

CALL FOR BIDS
CITY OF MINNEAPOLIS
M I N N E S O T A

Official Publication No. 8401

January 25, 2017

PURCHASING DEPARTMENT
330 Second Avenue South - Suite 552
Minneapolis, MN 55401

Minneapolis Convention Center

AN AFFIRMATIVE ACTION EMPLOYER

For information call
Traci Reimringer, (612) 673-2176
Traci.reimringer@minneapolismn.gov

"BIDS FOR MINNEAPOLIS CONVENTION CENTER EXTERIOR LIGHT REPLACEMENT PROJECT - PHASE 1"

To provide all materials, labor, equipment and incidentals necessary for the Minneapolis Convention Center Exterior Light Replacement Project Phase 1 for the City of Minneapolis, all in accordance with the provided specifications and drawings.

Complete project documents are available for electronic download at <http://www.questcdn.com> for **\$10.00** by entering ebid doc # **4806627** on the "Search Projects" page. Please contact QuestCDN.com at (952) 233-1632 or info@questcdn.com for assistance.

All plan holders who order electronic proposals through QuestCDN will receive addenda as they are released; however, it is the Contractor's full responsibility to ensure they have received all addenda prior to the submittal of bids.

Please e-mail questions concerning this solicitation to traci.reimringer@minneapolismn.gov. Questions received later than 8 days prior to bid opening may not be addressed.

A pre-bid meeting will be held February 9th, 2017 at 10:00 a.m. at the Minneapolis Convention Center – 1301 2nd Ave. S., Minneapolis, MN. Please meet at the Visitor's Information Desk. **All interested bidders are encouraged to attend this meeting.**

Successful bidders with cumulative contracts exceeding \$100,000 will be required to submit a written affirmative action plan (AAP) to the Minneapolis Department of Civil Rights (MDCR) in accordance with Chapter 139.50(b) of the Minneapolis Code of Ordinances.

The successful bidder shall be subject to a pre-award compliance review by the MDCR in accordance with Chapters 139.50 and 423. In addition to the pre-award review, MDCR will also monitor SUBP participation, minority and female employment participation and prevailing wage throughout all construction projects. As of May 1, 2012 the employment goals for onsite labor on all city construction contracts are 6% female and 32% minority. Employee hours and wages are required to be filed electronically with a free online account at LCPtracker.net. Information regarding Frequently Asked Questions (FAQs) may be found on the web at www.ci.minneapolis.mn.us/civilrights/contractcompliance/faq. Questions may be directed to the Department of Civil Rights at contractcompliance@minneapolismn.gov.

The City of Minneapolis hereby notifies all bidders that in regard to any invitations to bid, advertisements, solicitations, or contracts to be entered into pursuant to this Plan, businesses owned and controlled by minorities or women will be afforded maximum feasible opportunity to submit bids and/or proposals in response and will not be subjected to discrimination on the basis of race, color, creed, religion, ancestry, national origin, sex, including sexual harassment, sexual orientation, gender identity, disability, age, marital status, or status with regard to public assistance or familial status.

Prospective bidders' attention is called to Minnesota Statutes 13.591 [Business Data](#). This section states in part:

Data submitted by a business to a government entity in response to a request for bids as defined in Section 16C.02, Subdivision 11, are private or non-public until the bids are opened. Once the bids are opened, the name of the bidder and the dollar amount specified in the response are read and become public. All other data in a bidder's response to a bid are private or non-public data until completion of the selection process. For the purposes of this section, "completion of the selection process" means that the government entity has completed its evaluation and has ranked the responses.

After a government entity has completed the selection process, all remaining data submitted by all bidders are public with the exception of trade secret data as defined and classified in Section 13.37.

A statement by a bidder that submitted data are copyrighted or otherwise protected does not prevent public access to the data contained in the bid.

Bidders are hereby advised that their bid document may become available to the public once a successful bidder has been chosen.

The City of Minneapolis has adopted an Environmental Purchasing Policy (EPP) that is incorporated into all bids. A copy of the policy can be found at this link:

<http://wcms/intranet/finance/procurement/policies/WCMS1Q-003476>

Prompt Payment: Per Minnesota Statutes 471.425 contractors shall pay all certified small subcontractors for undisputed work completed, within ten (10) days after the City of Minneapolis has paid the contractor for the completed work.

Chapter 471.895 of the Minnesota Statutes prohibits gifts from interested persons to local officials. Local Officials includes any individuals who purchase or advise or recommend on the purchase of goods and/or services.

Conflict of Interest/Code of Ethics: Contractor agrees to be bound by the City's Code of Ethics, Minneapolis Code of Ordinances, Chapter 15. Contractor certifies that to the best of its knowledge, all City employees and officers participating in this Agreement have also complied with that Ordinance. It is agreed by the Parties that any violation of the Code of Ethics constitutes grounds for the City to void this Agreement. All questions relative to this section shall be referred to the City and shall be promptly answered.

All successful bidder(s) will be required to comply fully with the Americans with Disabilities Act of 1990 (ADA).

Official Publication No. 8401

Published in Finance and Commerce – January 31, 2017 and February 7th, 2017

Sealed bids will be received and time stamped by receptionist until **10 AM, Local Time, February 23, 2017** at which time they will be publicly opened and read aloud. **Do not fax** sealed bids to Purchasing.

Bids must be accompanied by a bid deposit in the amount of **2%** of the total amount bid in the form of a certified check or bidder's corporate surety bond made payable to the Minneapolis Finance Officer.

Successful bidder will be required to enter into a formal contract and provide a Performance Bond and Payment Bond in the full amount of the contract.

A contractor responding to this solicitation document shall submit to the City of Minneapolis a signed statement under oath by an owner or officer verifying compliance with each of the minimum criteria in Minnesota Statutes, Section 16C.285 subdivision 3.

Envelopes must bear the name of the firm submitting the bid and be addressed as follows:

City of Minneapolis Purchasing Department
Offl. Publ. #8401 – BIDS FOR MINNEAPOLIS CONVENTION CENTER EXTERIOR LIGHT
REPLACEMENT PROJECT PHASE 1
Bids opened 10 AM, Local Time, February 23rd, 2017
330 Second Avenue South - Suite 552
Minneapolis, MN 55401

The City of Minneapolis reserves the right to waive informalities in bids, to accept or reject any or all bids or any part of any bid. Bids must be typewritten, or printed in ink, and signed in ink in handwriting.

TWO complete bid form responses, including attachments, are to be returned, one of which **must** be an original.

BIDS CONTAINING ANY ALTERATION OR ERASURE WILL BE REJECTED UNLESS ALTERATION OR ERASURE IS CROSSED OUT AND CORRECTION PRINTED IN INK OR TYPEWRITTEN AND INITIALED IN INK BESIDE CORRECTION BY THE PERSON SIGNING THE BID.

Automatic Bid/RFP Notification:

Visit the Purchasing website at - http://www.minneapolismn.gov/business/business_doing_business_with_city to sign up for e-mail updates and to view Formal Bids, Informal Bids and RFPs

Taxes:

Effective January 1, 2014, State of Minnesota requires vendors to obtain an ST-3 exemption certificate to substantiate a full (State & Local) sales tax exemption on sales to Minnesota cities, counties, and townships. This form can be found on the City of Minneapolis website at <http://www.ci.minneapolis.mn.us/finance/procurement>.

