North Instructional Building
Bronx Community College
Bronx, NY

Technical Report 1

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9/16/13

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Exterior Space

Building Entrance North

Existing Conditions

The North Instructional Building's (NIB) north entry is denoted by a colonnade at the base of the structure with a regressed canopy. The canopy features an arched ceiling constructed of brick laid in a decorative pattern. Out front is a large open plaza connecting the campus sidewalk and the entrance of the building. The existing lighting features four decorative globe pendants centered in each arch of the colonnade. General area lighting at the front plaza is provided lamp poles resembling others found on the campus. Important tasks include circulation, public safety, and security.

Materials & Reflectance

Floor

- Concrete – 0.3
- Ceramic Tile – 0.2

Wall

- Brick Veneer – 0.25

Ceiling

- Brick – 0.3

Dimensions

Area – 1112 sq. ft.

Ceiling Height – 12'

Approximate Width – 56' 7"

Approximate Length – 12' 4"

Drawings – See Appendix

Luminaire Schedule			
Type	**Description**	**Lamp Code**	**Manufacturer/Catalog**
LX3	Exterior fluorescent pendant fixture Location(s): Main entrance at arch ceilings	(4)CF32DT/E/IN/830 Osram Sylvania	Custom Fixture – See architectural drawings for more information

Design Criteria

Qualitative

Security | *Very Important* |

Proper Illuminance levels should be met both horizontal and vertical to deter criminal activity and allow surveillance equipment to operate effectively.

Color Rendering | *Important* |

The lighting should demonstrate adequate rendering of color for security purposes.

Accent | *Important* |

The entrance of the building should distinguish itself and draw attention.

Quantitative

Illuminance Levels | *Very Important* |

IESNA Lighting Handbook, 10th Edition

Recommended Illuminance for Ages 25 and Under

- Building Entries | Canopied Entries/Exits | Low Activity | LZ1
    - Horizontal Illuminance @grade – 2 lux
    - Vertical Illuminance @5’ AFG – 0.5 lux
    - Uniformity Ratio, Avg:Min – 2:1 (4:1 E_v)

Energy Code | *Very Important* |

ANSI/ASHRAE/IES Standard 90.1-2010

Table 9.4.3B Individual Lighting Power Allowances for Building Exteriors – Zone 3

- Building Entrances and Exits
  - Entry Canopies
    - Maximum Allowable LPD – 0.4 W/ft^2
- Building Grounds
  - Plaza Areas
    - Maximum Allowable LPD – 0.16W/ft^2

Prioritized Criteria

1. Energy Code
2. Illuminance Levels
3. Security
4. Accent

Evaluation of Existing Lighting Conditions

The existing lighting under the canopy fits the design of the building well with its decorative features to match the architecture. They successfully illuminate the entire canopy. Outside the building however is the large plaza which is illuminated by induction lamps housed in lamp posts on each side. These lamp posts match those already existing on the campus. While they provide the general illumination over this outdoor space, there is still potential for an exceeding design.

Circulation Space I – Psychological Impressions

Ground Floor Corridor

Existing Conditions

The corridor runs east to west off of the central lobby guiding students to the state of the art classrooms on the ground floor and serves the main exit path in case of emergency evacuations. Classically styled architectural columns line the walls appearing to support the pattern of rectangular soffits continuing through the corridor. The ceiling between these columns adorns even smaller rectangular soffits to complete the classical style. The flooring pattern mirrors the ceiling with a combination of porcelain and terracotta tile. At the entrance of each classroom, the corridor extends towards the south wall creating a secondary rectangular area which provides access to electrical, data, and storage spaces adjacent to the corridor. The existing lighting consists of surface mounted hemispherical luminaires in each soffit with downlights illuminating the secondary classroom lobbies.

Materials & Reflectance

Ceiling

- PTD GWB (cream) – 0.7
- Decorative GWB Panels – 0.7

Walls

- PTD GWB (green) – 0.4
- PTD GWB (cream) – 0.6

Floor

- Ceramic Tile (Red) – 0.2
- Marble Tile (Cream) – 0.3

Dimensions

Area – 2500 sq. ft.

Ceiling Height – 11’ 6”

Approximate Width – 11’ 6”

Approximate Length – 170’

Drawings – See Appendix

Luminaire Schedule			
Type	**Description**	**Lamp Code**	**Manufacturer/Catalog**
L6	Compact fluorescent pendant with acrylic diffuser and solid brass decorative metal – 22" diameter Location(s): Ground floor corridor	(4) CF32DT/E/IN/830 Osram Sylvania	DAVIS MULLER LIGHTING C-3160-1-22"-2-MOD/(4)32WSA-2-A-MOD/Brushed nickel Modified with (4)32 watt lamps and brushed nickel finish; Architect to verify ball finial and metal finish

Design Criteria

Qualitative

Psychological Impact | *Important* |

The lighting should create an appealing and intuitive passageway to guide the user to their destination. By properly placing light the design can evoke a sense of spaciousness and comfort.

Glare | *Important* |

Luminaires should be pleasant to view under normal viewing conditions so that discomfort glare is avoided.

Color Rendering | *Important* |

A light source with a high CRI value (80+) should be selected to properly render the color of skin tone, clothing, and the architectural materials.

The lighting in the corridor must create an appealing and intuitive passageway to guide the user to their destination. A corridor should be appealing in its physical appearance as well as psychological impression. The lighting must synchronize with the elegance of the architecture and provide a sense of spaciousness and fluency in the understanding its design. The architectural color palette is a mix of light color tones which the lighting should complement in providing a soft glowing, glare free environment with exceptional rendition of colors.

Quantitative

Illuminance Levels | *Very Important* |

IESNA Lighting Handbook, 10th Edition

Recommended Illuminance for Ages 25 and Under

- Transition Spaces | Circulation Corridor | Public | Independent Passageway
    - Horizontal Illuminance @floor – 25 lux
    - Vertical Illuminance @5' AFF – 15 lux
    - Uniformity Ratio, Avg:Min – 2:1

Energy Code | *Very Important* |

ANSI/ASHRAE/IES Standard 90.1-2010

Lighting Power Density - Space by Space Method

- Corridor/Transition
    - Maximum Allowable LPD – 0.66 W/ft^2

Prioritized Criteria

5. Energy Code
6. Illuminance Levels
7. Psychological Impact
8. Color Rendering

Evaluation of Existing Lighting Conditions

The current lighting in the corridor creates a nice rhythm and a central line of light through the hallway. The hemispherical shaped omnidirectional source spreads out the light but the result is a very one dimension and confined appearance with dark shadows in the corners and high on the walls.

Circulation Space II

Monumental Stair and Elevator Lobby

Existing Conditions

Through the two sets of double doors of the main lobby is the elevator lobby that displays a scaled model of the building as well as a building directory opposite the elevator door on the east wall. The monumental staircase follows with a small rise to the landing which connects the two branches of stairs that ascend to the library above. The elevator lobby and base of the monumental stair are circulation spaces but can also serve as a place to meet fellow students or coworkers because of its relatively spacious geometry. An exterior wall at the base of the stairs offers daylight through its north facing window. The stairs feature an angled ceiling and artwork displayed on the walls at each mid-level stair landing. The existing lighting consists of pendants in the lobby and sconces along the stairs providing general illumination, and accent lights highlighting the artwork in the stairs.

Materials & Reflectance

Ceiling

- PTD GWB (cream) – 0.7
- Decorative GWB Panels – 0.7

Walls

- PTD GWB (tan) – 0.5

Floor

- Ceramic Tile (Red) – 0.2
- Marble Tile (Cream) – 0.4

Furniture

- Wood Display Case – 0.3

Dimensions

Area – 1338 sq. ft.

Ceiling Height – 15’

Approximate Width – 5’ 9”

Approximate Length – 16’ 3”

Drawings – See Appendix

Luminaire Schedule			
Type	**Description**	**Lamp Code**	**Manufacturer/Catalog**
L3	Recessed compact fluorescent downlight - 6” aperture Location(s): Multiple	CF32DT/E/IN/830 Osram Sylvania	GOTHAM AFV-32TRT-6AR-LD-277-GEB10 Architect to confirm clear semidiffuse flange finish; Flange width to match on wall washers and downlights
L8	Compact fluorescent pendant with acrylic diffuser and solid brass decorative metal – 30” diameter Location(s): Ground floor elevator lobby & Second floor lounge seating	(4) CF32DT/E/IN/830 Osram Sylvania	Custom Fixture – See architectural drawings for more information
L16	Compact fluorescent decorative sconce with glass shade Location(s): Main staircase and ground floor	CF18DT/E/IN/830 Osram Sylvania	BALDINGER Riverside-RS31461-MOD/brushed nickel-white cased glass-18W CFQ-277V Fixture must be mounted so that it is ADA compliant
L22	Decorative compact fluorescent pendant Locations: Grand stair landings	CF32DT/E/IN/830 Osram Sylvania	URBAN ARCHEOLOGY UA0612HL “Savoy”-MOD/(1) 32W Fixture modified to take (1) 32W compact fluorescent; Provide with satin nickel finish – architect to verify; Architect to coordinate mounting and suspension length

Design Criteria

Qualitative

Accent Lighting | *Important* |

The elevator lobby and monumental stairs contain building directories and artwork that should be highlighted. Accent lighting can also be used to suggest direction of travel.

Glare |*Very Important* |

Daylight entering through the windows must be controlled so it does not cause glare and discomfort.

Quantitative

Illuminance Levels | *Very Important* |

IESNA Lighting Handbook, 10th Edition

Recommended Illuminance for Ages 25 and Under

- Transition Spaces | Stairs | Typical
    - Horizontal Illuminance @floor – 25 lux
    - Vertical Illuminance @5' AFF – 15 lux
    - Uniformity Ratio, Avg:Min – 2:1

Energy Code | *Very Important*|

ANSI/ASHRAE/IES Standard 90.1-2010

Lighting Power Density - Space by Space Method

- Stairway
    - Maximum Allowable LPD – 0.69 W/ft^2

Evaluation of Existing Lighting Conditions

The elevator lobby and monumental stair are illuminated with an efficient simplistic design. The decorative pendant fixtures harmonize well with the architecture and spread the light quite nicely throughout the spaces. The window allows daylight to enter and offers exterior views. However, I feel that a larger window while providing more light would also decrease the need for some existing fixtures.

Large Workspace

Library and Reading Room

Existing Conditions

Atop the monumental staircase lies the building's feature space, the library, which showcases an enormous double height reading room. The library is rectangular in shape and has a two adjacent barrel vaults for its ceiling which are supported by centralized columns between the arches. The reading room lies in the center of the library and is open to the third floor above. Study carrels, computer stations, and long study tables cover the open floor. Along the wooden banner around the reading room's opening to above are paintings done by a local artist. Large windows on the south wall provide the space with a generous amount of daylight. The amount of daylight is controlled with motorized shades under the control of the library's management staff. The primary lighting system consists of large metal halide fixtures mounted on the exterior columns and individual task lights down on the reading tables. Lighting on the underside of the floor above also adds to the light levels in the reading room.

