:
18.1B

FLOOR PLAN KEYED NOTES

- ① RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.
- ② REPLACE FIXTURES WITH 6' AND 8' LAMPS IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.



General Notes		
No.	Revision/Issue	Date



DRAWING TITLE: SECOND MEZZANINE FLOOR PLAN - AREA "A"

UNIVERSITY OF OREGON

DESIGN SERVICES GROUP
1295 FRANKLIN BOULEVARD
EUGENE, OREGON 97403-1216
(541) 346-2270

PROJECT NAME:
T-12 LIGHTING
SYSTEM IMPROVE-
MENTS - PHASE 2D:
KNIGHT LIBRARY

PROJECT NO.:
WK193368

DATE:
05/01/2012

DESIGN/DRAWN BY:
JPK/JNC

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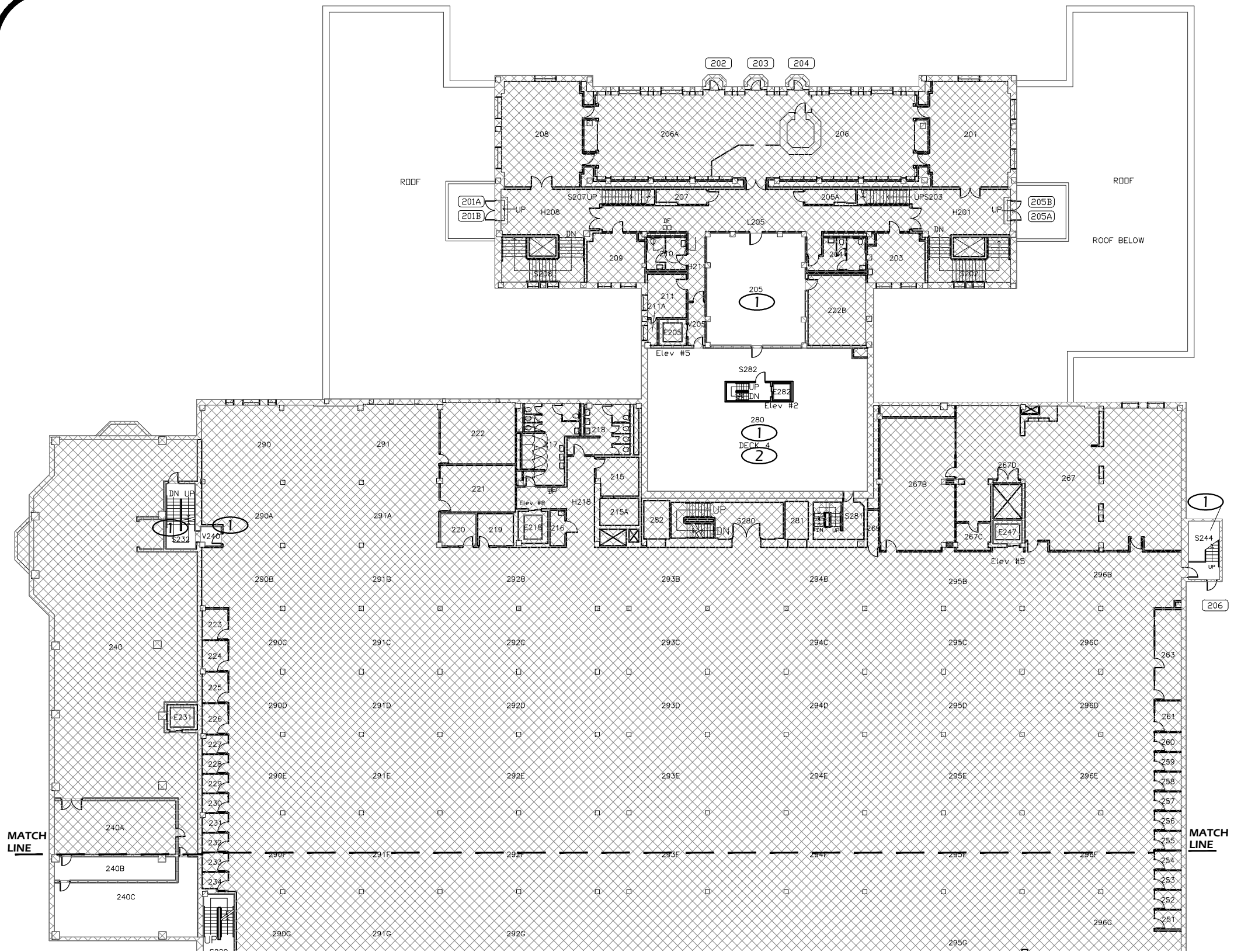
DRAWING NO.:
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1 SECOND MEZZANINE FLOOR PLAN - AREA "A"
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Paradigm Engineering

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jkrumsick@q.com



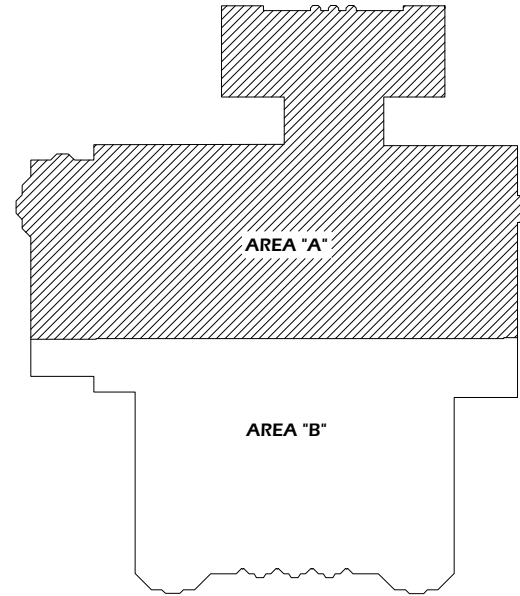
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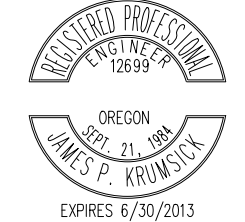
FLOOR PLAN KEYED NOTES

- ① RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.
- ② REPLACE FIXTURES WITH 6' AND 8' LAMPS IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.

SECOND FLOOR KEY PLAN - AREA "A"



General Notes		
No.	Revision/Issue	Date



DRAWING TITLE: **SECOND FLOOR PLAN - AREA "A"**

UNIVERSITY OF OREGON

DESIGN SERVICES GROUP
1295 FRANKLIN BOULEVARD
EUGENE, OREGON 97403-1216
(541) 346-2270

PROJECT NAME:
**T-12 LIGHTING
SYSTEM IMPROVE-
MENTS - PHASE 2D:
KNIGHT LIBRARY**

PROJECT NO.:
WK193368

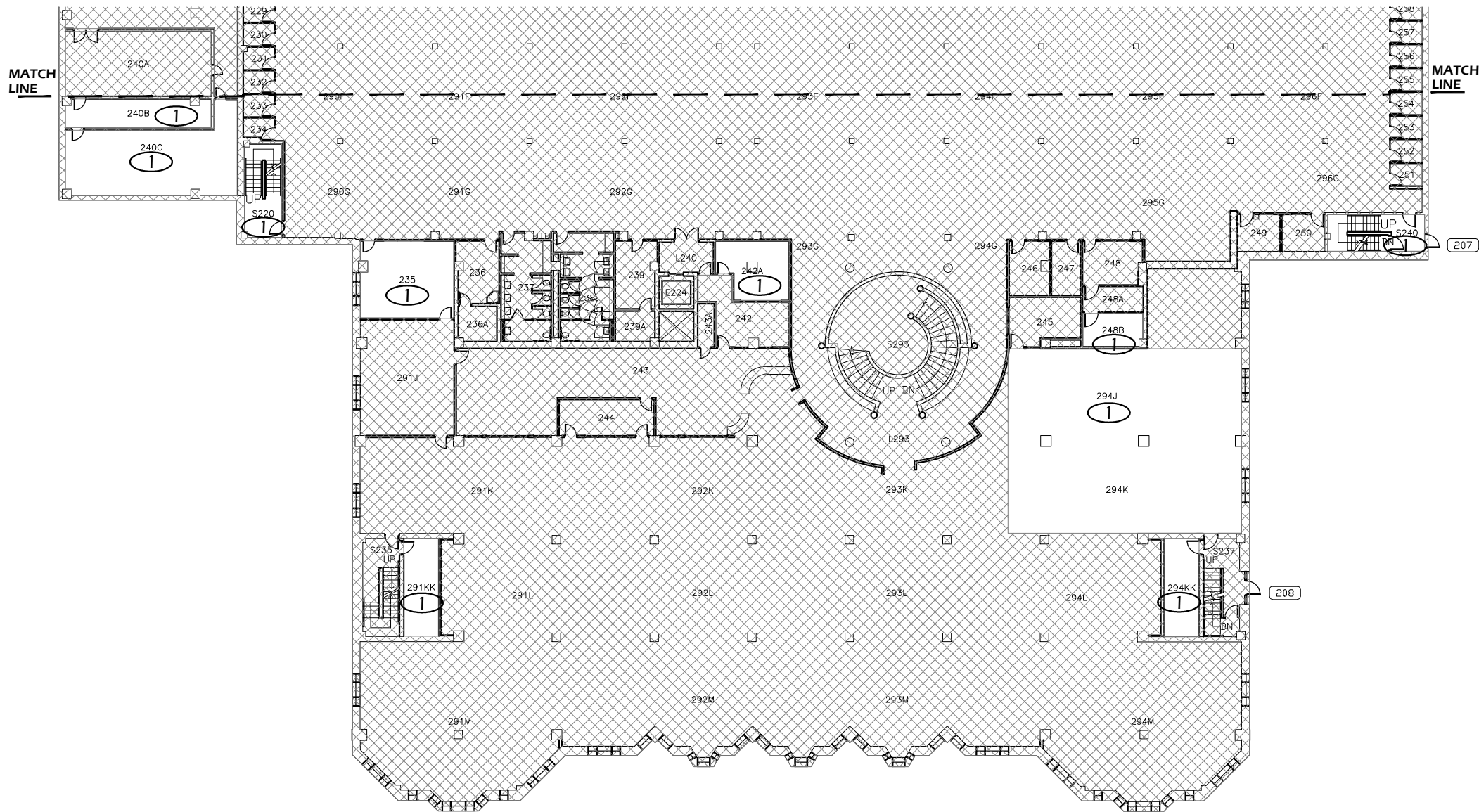
DATE:
05/01/2012

DESIGN/DRAWN BY:
JPK/JNC

SCALE:
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DRAWING NO.:
18.2A

Paradigm Engineering
85193 Appletree Drive, Eugene OR 97405
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541 285 1680
jkrumsick@q.com



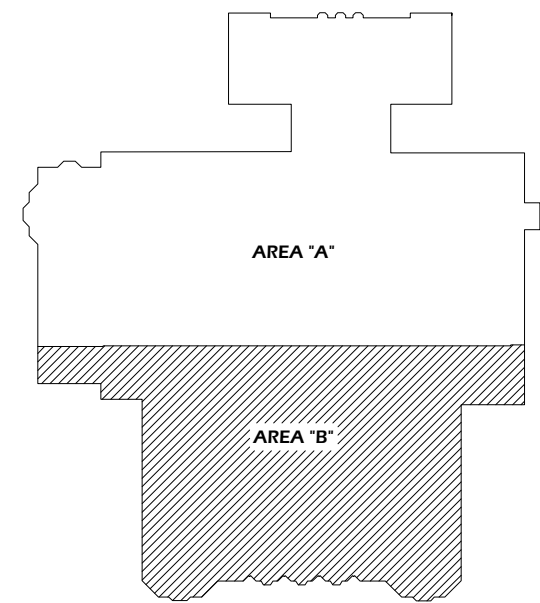
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FLOOR PLAN KEYED NOTES

- ① RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.