Instructions to Bidders

IF the Call for Bids, indicates a bid deposit is required, the bid deposit should be in the form of a certified check, cashiers check or bidder's corporate surety bond. If certified check or cashier check is used, it shall be made payable to the Party named in the Call for Bids. Said bid deposit shall be retained by the City of Minneapolis or Board as liquidated damages and not a penalty, in the event the bid is selected by the City of Minneapolis or Board and the bidder fails to execute a contract, therefore, and upon request of the City of Minneapolis or Board, a performance bond and payment bond, as may be required by the City of Minneapolis subsequent to award of contract.

By submitting a bid, bidder agrees that said liquidated damages shall cover only the damages sustained by the City of Minneapolis or Board, from additional administrative costs, expenses or re-advertising and re-bidding and other damages sustained by the City of Minneapolis or Board as a result of failure of successful bidder to execute a written contract, and a performance bond and payment bond when so required, but shall not cover nor preclude the City of Minneapolis or Board from claiming damages on account of delay, price change, loss of other contracts, loss of income, inability of City of Minneapolis or Board to fulfill other contracts, loss of other benefits of this contract, or damages, direct or consequential arising out of breach of contract by the successful bidder.

Whenever separately numbered categories as to materials, equipment or services are set forth in the specifications and in the bid form, unless specifications or bid form is qualified by the statement "ALL OR NONE", bidder may submit a bid upon each, or all, or any selected number of categories, and in such case separate category shall be considered as a separate bid letting procedure, and the City of Minneapolis shall have the right to make separate awards to the lowest and best bidder in any particular category, or to the overall lowest and best bidder where it is found to be in the best interest of the City.

Bidder is responsible to ensure they are in receipt of all addenda. Contact the buyer if questions.

The City of Minneapolis is subject to Minnesota Sales and Use Tax for taxable items in accordance with the Minnesota Department of Revenue.

If a lump sum bid for materials and/or equipment includes labor and all incidentals, the bidder is responsible for all applicable sales tax on taxable items required in the performance of the bid and should be included in the total amount bid.

Specification Information

Unless qualified by the provision "NO SUBSTITUTE", the use of the name of a manufacturer brand and/or catalog description in specifying any item does not restrict bidders to that manufacturer, brand or catalog description identification. This is used simply to indicate the character, quality, and/or performance equivalence of the commodity desired, but the commodity on which bids are submitted must be of such character, quality, and/or equivalence that it will serve the purpose for which it is to be used equally well as that specified, and be acceptable to the using department.

In submitting a bid on a commodity other than specified, bidder shall furnish complete data and identification with respect to the commodity he proposes to furnish. Consideration will be given to bids submitted on commodities to the extent that such action is deemed to serve the best interest of the department or boards of the City of Minneapolis.

If a Bidder does not indicate that the commodity he proposes to furnish is other than specified, it will be construed to mean that the bidder proposes to furnish the exact commodity as described.

Bids – City General Requirements

(Revised: May 2016)

The General Conditions are terms and conditions that the City expects all of its Contractors to meet. By submitting a bid, the bidder agrees to be bound by these requirements.

1 City's Rights

The City reserves the right to reject any or all Bids or parts of Bids, to accept part or all of Bids on the basis of considerations other than lowest cost, and to create a project of lesser or greater expense and reimbursement than described in the Call for Bid, or the respondent's reply based on the component prices submitted.

2 Equal Opportunity and Non-Discrimination

The Contractor will comply with applicable provisions of applicable federal, state and city regulations, statutes and ordinances pertaining to the civil rights and non-discrimination in the its application process for and hiring of employees, sub-contractors and suppliers. Among the city ordinances, state statutes and federal statutes to which the Contractor shall be subject to and comply with under the terms of this Contract include, without limitation: Minneapolis Code of Ordinances, Chapter 139; Minnesota Statutes, Section 181.59 and Chapter 363A; 42 U.S.C. Section 2000e, et. seq. (Title VII of the Civil Rights Act of 1964), 29 U.S.C. Sections 621-624 (the Age Discrimination Employment Act), 42 U.S.C. Sections 12101-12213 (Americans with Disabilities Act or ADA), 29 U.S.C. Section 206(d) (the Equal Pay Act), 8 U.S.C. Section 1324 (Immigration Reform and Control Act of 1986) and all regulations and policies and orders promulgated to enforce these laws. The Contractor shall have submitted and had an "affirmative action plan" approved by the City prior to entering into the Contract.

3 Insurance

Insurance secured by the Contractor shall be issued by insurance companies acceptable to the City and admitted in Minnesota. The insurance specified may be in a policy or policies of insurance, primary or excess. Such insurance shall be in force on the date of execution of the Contract and shall remain continuously in force for the duration of the Contract.

Acceptance of the insurance by the City shall not relieve, limit or decrease the liability of the Contractor. Any policy deductibles or retention shall be the responsibility of the Contractor. The Contractor shall control any special or unusual hazards and be responsible for any damages that result from those hazards. The City does not represent that the insurance requirements are sufficient to protect the Contractor's interest or provide adequate coverage. The City of Minneapolis shall be named as an Additional Insured. Evidence of coverage is to be provided on a Certificate of Insurance ACORD Form. A thirty (30) day written notice is required if the policy is canceled, not renewed or materially changed. The Contractor shall require any of its subcontractors, if sub-contracting is allowable under this Contract, to comply with these provisions.

Any Contractor that fails to provide proof of insurance coverage for the Contractor or that fails to provide either coverage for its subcontractors or insurance certificates from any of its subcontractors will be deemed to have submitted a non-responsive bid. The City's award of the Contract will be contingent upon the City's receipt of the required proof of insurance coverage.

The Contractor and its sub-contractors shall secure and maintain the following insurance:

- a) **Workers Compensation** insurance that meets the Minnesota statutory obligations with Coverage B- Employers Liability limits of at least \$100,000 each accident, \$500,000 disease - policy limit and \$100,000 disease each employee.
- b) **Commercial General Liability** insurance with limits of at least \$2,000,000 general aggregate, with coverage for products - completed operations, personal and advertising injury, fire damage and medical expense any one person. The policy shall be on an "occurrence" basis, shall include contractual liability coverage and the City shall be named an "Additional Insured." The coverage amount may be increased if the project amount is expected to exceed \$2,000,000 or involves potentially high risk activity.
- c) **Commercial Automobile Liability** insurance covering all owned, non-owned and hired automobiles with limits of at least \$1,000,000 per accident and the City shall be named an "Additional Insured."
- d) **Builders Risk** insurance. Coverage will be written on an "All Risks" (Special Form policy form). The contractor is responsible for all of the deductible in the Builders Risk policy. The property covered shall cover the full insurable value of the improvements, betterments, and include consequential loss insurance. The City of Minneapolis will be named as a loss payee to protect the City's interests with respect to the repair or replacement of any damaged property or other amounts payable under the policy. A builder's risk insurance policy is written specifically for a project and the City of Minneapolis requires a complete copy of the policy. An Installation Floater policy (equipment), may be required as part of the builders risk policy when equipment is being installed by a contractor.

4 Hold Harmless

The Contractor agrees to defend, indemnify and hold harmless the City, its officers and employees, from any liabilities, claims, damages, costs, judgments, and expenses, including reasonable attorney's fees, attributable to the negligent or otherwise wrongful acts or omissions of the Contractor, its employees, its agents, or employees of subcontractors, in the performance of the work or services provided by or through this Contract or by reason of the failure of the Contractor to fully perform, in any respect, any of its obligations under this Contract.