Materials and Reflectance

Ceiling

- Barrel Vaulted GWB – 0.7
- Acoustical Plaster – 0.7
- Architectural Arches – 0.2

Walls

- PTD GWB (tan) – 0.5

Floor

- Cork Floor (Reading Room) – 0.2
- Carpet (Walkway) – 0.2

Furniture

- Wood Tables and Chairs (Lower Level) – 0.3
- Wood, Fabric (Upper Level) – 0.3

Dimensions

Reading Room – Lower Level

Area – 9450 sq. ft.

Ceiling Height High Point – 26' 3"

Ceiling Height Low Point – 20' 3"

Approximate Width – 101' 11"

Approximate Length – 136' 8"

Reading Room – Upper Level

Area – 2565 sq. ft.

Approximate Width – 16' 3"

Approximate Length – 136' 8"

Drawings – See Appendix

Luminaire Schedule			
Type	**Description**	**Lamp Code**	**Manufacturer/Catalog**
L2	Surface mounted adjustable metal halide uplight with perforated housing, cut-off shield, remote ballast, mechanical locked position option, modified with dichroic lens, and concealed from view in custom decorative enclosure Location(s): Main reading room	(2) CDM400S51/HOR/4K/ ALTO Philips MasterColor ED-18, clear	SPI LIGHTING EIW3026-FT-2M400-277-CSPT01-MOD w/Cat-I-Glass #3410 dichroic glass lens and spacer to dissipate heat Custom enclosure to be minimum 1” away from fixture to allow for proper heat dissipation – refer to architectural drawings for enclosure details and dimensions; Maximum remote ballast distance is 50’ - ballast location to be in accessible and ventilated location;
L11	Task light with nomex shade, metal base with integrated electrical outlet and data port Location(s): 2nd floor and 3 rd floor law library	Soft White Plus BCEL/SWP 20 Alto Philips (Marathon Soft White Plus Self-ballasted compact fluorescent lamp with medium base socket)	BALDINGER Seward-RS31462/TO Provide with electrical outlet and pass through dataport integrated in base; provide with nomex shade and antique brass finish; architect to verify finishes
L11A	Compact fluorescent decorative sconce with glass shade Location(s): Main staircase and ground floor	Soft White Plus BCEL/SWP 20 Alto Philips (Marathon Soft White Plus Self-ballasted compact fluorescent lamp with medium base socket)	BALDINGER Seward-RS31462/TO Provide with electrical outlet integrated in base; provide with nomex shade and antique brass finish; architect to verify finishes

Design Criteria

Qualitative

Glare |*Very Important* |

Daylight entering through the windows must be controlled so it does not cause glare, direct or reflected, and disrupt students in their studies.

Controls |*Important* |

The level of control designed into the illumination system will have a major role in addressing daylight illuminance levels and overall design flexibility.

Accent Lighting |*Somewhat Important* |

The artwork on the banner around the reading room should have proper vertical illuminance to be viewed.

Quantitative

Energy Code |*Very Important*

ANSI/ASHRAE/IES Standard 90.1-2010

Lighting Power Density - Space by Space Method

- Library | Reading Area
    - Maximum Allowable LPD – 0.93 W/ft2

Illuminance Levels |*Very Important*

IESNA Lighting Handbook, 10th Edition

Recommended Illuminance *for Ages 25 and Under*

- Library Facilities | Library Proper | Reading Area | Study Carrels & Tables and Chairs
    - Horizontal Illuminance @2.5’ AFF – 250 lux
    - Vertical Illuminance @4’ AFF – 100 lux
    - Uniformity Ratio, Avg:Min – 2:1

- Library Facilities | Reading and Writing | VDT Screen | CSA/ISO Type I | Positive Polarity
    - Horizontal Illuminance @2.5’ AFF – 150 lux
    - Vertical Illuminance @3.5’ AFF – 75 lux

*Maximum Illuminance ratio to maintain concentration should be 5:1 at task area to minimum throughout work space

Prioritized Criteria

1) Energy Code
2) Illuminance Levels
3) Glare
4) Controls

Evaluation of Existing Lighting Conditions

The strategy to illuminate the ceiling works very well. The wash created on the barrels provides great ambient light and a spectacular visual. The aiming of the fixtures to create this even wash causes a hotspot on the column above the fixture mount which in a way separates itself from the wash on the ceiling and creates the appearance of a burning torch. Because the columns are offset from where the wall and ceiling join, a strong shadow is created on the edge of the ceiling at these locations. The placement of these fixtures allows for easy access for maintenance. One issue found upon personal observance is the current light sources are experiencing color shifts and inconsistencies between lamps. The individual task lights operated at the user's discretion add flexibility and control. The following light level calculation will provide insight to the designs quantitative performance.

Type	Lamp Lumens		Light Loss Factors			
	Initial	Mean	LLD	LDD	BF	Total
L2	34,800	29,600	0.85	0.75	1.0	0.64

Type	Lamp/Fixture	Fixture Quantity	Input Watts	Total Watts
L2	(2) CDM400S51	30	430	25,800

ANSI/ASHRAE/IESNA 90.1 - 2010		
Category	**Allowable**	**Actual**
Area (sqft)	-	12,015
Input Watts (W)	-	25,800
Power Density (W/sqft)	0.93	**2.15**

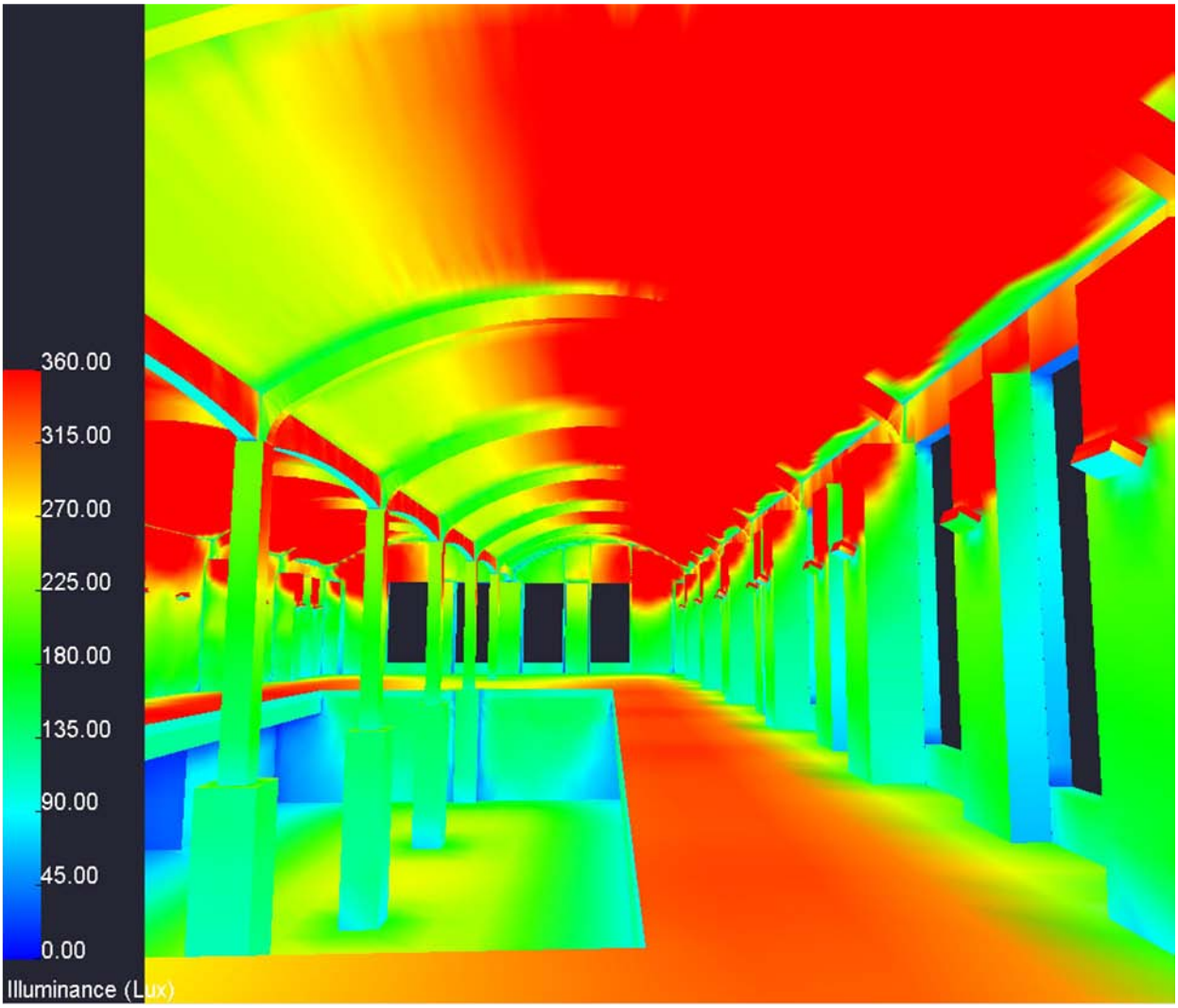


Figure 1: Pseudo Rendering of Library

Results

Reading Room – Lower Level

Avg – 231.2 lux
Max – 271 lux
Min – 120 lux
Avg/Min – 1.93

Reading Room – Upper Level

Avg – 300.2 lux
Max – 382 lux
Min – 161 lux
Avg/Min – 1.86

Summary

It is clear from the rendering of the model above that the 1500W metal halide fixtures do reach the recommended light levels on the lower level but exceeds the values on the upper. In combination with the CFL tasks lights at each seating area, this lighting scheme provides more than the recommended light levels throughout the library. In regards to the darker areas surrounding the lower level of the reading room, these light levels will be sufficient since light will spill from other sources underneath the walkway and the surrounding spaces.

*Calculation points: 3’ x 3’ spacing 2.5’AFF

*AGi Files: Y:\Clark_Jarret\Tech 1

Special Purpose Space – Three Schematic Design Concepts

Multipurpose Classroom and Law Collection

Existing Conditions

The third floor of the southwest wing contains a multipurpose room to hold lectures, courtroom mockups, and store the law stacks. This multi-purpose room's geometry is unique to the other spaces. Its ceiling angles inward from the North/South walls which are joined by a flat plane in the center of the room. Law stacks line the North/South walls and also occupy the West half of the room. The eastern half of the room is occupied by multiple wooden tables and chairs that may be rearranged to adhere to different teaching styles or create a mock-up courtroom setting. The existing lighting system is composed of one central lay-light to imitate a skylight and give the sense of a day lit space. The effect is achieved by reflecting light from linear fluorescents off of a highly reflective surface to diffuse and spread the light evenly across the frosted lens. The lay-light is surrounded by six metal halide accent lights. Direct/Indirect pendants are hung from the sloped ceiling. These provide general illumination and spill light onto the ceiling and floor. Each stack contains its own integral lighting fixture.