SECOND FLOOR KEY PLAN - AREA "B"



General Notes		
No.	Revision/Issue	Date



UNIVERSITY OF OREGON

DRAWING TITLE: **SECOND FLOOR PLAN - AREA "B"**

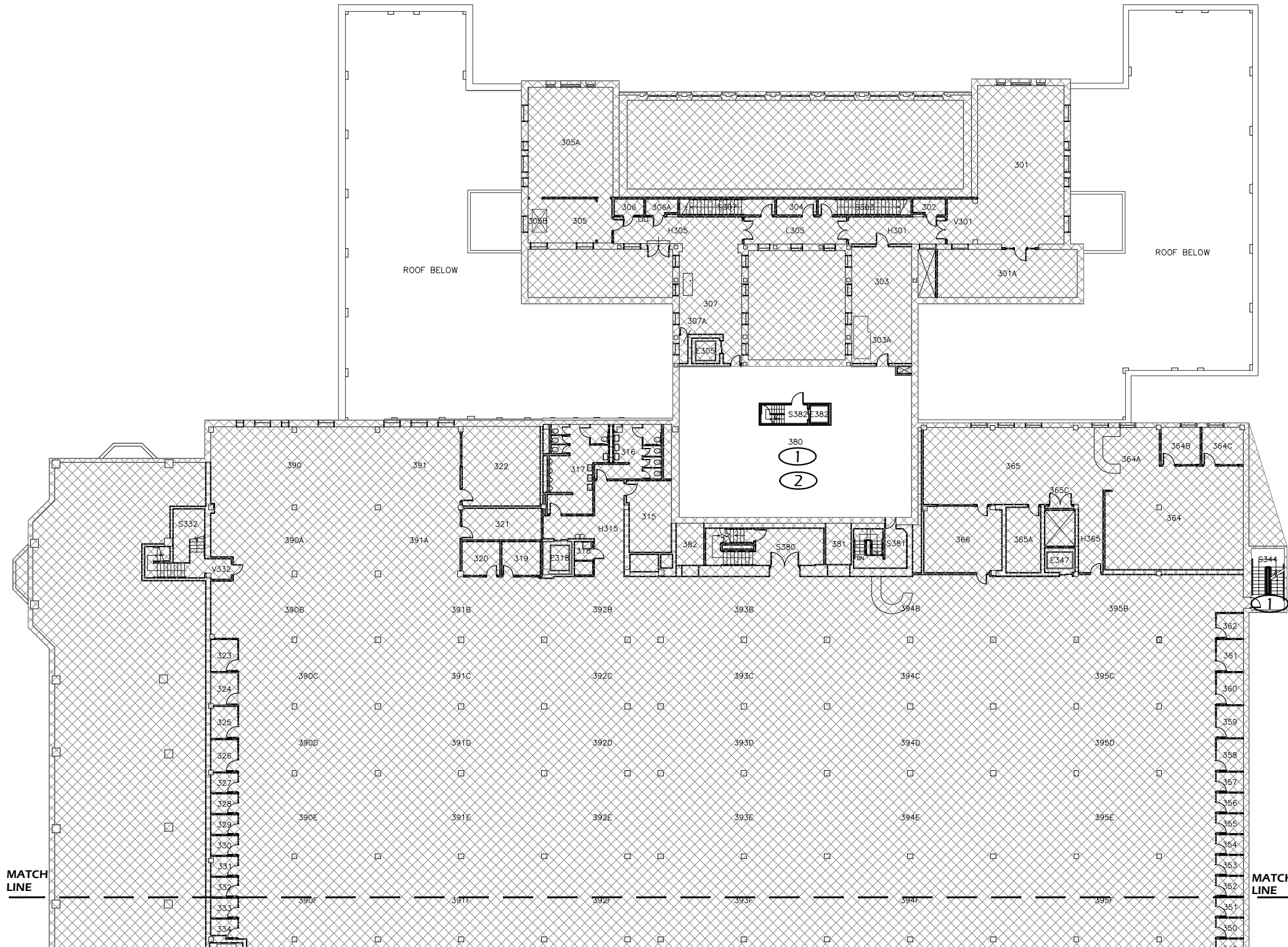
DESIGN SERVICES GROUP
1295 FRANKLIN BOULEVARD
EUGENE, OREGON 97403-12176
1541 346-2270

PROJECT NAME:
T-12 LIGHTING SYSTEM IMPROVEMENTS - PHASE 2D: KNIGHT LIBRARY

PROJECT NO.: **WK193368**
DATE: **05/01/2012**
DESIGN/DRAWN BY: **JPK/JNC**
SCALE: **1/32"=1'-0"**

DRAWING NO.: **18.2B**

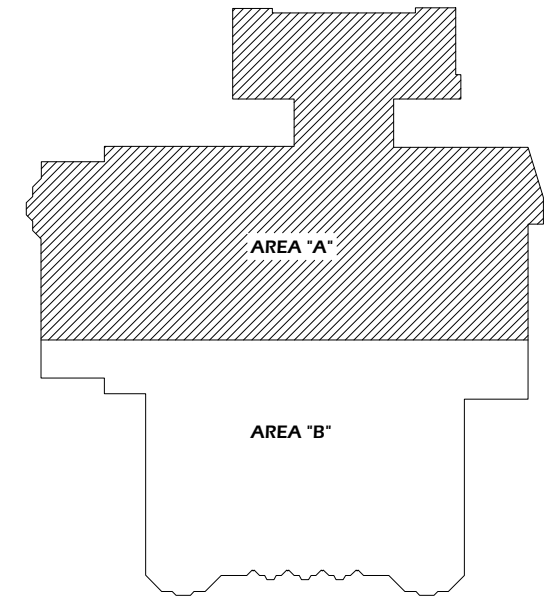
Paradigm Engineering
85193 Appletree Drive, Eugene OR 97405
James Krumsick PE LEED AP
541 285 1680
jkrumsick@q.com



FLOOR PLAN KEYED NOTES

- ① RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.
- ② REPLACE FIXTURES WITH 6' AND 8' LAMPS IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.

THIRD FLOOR KEY PLAN - AREA "A"



General Notes		
No.	Revision/Issue	Date



DRAWING TITLE: **THIRD FLOOR PLAN - AREA "A"**
UNIVERSITY OF OREGON
 DESIGN SERVICES GROUP
 1295 FRANKLIN BOULEVARD
 EUGENE, OREGON 97403-1216
 (541) 346-2270

PROJECT NAME:
T-12 LIGHTING SYSTEM IMPROVEMENTS - PHASE 2D: KNIGHT LIBRARY

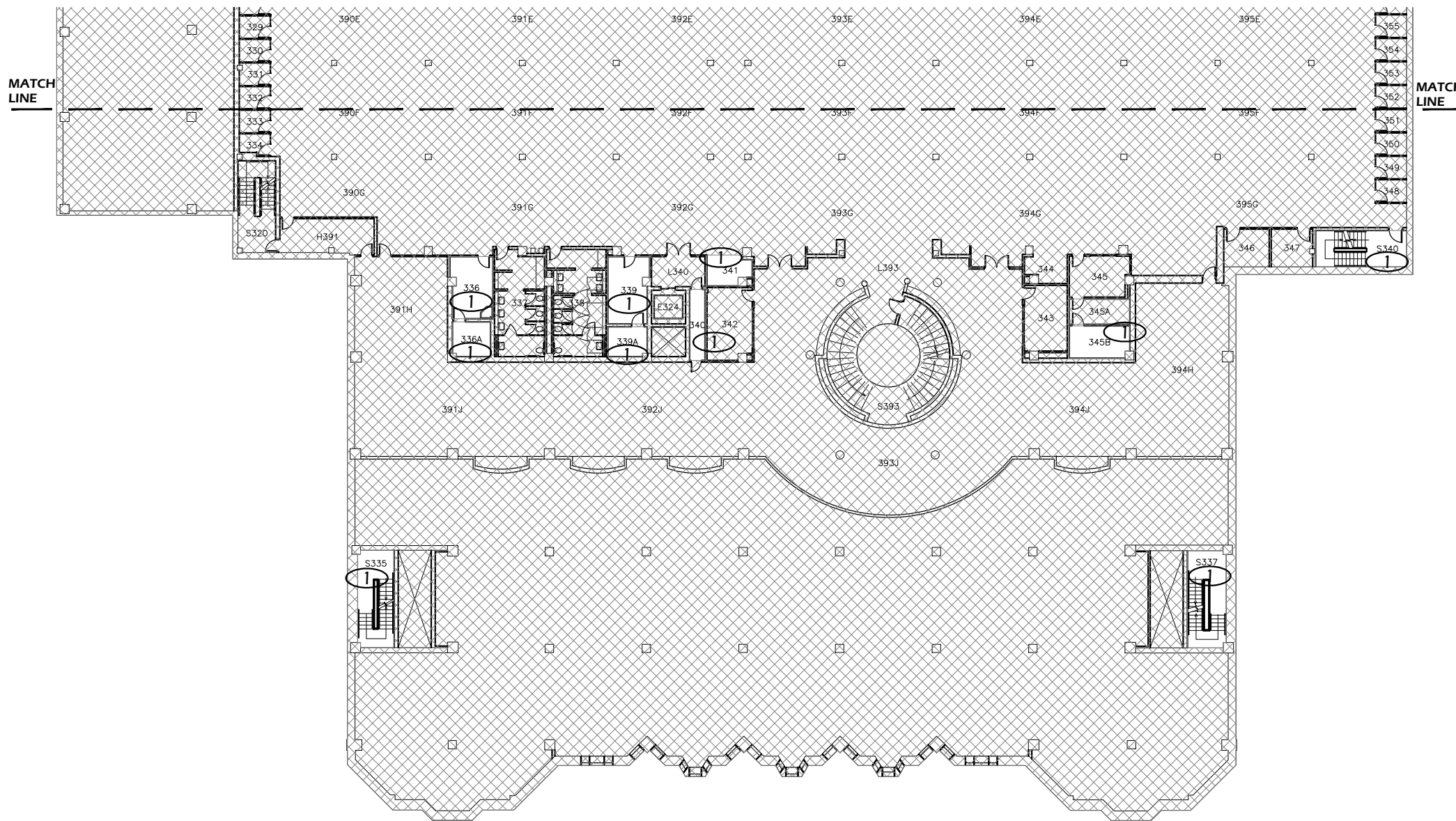
PROJECT NO.:
WK193368
 DATE:
05/01/2012
 DESIGN/DRAWN BY:
JPK/JNC
 SCALE:
1/32" = 1'-0"