5 Subcontracting

The Contractor shall provide written notice to the City and obtain the City's authorization to subcontract any work or services to be provided to the City pursuant to this Contract. The Contractor shall not subcontract any services or work under this Contract without prior written approval of the City Department Contract Manager designated herein. As required by Minnesota Statutes, Section 471.425, the Contractor shall pay all subcontractors for subcontractor's undisputed, completed work, within ten (10) days after the Contractor has received payment from the City.

6 Assignment or Transfer of Interest

The Contractor shall not assign any interest in the Contract, and shall not transfer any interest in the same either by assignment or novation without the prior written approval of the City.

7 General Compliance

The Contractor agrees to comply with all applicable Federal, State and local laws and regulations affecting the Contract or governing funds provided under the Contract.

8 Performance Monitoring

The City will monitor the performance of the Contractor against goals and performance standards required herein. Substandard performance as determined by the City will constitute non-compliance with this Contract. If action to correct such substandard performance is not taken by the Contractor within a reasonable period of time to cure such substandard performance, after being notified by the City, Contract termination procedures will be initiated. All work submitted by Contractor shall be subject to the approval and acceptance by the City Department Contract Manager designated herein. The City Department Contract Manager designated herein shall review each portion of the work when certified as complete and submitted by the Contractor and shall inform the Contractor of any apparent deficiencies, defects, or incomplete work, at any stage of the project.

9 Prior Uncured Defaults

Pursuant to City Code of Ordinances, Section 18.115, the City may not contract with persons or entities that have defaulted under a previous contract or agreement with the City and have failed to cure the default.

10 Independent Contractor

Nothing contained in this Contract is intended to, or shall be construed in any manner, as creating or establishing the relationship of employer/employee between the parties. The Contractor shall at all times remain an independent contractor with respect to the work and/or services to be performed under this Contract. Any and all employees of Contractor or other persons engaged in the performance of any work or services required by Contractor under this Contract shall be considered employees or sub-contractors of the Contractor only and not of the City; and any and all claims that might arise, including Worker's Compensation claims under the Worker's Compensation Act of the State of Minnesota or any other state, on behalf of said employees or other persons while so engaged in any of the work or services to be rendered or provided herein, shall be the sole obligation and responsibility of the Contractor.

11 Accounting Standards

The Contractor agrees to maintain the necessary source documentation and enforce sufficient internal controls as dictated by generally accepted accounting practices (GAAP) to properly account for expenses incurred under this Contract.

12 Retention of Records

The Contractor shall retain all records pertinent to expenditures incurred under this Contract in a legible form for a period of six years after the resolution of all audit findings. Records for non-expendable property acquired with funds under this Contract shall be retained for six years after final disposition of such property.

13 Data Practices

The Contractor agrees to comply with the Minnesota Government Data Practices Act (Minnesota Statutes, Chapter 13) and all other applicable state and federal laws relating to data privacy or confidentiality. The Contractor and any of the sub-contractors and suppliers retained by the Contractor to provide work or services under this Contract shall comply with the Act and be subject to penalties for non-compliance as though they were a “government entity.”

The Contractor must immediately report to the City any requests from third parties for information relating to this Contract. The City agrees to promptly respond to inquiries from the Contractor concerning data requests. The Contractor agrees to hold the City, its officers, and employees harmless from any claims resulting from the Contractor’s unlawful disclosure or use of data protected under state and federal laws.

All Bids shall be treated as non-public information until the Bids are opened for review by the City. At that time, the names of the responders become public data. All other data is private or non-public until the City has completed negotiating the Contract with the selected Contractor. At that time, the Bids and their contents become public data under the provisions of the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13 and as such are open for public review.

14 Inspection of Records

Pursuant to Minnesota Statutes, Section 16C.05, all Contractor records with respect to any matters covered by this Contract shall be made available to the City and the State of Minnesota, Office of State Auditor or their designees, upon notice, at any time during normal business hours, as often as the City deems necessary, to audit, examine, and make excerpts or transcripts of all relevant data. Contractor will comply with all State and local audit requirements.

15 Living Wage Ordinance

The Contractor may be required to comply with the “Minneapolis Living Wage and Responsible Public Spending Ordinance” Chapter 38 of the City’s Code of Ordinances (the “Ordinance”) (http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/convert_255695.pdf). Unless otherwise exempt from the ordinance as provided in Section 38.40 (c), any City contract for services valued at \$100,000 or more or any City financial assistance or subsidy valued at \$100,000 or more will be subject to the Ordinance’s requirement that the Contractor and its sub-contractors pay their employees a “living wage” as defined and provided for in the Ordinance.

16 Applicable Law

The laws of the State of Minnesota shall govern all interpretations of this Contract, and the appropriate venue and jurisdiction for any litigation which may arise hereunder will be in those courts located within the County of Hennepin, State of Minnesota, regardless of the place of business, residence or incorporation of the Contractor.

17 Conflict and Priority

In the event that a conflict is found between provisions in this Contract and the Contractor's Bid, the provisions in the following rank order shall take precedence: 1) Contract including Bid specifications 2) Bid.

18 Travel

If travel by the Contractor is allowable and approved for this Contract, then Contractor travel expenses shall be reimbursed in accordance with the City's *Contractor Travel Reimbursement Conditions*, available from the City.

19 Billboard Advertising

City Code of Ordinance 544.120, prohibits the use of City and City-derived funds to pay for billboard advertising as a part of a City project or undertaking.

20 Conflict of Interest/Code of Ethics

Pursuant to Section 15.250 of the City's Code of Ordinances, both the City and the Contractor are required to comply with the City's Code of Ethics. Chapter 15 of the Code of Ordinances requires City officials and the Contractor to avoid any situation that may give rise to a "conflict of interest." A "conflict of interest" will arise if Contractor represents any other party or other client whose interests are adverse to the interests of the City.

As it applies to the Contractor, the City's Code of Ethics will also apply to the Contractor in its role as an "interested person" since Contractor has a direct financial interest in this Agreement. The City's Code of Ethics prevents "interested persons" from giving certain gifts to employees and elected officials.

21 Termination

The City may cancel this Contract for any reason without cause upon thirty (30) days written notice. Both the City and the contractor may terminate this Contract if either party fails to fulfill its obligations under the Contract in a proper and timely manner, or otherwise violates the terms of this Contract. The non-defaulting party shall have the right to terminate this Contract, if the default has not been cured after ten (10) days written notice or such other reasonable time period to cure the default, has been provided. If termination shall be without cause, the City shall pay Contractor all compensation earned to the date of termination. If the termination shall be for breach of this Contract by Contractor, the City shall pay Contractor all compensation earned prior to the date of termination minus any damages and costs incurred by the City as a result of the breach. If the Contract is canceled or terminated, all finished or unfinished documents, data, studies, surveys, maps, models, photographs, reports or other materials prepared by the Contractor under this Contract shall, at the option of the City, become the property of the City, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents or materials prior to the termination.

Notwithstanding the above, the Contractor shall not be relieved of liability to the City for damages sustained by the City as a result of any breach of this Contract by the Contractor. The City may, in such event, withhold payments due to the Contractor for the purpose of set-off until such time as the exact amount of damages due to the City is determined. The rights or remedies provided for herein shall not limit the City, in case of any default by the Contractor, from asserting any other right or remedy allowed by law, equity, or by statute. The Contractor has not waived any rights or defenses in seeking any amounts withheld by the City or any damages due the Contractor.

22 Ownership of Materials

All finished or unfinished documents, data, studies, surveys, maps, models, photographs, reports or other materials resulting from this Contract shall become the property of the City upon final approval of the final report or upon request by the City at any time before then. The City, at its own risk, may use, extend, or enlarge any document produced under this Contract without the consent, permission of, or further compensation to the Contractor.