Materials & Reflectance

Ceiling

- Sloped GWB – 0.7
- Skylight – 0.7

Walls

- PTD GWB – 0.5

Floor

- Carpet – 0.2

Furniture

- Wood Tables , Chairs, Stacks – 0.3

Dimensions

Area – 3000 sq. ft.

Ceiling Height – 15'

Approximate Width – 68'

Approximate Length – 44'

Drawings – See Appendix

Luminaire Schedule			
Type	**Description**	**Lamp Code**	**Manufacturer/Catalog**
L1E	Indirect/direct linear fluorescent pendant with white baffles, cable suspension, and aluminum housing – 8’ Location(s): Library	FP28/830/ECO Osram Sylvania 2-lamp cross section	AXIS LIGHTING 101F-SB-8’-T5-2-W-60/40-E-277-1-CT-C-(emergency requirements) Provide with 60% uplight/ 40% downlight distribution; Architect to confirm white louver and housing finish; Cable length to be 18”; Contractor to coordinate fixture mounting with ceiling system
L7A	Bracket mounted T5 linear fluorescent lensed stacklight with remote ballast – 9’ Location(s): Library	FP21/830/ECO (3’) Osram Sylvania 1-lamp cross section	BARTCO BFL992-WATT/PRS/FINISH-9’ length-MOD with T5 lamp and lens Fixture is bracket-mounted off stack; Architect to select fixture finish; provide with programmed rapid start ballast; See Type L7 Series Notes
L7B	Bracket mounted T5 linear fluorescent lensed stacklight with remote ballast – 12’ Location(s): Library	FP21/830/ECO (3’) Osram Sylvania 1-lamp cross section	BARTCO BFL992-WATT/PRS/FINISH-12’ length-MOD with T5 lamp and lens Fixture is bracket-mounted off stack; Architect to select fixture finish; provide with programmed rapid start ballast; See Type L7 Series Notes
L7C	Bracket mounted T5 linear fluorescent lensed stacklight with remote ballast – 15’ Location(s): Library	FP28/830/ECO (4’) and/or FP21/830/ECO (3’) Osram Sylvania 1-lamp cross section	BARTCO BFL992-WATT/PRS/FINISH-15’ length-MOD with T5 lamp and lens Fixture is bracket-mounted off stack; Architect to select fixture finish; provide with programmed rapid start ballast; See Type L7 Series Notes
L7E	Bracket mounted T5 linear	FP28/830/ECO (4’)	BARTCO

	fluorescent lensed stacklight with remote ballast – 18’ Location(s): Library	and/or FP21/830/ECO (3’) Osram Sylvania 1-lamp cross section	BFL992-WATT/PRS/FINISH-18’ length-MOD with T5 lamp and lens Fixture is bracket-mounted off stack; Architect to select fixture finish; provide with programmed rapid start ballast; See Type L7 Series Notes
L7J	Bracket mounted fluorescent lensed stacklight with remote ballast – 62’ Location(s): Library	FP28/830/ECO (4’) and/or FP21/830/ECO (3’) Osram Sylvania 1-lamp cross section	BARTCO BFL992-WATT/PRS/FINISH-62’ length-MOD with T5 lamp and lens Fixture is bracket-mounted off stack; Architect to select fixture finish; provide with programmed rapid start ballast; See Type L7 Series Notes
L9	Recessed metal halide adjustable accent light with accessories – 6” aperture Location(s): Third floor grand staircase skylight and law library skylight	CDM70/PAR38/FL/3 K/ ALTO Philips MasterColor	GOTHAM DPH-P38-70M-6-AC-T00-LD-277-HEB-Custom color flangeLTWFH700 DBL-F700/SL and L700 Provide with accessory lens holder, honeycomb louver and spread lens; Architect to confirm fixture housing fits in skylight structure; Architect to select flange finish
L11	Task light with nomex shade, metal base with integrated electrical outlet and data port Location(s): 2nd floor and 3 rd floor law library	Soft White Plus BCEL/SWP 20 Alto Philips (Marathon Soft White Plus Self-ballasted compact fluorescent lamp with medium base socket)	BALDINGER Seward-RS31462/TO Provide with electrical outlet and pass through dataport integrated in base; provide with nomex shade and antique brass finish; architect to verify finishes

L19A	Surface mounted metal halide lightpipe with extruded aluminum luminaire housing and UV stabilized polycarbonate pipe – 18' length Locations: Law library skylight/lay light	MH1000/U/BT37 Clear lamp	INSIGHT LIGHTING AL10-18-180 o -(mounting)-277-TW-RA-MOD w/Abrisa #127 dichroic lens Continuous run fixtures mounted above the skylight structure, mounting condition to be coordinated by contractor; Lamp compartment to be located in accessible location, Architect to coordinate. Laylight glass to be opal glass with no more than 50% transmittance

Design Criteria

Qualitative

Scenes | *Very Important* |

The lighting design must provide the flexibility needed to adapt to the various tasks this room may be used for. Multiple layers and configurations of light should be present.

Controls | *Very Important* |

Having multiple tasks and lighting schemes occurring is the space will require user friendly controls that can be easily accessible.

Quantitative

Illuminance Levels | *Very Important*

IESNA Lighting Handbook, 10th Edition

Recommended Illuminance for Ages 25 and Under

- Educational Facilities | Classrooms | Study Halls
    - Horizontal Illuminance @2.5' AFF – 150 lux
    - Vertical Illuminance @4' AFF – 100 lux
    - Uniformity Ratio, Avg:Min – 2:1

Energy Code | *Very Important*

ANSI/ASHRAE/IES Standard 90.1-2010

Lighting Power Density - Space by Space Method

- Classroom/Lecture/Training
  - Maximum Allowable LPD – 1.23 W/ft^2

Prioritized Criteria

1) Energy Code
2) Illuminance Levels
3) Scenes
4) Controls

Evaluation of Existing Lighting Conditions

The lighting in the multi-purpose room does not seem like a cohesive system. Light fixtures are randomly suspended around the sides and do not provide much light to the walls. The distribution of light does not create a pleasant environment to work in. The lay-light does give the space a sense of openness but is not effective in creating a desirable space on its own. A greater amount of ambient light and a more sophisticated layout could improve upon these shortcomings. A redesign of the ceiling and lighting might also be an alternative in creating a further stimulating and flexible environment.

	Lamp Lumens		Light Loss Factors			
Type	**Initial**	**Mean**	**LLD**	**LDD**	**BF**	**Total**
L9	4,100	2,870	0.7	0.85	1.0	0.6
L19A	120,000	96,000	0.8	0.85	1.0	0.68

Type	Lamp/Fixture	Fixture Quantity	Input Watts	Total Watts
L9	(1) CDM70	6	79	474
L19A	(1) MH1000	2	1,080	2,160

ANSI/ASHRAE/IESNA 90.1 - 2010		
Category	**Allowable**	**Actual**
Area (sqft)	-	3,000
Input Watts (W)	-	2,634
Power Density (W/sqft)	1.23	**0.88**