DRAWING NO.:
18.3A

1 THIRD FLOOR PLAN - AREA "A"
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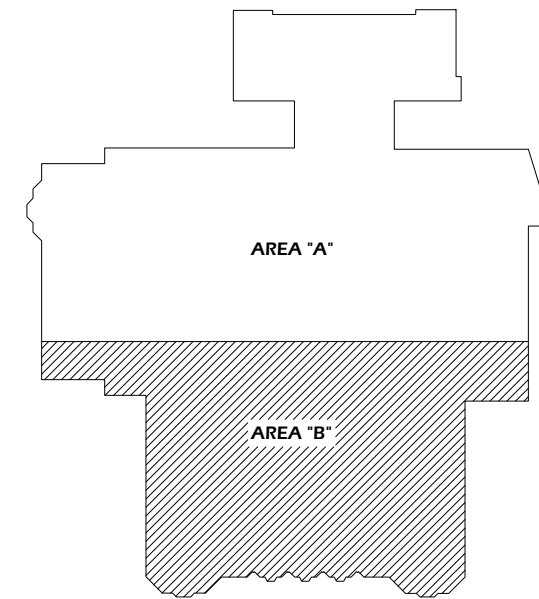
Paradigm Engineering
 85193 Appletree Drive, Eugene OR 97405
 James Krumsick PE LEED AP
 541 285 1680
 jkrumsick@q.com



FLOOR PLAN KEYED NOTES

- ① RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.

THIRD FLOOR KEY PLAN - AREA "B"



General Notes		
No.	Revision/Issue	Date



DRAWING TITLE: **THIRD FLOOR PLAN - AREA "B"**

UNIVERSITY OF OREGON

DESIGN SERVICES GROUP
1295 FRANKLIN BOULEVARD
EUGENE, OREGON 97403-12176
(541) 346-2270

PROJECT NAME:
T-12 LIGHTING SYSTEM IMPROVEMENTS - PHASE 2D: KNIGHT LIBRARY

PROJECT NO.:
WK193368

DATE:
05/01/2012

DESIGN/DRAWN BY:
JPK/JNC

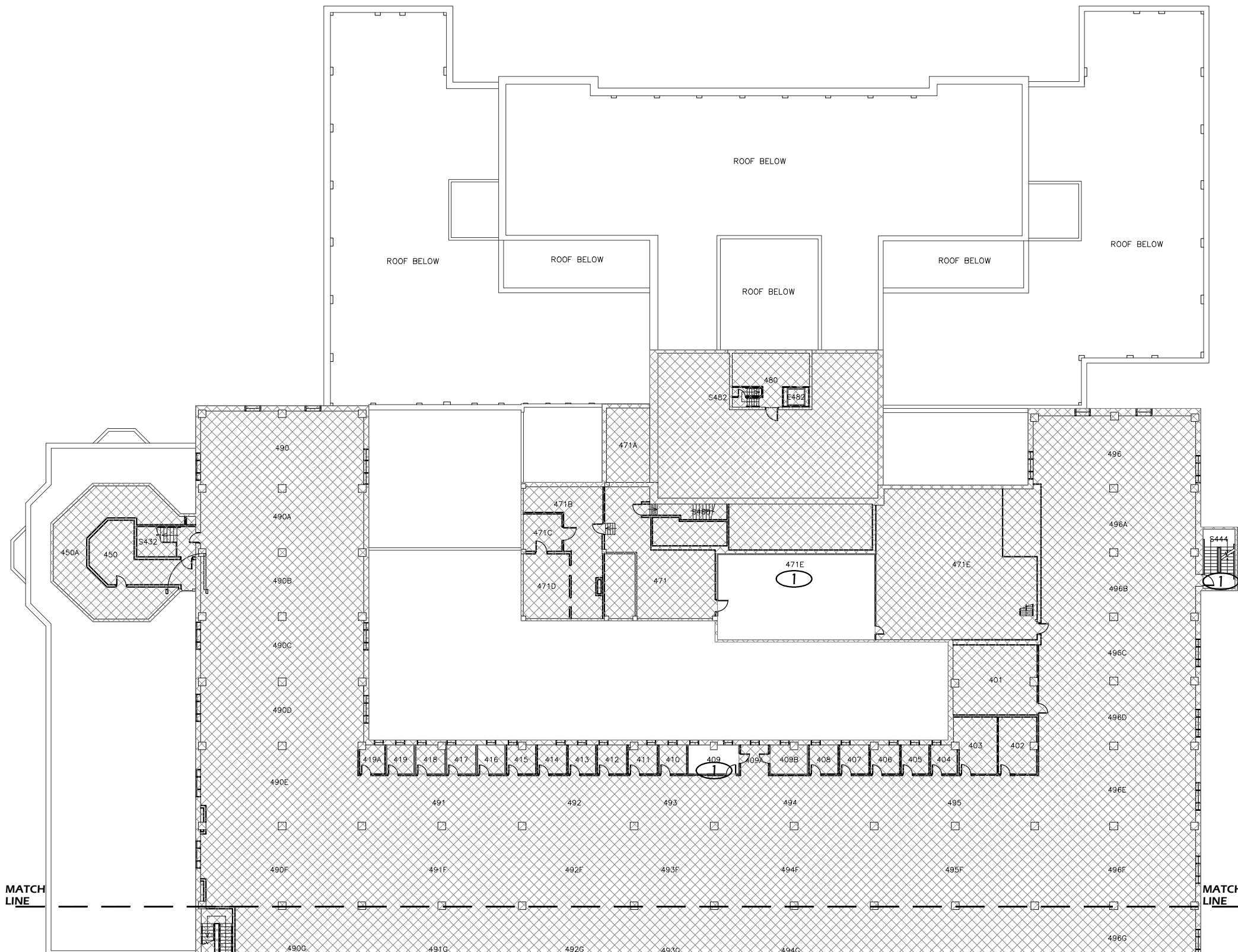
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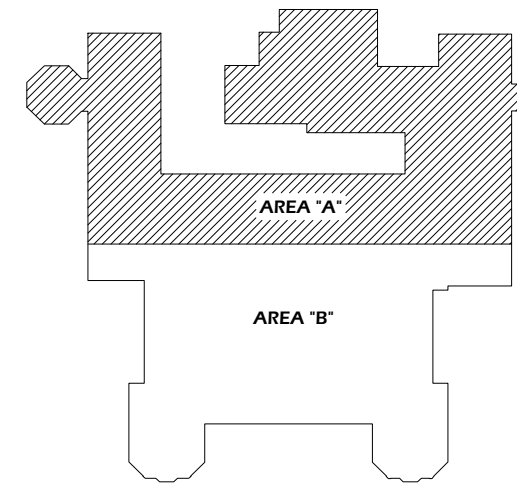
Paradigm Engineering
85193 Appletree Drive, Eugene OR 97405
James Krumsick PE LEED AP
541 285 1680
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FLOOR PLAN KEYED NOTES

- ① RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.

FOURTH FLOOR KEY PLAN - AREA "A"



General Notes		
No.	Revision/Issue	Date



DRAWING TITLE: **FOURTH FLOOR PLAN - AREA "A"**
UNIVERSITY OF OREGON
 FACILITIES SERVICES
 1276 UNIVERSITY OF OREGON
 EUGENE, OREGON 97403-1276
 DESIGN SERVICES GROUP
 1295 FRANKLIN BOULEVARD
 EUGENE, OREGON 97401-2270