23 Intellectual Property

Neither the City nor the Contractor anticipate that any intellectual property rights will be created as a result of this Contract. For the purpose of this Contract, "intellectual property" shall include all inventions, improvements, discoveries, processes, computer programs or similar intangible interests that either the City or Contractor develop as a result of the work or project undertaken which is the subject matter of and during the term of the Contract.

Each party acknowledges and agrees that each party is the sole and exclusive owner of all right, title, and interest in and to its services, products, software, source and object code, specifications, designs, techniques, concepts, improvements, discoveries and inventions including all intellectual property rights thereto, including without limitations any modifications, improvements, or derivative works thereof, created prior to, or independently, during the terms of this Contract. This contract does not affect the ownership of each party's pre-existing, intellectual property. Each party further acknowledges that it acquires no rights under this Contract to the other party's pre-existing intellectual property, other than any limited right explicitly granted in this Contract.

24 Equal Benefits Ordinance

Minneapolis Code of Ordinances, Section 18.200, relating to equal benefits for domestic partners, applies to each contractor and subcontractor with 21 or more employees that enters into a "contract", as defined by the ordinance that exceeds \$100,000. The categories to which the ordinance applies are personal services; the sale or purchase of supplies, materials, equipment or the rental thereof; and the construction, alteration, repair or maintenance of personal property. The categories to which the ordinance does not apply include real property and development contracts.

Please be aware that if a "contract", as defined by the ordinance, initially does not exceed \$100,000, but is later modified so the Contract does exceed \$100,000, the ordinance will then apply to the Contract. A complete text of the ordinance is available at:

http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/convert_261694.pdf.

It is the Contractor's and subcontractor's responsibility to review and understand the requirements and applicability of this ordinance.

25 Cardholder Data and Security Standards

Should the Contractor collect revenue on behalf of the City through the acceptance of credit cards offered by cardholders to pay for services offered under the terms of this Contract, then Contractor represents and acknowledges that the Contractor will comply with Payment Card Industry (PCI) regulatory standards including the Data Security Standards (DSS). Contractor represents that it will protect cardholder data. Contractor will be annually certified as a PCI compliant service provider and agrees to provide evidence of said certification to the City upon request. Contractor agrees at reasonable times to provide to the City or to its assigns, the audit rights contained herein for all physical locations, systems or networks that process credit cards on behalf of the City. Contractor

also agrees to provide written notice to the City of any breach of a system owned, operated or maintained by the Contractor that contains cardholder data or information.

26 Small & Underutilized Business Program (SUBP)

See attached current Small & Underutilized Business Program (SUBP) Requirements incorporated herein by reference.

27 City Ownership and Use of Data

The City has adopted an Open Data Policy (“Policy”). The City owns all “Data Sets” as part of the compliance with the Policy. Data Sets means statistical or factual information: (a) contained in structural data sets; and (b) that is regularly created or maintained by or on behalf of the City or a City department which supports or contributes to the delivery of the project underlying this Contract or related programs and functions. The City shall not only retain ownership of all Data Sets, but also all information created through the City’s use of software and/or software applications that are licensed by the Contractor (or any subcontractor of the Contractor) to the City

The City shall also retain the right to publish all data, information and Data Sets independently of this Contract regardless of whether the data and information originated from the Contractor or any subcontractor, using whatever means the City deems appropriate. The City shall have the right to access all project data, regardless of which party created the content and for whatever purpose it was created. The Contractor shall provide bulk extracts of data that satisfy the public release criteria for use in and within an open data solution.

28 Responsible Contractor Requirement

The Contractor represents that it is a “responsible contractor.” The term “responsible contractor” as used in this document means a contractor as defined in Minnesota Statutes, Section 16C.285 subdivision 3. Any prime contractor or subcontractor that does not meet the minimum criteria in Section 16C.285 subdivision 3 or fails to verify that it meets those criteria is not a responsible contractor and is not eligible to be awarded a construction contract for the scope of work described in the bid documents. A false statement under oath verifying compliance with any of the minimum criteria shall render the prime contractor or subcontractor that makes the false statement ineligible to be awarded a construction contract for the scope of work defined in the bid documents and may result in the termination of a contract awarded to a prime contractor or subcontractor that submits the false statement. A prime contractor shall submit to the City, upon request, copies of the signed verifications of compliance from all subcontractors of any tier pursuant to Minnesota Statutes, Section 16C.285, subdivision 3, clause (7).

Notice of Civil Rights Rules and Regulations

This notice advises City of Minneapolis contractors of their commitments under Minneapolis Code of Ordinances section 139.50. All contractors must comply with all provisions of Minneapolis Code of Ordinances Title 7 and with all rules and regulations issued by the Minneapolis Department of Civil Rights (“MDCR”) director. Contractors will be subject to a pre-award compliance review. Failure to cooperate may result in denial of contract award.

1. **Non-Discrimination:**¹ The contractor will not discriminate against any employee or applicant for employment because of race, color, creed, religion, ancestry, national origin, sex, sexual orientation, gender identity, disability, age (over the age of 25), marital status, or status with regard to public assistance. The contractor will take affirmative action to ensure that all employment practices are free of such discrimination. Such employment practices include but are not limited to the following: Hiring, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff, termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.
2. **Equal Employment Opportunity/Affirmative Action Employer:** The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that it is an equal opportunity or affirmative action employer.
3. **Affirmative Action Plan:** The contractor must have an Affirmative Action Plan approved by MDCR before it may enter into a contract over \$50,000 with the City.
4. **Small and Underutilized Business Program (SUBP):** When applicable, the contractor must comply with the SUBP program, including, but not limited to, making a good faith effort to meet the Minority-Owned Business Enterprises and Women-Owned Business Enterprises goals established on City construction and development projects.
5. **Employment Goals:**² The contractor must make a good faith effort to meet the City’s aspirational construction workforce goals of **6%** female participation and **32%** minority participation.
6. **Prevailing Wage:**³ When applicable, the contractor must comply with prevailing wage laws on City construction and development projects.
7. **HUD Section 3:**⁴ When applicable, the contractor must comply with Section 3 of the Housing and Urban Development Act of 1968, as amended. Contractors must incorporate the Section 3 Clause into all subcontracts and to the greatest extent feasible, ensure that employment and other economic activities be directed to low income persons.
8. **Posting Requirement:** The contractor must provide this notice to its trade and labor union or representative of workers and shall post the notice in conspicuous places available to employees and applicants for employment.

¹ Acts of discrimination are defined in the Minneapolis Code of Ordinances, Chapter 139.

² See Request for City Council Committee Action, Adopted March 21, 2012; incorporated into section 139.50 as a rule issued by the MDCR director.

³ See Minneapolis Code of Ordinances section 24.220, CPED Prevailing Wage Policy (adopted by City Council June 8, 2004), and Davis-Bacon and Related Acts; enforcement authority has been delegated to MDCR.

⁴ See 24 CFR Section 135.38; enforcement authority has been delegated to MDCR.

City of Minneapolis
Small and Underutilized Business Enterprise Program
Special Provisions - City Bidded Projects

I. Overview

The City of Minneapolis policy is to provide equal opportunities to all businesses, with an effort to redress discrimination in the City's marketplace and in public contracting against minority-owned business enterprises ("MBEs") and women-owned business enterprises ("WBEs"). This is accomplished through the Small and Underutilized Business Program ("SUBP") as detailed in the Minneapolis Code of Ordinances Chapter 423. SUBP applies to any construction or professional services project over \$100,000. SUBP goals are set on projects based on the project scope, subcontracting opportunities and availability of eligible MBEs/WBEs.