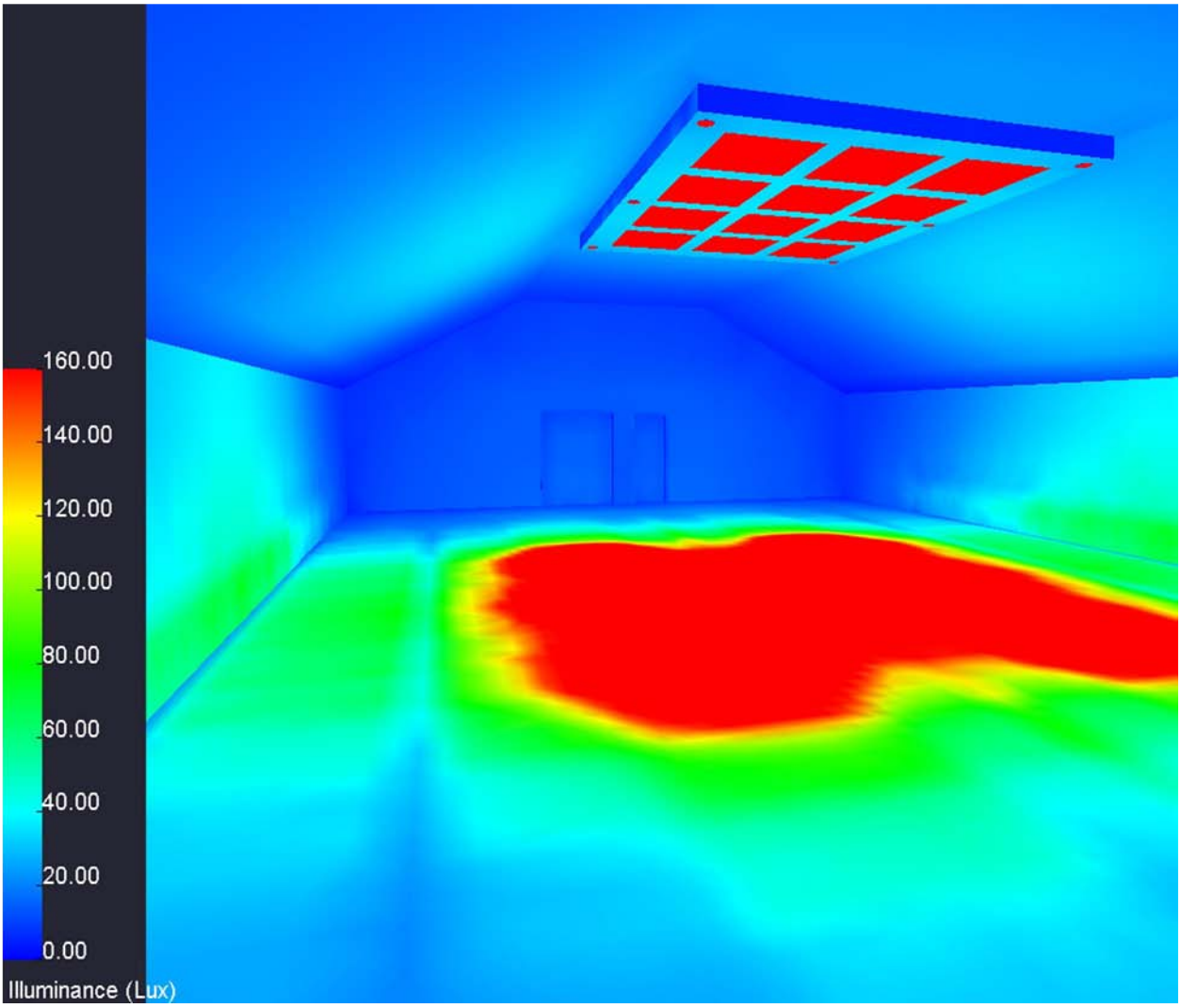


Figure 2: Pseudo Rendering of Multipurpose Classroom

Results

Avg – 221.19 lux
Max – 702 lux
Min – 43.1 lux
Avg/Min – 5.13

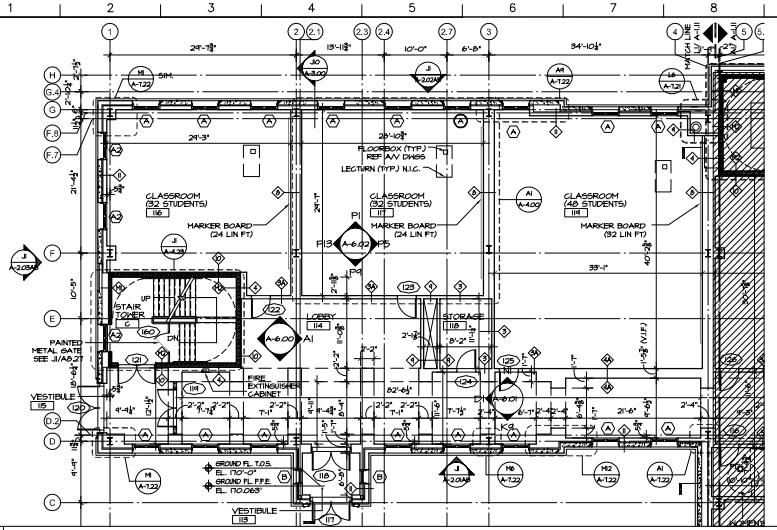
Summary

The multipurpose classroom was modeled as shown in the drawing set but excluding the individual task lights on the library stacks because of their specialty and varying use. No other general lighting system is recorded. This design only supports a fixed furniture location centered in the room. Even so, the light levels provided at this task focused area are extremely high and non-uniform. The intense hotspot created would be very unpleasant to work in, especially with minimal light spread to the walls.

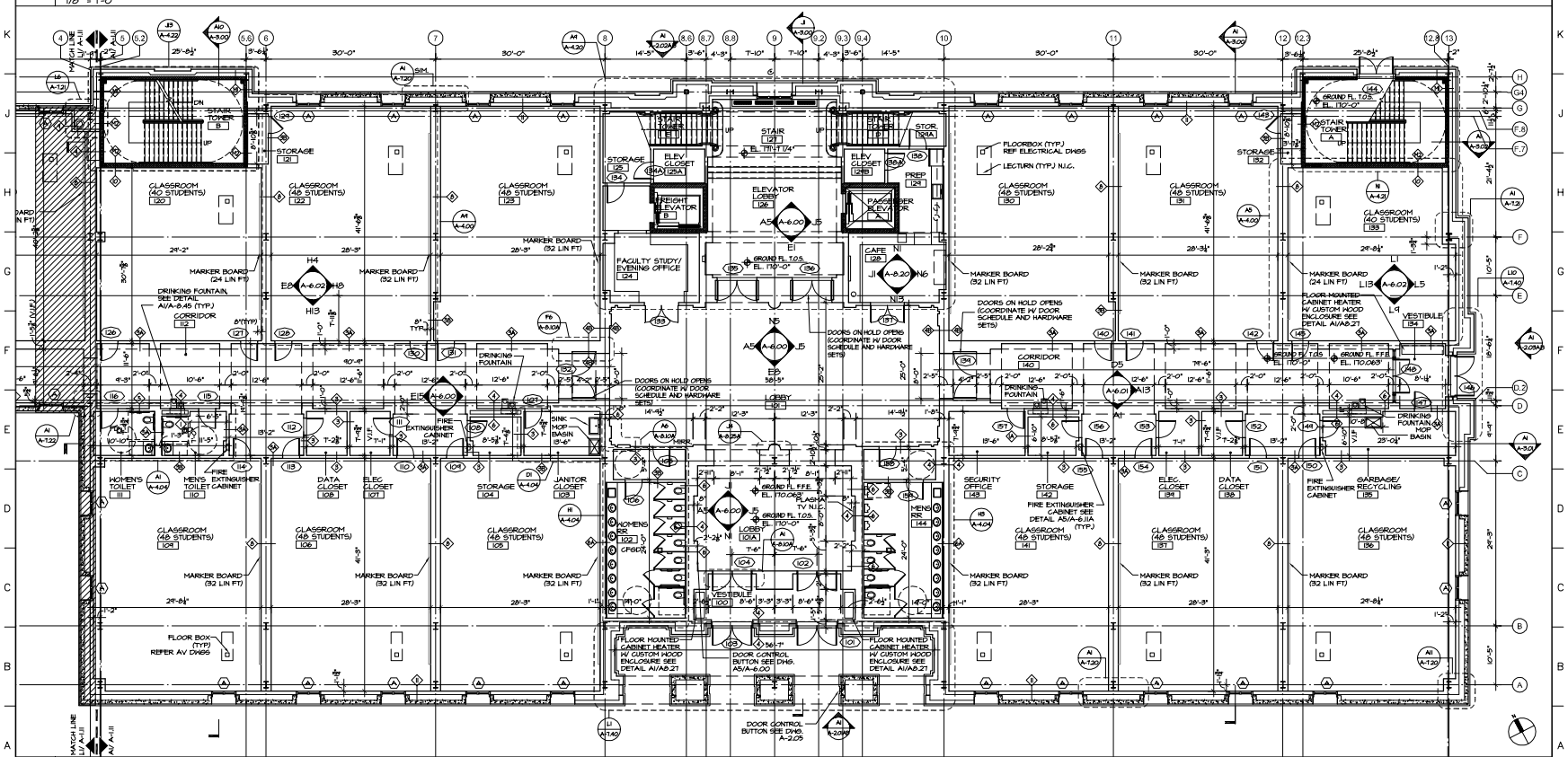
*Calculation points: 3’ x 3’ spacing 2.5’AFF

*AGi Files: Y:\Clark_Jarret\Tech 1

Appendix



LI GROUND FLOOR- WEST
1/8" = 1'-0"



AI GROUND FLOOR- EAST
1/8" = 1'-0"

GENERAL NOTES

1. SEE DWG. A-1.01 FOR OVERALL BUILDING DIMENSIONS
2. SEE EXTERIOR ELEVATION PRECAST PANEL LAYOUT DRAWINGS FOR EXACT PANEL LAYOUT AND DIMENSIONS
3. SEE EXTERIOR PRECAST PANEL DWGS. FOR SIZE & LOCATION OF WINDOW AND DOOR OPENINGS.
4. SEE MEP DWGS. FOR FLOOR DRAIN LOCATIONS.
5. PROVIDE BLOCKING AS REQUIRED FOR PLASMA T.V.S

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COST ESTIMATOR
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KEY PLAN

No.	ISSUE	DATE
6	CONSTRUCTION DOCUMENTS (100%)	08/29/2008
5	CONSTRUCTION DOCUMENTS (90%)	06/27/2008
4	CONSTRUCTION DOCUMENTS (60%)	04/11/2008
3	CONSTRUCTION DOCUMENTS (30% INTERNAL REVIEW)	02/22/2008
2	DESIGN DEVELOPMENT SUBMISSION (60%)	04/30/2007
1	SCHEMATIC DESIGN SUBMISSION (30%)	11/08/2006

NORTH INSTRUCTIONAL BUILDING
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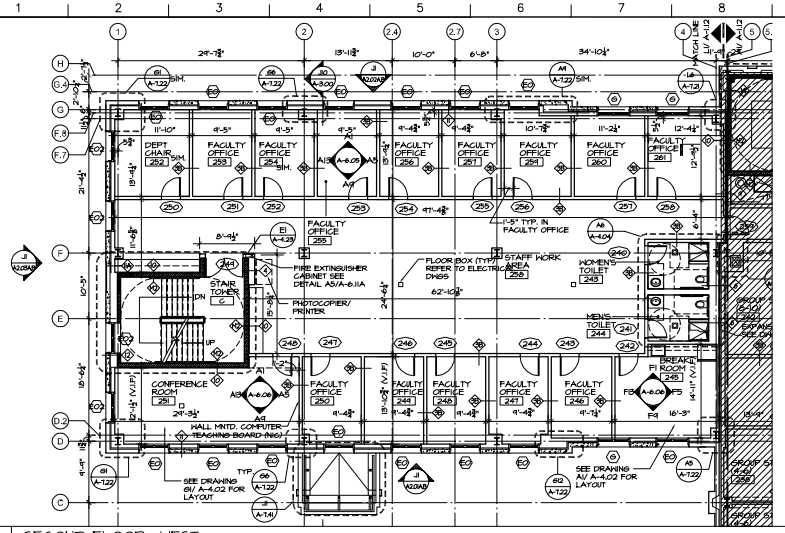
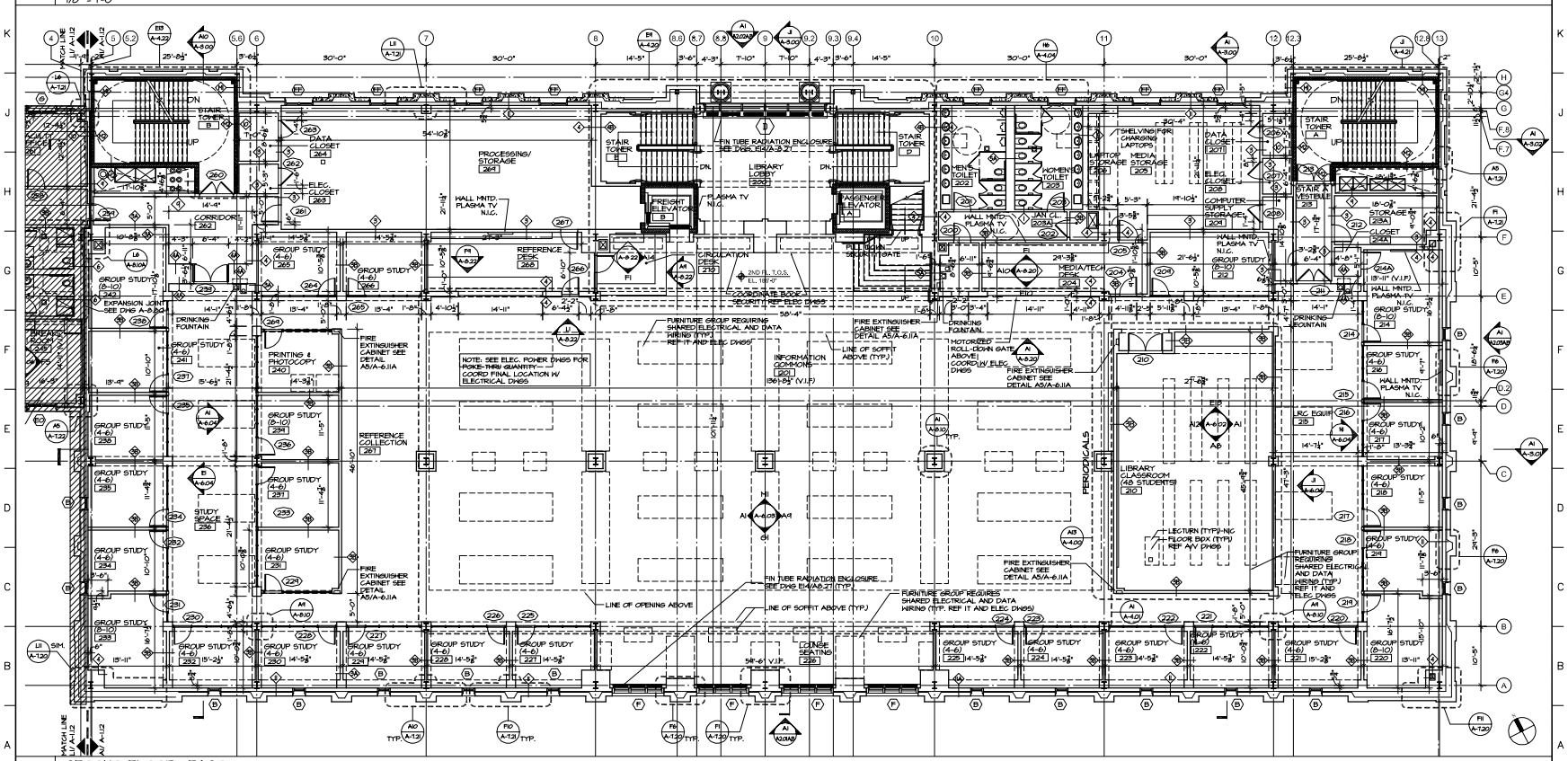
ENLARGED GROUND FLOOR PLAN