PROJECT NAME:
T-12 LIGHTING SYSTEM IMPROVEMENTS - PHASE 2D: KNIGHT LIBRARY

PROJECT NO.: **WK193368**
 DATE: **05/01/2012**
 DESIGN/DRAWN BY: **JPK/JNC**
 SCALE: **1/32" = 1'-0"**

DRAWING NO.: **18.4A**

1 FOURTH FLOOR PLAN - AREA "A"
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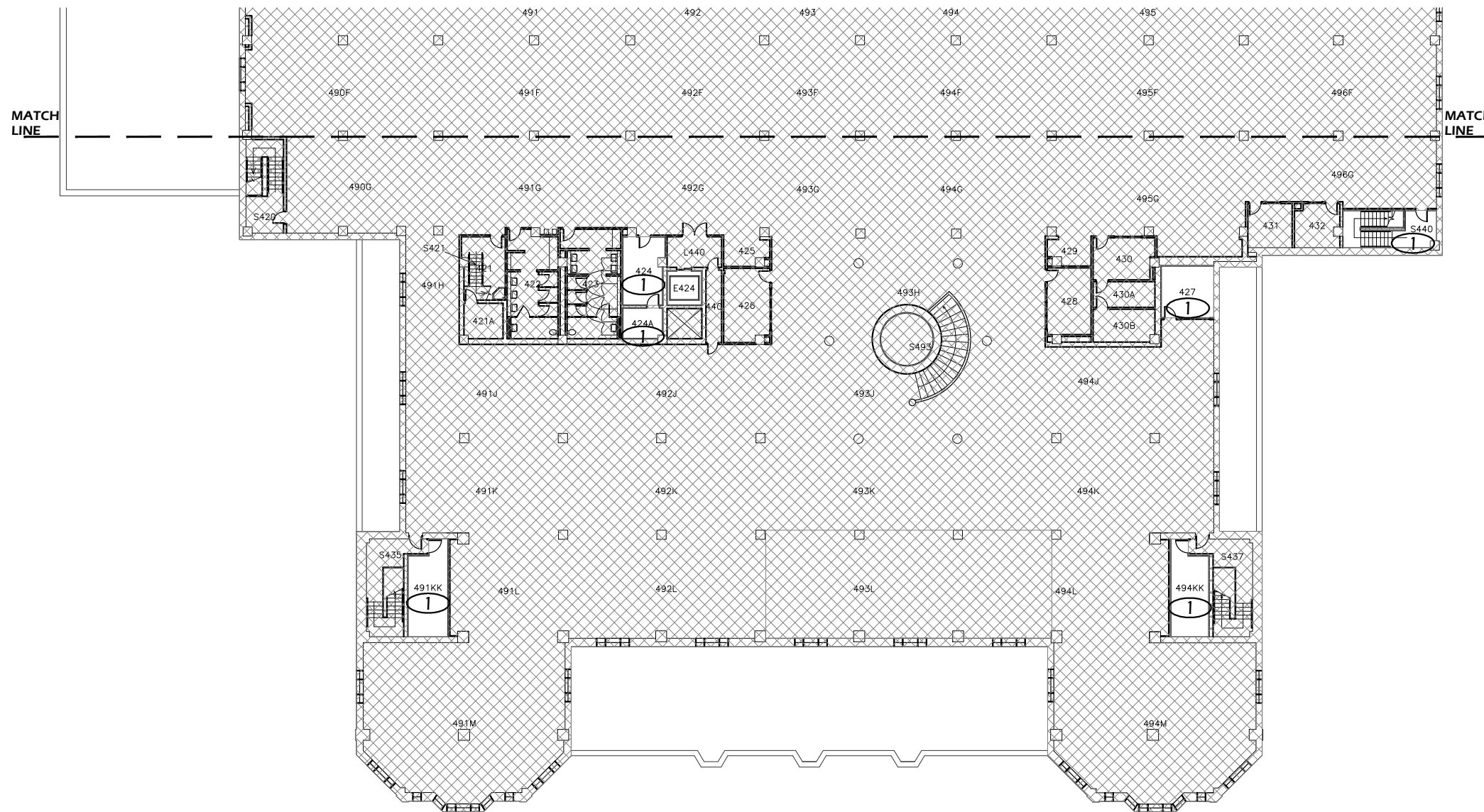
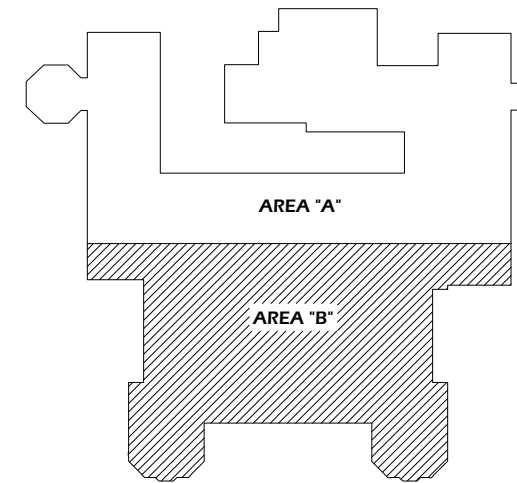


Paradigm Engineering
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 James Krumsick PE LEED AP
 541 285 1680
 jkrumsick@q.com

FLOOR PLAN KEYED NOTES

- ① RELAMP AND REBALLAST EXISTING LIGHT FIXTURES IN ACCORDANCE WITH SPECIFICATION SECTION 265000 AND BUILDING / ROOM SCHEDULE.

FOURTH FLOOR KEY PLAN - AREA "B"



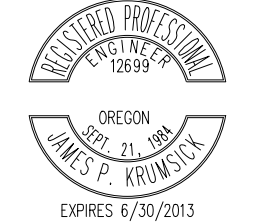
1 FOURTH FLOOR PLAN - AREA "B"
Scale: 1/32" = 1'-0"



Paradigm Engineering

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General Notes		
No.	Revision/Issue	Date



FOURTH FLOOR PLAN - AREA "B"

UNIVERSITY OF OREGON

DESIGN SERVICES GROUP
1276 FRANKLIN BOULEVARD
EUGENE, OREGON 97403-1276
(541) 346-2270

PROJECT NAME:
**T-12 LIGHTING
SYSTEM IMPROVE-
MENTS - PHASE 2D:
KNIGHT LIBRARY**

PROJECT NO.:
WK193368

DATE:
05/01/2012

DESIGN/DRAWN BY:
JPK/JNC

SCALE:
1/32"=1'-0"

DRAWING NO.:
18.4B

PART 1 GENERAL

1.1 CONTRACT DESCRIPTION

- A. The project generally consists of Work in the Knight Library.

1.2 PROJECT DRAWINGS

- A. See Table of Contents

1.3 CONTRACT METHOD

- A. Construct the Work under the OUS Retainer Contract. The work will be constructed under a single fixed price contract.
- B. The drawings are included for reference and project orientation. The University of Oregon is a dynamic place and drawings do not necessarily reflect the actual building configuration and notes don't always reflect the full scope of work required. The schedules at the end of this specification takes precedence over the drawings in determining the scope of work for the project.

1.4 CONTRACT TIME AND SEQUENCING OF THE WORK

- A. Do not commence Work until after execution of the Agreement, and receipt of Notice to Proceed from Owner.
- B. Perform work so as to achieve Substantial Completion of the work no later than September 14, 2012.

1.5 USE OF SITE

- A. Access to the work area will be available on a 24/7 basis.
- B. Limit use of the premises to construction activities. Material Storage will be available in Second Floor mechanical room # 240.
- C. Parking: Parking is restricted by issued parking permits through the Department of Public Safety in designated locations only. Contractor shall pay all costs and fees associated with parking permits.
- D. Construction Operations: Limited to areas indicated on Drawings. Use of electric lifts inside buildings is prohibited.

1.6 OWNER / CONTRACTOR RESPONSIBILITIES

- A. Owner / Engineer's Responsibilities:
 - 1. Arrange for and deliver Owner reviewed Shop Drawings, Product Data, and Samples, to Contractor.
 - 2. Arrange Plan Submittal to the City and pay for Permits.
- B. Contractor's Responsibilities:

1. Review Owner reviewed Shop Drawings, Product Data, and Samples.
2. Receive and unload Products at site; inspect for completeness or damage, jointly with Owner.
3. Handle, store, install and finish Products.
4. Repair or replace items damaged after receipt.

1.7 OWNER'S USE OF PREMISES

- A. Except during Holidays and other Vacation Periods, Owner will occupy all existing Building Premises during construction period for the conduct of his normal operations.
- B. Cooperate with Owner during construction operations to minimize conflicts and to facilitate Owner's use of facilities.
- C. Schedule Work to maintain Owner's continuous operations. Include in Contract Sum sufficient funds as may be required for any "overtime" work caused by this requirement. No additional payment to Contractor will be authorized because of Contractor's failure to anticipate required "overtime" work.

1.8 CONTRACTOR'S USE OF PREMISES

- A. Obtain and pay for any necessary additional Storage or Work Areas at no additional cost to Owner.
- B. Contractor shall conduct his operations as to insure the least reasonable inconvenience to the General Public.
- C. Work in Rooms 1, 31, 32, 33, 35A, 35B, 35, 36C, 37, 130, 135, 135, 136A, 335, 337, 339, 409 424, and 427 shall be scheduled when the Library is closed.
- D. Work in Rooms 25, 180, M180, 205, 280, M280, and 380 shall be performed during normal Library business hours. The Contractor will be escorted by Library staff when working in these rooms.
- E. Library Summer Schedule is as follows:

Monday, June 25 - Friday, August 17:
 - Monday - Thursday: 8am - 9pm
 - Friday: 8am - 7pm
 - Saturday: 12 noon - 7pm
 - Sunday: 12 noon - 9pmSaturday, August 18 - Sunday, September 23:
 - Monday - Friday: 9am - 6pm
 - Saturday/Sunday: closed

1.9 OVERTIME WORK

- A. The Contractor shall notify the Owner at least 48 hours in advance of any overtime work, including nights, weekends, and holidays.

1.10 SURVEYING EXISTING CONDITIONS

- A. Prior to commencement of Work, Contractor, Owner, and Engineer shall jointly survey existing conditions.
- B. The Engineer will be available at regular intervals – weekly or bi weekly – to review areas which the Contractor plans to work on in the coming weeks. Issues that will be covered in this walkthrough include location of occupancy sensors, hanging method for new fixtures and coordination of Owner supplied light fixtures.

1.11 USE OF OWNER'S PROPERTY & EQUIPMENT

- A. Do not use Owner's Property, Facilities, or Equipment such as Tools, Ladders, Furniture, Janitorial Equipment, Supplies, etc.

1.12 EXCESSIVE NOISE

- A. Do not make excessive noise, such as that caused by Jack Hammers, Air Compressors, Rivet Guns, or other similar Devices during hours the buildings are open. When such noise is unavoidable, notify Owner's Representative at least 24 hours prior to such noise, and comply with Owner's instructions.

1.13 OFFENSIVE ODORS

- A. Smoking is prohibited within existing building.
- B. Do not use offensive smelling Compounds. When such Odors are unavoidable, exhaust Odors directly to out-of-doors.

1.14 SHUTDOWN OF EXISTING UTILITIES

- A. Do not interrupt existing Utility Services without advance written approval of Owner's Representative.
- B. Minimum Advance Notice:
 - 1. For Minor Interruptions: 3 working days
 - 2. For Major Interruptions impacting entire Building, Wing, or Floor: 10 working days

1.15 SAFETY REQUIREMENTS

- A. Safety of staff and the public is critical. Take all reasonable precautions to prevent endangerment or injury.
- B. Advise and coordinate operations with the Owner.
- C. Contractors are to adhere to the regulations of Oregon OSHA.

1.16 COORDINATION OF WORK WITH OWNER AND BUILDING OCCUPANTS

- A. It shall be the responsibility of the contractor to provide prior notification of work, by building and by room, to the building occupants. The notification shall consist of a sturdy hang-tag, placed or attached to the door of the area, provided by the contractor, and of a design approved by Owner. Hang tag shall describe the area subject to the lighting work, the date the work will be accomplished, other information as specified by the University, and any special Contractor requirements. Hang-tag shall be placed a minimum of two working days, i.e. Monday-Friday, prior to the date the work will be started. It is not the intent that the contractor place hang tags on the entire building at once but rather separate areas to serve as an advance notice of impending work in specific areas.