The City has set the following SUBP goals to facilitate participation of MBEs/WBEs on this project:

7% Combined MBE/WBE goal.

Only eligible MBEs/WBEs count towards the SUBP goals. A MBE/WBE is eligible if they are:

1. Certified with the Minnesota Unified Certification Program ("MNUCP").
2. Located within the City's marketplace.¹
3. Certified within the scope of work that they will perform.
4. Performing a commercially useful function on the contract.

II. Good Faith Efforts Evaluation

The bidder must either meet the goals listed above or demonstrate a Good Faith Effort to do so. A Good Faith Effort means that the bidder made *every necessary and reasonable effort* to subcontract with MBEs/WBEs prior to bid opening.

To determine if the bidder solicited MBEs/WBEs in good faith, the following list of *seven factors* may be considered:

1. Soliciting through all reasonable and available means (attendance at pre-bid meetings, advertising and/or written notices) the interest of all MBEs/WBEs certified in the scopes of work of the contract. The bidder must solicit MBEs/WBEs in sufficient time prior to bid opening or the proposal deadline to allow MBEs/WBEs to respond to solicitations. The bidder must determine with reasonable certainty if the MBEs/WBEs are interested by taking appropriate steps to follow up on initial solicitations.
2. Selecting portions of the work to be performed by MBEs/WBEs in order to increase the likelihood that the project goals will be achieved. This includes, where appropriate, breaking out contract work into smaller units to facilitate MBE/WBE participation, even when a bidder might otherwise prefer to perform these work items with its own forces.
3. Providing interested MBEs/WBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
4. The bidder must negotiate in good faith with interested MBEs/WBEs and provide written documentation of such negotiation with each such business. In determining whether the bidder negotiated in good faith, the City of Minneapolis Department of Civil Rights ("MDCR") may consider a number of factors including price, scheduling and capabilities as well as the contract goal.
5. The fact that there may be some additional costs involved in finding and using MBEs/WBEs is not itself sufficient reason for the bidder's failure to meet the project goals as long as such costs are reasonable.

¹ Minnesota counties of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and Wright.

6. If requested by a solicited MBE/WBE, the bidder must make reasonable efforts to assist such MBEs/WBEs in obtaining bonding, lines of credit or insurance as required by the city or by the bidder, provided that the bidder need not provide financial assistance toward this effort.
7. Effectively using the services of minority/woman community organizations; minority/woman contractors' groups; local, state and federal business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the solicitation and placement of MBEs/WBEs.

III. Required Documentation

1. The bidder must thoroughly document its efforts to solicit and incorporate MBE/WBE participation to meet the SUBP goals. The following must be submitted with the bid:
 - a. *Small and Underutilized Business Program (SUBP) Participation Form*: Must include all contractors, sub-consultants, suppliers, and service providers that submitted a bid/quote for the project and were selected.
2. If the *SUBP Participation Form* does not demonstrate, or the City could not confirm, sufficient MBE/WBE participation to meet the SUBP goals, the bidder must submit documentation demonstrating that the bidder made sufficient good faith efforts to meet the goals. This includes:
 - a. *Good Faith Efforts Checklist*: A checklist based on the *seven factors* that may be considered in determining whether MBE/WBE participation was solicited in good faith. The bidder must use the checklist during subcontractor bid solicitation to demonstrate the efforts that were made.
 - b. *Bidders and Solicitation List*: Must include all MBE/WBE and non-MBE/WBE subcontractors, sub-consultants, service providers or suppliers that were solicited to submit a bid or quote for the project. It also indicates which MBE/WBE firms the bidder proposes to use.
 - c. *Supporting Documentation to Demonstrate Good Faith Efforts*: The bidder must submit documentation evidencing the efforts taken to achieve the SUBP goals. The information may include, but is not limited to, copies of solicitation emails, bids received, faxes, and phone call logs.
3. If determined that bidder made a good faith effort to meet the goals, a *Pre-Construction Book* must be submitted prior to approval by MDCR.
 - a. *Pre-Construction Book*: Collects information related to subcontracts, employment participation, construction schedules, and required wages.

IV. Post-Award Substitutions

The bidder shall not substitute any MBE/WBE subcontractor listed in the *SUBP Participation Form* without the prior written approval from MDCR. The bidder must make good faith efforts to replace an MBE/WBE subcontractor that is unable to perform with another MBE/WBE to perform the same scope of work.

V. Penalties for Non-Compliance

Compliance with SUBP is a material condition of the contract. The City may take the following actions wholly, partly, or in any combination:

- a) Temporarily withhold funds pending correction of the deficiency.
- b) Disallow the use of funds for all or part of the cost of the activity or action not in compliance.
- c) Suspend or debar the noncompliant contractor, subcontractor, supplier or vendor as ineligible for all current or potential contracts with the City or supported by City funds.
- d) Designate the noncompliant contractor, subcontractor, supplier or vendor as high-risk for future contracts and require of the contractor, subcontractor, supplier or vendor increased reporting requirements, mandatory audits and similar measures.

Please review Minneapolis Code of Ordinances Chapter 423 for more information or contact the City of Minneapolis Department of Civil Rights at (612) 673-3012 or contractcompliance@minneapolismn.gov.

Small and Underutilized Business (SUBP) Participation Form

Please list **all** contractors (including your company), sub-consultants, suppliers, and service providers who submitted a bid/quote and will be selected.

Please Note:

- Only Minnesota Unified Certification Program (MNUCP) certified minority-owned and women-owned business enterprises (MBEs or WBEs) count toward the SUBP goals. Please place a mark “x” in the appropriate column below.²
- Companies certified as both MBE and WBE count towards the MBE goal.
- If an MBE/WBE subcontracts work to a non-MBE/WBE, that value of work will not count toward the SUBP goals.
- An MBE/WBE must perform a commercially useful function³ to count toward the SUBP goals.

Business Name	City, State	Phone & Email	Contact Method (fax, phone, email)	Date of Solicitation	Scope of Work	Bid/Quote Amount	MNUCP MBE	MNUCP WBE

² The MBE/WBE must be certified in the scope of work and located in the 11 county metropolitan area (Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington and Wright).

³ Commercially useful function: Business executing a distinct element of work and carries out its responsibilities by actually performing, managing, and supervising the work involved.

City of Minneapolis Small and Underutilized Business Program (SUBP)

MCC Exterior Light Replacement Project Phase 1

This report lists MBEs and WBEs that have been certified by the Minnesota Uniform Certification Program (MnUCP) in scopes of services relevant to this project. If additional scopes of services are identified, the MnUCP online directory (<http://mnucp.metc.state.mn.us/>) should be utilized to find additional certified MBEs and WBEs in those scopes. Another way to locate additional MBEs and WBEs is to contact the National Association of Minority Contractors (NAMC) or the Association of Women Contractors (AWC). NAMC contact: 612-521-3366; staff@namc-um.org. AWC contact: 651-489-2221; awc@awcmn.org.

Note that if a firm is certified as both 'MBE' and 'WBE', that firm's participation in the project will only count toward the 'MBE' goal.

The scopes of services are categorized using the North American Industry Classification System (NAICS). For definitions and more information about NAICS Codes visit the U.S. Census Bureau (<http://www.census.gov/eos/www/naics/>).