Project No.	Date
A05034.01	2008-08-29
CAD File No.	Scale
A-III	1/8"=1'-0"
Drawing No.	
A-1.11	



LI SECOND FLOOR- WEST
1/8" = 1'-0"



AI SECOND FLOOR- EAST
1/8" = 1'-0"

GENERAL NOTES

1. SEE DWG. A-101 FOR OVERALL BUILDING DIMENSIONS
2. SEE EXTERIOR ELEVATION PRECAST PANEL LAYOUT DRAWINGS FOR EXACT PANEL LAYOUT AND DIMENSIONS
3. SEE EXTERIOR PRECAST PANEL DWGS. FOR SIZE & LOCATION OF WINDOW AND DOOR OPENINGS.
4. SEE MEP DWGS. FOR FLOOR DRAIN LOCATIONS.
5. PROVIDE BLOCKING AS REQUIRED FOR PLASMA T.V.'S

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515 BROADWAY
ALBANY, NEW YORK
12207-2964

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KEY PLAN

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1	SCHEMATIC DESIGN SUBMISSION (30%)	11/08/2006

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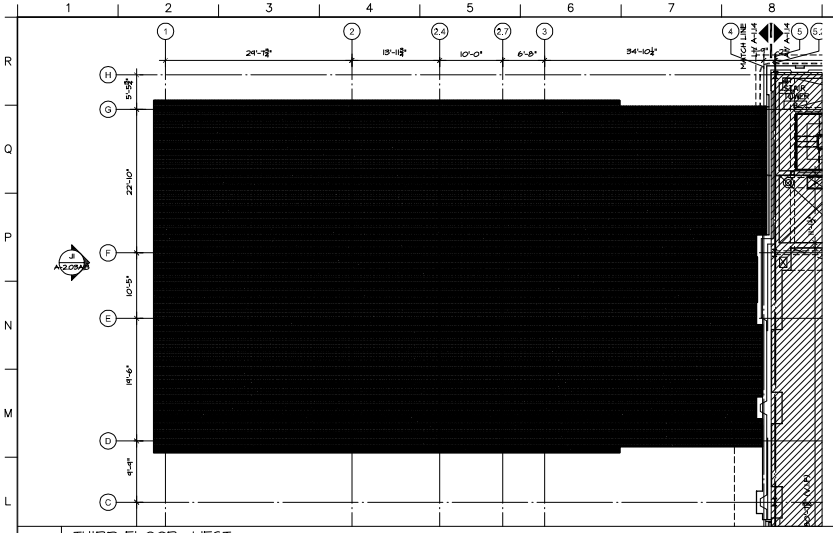
A-112 – A-112

Project No.	Date
AC0234.01	2008-08-29
CAD File No.	Scale
A-112	1/8"=1'-0"
Drawing No.	
17	



LI THIRD FLOOR- WEST
1/8" = 1'-0"

GENERAL NOTES

1. SEE DWG. A-1.03 FOR OVERALL BUILDING DIMENSIONS
2. SEE EXTERIOR ELEVATION PRECAST PANEL LAYOUT DRAWINGS FOR EXACT PANEL LAYOUT AND DIMENSIONS
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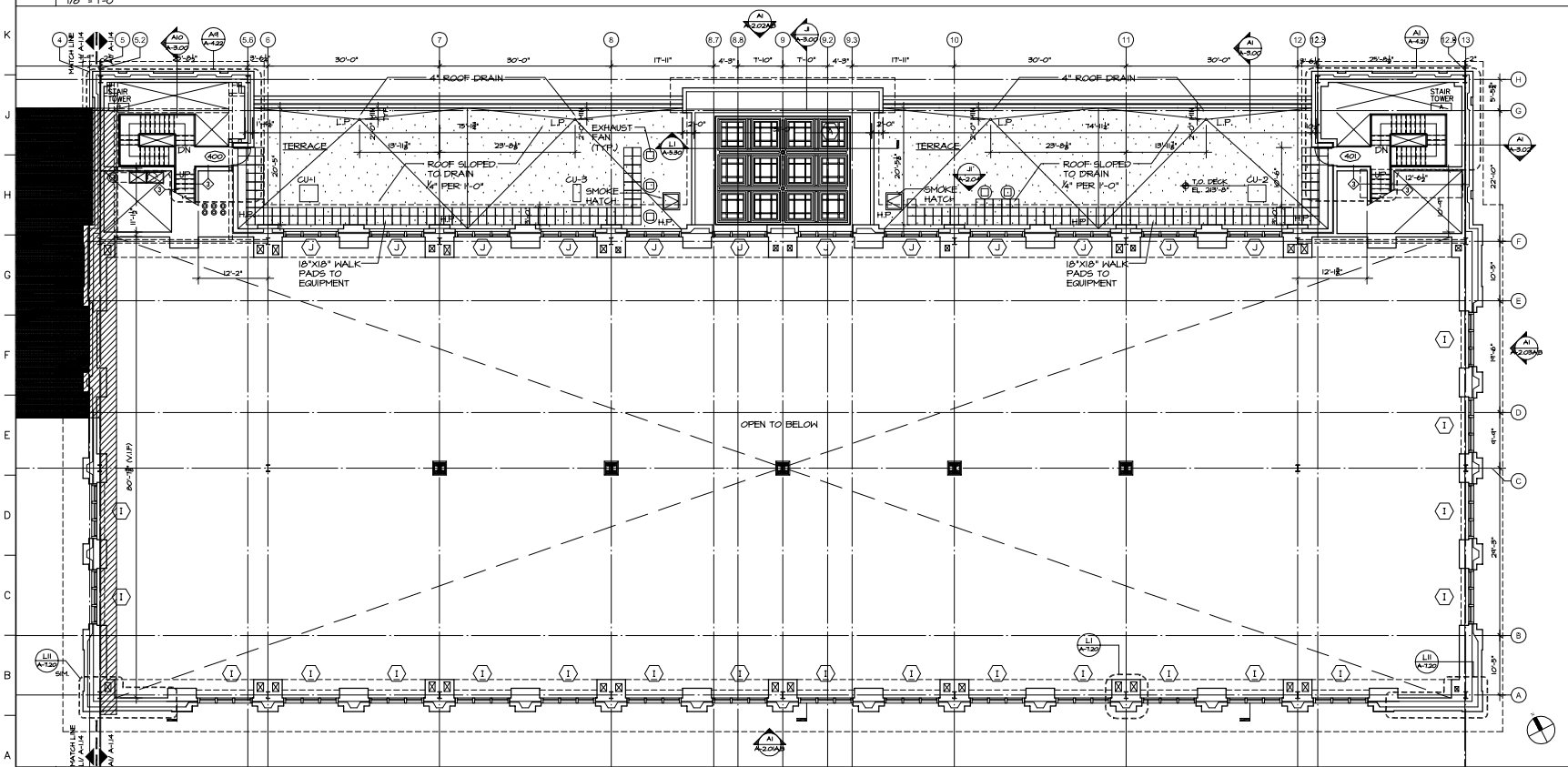
4. SEE MEP DWGS. FOR FLOOR DRAIN LOCATIONS.



AI CLERESTORY
1/8" = 1'-0"

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12207-2964

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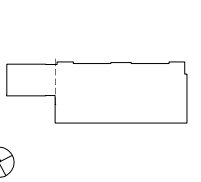
KEY PLAN



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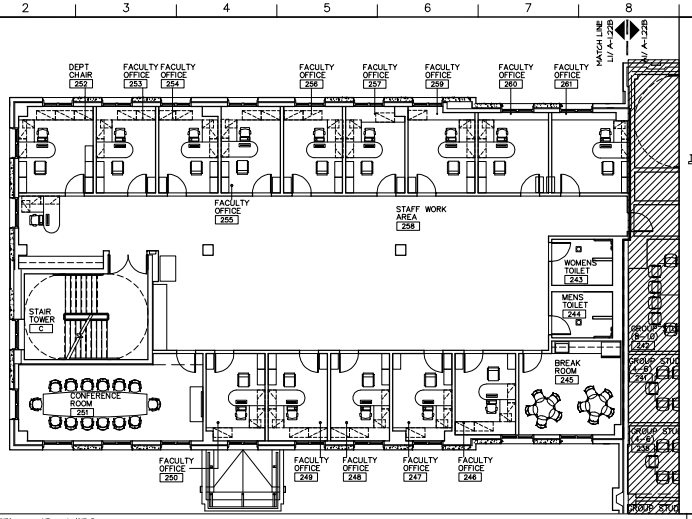
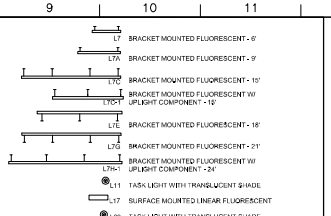
A-114 – A-1.14 CLERESTORY PLAN

Project No. AC0234.01	Date 2008-08-29
CAD File No. A-114	Scale 1/8"=1'-0"
Drawing No.	19