1.17 GENERAL WORK RULES

- A. Much of work may be in private office spaces, laboratories, and other departmental areas not open to the general public. Contractor shall lock doors to areas when leaving for breaks, lunch, parts runs, etc.
- B. Clean-up work areas at conclusion of work or, at a minimum, at the end of shift.
- C. Storage space for contractor's tools, ladders, lifts, etc. is generally limited and Contractor should remove at the conclusion of the day's work. Do not plan to store new or removed lamps and ballasts on site, unless approved by Owner in advance.

END OF SECTION 01010

Part 1 - General

1.01 CONTRACT CONDITIONS

- A. The Drawings and Specifications are complimentary and what is called for by one shall be as binding as if called for by both.
- B. The Contractor shall inspect the job site prior to bidding and become familiarized with existing conditions which will affect the work.
- C. Prior to start of work, obtain "As built," "Record," or other Drawings showing existing conditions.

1.02 DESCRIPTION OF SYSTEM

- A. Electrical Drawings are diagrammatic and do not necessarily show all raceways, wiring, number and types of fittings required.
- B. Provide all related Electrical Work specified herein and diagramed or scheduled on Electrical Drawings. All work shall conform to applicable national, state, and local codes. Contractor is responsible for installation of complete and operating electrical systems.

1.03 QUALITY ASSURANCE

- A. Qualifications of Installers:
 - 1. For actual fabrication, installation and testing of Work of this Section, use only thoroughly trained and experienced personnel familiar with requirements for this Work and with installation recommendations of Manufacturers of specified items.
- B. Design Criteria:
 - 1. Conform Work with conditions shown and specified.
 - 2. Where adjustments or modifications of Work are necessary for fabrication and installation of items, or for resolution of conflicts between items, make such adjustments at no added expense to Owner.
 - 3. Submit adjustments or modifications of Work affecting functional or aesthetic design of Work to Architect for review.
 - 4. Pay for equipment relocations or modifications necessitated by failure to advise Engineer of conflicts or coordinate work.
- C. Select equipment to meet design conditions stated. Contractor is responsible for meeting technical data and performance requirements of system.
- D. Satisfy requirements of regulatory agencies or codes having jurisdiction over project. Provide U.L. labels for all equipment falling under testing capabilities of U.L.
- E. Owner will submit drawings for plan review and pay fees for electrical permit. Contractor shall be for all other deposits, assessments and tax charges required for Electrical Work.
- F. Arrange for and pay for inspections and tests required by codes and ordinances during construction.

1.04 SUBMITTALS

- A. Provide shop drawings and product data for the Work of this Division.
- B. Submittal material sent by facsimile machine will not be accepted.

- C. Post Contract Award:
 - 1. Prepare and submit as follows:
 - a. Provide complete drawings, diagrams, illustrations, performance charts, brochures, and/or other data which adequately describes product to enable thorough evaluation.
 - b. Number of copies, method of distribution, format and schedule for submission;
 - c. Submit all at one time.
 - d. Do not order or manufacture equipment until full review received from Engineer.
 - e. Submit, where applicable, certificates denoting conformance to standards adopted by recognized organizations such as NEMA, UL, OSHA, etc.
 - f. Schedule of values.
- D. Provide product data for materials and equipment as required by individual sections.

1.05 SUBSTITUTIONS

- A. Substitution requests will not be considered unless they are submitted in writing.
- B. Products specified herein are so specified to establish a minimum level of product quality. Except where indicated that no substitutions are allowable, equivalent quality products may be submitted to the Architect for approval.
- C. Substitution requests will not be considered unless they include the following:
 - 1. Model numbers of proposed substitutions.
 - 2. Options which are required to make the proposed substitution comply with Specifications.
 - 3. Summary of modifications of the Work which are required to accommodate the proposed substitution.

1.06 RECORD DRAWINGS

- A. Provide redlined set of record drawings at completion of project.

1.07 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Make inspection of equipment for possible damage at time of delivery to avoid future delays in construction due to replacement or repair.
- B. In event of damage, immediately make all repairs and/or replacements necessary to approval of Architect, at no additional expense to Owner.

1.08 COORDINATION

- A. Report any discrepancies discovered between existing job conditions and Work to be installed. Fully resolve such discrepancies prior to continuation of work.
- B. Consult Engineer prior to installing equipment in area which obviously exceeds, or will exceed, ambient operating requirements such as for temperature and humidity.

1.09 WARRANTY

- A. Warrant all Work included in this Specification for period of one year from date of substantial completion, under provisions of Division 1.
- B. During warranty period, remedy without delay or expense to Owner any defects providing, in judgment of Engineer, that such defects are not result of misuse or abuse on part of Owner.
- C. Warrant that all equipment and installations are in compliance with OSHA regulations.

Part 2 - Products

2.01 MATERIAL

- A. Provide new material and equipment items that are standard products of Manufacturers regularly engaged in production of such materials and equipment. Architect reserves right to reject items not in accordance with Specifications.
- B. For each type of equipment, use same manufacturer throughout.
- C. Verify all materials are acceptable to Authority having jurisdiction, as suitable for the use intended.

Part 3 - Execution

3.01 COMPLETION

- A. Complete each system as shown or specified herein and place in operation, except where only roughing-in or partial systems are called for.

3.02 SCHEDULING OF WORK

- A. Schedule Work with Owner to maintain job progress schedule, and avoid conflicts in installation of Work by various trades.
- B. Contractor shall use a door hanger system to notify building tenants when work is scheduled for individual offices, labs and work spaces. Three work days prior to commencing work in a space a door hanger shall be left at the door to the work space indicating when work is scheduled to take place, and color temperature of lamps that will be installed.

3.03 POWER INTERRUPTIONS

- A. Lockoffs at individual room light switches shall be used to limit power outages to the room that is being worked on. Notify Owner representative minimum 3 days before outage if work in an individual room will disrupt power outside that room.

3.04 SLEEVES AND OPENINGS

- A. Provide through floors and walls for Electrical Work.
- B. Patch and seal around all openings, both sides of material penetrated where possible.

3.05 CUTTING AND PATCHING

- A. Where access within or behind existing surfaces is required by the work of this Section, remove, cut, patch reinstall, and refinish surfaces and assemblies as required to restore them to their previous and/or scheduled finish condition.

3.06 MANUFACTURER'S INSTALLATION DETAILS

- A. Follow exactly, where available.
- B. Provide special wiring or fittings as required.

3.07 ACCESSIBILITY OF EQUIPMENT

- A. Install equipment accessible for operation, maintenance or repair as required by NEC.

- B. Inaccessible Equipment:
 - 1. Where the Owner's representative determines that the Contractor has installed equipment not conveniently accessible for operation and maintenance, equipment shall be removed and reinstalled as directed, at no additional cost to the Owner.
 - 2. "Conveniently accessible" is defined as being capable of being reached without the use of ladders, or without climbing or crawling under or over obstacles such as motors, pumps, belt guards, transformers, piping and ductwork.

3.08 COORDINATION

- A. Coordinate all light fixture and device locations with other trades to avoid possible conflicts with ducts, sprinkler piping, and other obstacles affecting installation.
- B. Coordinate conduit, junction boxes, supporting equipment, etc. Affecting normal operating and maintenance activities related to mechanical equipment, piping, valves, accessories, etc.

3.09 TESTS

- A. Fully test and adjust equipment installed under this specifications prior to Owner's personnel instruction. Each system shall be left in proper operation free of faults, shorts or unintentional grounds.
- B. Do not test or operate for any other purpose, such as checking motor rotation, any item of equipment until fully checked in accordance with Manufacturer's instructions.
- C. Demonstrate essential features of the following electrical systems:
 - 1. Demonstration held upon completion of all systems at a time agreed upon in writing by the Owner or his representative. Each system demonstrated once only, after completion of testing.
- D. Demonstrate functions and location of each system and indicate its relationship to "Schematic Diagrams" on Drawings. Demonstrate how to work controls, and operation of typical control devices.
- E. Submit to engineer certificate of completed demonstration.

3.10 CLEANING OF ELECTRICAL INSTALLATION

- A. Prior to acceptance of building, thoroughly clean all exposed portions of electrical installation.
- B. Remove all nonessential labels and traces of foreign substances.
- C. Use only cleaning solution approved by Manufacturer.
- D. Avoid any damage to finished surfaces.

3.11 EQUIPMENT CONNECTIONS

- A. Provide a complete electrical connection for all items of equipment including incidental wiring, materials, devices and labor necessary for a complete operating system. The location and method for connecting to each item of equipment shall be verified prior to rough-in. The voltage and phase of each item of equipment shall be checked before connecting.

END OF SECTION

Part 1 - General

1.01 SECTION INCLUDES

- A. Electrical demolition.

Part 2 - Products

2.01 MATERIALS AND EQUIPMENT

- A. Materials and Equipment for Patching and Extending Work: As specified in individual sections.

Part 3 - Execution

3.01 EXAMINATION

- A. Verify that abandoned wiring and equipment serve only abandoned facilities. Report discrepancies to Architect before disturbing existing installation.

3.02 PREPARATION

- A. Verify that abandoned wiring and equipment serve only abandoned facilities. Report discrepancies to Architect before disturbing existing installation.

3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- A. Remove, relocate, and extend existing installations as required to accommodate installation of new light fixtures.
- B. Remove exposed abandoned conduit.
- C. Repair adjacent construction and finishes damaged during demolition and extension work.
- D. Maintain access to existing electrical installations which remain active.
- E. Extend existing installations using materials and methods compatible with existing electrical installations.
- F. Check branch circuit wiring disturbed in execution of this Work which is to remain for continuity, overloads and grounds. Repair any deficiencies.
- G. Unless otherwise directed by the Drawings or the Owner's Representative, all salvage materials shall be disposed of by the Contractor. Contractor shall recycle all metals and other scrap from fixtures. Place fixtures neatly on pallets or in other type of container for disposal. Fixtures shall be stored in a manner such that they do not obstruct movement in hallways, designated exits, etc. Remove fixtures from the building at the end of each shift. Do not store fixtures on campus overnight without the permission of Owner's Representative and only then in an approved location.
- H. Prior to acceptance of the building, thoroughly clean exposed portions of the electrical installation, removing labels and traces of foreign substance, using only a cleaning solution approved by the manufacturer and being careful to avoid damage to finished surfaces.