NAICS CODE: 238210		Electrical Contractors and Other Wiring Installation Contractors				
Company	Contact	Email	Phone	Fax	MBE	WBE
A.R. GLOBAL-NET	FLOYD BEECHAM JR.	fbeechamjr@arglobal-net.com	763-360-7868		Yes	No
AFS SYSTEMS INC	KATHRYN F QUIGLEY	kathrynquigley@afssystemsinccom.com	763-425-8396	763-425-8397	No	Yes
ALBRECHT SIGN COMPANY INC	TOM ALBRECHT	tom@albrechtsigncompany.com	763-754-2899	763-767-7316	Yes	No
AMS CONTRACTING LLC	ANTHONY SEBURG	office@amscont.com	651-797-3685	651-797-3942	Yes	No
BIG G TECH SUPPORT LLC	GERALD BEN-AMI	gerald@bgtsllc.com	763-390-1317	888-867-7126	Yes	No
CASTREJON INCORPORATED	MONICA CASTREJON	MONICA@CASTREJONINC.COM	763-450-2055	763-450-2056	Yes	No
CI UTILITIES LLC	BERT CASTREJON	bert@castrejoninc.com	763-450-2055	763-450-2056	Yes	No
CLIMATE MAKERS INC	LORI BAUER	lorib@climatemakersinc.com	763-786-5999	763-786-3893	No	Yes
COVENANT ELECTRIC INC	BARBARA GRAYDON	bgraydon@covenantelectric.com	612-554-2066	651-638-0071	Yes	Yes
CROCUS HILL ELECTRIC CO	ELIZABETH ROCCO	liz@crocushillelectric.com	651-221-0261	651-221-0354	No	Yes
DELL-COMM INC	KAREN AHO	info@dell-comm.com	763-783-0035	763-783-0896	No	Yes
ELLIOTT CONTRACTING CORP	JOHN T ELLIOTT	kcompheer@elliottcontracting.com	763-489-7300	763-571-9333	Yes	No
GUNNAR ELECTRIC INC	LAURA KAROW	Lkarow@GUNNARELECTRIC.COM	952-937-9262	952-937-1034	No	Yes
LIGHTINGHOUSEUSA INC.	SUDHIR SINGH	sudhirs@lightinghouseusa.com	763-443-2112	763-235-4536	Yes	No
MIDWEST ELECTRIC CORP	DELORES WERMERSKIRCHEN	dwermer@msn.com	763-551-7992	763-551-7968	No	Yes

MODERN ELECTRICAL SOLUTIONS INC	TYRA DINH TRAN	luyen_le@modernelectricalsolutions.com	651-313-0110	763-780-6398	Yes	Yes
MTEC ELECTRIC INC	HUONG PHAM	nick@mtecelectric.com	763-537-1570	763-537-7786	Yes	Yes
PDS COMMUNICATIONS	RENE J. FUENTES	rjfuentes@pdscomm.com	651-203-0301	651-203-0306	Yes	No
PHONE JACKS UNLIMITED INC. (DBA ALLAREA CONTRACTORS)	SCARLETT BIESEMEYER	scarlett@allareacontractors.com	763-413-8488	763-413-0019	No	Yes
RENEWABLE ENERGY PARTNERS DBA RENEWABLE NRG PARTNERS	JAMEZ STAPLES	jstaples@renewableNRGPartners.com	612-282-2573	612-924-6514	Yes	No
ROSS ELECTRIC COMPANY INC	CEDRIC ROSS	rosselectricco.mn@gmail.com	612-702-7840	651-776-5018	Yes	No
SUESS ELECTRIC LLC	SUSAN SUESS THOMSON	info@suesselectric.com	651-429-0968	651-429-1691	No	Yes
TRICOM COMMUNICATIONS INC	DIANE EVANS	diane.evans@tricom1.com	651-686-9000	651-686-9999	No	Yes
TRIUMPH ELECTRICAL SERVICES INC.	DOUG RUIZ SR.	doug@triumphes.com	612-298-3221		Yes	No
UNITECH ELECTRONIC CONTRACTING LLC	MICHAEL VETTER	MichaelV@unitechcontractors.com	763-428-3600		Yes	No
ZEAN-TECH SERVICES LLC	JONATHAN ZEAN	jzean@zeantechservice.com	612-424-3564	612-234-4693	Yes	Yes

NAICS CODE: 423610 Electrical Apparatus and Equipment Wiring Supplies and Related Equipment Mer

Company	Contact	Email	Phone	Fax	MBE	WBE
ALLIED ELECTRICAL & INDUSTRIAL SUPPLY	VALERIE MCKISSACK	vmckissack@allied-electrical.com	763-544-3600	763-544-3601	Yes	Yes
ANCELRAN INC DBA MUSKA LIGHTING CENTER /OR LIGHT N' UP	CELESTE SCHUMACHER	celestes@lightn-up.com	952-934-6730	952-974-5199	No	Yes
B & L SUPPLY INC	CLIFTON BOYD JR	blsupply@blsupply.com	651-646-1098	651-646-9459	Yes	No
CARLO LACHMANSINGH SALES INC	CARLO LACHMANSINGH	carlo@carloelectrical.com	612-827-2211	612-821-0161	Yes	No
CROCUS HILL ELECTRIC CO	ELIZABETH ROCCO	liz@crocushillelectric.com	651-221-0261	651-221-0354	No	Yes
ELLIOTT CONTRACTING CORP	JOHN T ELLIOTT	kcompheer@elliottcontracting.com	763-489-7300	763-571-9333	Yes	No
GOPHER STAGE LIGHTING INC.	MELANIE HOLLOWAY	info@gopherstagelighting.com	612-871-0138	612-871-6532	No	Yes
HIGHWAY SOLUTIONS INC	JEROME PERRY	jeromeperry@highwaysolutionsinc.com	612-817-3310	715-549-6162	Yes	No
KIRBYCO PRODUCTS	JULIANN KIRBY	jkirby@kirbycoproducts.com	651-227-7020	651-227-1387	No	Yes
LIGHTEN UP LLC	HOLLY BOYCE	holly@lightenupllc.com	952-944-7515	952-944-7515	No	Yes
MIDWEST LIGHTING PRODUCTS	SUE FRANNEY	sue@midwestltg.com	763-424-9411	763-424-8720	No	Yes
NORTH COUNTRY SUPPLY INC	JACKELYN BOTENEN	Northcountrysupply@gmail.com	651-470-6376	651-253-3089	No	Yes
PM SUPPLY	PAMELA KASTANSO	pm-supply@q.com	763-226-7234	763-537-7746	No	Yes

SHER LIGHTING LLC	SHERRY YAGER	sherry@sherlighting.com	952-500-8794	952-236-7131	No	Yes
UNITECH ELECTRONIC CONTRACTING LLC	MICHAEL VETTER	MichaelV@unitechcontractors.com	763-428-3600		Yes	No

**CITY OF MINNEAPOLIS
SMALL AND UNDERUTILIZED BUSINESS PROGRAM (SUBP)
GOOD FAITH EFFORTS CHECKLIST**

If the SUBP goals for the project have not been met, then a Good Faith Efforts Review will be conducted by the Department of Civil Rights Contract Compliance Division (CCD). The following checklist should be used during bid solicitation to demonstrate the efforts that were made to meet the SUBP goals. This checklist will need to be submitted to CCD if a Good Faith Effort Review is warranted. Per City ordinance (Chapter 423), there are seven factors that may be considered to determine whether or not MBE/WBE participation was solicited in good faith.

Do NOT return this document with your bid response.