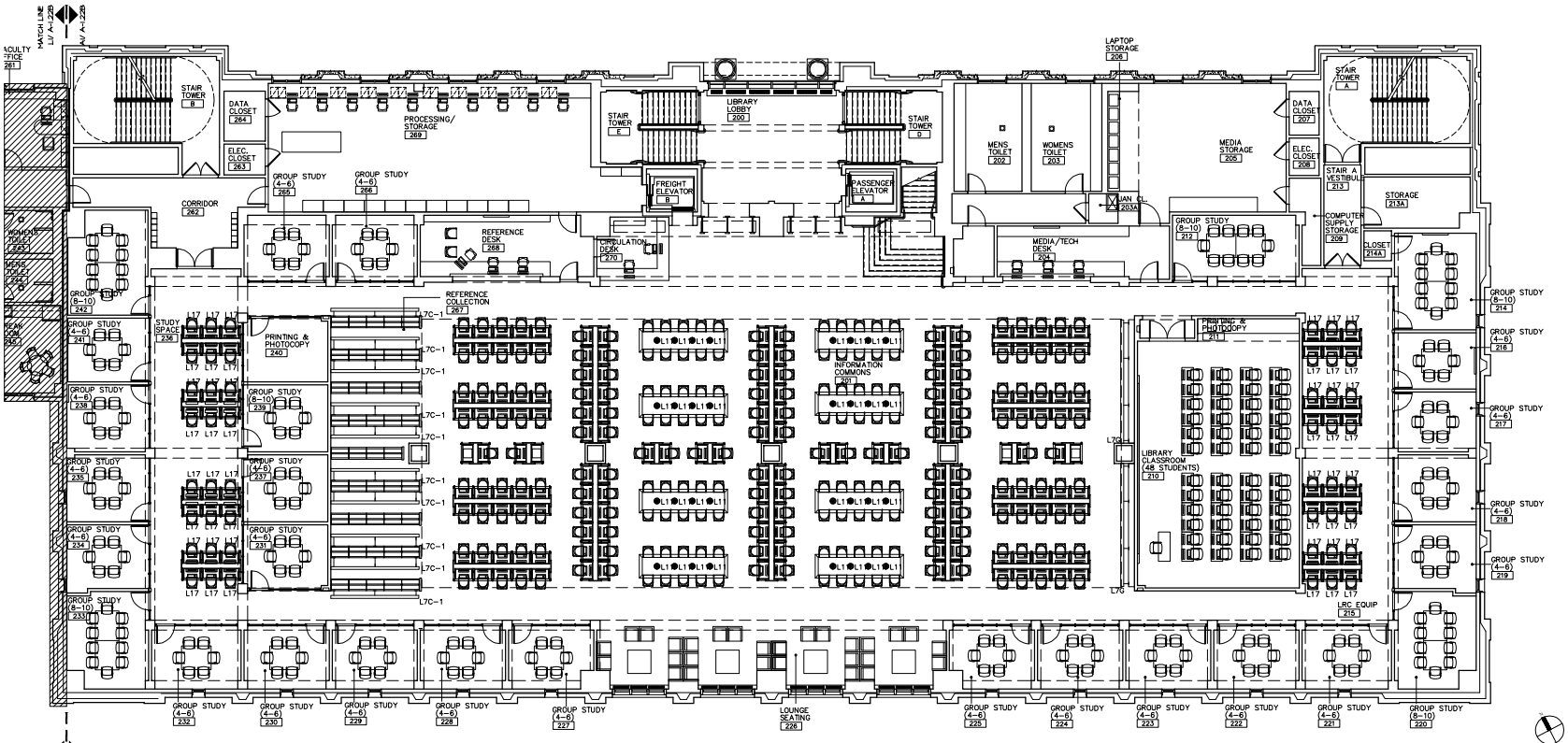


L1 SECOND FLOOR- WEST
1/8" = 1'-0"



NOTE: FURNITURE & BOOKSHELVES FOR REFERENCE ONLY N.I.C. EXCEPT AS NOTED

L9 STACK & TASK LIGHTING SCHEDULE
N.T.S.



A1 SECOND FLOOR- EAST
1/8" = 1'-0"

DORMITORY AUTHORITY
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12207-2964

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KEY PLAN

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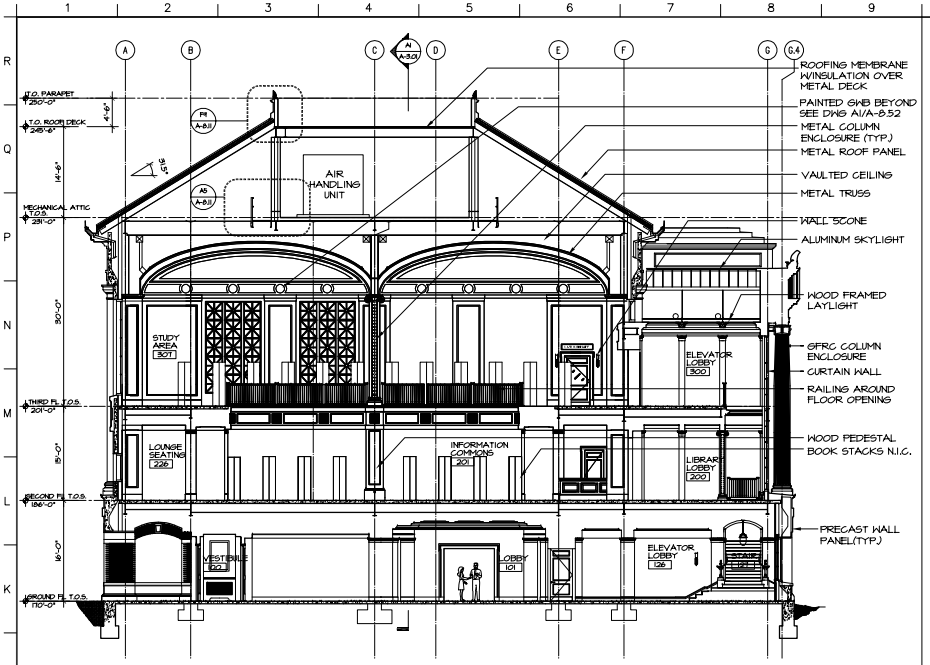
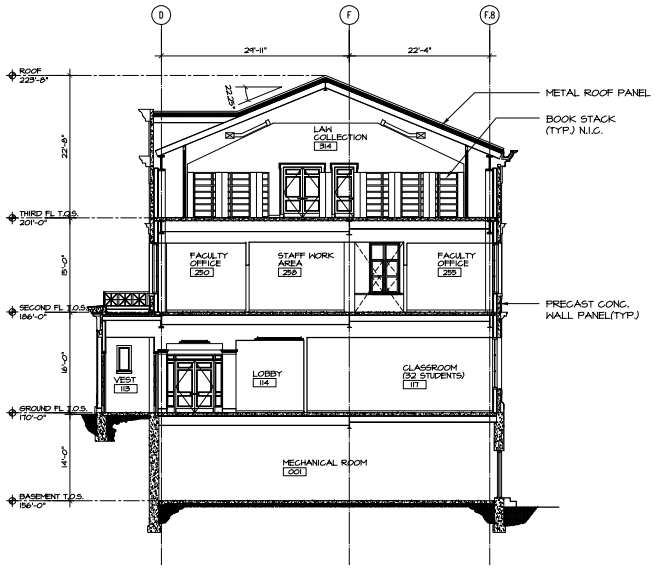
A-122B - A-122B

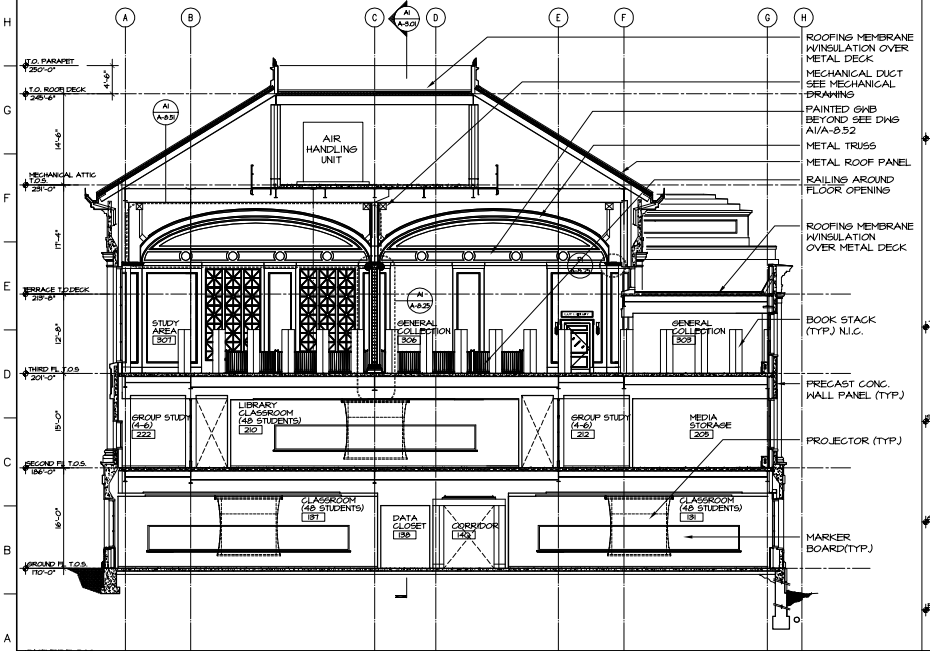
Project No. AC05341.01	Date 2008-08-29
CAD File No. A-122B	Scale 1/8"=1'-0"
Drawing No. 25	



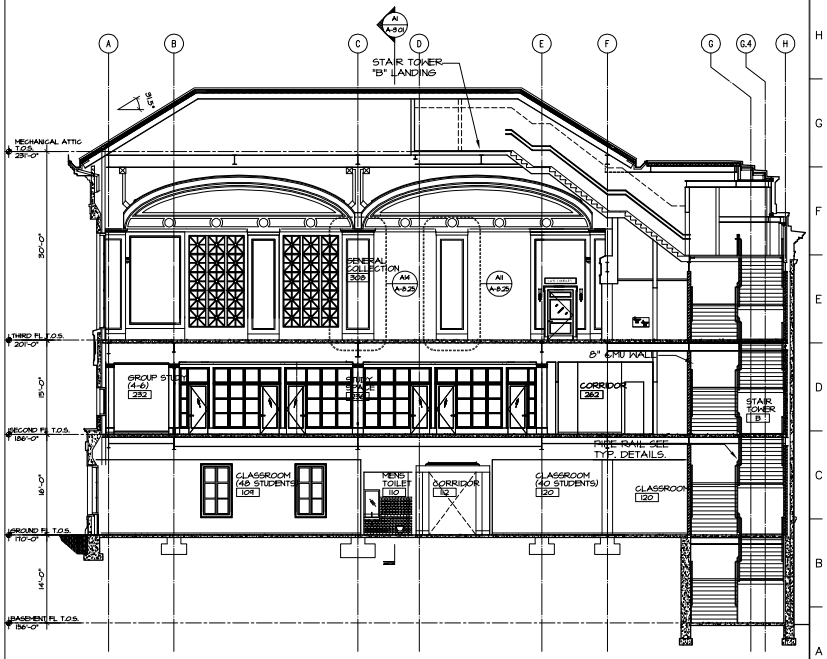
A1 NORTH-SOUTH BUILDING SECTION THROUGH INFORMATION COMMONS
1/8" = 1'-0"