3.04 CLEANING OF LIGHT FIXTURES

- A. Contractor shall clean the lens, covers, reflector, and visible fixture body prior to reassembly of fixture after re-lamping and re-ballasting. Clean dust, smoke residue, grease, etc. according to industry standard methods. Note broken or cracked lens and any hidden fixture damage and report to Owner on approved Light Fixture Condition form. Tag or place streamer on damaged fixtures to facilitate easy identification by Owner. Check the condition of the tombstones and replace as necessary.

3.05 CLEAN UP OF LEAKING PCB BALLASTS

- A. The University EH&S department will handle the cleanup and disposal of leaking PCB ballasts. Notify the University EH&S office immediately or as soon thereafter as practical, by email, or by other means approved means, of the particulars of the breakage, i.e. time occurred, building name, room number, etc. . Contractor shall immediately suspend work in affected areas pending clean up by the University EH&S department.

3.06 CLEAN UP OF BROKEN FLUORESCENT LAMPS

- A. Contractor shall cordon off areas below site of breakage and notify the University EH&S office immediately or as soon thereafter as practical, by email or by other means prescribed means, of the particulars of the breakage, i.e. time occurred, building name , room number, etc. . Contractor shall suspend work in affected areas pending clean up by the University EH&S department. Cleanup of breakage is shall be the responsibility of the University.

3.07 DISPOSAL OF BALLASTS

- A. Ballast removed from service need to be segregated into four (4) groups as noted in Subparagraph D below. Contractor shall be responsible for handling, temporary storage, and delivery of used ballasts segregated into groups to designated staging areas on campus. The Owner to provide barrels for each group. The Owner shall be responsible for handling and disposal of ballasts after delivery to designated staging areas.
- B. All ballasts are to be treated as Hazardous Material and the University is responsible for disposal. It is the Contractor's responsibility to identify whether ballasts contain PCB's and dispose of them as specified herein.
- C. Contractor to record location of PCB leakage and date/time cleaning was done on approved form and provided to Owner's Representative each working day.
- D. Ballasts shall be sorted into four groups and put into designated barrels.
 - a. PCB and unidentifiable ballasts – Non-leaking – Place into separate container.
 - b. PCB ballasts – Leaking. Place leaking PCB ballasts into separate container.
 - c. Non-PCB ballasts – Electronics – Place into separate container.
 - d. Non-PCB ballasts – magnetic – Place into separate container.

- E. All PCB containing ballasts are to be treated as Hazardous Waste and the University is responsible for the disposal.

3.08 DISPOSAL OF FLUORESCENT LAMPS

- A. Lamps removed from service need to be segregated into two (2) groups for disposal as noted below. Contractor shall be responsible for handling, temporary storage, and delivery of used lamps segregated by groups to designated staging areas on campus. Boxes containing lamps shall be neatly stacked in shipping containers/trailers. The UO shall be responsible for handling and disposal of lamps after delivery to designated staging areas.
- B. Unbroken lamps shall be placed into cardboard containers and sealed. Contractor will provide all cartons as required. Label as noted. 8'0" lamps and U-tube lamps shall be cartoned also following same procedures. Contractor to provide all cartons and packing materials for used, unbroken lamps.
- C. Broken lamps, shards, etc. shall be placed into barrels provided by Owner.
- D. All intact mercury containing lamps are to be treated as Universal Waste and the University is responsible for the disposal.
- E. All broken mercury containing lamps are to be treated as Hazardous Waste and the University is responsible for the disposal.
- F. Contractor to record location of lamp breakage and date/time cleaning was done on approved form and provided to Owner's Representative each working day.

3.09 HANDLING OF LIGHT FIXTURES REMOVED FROM SERVICE

- A. The University shall specifically designate any fixtures to be reused or that are saleable. Fixtures that are to be reused or in resalable condition shall be wrapped (lamps removed, ballasts intact) in plastic wrap, placed neatly on pallets, and delivered to University Surplus Property for sale or to Campus Operations as designated.
- B. For fixtures to be salvaged, remove lamps and ballasts and handle according to specifications. Place light fixtures in barrels or on pallets and protect for further damage. Deliver to Owner designated area and place in designated metal recycling containers. Remove acrylic lens and place in designated plastics recycling containers.

3.11 REPLACEMENT OF LIKE COLOR TEMPERATURE LAMPS WITH LIKE

- A. Contractor shall be responsible for proving the same color temperature lamps as installed in an area, i.e. 3500 K, 4100K, etc. Verify color temperature prior to lamps removal. The Drawings show color temperature where known; however, it is the contractor's responsibility to verify and replace like with like.

3.12 ASBESTOS CONTAINING MATERIALS

- A. The University shall provide the contractor with a listing of building ceiling systems and ceiling spaces with asbestos containing materials. In general, this is limited to Clinical Services,

Building 29; Computing Center, Building 39; Gerlinger Annex, Building 62; and, Oregon Hall, Building 42. Contractor shall evaluate the potential for contact with asbestos containing materials in all working areas and request evaluation by the University EH&S department as necessary. The University will perform limited asbestos remediation at university expense as required.

3.13 SMOKE AND DUST CONTROL NEAR FIRE-SMOKE DETECTORS

- A. Contractor shall cover in an approved manner nearby smoke detectors when utilizing powder actuated fastening devices or drills that may create dust particles in the air. Notify University EH&S when smoke detectors are covered and remove covers as soon as dust and or smoke has dissipated. In no case, shall Contractors leave cover on smoke detectors any longer than absolutely necessary.

3.14 REMOVAL OF TOMBSTONES ON LIGHTING FIXTURES

- A. Remove unused tombstones from lighting fixtures if specified that the fixtures are to be de-lamped or if other circumstances dictate.
- B. Bid shall be based on reuse of existing tombstones. If existing tombstones are damaged or broken they will be replaced and unit costs will be applied.

3.15 INSTALLATION OF INDIVIDUAL DISCONNECTING MEANS ON FIXTURES

- A. In the absence of an existing code approved disconnect means at the each light fixture, contractor shall install a code approved disconnecting means, i.e. modular connector, at each light fixture.

3.16 PROTECTION OF OFFICE FURNITURE

- A. Contractor shall provide visqueen cover over furniture in work areas where work activities will produce dust and debris.

END OF SECTION

Part 1 - General

1.01 SECTION INCLUDES

- A. Occupancy Sensors.

1.02 RELATED SECTIONS

- A. Section 265000 - Light Fixtures

1.03 SUBMITTALS

- A. Submit product data under provisions of Section 260100. Include outline drawings with dimensions, and equipment ratings for voltage, capacity, and poles.
- B. Submit manufacturers' instructions under provisions of Section 260100.

Part 2 - Products

2.01 ACCEPTABLE MANUFACTURERS

- A. Wattstopper
- B. Sensor Switch.

2.02 Occupancy Sensor Description

- A. Dual Technology.
- B. Wall Sensors. Wattstopper DW-100 or Equal
- C. Ceiling Sensors: Wattstopper DT-300/BZ-50 in suspended ceiling areas
- D. Ceiling Sensors: Wattstopper DT-200/BZ-50 in all other areas

Part 3 - Execution

3.01 OCCUPANCY SENSORS

- A. Install occupancy sensors and powerpacks per manufacturers recommendations.

3.02 Ceiling Sensor Installation

- A. Mount flush with ceiling at center of room in suspended ceiling areas.
- B. Mount on light fixture at center of room in other areas.

END OF SECTION

Part 1 - General

1.01 WORK INCLUDED

- A. Provide a typical lighting fixture, complete with lamps, at each lighting outlet shown.
- B. Replace lamps and ballasts in existing light fixtures as scheduled.

1.02 SECTION INCLUDES

- A. Interior luminaires and accessories.
- B. Electronic High Performance Ballasts
- C. Lamps.

1.03 SUBMITTALS

- A. Submit product data under provisions of Section 260100.

1.04 JOB CONDITIONS

- A. Existing Conditions:
 - 1. Prior to ordering lighting fixtures, verify finish material in locations where lighting fixtures are mounted.
 - 2. Verify fire rating of new and existing ceilings.

Part 2 - Products

2.01 INTERIOR LUMINAIRES AND ACCESSORIES

- A. See Luminaire Schedule.

2.02 BALLASTS / LAMP SYSTEMS

- A. Approved Lamps/ Ballasts are listed in the table at the end of this section.

Part 3 - Execution

3.01 INSTALLATION

- A. Install lamps in luminaires and lampholders.
- B. Fixture Support:
 - 1. Light fixtures mounted in or on suspended ceilings shall be positively attached to the suspended ceiling system.
 - 2. Provide two #12 gauge steel wire seismic supports connected to structure for light fixtures less than 50 lbs. Seismic supports may be installed slack.
- C. Install recessed luminaires to permit removal from below.
 - 1. Use plaster frames in plaster ceiling.
 - 2. Install grid clips in grid type ceiling systems.

3.02 LAMPING

- A. Provide lamp color as indicated in the building work summary spreadsheet at the end of this specification. If, through the door tag system, a building occupant requests a different lamp color than is listed in this table, the University will exchange lamps with the Contractor to meet the building occupant request.

3.03 ADJUSTING AND CLEANING

- A. Align luminaires and clean lenses and diffusers at completion of work. Clean dirt, and debris from installed and relamped / reballasted luminaires.
- B. Touch up luminaire finish at completion of work.

3.04 PREPARATION

- A. Field Measurements:
 - 1. Coordinate fixture location with Engineer.
- B. Noisy Ballasts:
 - 1. Engineer shall determine which ballasts are excessively noisy and to be replaced at no cost to owner.
 - 2. Check: Ballasts shall be tightly fastened to fixture and have no loose connections.

3.05 LUMINAIRE SCHEDULES

- A. See Luminaire Schedules at end of this section.
- B. The attached Light Retrofit Schedule provides a summary of existing fixture styles.
- C. New light fixtures are described in the attached Light Fixture Schedule.
- D. Approved lamps and ballasts are listed in the attached Approved Lamp / Ballast table.