Date:	
Company Name:	
Completed By:	
Title:	
Signature:	

Checklist Instructions:

- All factors listed below **may** be considered. Some factors may not be applicable to all projects or situations.
- Check all actions that were taken and enter comments for each factor explaining the actions taken.
- Documentation of all attempts to solicit MBE/WBE participation should be kept.
- Use additional sheets if necessary to supplement the responses and attach them to this form.

1. Solicited through all Reasonable and Available Means: As stated in 423.90(g)(1), the department may consider whether the bidder or proposer *solicited through all reasonable and available means (attendance at pre-bid meetings, advertising and/or written notices) the interest of all MBEs/WBEs certified in the scopes of work of the contract. The bidder or proposer must solicit MBEs/WBEs in sufficient time prior to bid opening or the proposal deadline to allow MBEs/WBEs to respond to solicitations. The bidder or proposer must determine with reasonable certainty if the MBEs/WBEs are interested by taking appropriate steps to follow up on initial solicitations.*

Solicited to all firms listed on the MnUCP report provided by CCD that listed MBEs/WBEs certified in scopes of work related to the project (Keep copies of phone logs, emails, fax sheets, etc.) **If no, please explain here:**

- Utilized the [Online MnUCP Directory](#)¹ to identify additional MBEs/WBEs
- Attended Pre-Bid Meeting to learn about the project and SUBP goals. **Date attended:** _____
- Reviewed bid documents or RFP for SUBP goals and policies regarding solicitation and utilization of MBEs/WBEs
- Solicited MBEs/WBEs in sufficient time prior to bid opening or proposal due date to allow MBEs/WBEs to respond to the bid solicitation (CCD recommends 2 weeks prior to bid opening). **Date solicited:** _____
- Followed up with the MnUCP certified MBEs/WBEs to confirm interest in participation (Keep log of follow-up activities and provide the log to CCD)
- Other _____

Comments: _____

¹ Link to MnUCP Online Directory <http://mnucp.metc.state.mn.us/>

2. Broke the Contract Work into Smaller Units: As stated in 423.90(g)(2), the department may consider whether the bidder or proposer *selected portions of the work to be performed by MBEs/WBEs in order to increase the likelihood that the project goals will be achieved. This includes, where appropriate, breaking out contract work into smaller units to facilitate MBE/WBE participation, even when a contractor might otherwise prefer to perform these work items with its own forces.*

- Broke the contract into smaller scopes of work in order to facilitate MBE/WBE participation. Please list the scopes that were broken into smaller units:

- Subcontracted/solicited scopes of work that could have been self-performed. Please list these scopes:

- Other _____

Comments: _____

3. Provided MBEs/WBEs with Adequate Information: As stated in 423.90(g)(3), the department may consider whether the bidder or proposer *provided MBEs/WBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.*

- Bid invitations/advertisement included adequate information about the scope of work, contract requirements, deadline to submit a bid, etc. (Keep copy of invite/advertisement)
- Provided MBEs/WBEs adequate project information and access to the plans and specifications
- Other _____

Comments: _____

4. Negotiated in Good Faith: As stated in 423.90(g)(4), the department may consider whether the bidder or proposer *negotiated in good faith with interested MBEs/WBEs and provide written documentation of such negotiation with each such business. In determining whether the bidder or proposer negotiated in good faith, the department may consider a number of factors including price, scheduling and capabilities as well as the contract goal.*

- Negotiations with MBEs/WBEs are conducted fairly
- Communication to MBEs/WBEs regarding pricing, scheduling and capability requirements are consistent with project plans and requirements. Communications and project information provided is the same to all potential bidders.
- Were there any MBE/WBE firms that bid to you that you did not consider qualified to perform the work? If yes, explain here:

- MBE/WBE bids were rejected. Please explain the reasons why here:

- Other _____

Comments: _____

5. **Used Reasonable Resources to Comply with SUBP:** As stated in 423.90(g)(5), *The fact that there may be some additional costs involved in finding and using MBEs/WBEs is not itself sufficient reason for a bidder's or proposer's failure to meet the project goals as long as such costs are reasonable.*

- Please list the resources your company used to comply with SUBP (examples include: bid advertisements, list serves, time spent soliciting, time spent documenting efforts, and other administrative resources spent to perform good faith efforts)

6. **Provided MBEs/WBEs with Assistance in Meeting City Contracting Requirements:** As stated in 423.90(g)(6), *if requested by a solicited MBE/WBE, the bidder or proposer must make reasonable efforts to assist such MBEs/WBEs in obtaining bonding, lines of credit or insurance as required by the city or by the bidder or proposer, provided that the bidder or proposer need not provide financial assistance toward this effort.*

- Provided reasonable assistance to help MBEs/WBEs obtain bonds, lines of credit, or insurance that is required by the City.
- Referred MBEs/WBEs in need of financial or technical assistance to City's **Business and Technical Assistance Program (B-TAP)**. For more information on B-TAP please visit: <http://www.minneapolismn.gov/business/B-TAP>.
- Other _____

Comments: _____

7. **Effectively Used Community Organizations:** As stated in 423.90(g)(6), *effectively using the services of minority/woman community organizations; minority/woman contractors' groups; local, state and federal business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the solicitation and placement of MBEs/WBEs.*

- Used services of minority/women community organizations
- Used services of minority/women professional organizations
- Other _____

Please list the organizations that were used:

8. Other Good Faith Efforts

Please explain any other good faith efforts made by your company not included above. Examples may include: identifying firms eligible to become MnUCP certified MBEs/WBEs, hosting open houses or networking events, and participation in trainings related to equity and inclusion.

PREVAILING WAGE CERTIFICATE

SUBMIT WITH ORIGINAL COPY OF YOUR BID

Federal prevailing wage rates apply to this project. For a copy of the prevailing wage rates - visit:

<http://www.wdol.gov/dba.aspx>

Use the rates for State of Minnesota - Hennepin County (or Anoka if applicable)

Laborers and Mechanics shall be paid according to the Contracts for Public Works Ordinance, Minneapolis Code of Ordinances, Chapter 24, Section 24.200 through 24.260, as amended, and the minimum wage rates and fringe benefits paid to the various classes shall be as determined by the Secretary of Labor of the United States, for work in the City, subject to and upon compliance with all requirements provided in the Rules of the Office of the Secretary of Labor of the United States. Apprentices may be paid less than the predetermined wage rate for the work performed. Apprentices must participate in a registered apprenticeship program (See 29 CFR, Parts 5 and 29). In addition to the certificates and other evidences of compliance which are required under these specifications and under Minneapolis Code of Ordinances, Section 24.240, it shall be required that the person or company representative submitting a bid for this contract shall certify in writing that both she/he/it and their Subcontractors shall comply with the wage and labor standard provision of Minneapolis Code of Ordinances, Section 24.200 through 24.260 as amended. Failure to comply with this ordinance shall mean the City may, by written notice to the Contractor, terminate the Contractor's right to proceed with the work and the Contractor and his Sureties shall be liable to the City for any excess cost occasioned to the City for the completion of the work.

By submitting this bid, it is understood and agreed that if it is accepted, in whole or in part, by the City of Minneapolis or Board, as designated, that any work done by the Contractor or by the Contractor's agent or Subcontractor under a contract with the City of Minneapolis or Board as designated shall be done in conformity with provisions of Minneapolis Code of Ordinances, Chapter 24, Section 24.200 through 24.260, or, if applicable Park Board Code of Ordinances, Chapter 6, Section PB 6-1 through PB 6-5. Specifically, it is agreed that payment of wages to employees or agents of the Contractor or any Subcontractor shall be no less than the amounts set forth in the wage decision.