A10 NORTH-SOUTH BUILDING SECTION THROUGH ANNEX
1/8" = 1'-0"



A1 NORTH SOUTH SECTION
1/8" = 1'-0"



A10 NORTH SOUTH SECTION THROUGH EGRESS STAIR
1/8" = 1'-0"

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NORTH INSTRUCTIONAL BUILDING

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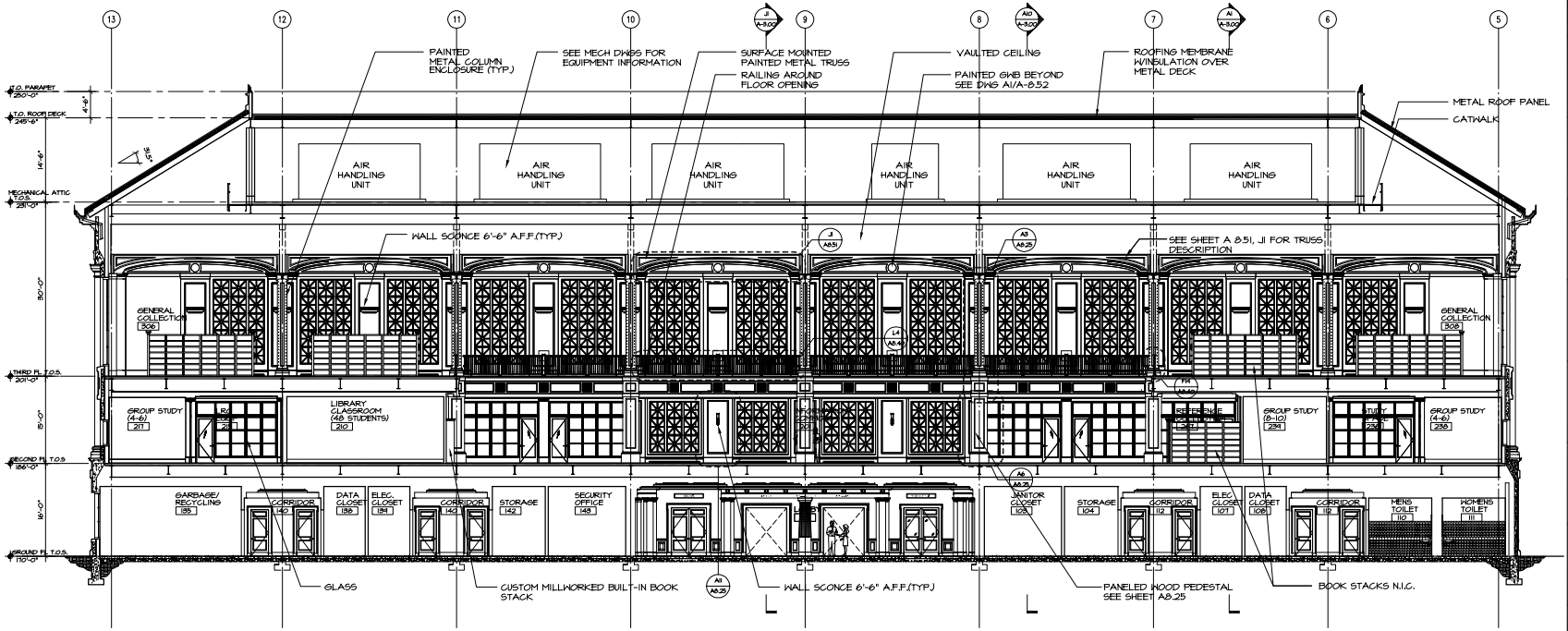
A-300 – A-300

Project No.	Date
AC5c294.01	2008-08-29
CAD File No.	Scale
A-300	1/8"=1'-0"
Drawing No.	
46	



A1 EAST-WEST SECTION THROUGH INFORMATION COMMONS

1/8" = 1'-0"

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4	CONSTRUCTION DOCUMENTS (60%)	04/11/2008
3	CONSTRUCTION DOCUMENTS (30% INTERNAL REVIEW)	02/22/2008
2	DESIGN DEVELOPMENT SUBMISSION (60%)	04/30/2007
1	SCHEMATIC DESIGN SUBMISSION (30%)	11/08/2006

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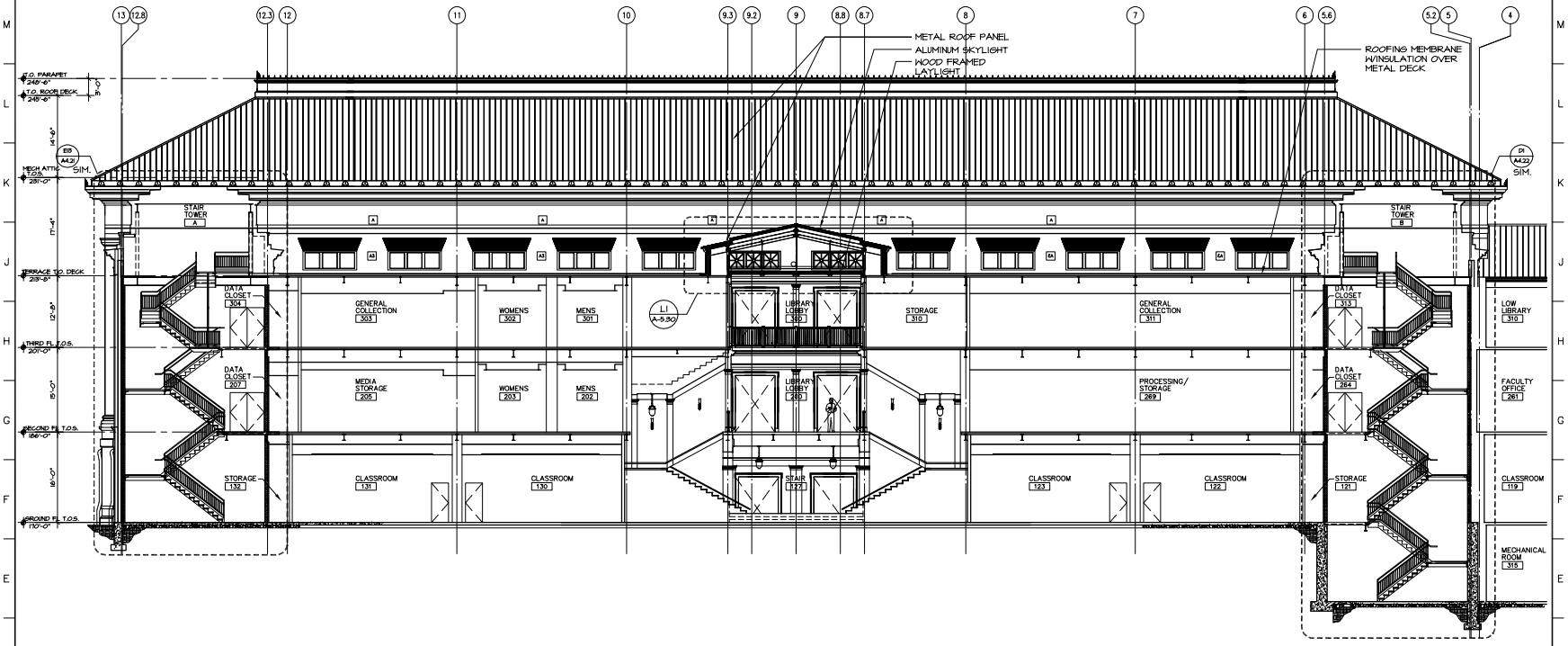
A-301 – A-301

Project No. AC5034.01	Date 2008-08-29
CAD File No. A-301	Scale 1/8"=1'-0"
Drawing No. 47	



A1 EAST-WEST SECTION STAIR
1/8" = 1'-0"

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KEY PLAN

No.	ISSUE	DATE
6	CONSTRUCTION DOCUMENTS (100%)	08/29/2008
5	CONSTRUCTION DOCUMENTS (90%)	06/27/2008
4	CONSTRUCTION DOCUMENTS (60%)	04/11/2008
3	CONSTRUCTION DOCUMENTS (30% INTERNAL REVIEW)	02/22/2008
2	DESIGN DEVELOPMENT SUBMISSION (60%)	04/30/2007
1	SCHEMATIC DESIGN SUBMISSION (30%)	11/08/2006

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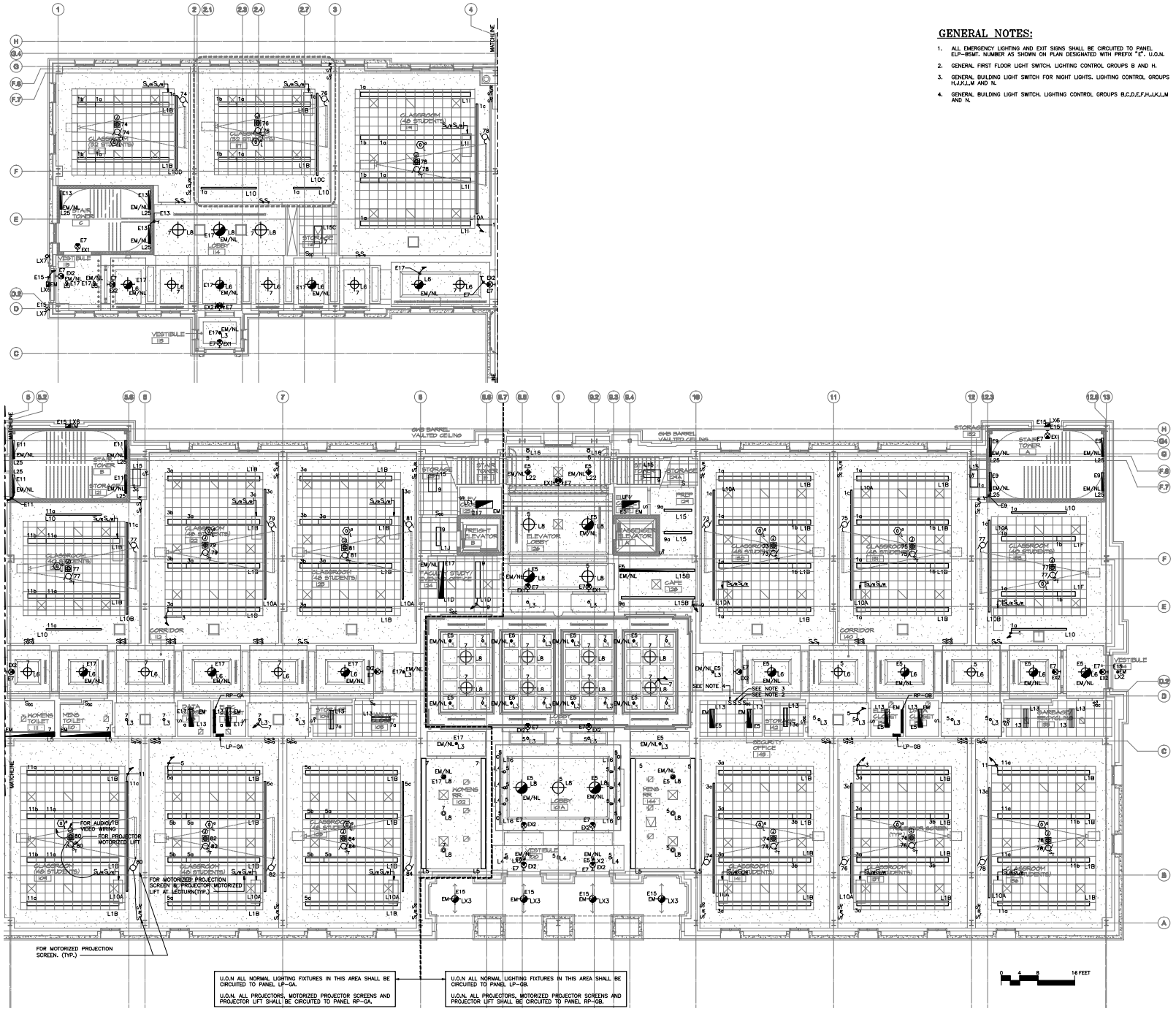
A-302 – A-302