END OF SECTION

APPROVED LAMP / BALLAST TABLE

Manuf.	Model	Description	Lamp	Watts	Voltage	Lamp	Ballast Factor	Ballast Eff.	Nomenclature
Osram Sylvania	QTP 232 T8/UNV PSX TC	Prostart Low Ballast Factor	2	47/46	120/277	F032/XPS/ECO3	0.71	1.54	2-LAMP-HP-T8-LBF
Osram Sylvania	QTP 232 T8/UNV PSN TC	Prostart Normal Ballast Factor	2	59/56	120/277	F032/XPS/ECO3	0.88	1.57	2-LAMP-HP-T8-NBF
Osram Sylvania	QTP 232 T8/UNV PSN TC	Prostart Normal Ballast Factor	2	60	120/277	F032 T8 U/XPS/ ECO3	0.88	1.57	2-LAMP-HP-T8-U6-NBF
Osram Sylvania	QTP 232 T8/UNV PSX TC	Prostart Low Ballast Factor	3	73/71	120/277	F032/XPS/ECO3	0.71	1	3-LAMP-HP-T8-LBF
Osram Sylvania	QTP 232 T8/UNV PSN TC	Prostart Normal Ballast Factor	3	88/85	120/277	F032/XPS/ECO3	0.88	1.04	3-LAMP-HP-T8-NBF
Osram Sylvania	QTP 232 T8/UNV PSX TC	Prostart Low Ballast Factor	1	25	120/277	F032/XPS/ECO3	0.71	2.84	1-LAMP-HP-T8-LBF
Osram Sylvania	QTP 232 T8/UNV PSN TC	Prostart Normal Ballast Factor	1	31/30	120/277	F032/XPS/ECO3	0.88	2.93	1-LAMP-HP-T8-NBF
Phillips	IOP 1S32 – LW-SC	Optanium Low Ballast Factor	2	26	120/277	F32T8/ADV 841/ALTO	0.71	1.51	2-LAMP-HP-T8-LBF
Phillips	IOP 2S32-SC	Optanium Norm Ballast Factor	2	57/56	120/277	F32T8/ADV 841/ALTO	0.88	1.57	2-LAMP-HP-T8-NBF
Phillips	IOP 2S32-SC	Optanium Norm Ballast Factor	2	U6	120/277	F32T8 U ADV841 ALTO	0.88	1.57	2-LAMP-HP-T8-U6-NBF
Phillips	IOP 2S32 –LW-SC	Optanium Low Ballast Factor	3	71/70	120/277	F32T8/ADV 841/ALTO	0.71	1	3-LAMP-HP-T8-LBF
Phillips	IOP 3S32-SC	Optanium Norm Ballast Factor	3	84/83	120/277	F32T8/ADV 841/ALTO	0.88	1.06	3-LAMP-HP-T8-NBF
Phillips	IOP 3S32 –LW-SC	Optanium Low Ballast Factor	1	26	120/277	F32T8/ADV 841/ALTO	0.73	2.81	1-LAMP-HP-T8-LBF
Phillips	IOP 1S32-SC	Optanium Norm Ballast Factor	1	29	120/277	F32T8/ADV 841/ALTO	0.94	3.1	1-LAMP-HP-T8-NBF
General Electric	GE 232 MVPS L	Ultrastart Low Ballast Factor	2	47	120/277	F32T8XL SPX41 HLEC	0.71	1.51	2-LAMP-HP-T8-LBF
General Electric	GE 232 MVPS N	Ultrastart Norm Ballast Factor	2	59/58	120/277	F32T8XL SPX41 HLEC	0.89	1.51	2-LAMP-HP-T8-NBF
General Electric	GE 232 MVPS L	Ultrastart Low Ballast Factor	3	69	120/277	F32T8XL SPX41 HLEC	0.71	1.03	3-LAMP-HP-T8-LBF
General Electric	GE 232 MVPS N	Ultrastart Norm Ballast Factor	3	86	120/277	F32T8XL SPX41 HLEC	0.89	1.03	3-LAMP-HP-T8-NBF
General Electric	GE 232 MVPS L	Ultrastart Low Ballast Factor	1	30	120/277	F32T8XL SPX41 HLEC	0.81	2.7	1-LAMP-HP-T8-LBF
General Electric	GE 232 MVPS N	Ultrastart Norm Ballast Factor	1	37	120/277	F32T8XL SPX41 HLEC	1.05	2.84	1-LAMP-HP-T8-NBF
General Electric	GE 232 MVPS N	Ultrastart Norm Ballast Factor	2	60	120/277	F32T8XL SPX41 U HLEC	1.05	2.84	2-LAMP-HP-T8-U6 Lamp NBF

EXISTING LIGHT FIXTURE SCHEDULE

Type	Description	Lamps
1F2	Existing 1' x 4' Modular Fluorescent	2 F32 T8
1F3	Existing 1' x 4' Modular Fluorescent	3 F32 T8
2F2U	Existing 2' x 2' Modular Fluorescent	2 F32 T8 U6
2F4	Existing 2' x 4' Modular Fluorescent	4 F32 T8
1I2	Existing 1' x 4' Industrial Fluorescent	2 F32 T8
1I3	Existing 1' x 4' Industrial Fluorescent	3 F32 T8
2I2	Existing 2' x 4' Industrial Fluorescent	2 F32 T8
2I3	Existing 2' x 4' Industrial Fluorescent	3 F32 T8
1P2	Existing 1' x 4' Pendant Fluorescent	2 F32 T8
2P2	Existing 2' x 4' Pendant Fluorescent	2 F32 T8
2P4	Existing 2' x 4' Pendant Fluorescent	4 F32 T8
2P3	Existing 2' x 4' Pendant Fluorescent	3 F32 T8
2P3T	Existing 2' x 8' Pendant Fluorescent	6 F32 T8
1T2	Existing 1' x 4' Recessed Fluorescent	2 F32 T8
1T3	Existing 1' x 4' Recessed Fluorescent	3 F32 T8
2T2U	Existing 2' x 2' Recessed Fluorescent	2 F32 T8 U6
2T2	Existing 2' x 4' Recessed Fluorescent	2 F32 T8
2T4	Existing 2' x 4' Recessed Fluorescent	4 F32 T8
1W1	Existing 1' x 4' Wraparound Fluorescent	1 F32 T8
1W2	Existing 1' x 4' Wraparound Fluorescent	2 F32 T8
2W4	Existing 2' x 4' Wraparound Fluorescent	4 F32 T8
1S1	Existing 1' x 4' Strip Fluorescent	1 F32 T8
1S2	Existing 1' x 4' Strip Fluorescent	2 F32 T8
1S4	Existing 1' x 4' Strip Fluorescent	4 F32 T8

NEW LIGHT FIXTURE SCHEDULE

T2R	Drop Basket 2 x4 Retrofit Kit	2-F32 T8	Troffer Retrofit Kit, Cooper #ART 2 CRZ 232 120 - HR8
T22R	Drop Basket 2 x2 Retrofit Kit	2-F17 T8	Troffer Retrofit Kit, Cooper #ART 2 CRZ 217 120 - HR8
PT2	Drop Basket 1 x4 Pendant	2-F32 T8	Lithonia Avante Model #AVSM 232 MDR DLS 120V Ballast as noted in specifications.
1F2R	Owner Furnished Modular 1x4 – Relamp and Reballast	2-F32 T8	120V Ballast as noted in specifications.
2F4R	Drop Basket Retrofit Kit	2-F32 T8	Modular Fluorescent Retrofit Kit, Cooper #ART 2 CRZ 232 120 ER8
S1T-6'	6 Foot 1 lamp Strip	2-F25 T8	Lithonia Z Series; Metalux SNF Series. Remove reflector / louver assembly from existing light fixtures and reinstall on new light fixtures. Where tube guards are currently used in place of reflector / louvers, typically at door locations, reinstall tube guards over existing lamps.
S1T-8'	8 Foot 1 lamp Strip	2-F32 T8	Lithonia Z Series; Metalux SNF Series. Remove reflector / louver assembly from existing light fixtures and reinstall on new light fixtures. Where tube guards are currently used in place of reflector / louvers, typically at door locations, reinstall tube guards over existing lamps.
S2T	4 Foot 2 lamp Strip	2 F32 T8	Lithonia Z Series; Metalux SNF Series
2T3R	3 Lamp 2 x 4 Troffer Retrofit Kit	3 F32 T8	Precision Paragon TKS 2x4 3L T8 UL1 PMB LP UE PS
I4	4' Pendant Mounted Industrial Fluorescent	3 F32 T83-	Metalux 4-I8-332-UNV Ballast as noted in specifications.
I8	8' Pendant Mounted Industrial Fluorescent	6 F32 T8	Metalux 8-I8-332-UNV Ballast as noted in specifications.
I2T	2 Lamp 8' Surface Industrial Fluorescent	4 F32 T8	Metalux DIF 232-UNV Ballast as noted in specifications.
PI8B	Pendant mounted 8' Retrofit unit	4 F32 T8	Relamp and Reballast Owner Furnished 6" x 9" x 8' pendant mounted fixture. Retrofit with US Scientific Reflector assembly per specifications.

18 KNIGHT LIBRARY T12 LAMPS

ROOM # AND DESCRIPTION		LAMP TYPE	EXISTING FIXTURES	LAMPS	EXISTING FIXTURE TYPE	NEW LAMP TYPE	FIXTURE QUANTITY	CONTRACTOR WORK	OCCUPANCY SENSOR	
BASEMENT										
1		Lounge	UNO2 4100K	1	2	2T2U	2-LAMP HP T8 U LBF	1	Relamp / Reballast	----
2	A	Mechanical	4NO1 4100K	1	1	1S1	1-LAMP HP T8 LBF	1	Relamp / Reballast	
E31		Elevator	4NO2 4100K	1	2	1S2	2-LAMP HP T8 LBF	1	Relamp / Reballast	----
32		Copy	4NO2 4100K	2	2	1W2	2-LAMP HP T8 LBF	2	Relamp / Reballast	Ceiling
33		Listening	4NO2 4100K	2	2	1F2	2-LAMP HP T8 LBF	2	Relamp / Reballast	----
35	A	Office	4NO2 4100K	4	2	1F2	2-LAMP HP T8 LBF	4	Relamp / Reballast	Ceiling
35	B	Office	4NO2 4100K	4	2	1F2	2-LAMP HP T8 LBF	4	Relamp / Reballast	Ceiling
35		Repairs	4NO2 4100K	21	2	1F2	2-LAMP HP T8 LBF	21	Relamp / Reballast	----
36	C	Storage	4NO1 4100K	1	1	1W1	1-LAMP HP T8 LBF	1	Relamp / Reballast	----
37		Issue	4NO2 4100K	10	2	1F2	2-LAMP HP T8 LBF	10	Relamp / Reballast	----
38	A	Machine	4NO2 4100K	1	2	1S2	2-LAMP HP T8 LBF	1	Relamp / Reballast	----
38		Storage	4NO1 4100K	35	1	1S1	1-LAMP HP T8 LBF	35	Relamp / Reballast	----
39		Mechanical	4NO1 4100K	4	1	1S1	1-LAMP HP T8 LBF	4	Relamp / Reballast	
43		Storage	4NO2 4100K	4	2	1S2	2-LAMP HP T8 LBF	4	Relamp / Reballast	----
61	A	Restroom	UNO2 4100K	1	2	2F2U	2-LAMP HP T8 U LBF	1	Relamp / Reballast	Ceiling
66	A	Mechanical	4NO2 4100K	1	2	1W2	2-LAMP HP T8 LBF	1	Relamp / Reballast	----
S81		Stairs	4NO2 4100K	2	2	1W2	2-LAMP HP T8 LBF	2	Relamp / Reballast	
BASMENT TOTAL				95				95		
FIRST FLOOR										
120		Restroom	UNO2 4100K	1	2	2F2U	2-LAMP HP T8 U LBF	1	Relamp / Reballast	Ceiling
E124		Elevator	4NO2 4100K	1	2		2-LAMP HP T8 LBF	1	Relamp / Reballast	----
E118		Elevator	4NO2 4100K	1	2	1F2	2-LAMP HP T8 LBF	1	Relamp / Reballast	----
S120		Stairs	4NO2 4100K	3	2		2-LAMP HP T8 LBF	3	Relamp / Reballast	----
136	A	Office	4NO2 4100K	4	2		2-LAMP HP T8 LBF	4	Relamp / Reballast	Ceiling
S137		Stairs	4NO2 4100K	3	2		2-LAMP HP T8 LBF	3	Relamp / Reballast	----
S140		Stairs	UNO2 4100K	1	2		2-LAMP 2' HP T8 LBF	1	Relamp / Reballast	----
E147		Elevator	4NO2 4100K	1	2	1W2	2-LAMP HP T8 LBF	1	Relamp / Reballast	----
191	L	Stacks	4NO1 4100K	15	1	1S1	1-LAMP HP T8 LBF	15	Relamp / Reballast	
193B		Lobby	UNO2 4100K	26	2	2F2U	2-LAMP HP T8 U LBF	26	Relamp / Reballast	----
195	G	Stacks	UNO1 4100K	1	1	2F1U	2-LAMP HP T8 U LBF	1	Relamp / Reballast	
FIRST FLOOR TOTALS				41				41		

18 KNIGHT LIBRARY T12 LAMPS										
ROOM # AND DESCRIPTION			LAMP TYPE	EXISTING FIXTURES	LAMPS	EXISTING FIXTURE TYPE	NEW LAMP TYPE	FIXTURE QUANTITY	CONTRACTOR WORK	OCCUPANCY SENSOR
SECOND FLOOR										
205		Stack	6NO1 4100K	7	1	S1T (6')	2-LAMP 3' HP T8 LBF	7	Replace	----
205		Stack	8NO1 4100K	4	1	S1T (8')	2-LAMP 4' HP T8 LBF	4	Replace	----
205		Stack	4NO1 4100K	5	1	1S1	1-LAMP HP T8 LBF	5	Relamp / Reballast	----
205		Stack total	----	16	16		----	----	----	----
S240		Stairs	UNO2 4100K	1	2	2T2U	2-LAMP HP T8 U LBF	1	Relamp / Reballast	
S232		Stairs	4NO2 4100K	1	2	1W2	2-LAMP HP T8 LBF	1	Relamp / Reballast	
240	B	Electrical	4NO2 4100K	4	2	1S2	2-LAMP HP T8 LBF	4	Relamp / Reballast	----
240	C	Mechanical	4NO2 4100K	8	2	1S2	2-LAMP HP T8 LBF	8	Relamp / Reballast	----
242	A	Office	4NO2 4100K	4	2	1W2	2-LAMP HP T8 LBF	4	Relamp / Reballast	
S244		Stairs	4NO2 4100K	1	2	1W2	2-LAMP HP T8 LBF	1	Relamp / Reballast	----
248	B	Mechanical	4NO2 4100K	1	2	1S2	2-LAMP HP T8 LBF	1	Relamp / Reballast	----
291	KK	Mechanical	4NO2 4100K	2	2	1S2	2-LAMP HP T8 LBF	2	Relamp / Reballast	----
294	J	Stacks	4NO1 4100K	1	2	1S2	2-LAMP HP T8 LBF	1	Provide new light fixture, Neo Ray 83DS1T8-8'- 2, ballast per specifications. Ceiling mount fixture near adjacent wall.	----
294	KK	Mechanical	4NO2 4100K	2	2	1S2	2-LAMP HP T8 LBF	2	Relamp / Reballast	----
SECOND FLOOR TOTALS				41				41		
THIRD FLOOR										
S335		Stairs	4NO2 4100K	2	2	1W2	2-LAMP HP T8 LBF	2	Relamp / Reballast	----
336	A	Mechanical	4NO2 4100K	1	2	1S2	2-LAMP HP T8 LBF	1	Relamp / Reballast	----
336		Custodial	4NO2 4100K	2	2	1W2	2-LAMP HP T8 LBF	2	Relamp / Reballast	----
S337		Stairs	4NO2 4100K	2	2	1W2	2-LAMP HP T8 LBF	2	Relamp / Reballast	----
339	A	Mechanical	4NO2 4100K	1	2	1S2	2-LAMP HP T8 LBF	1	Relamp / Reballast	----
339		Reshelving	4NO2 4100K	2	2	1W2	2-LAMP HP T8 LBF	2	Relamp / Reballast	----
340	A	Electrical	4NO1 4100K	2	1	1S2	2-LAMP HP T8 LBF	2	Relamp / Reballast	
341		Storage	4NO2 4100K	1	2	1W2	2-LAMP HP T8 LBF	1	Relamp / Reballast	
S344		Stairs	4NO2 4100K	3	2	1W2	2-LAMP HP T8 LBF	3	Relamp / Reballast	
345	B	Mechanical	4NO2 4100K	1	2	1S2	2-LAMP HP T8 LBF	1	Relamp / Reballast	----

THIRD FLOOR TOTALS

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18 KNIGHT LIBRARY T12 LAMPS

ROOM # AND DESCRIPTION			LAMP TYPE	EXISTING FIXTURES	LAMPS	EXISTING FIXTURE TYPE	NEW LAMP TYPE	FIXTURE QUANTITY	CONTRACTOR WORK	OCCUPANCY SENSOR
FOURTH FLOOR										
409		Office	UNO2 4100K	1	2	2T2U	2-LAMP HP T8 U LBF	1	<i>Relamp / Reballast</i>	Ceiling
424	A	Mechanical	4NO2 4100K	1	2	1S2	2-LAMP HP T8 LBF	1	<i>Relamp / Reballast</i>	----
424	E	Elevator	4NO2 4100K	1	2	2T2	2-LAMP HP T8 LBF	1	<i>Relamp / Reballast</i>	----
424		Reshelving	4NO2 4100K	2	2	1W2	2-LAMP HP T8 LBF	2	<i>Relamp / Reballast</i>	----
S440		Stairs	4NO2 4100K	1	2	1W2	2-LAMP HP T8 LBF	1	<i>Relamp / Reballast</i>	
427		Group Study	4NO2 4100K	2	2	1W2	2-LAMP HP T8 LBF	2	<i>Relamp / Reballast</i>	----
S444		Stairs	4NO2 4100K	1	2	1W2	2-LAMP HP T8 LBF	1	<i>Relamp / Reballast</i>	
471	E	Mechanical	4NO2 4100K	9	2	1S2	2-LAMP HP T8 LBF	9	<i>Relamp / Reballast</i>	----
491	KK	Mechanical	4NO2 4100K	1	2	1S2	2-LAMP HP T8 LBF	1	<i>Relamp / Reballast</i>	----
494	KK	Mechanical	4NO2 4100K	1	2	1S2	2-LAMP HP T8 LBF	1	<i>Relamp / Reballast</i>	----
		FOURTH FLOOR TOTALS		20				20		

18 KNIGHT LIBRARY **STACKS** T12 LAMPS										
ROOM # AND DESCRIPTION			LAMP TYPE	EXISTING FIXTURES	LAMPS	EXISTING FIXTURE TYPE	NEW LAMP TYPE	FIXTURE QUANTITY	CONTRACTOR WORK	OCCUPANCY SENSOR
LEVEL 1										
25	Deck 1	Stacks	4NO1 4100K	1	1	1S1	1-LAMP HP T8 LBF	1	Relamp / Reballast	----
25	Deck 1	Stacks	6NO1 4100K	2	1	1S1	2-LAMP 3' HP T8 LBF	2	Relamp / Reballast	----
25	Deck 1	Stacks	8NO1 4100K	44	1	S1T (8')	2-LAMP 4' HP T8 LBF	44	Replace	----
LEVEL 1 TOTALS				47				47		
LEVEL 2										
180	Deck 2	Stacks	4NO1 4100K	9	1	1S1	1-LAMP HP T8 LBF	9	Relamp / Reballast	----
180	Deck 2	Stacks	6NO1 4100K	11	1	S1T (6')	2-LAMP 3' HP T8 LBF	11	Replace	----
180	Deck 2	Stacks	8NO1 4100K	37	1	S1T (8')	2-LAMP 4' HP T8 LBF	37	Replace	----
LEVEL 2 TOTALS				57				57		
LEVEL 3										
M180	Deck 3	Stacks	4NO1 4100K	0	1	1S1	1-LAMP HP T8 LBF	0	Relamp / Reballast	----
M180	Deck 3	Stacks	6NO1 4100K	13	1	S1T (6')	2-LAMP 3' HP T8 LBF	13	Replace	----
M180	Deck 3	Stacks	8NO1 4100K	25	1	S1T (8')	2-LAMP 4' HP T8 LBF	25	Replace	----
LEVEL 3 TOTALS				38				38		
LEVEL 4										
280	Deck 4	Stacks	4NO1 4100K	8	1	1S1	1-LAMP HP T8 LBF	8	Relamp / Reballast	----
280	Deck 4	Stacks	6NO1 4100K	26	1	S1T (6')	2-LAMP 3' HP T8 LBF	26	Replace	----
280	Deck 4	Stacks	8NO1 4100K	30	1	S1T (8')	2-LAMP 4' HP T8 LBF	30	Replace	----
LEVEL 4 TOTALS				64				64		
LEVEL 5										
M280	Deck 5	Stacks	4NO1 4100K	3	1	1S1	1-LAMP HP T8 LBF	3	Relamp / Reballast	----
M280	Deck 5	Stacks	6NO1 4100K	14	1	S1T (6')	2-LAMP 3' HP T8 LBF	14	Replace	----
M280	Deck 5	Stacks	8NO1 4100K	29	1	S1T (8')	2-LAMP 4' HP T8 LBF	29	Replace	----
LEVEL 5 TOTALS				46				46		
BUILDING TOTAL				449				449		