Project No. AC5284.01	Date 2008-08-29
CAD File No. A-302	Scale 1/8"=1'-0"
Drawing No. 48	



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KEY PLAN

No.	ISSUE	DATE
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3	CONSTRUCTION DOCUMENTS (30% INTERNAL REVIEW)	02/22/200
2	DESIGN DEVELOPMENT SUBMISSION (60%)	04/30/200
1	SCHEMATIC DESIGN SUBMISSION (30%)	11/08/200

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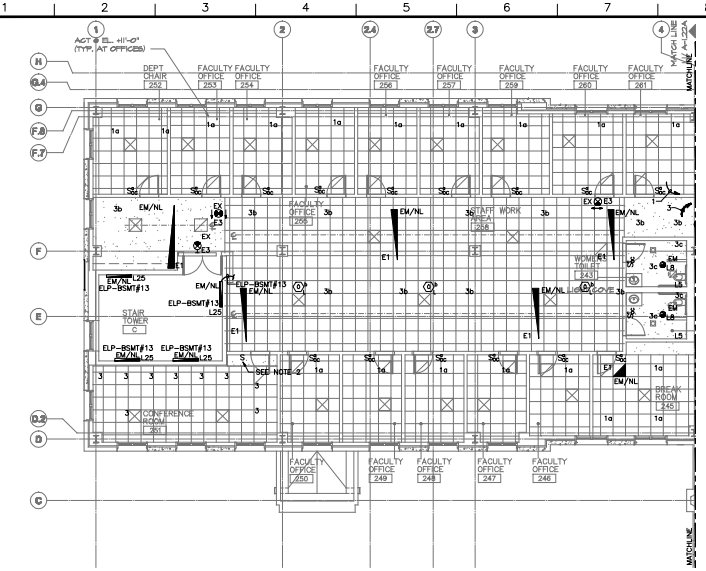
ELECTRICAL – GROUND FLOOR LIGHTING PLAN

Project No. 1231.000	Date 2008-08-29
CAD File No.	Scale 1/8"=1'-0"
Drawing No.	E-1.11



GENERAL NOTES:

1. ALL EMERGENCY LIGHTING AND EXIT SIGNS SHALL BE CIRCUITED TO PANEL ELP-2. NUMBER AS SHOWN ON PLAN DESIGNATED WITH PREFIX "E", U.O.N.
2. CIRCUITS FOR CARREL LIGHTING IS SHOWN ON POWER PLANS. REFER TO DRAWING E2.12.
3. ALL CIRCUITS THAT ARE LOCATED IN PANELS ON THIS FLOOR THAT STUBS UP OR POKES THRU THE FLOOR SHALL RUN ACROSS THE GROUND FLOOR CEILING AND BACK UP THRU THE FLOOR OF THE ELECTRIC ROOM INTO THE APPROPRIATE PANEL POWERING THE CIRCUIT. WHERE POSSIBLE, CIRCUIT SHALL BE GROUPED IN A JUNCTION BOX ABOVE AN ACCESSIBLE CEILING THEN BACK TO SOURCE.

KEY NOTES:

1. MAIN SWITCH BANK FOR SHADE CONTROL AND LIGHTING CONTROL OF THE LIBRARY. SWITCH BANK SHALL CONSIST OF (1) SHADE CONTROL KEYPAD (REFER TO DETAIL 03/E6.02), AND (5) TOGGLE SWITCHES FOR LIGHTING, CONNECTED TO THE LIGHTING CONTROL SYSTEM. TOGGLE SWITCHES ARE TO CONTROL ZONES AS FOLLOWS:

   SWITCH 1 – LIGHTING CONTROL ZONES C,D,K,L,M AND N. (ALL LIBRARY LIGHTS)
   SWITCH 2 – LIGHTING CONTROL ZONES C,K AND M (2ND FLOOR LIBRARY LIGHTS ONLY)
   SWITCH 3 – LIGHTING CONTROL ZONES D AND L (3RD FLOOR LIBRARY LIGHTS ONLY)
   SWITCH 4 – LIGHTING CONTROL ZONE N (2ND FLOOR CARREL LIGHTS)
   SWITCH 5 – LIGHTING CONTROL ZONE M (2ND FLOOR TABLE LIGHTS)

2. LUTRON GRAPHIC EYE, SEE DETAIL ON DRAWING E-6.02.

U.O.N ALL NORMAL LIGHTING FIXTURES IN THIS AREA SHALL BE CIRCUITED TO PANEL LP-2A.

U.O.N. ALL PROJECTORS, MOTORIZED PROJECTOR SCREENS AND PROJECTOR LIFT SHALL BE CIRCUITED TO PANEL RP-2A.

U.O.N ALL NORMAL LIGHTING FIXTURES IN THIS AREA SHALL BE CIRCUITED TO PANEL LP-2B.

U.O.N. ALL PROJECTORS, MOTORIZED PROJECTOR SCREENS AND PROJECTOR LIFT SHALL BE CIRCUITED TO PANEL RP-2B.

0 4 8 16 FEET

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KEY PLAN

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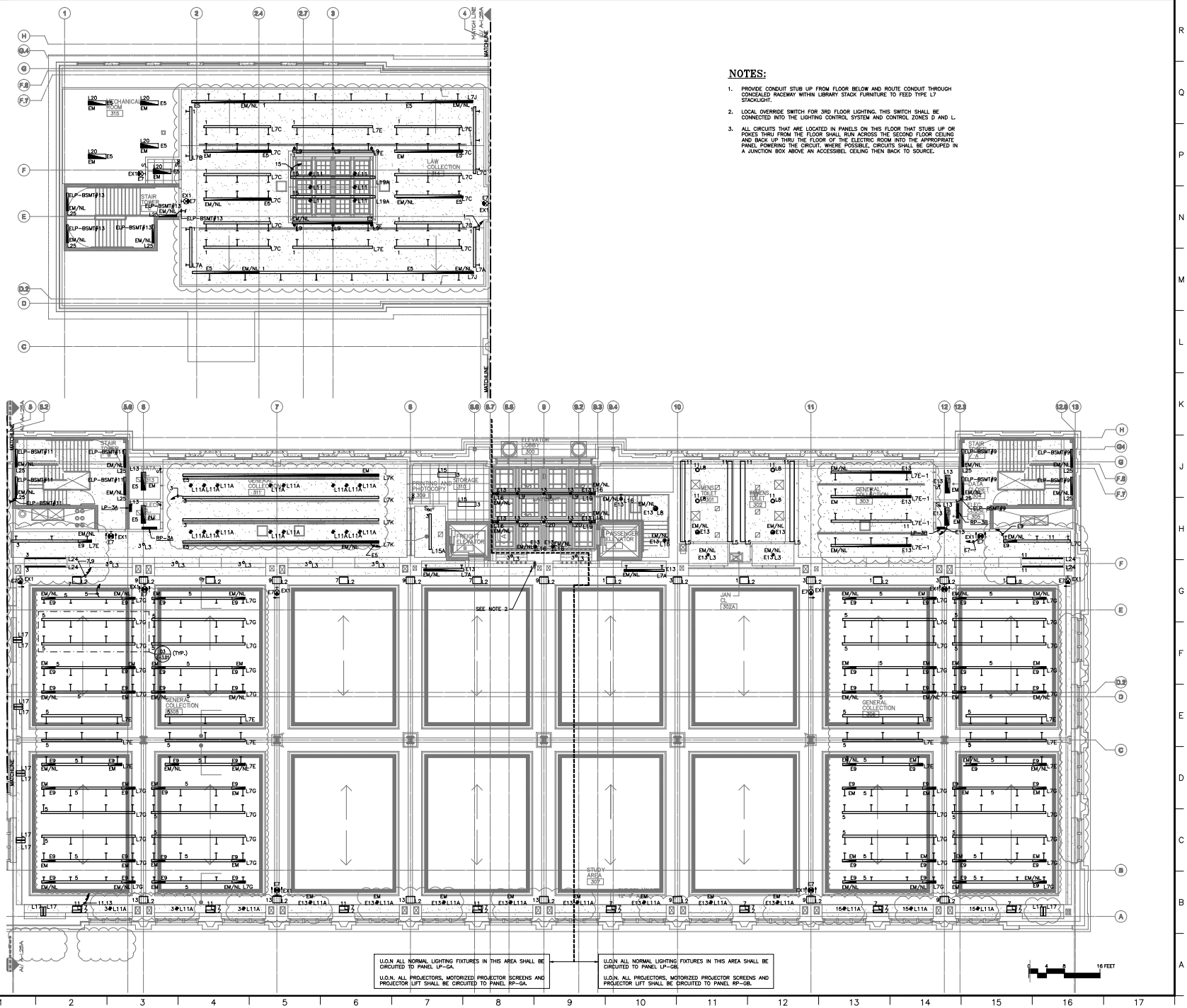
ELECTRICAL –
SECOND FLOOR LIGHTING PLAN

Project No. 1291.000	Date 2008-06-24
CAD File No.	Scale 1/8"=1'-0"
Drawing No.	E-1.12



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ELECTRICAL –
THIRD FLOOR LIGHTING PLAN

Project No. 1291.000	Date 2008-08-29
CAD File No.	Scale 1/8"=1'-0
Drawing No.	E-1.13