SIGNATURE

Company Name

BY SUBMITTING YOUR BID AND SIGNING THE BID FORM, YOU ARE AGREEING TO ALL OF THE ABOVE

RETURN THIS FORM WITH YOUR BID

General Decision Number: MN160036 11/11/2016 MN36

Superseded General Decision Number: MN20150036

State: Minnesota

Construction Type: Building

County: Hennepin County in Minnesota.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	01/22/2016
2	03/04/2016
3	05/20/2016
4	06/17/2016
5	06/24/2016
6	07/01/2016
7	07/22/2016
8	07/29/2016
9	08/26/2016
10	10/07/2016
11	10/28/2016
12	11/11/2016

ASBE0034-009 06/01/2016

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (Includes application of all insulating materials, protective coverings, coatings & finishes to all types of mechanical systems).....	\$ 35.11	29.89

BOIL0647-007 01/01/2013

	Rates	Fringes
BOILERMAKER.....	\$ 32.40	25.37

BRMN0001-047 05/01/2016

Rates Fringes

BRICKLAYER.....\$ 36.05 19.68

BRMN001-049 05/01/2015

Rates Fringes

TILE SETTER.....\$ 29.30 20.39

CARP0068-002 05/01/2016

Rates Fringes

LATHER.....\$ 37.61 17.14

CARP0322-004 05/01/2009

Rates Fringes

CARPENTER (Including
Acoustical Installation,
Drywall Hanging & Form Work)

Non Wood Frame Construction.\$ 31.79 16.10
Wood Frame Construction.....\$ 28.83 8.92

ELEC0110-002 07/01/2013

Rates Fringes

ELECTRICIAN (Low Voltage,
including wiring for Alarms).....\$ 23.91 10.15+a,b

FOOTNOTES:

a. 1 year service - 5 days paid vacation; 2 years service - 10 days paid vacation; 5 years service - 12 days paid vacation; 7 years service - 14 days paid vacation; 9 years service - 16 days paid vacation; 11 years service - 18 days paid vacation; 12 years service - 20 days paid vacation

b. 8 Paid Holidays: New Year's Day; Memorial Day; 4th of July; Labor Day; Thanksgiving Day; Day after Thanksgiving; the normal work day preceding Christmas Day; & Christmas Day

ELEC0292-011 05/01/2016

Rates Fringes

ELECTRICIAN.....\$ 39.04 22.22

ELEV0009-002 01/01/2016

Rates Fringes

ELEVATOR MECHANIC.....\$ 45.87 29.985

FOOTNOTE:

PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.
PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

ENGI0049-042 05/01/2016

	Rates	Fringes
OPERATOR: Power Equipment		
GROUP 1.....	\$ 39.14	18.40
GROUP 2.....	\$ 38.80	18.40
GROUP 3.....	\$ 37.33	18.40
GROUP 4.....	\$ 37.05	18.40
GROUP 5.....	\$ 36.13	18.40
GROUP 6.....	\$ 34.62	18.40
GROUP 7.....	\$ 33.50	18.40
GROUP 8.....	\$ 31.49	18.40

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Truck & Crawler Crane with 200' of Boom & Over, including Jib (\$.50 premium with 300' of Boom & over, including jib); & Tower Crane 250' & Over.

GROUP 2: Truck & Crawler Crane with 150' of Boom, up to but not including 200' of Boom, including Jib; & Tower Crane 200' & Over.

GROUP 3: Traveling Tower Crane; Truck & Crawler Crane, up to but not including 150' of Boom, including Jib; Tower Crane (Stationary) up to 200'; All-Terrain Vehicle Crane, Boom Truck over 100 ft, Dragline.

GROUP 4: Backhoe/Track/Trackhoe, Hoist (3 drums or more); Overhead Crane (inside building perimeter), Excavator.

GROUP 5: Asphalt Spreader, Bulldozer, Curb Machine, Drill, Forklift, Compressor 450 CFM or over (2 or more machines); Boom Truck up to 100 ft, Loader over 1 cu yd, Hoist (1 or 2 drums); Mechanic, Milling Machine, Roller, Scraper, Tractor over D2.

GROUP 6: Bobcat/Skid Loader, Loader up to 1 cu. yd., Tractor D2 or similar size.

GROUP 7: Compressor 600 CFM or over, Crane Oiler, Self Propelled Vibrating Packer.

GROUP 8: Oiler, Greaser (Tractor/Truck).

IRON0512-002 06/05/2016

	Rates	Fringes
IRONWORKER, ORNAMENTAL, REINFORCING, AND STRUCTURAL.....	\$ 36.00	24.90

LABO0563-006 05/01/2016

	Rates	Fringes
LABORER		
Group 1.....	\$ 32.41	17.44
Group 2.....	\$ 32.91	17.44

LABORERS CLASSIFICATIONS

GROUP 1 - Common or General Laborer, Asphalt Raker, Asphalt

Shoveler, Carpenter Tender, Concrete Saw, Form Stripping,
Mason Tender (Brick, Cement/Concrete), Plaster Tender,
Scaffold Builder (Brick and Masonry), Top Person, Vibrating
Plate

GROUP 2 - Pipelayer, Bottom Person

* LAB00563-007 01/01/2016

	Rates	Fringes
LABORER (ASBESTOS ABATEMENT) Removal from Floors, Walls & Ceilings.....	\$ 32.18	14.36

PAIN0386-001 06/01/2016

	Rates	Fringes
Drywall Finisher/Taper.....	\$ 32.53	24.40

PAIN0386-012 05/01/2014

	Rates	Fringes
Painters: Brush & Roller.....	\$ 32.88	18.46
Spray.....	\$ 32.88	18.46

PAIN1324-006 06/01/2015

	Rates	Fringes
GLAZIER.....	\$ 37.49	14.30

PLAS0265-005 06/01/2016

	Rates	Fringes
PLASTERER.....	\$ 31.39	21.52

PLAS0633-054 05/01/2016

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 36.61	17.67

PLUM0015-011 05/01/2016

	Rates	Fringes
PLUMBER (Excluding HVAC Pipe Installation).....	\$ 40.48	21.04

FOOTNOTE:
Paid Holiday: Labor Day

PLUM0417-003 06/01/2016

	Rates	Fringes
SPRINKLER FITTER (Fire).....	\$ 42.78	24.20

FOOTNOTE:

Paid Holidays: Memorial Day; July 4th; Friday before Labor Day; Labor Day; Columbus Day; & Thanksgiving Day

PLUM0539-001 05/01/2016

	Rates	Fringes
PIPEFITTER (Including HVAC Pipe Installation).....	\$ 38.72	28.86

ROOF0096-022 05/01/2016

	Rates	Fringes
ROOFER.....	\$ 35.91	15.82

FOOTNOTE: Paid Holiday - Labor Day

SHEE0010-052 05/01/2009

	Rates	Fringes
SHEET METAL WORKER (Including HVAC Duct and System Installation).....	\$ 38.46	18.34

FOOTNOTE: Paid Holiday: Labor Day

TEAM0346-005 05/01/2015

	Rates	Fringes
TRUCK DRIVER		
2-Axle Dump Truck.....	\$ 26.40	14.45
3-Axle Dump Truck.....	\$ 26.65	14.45

SUMN2009-045 07/27/2009

	Rates	Fringes
INSTALLER - SIGN.....	\$ 20.32	5.05
LABORER: Landscape.....	\$ 12.88	4.61

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====
Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage

determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====
END OF GENERAL DECISION

RESPONSIBLE CONTRACTOR VERIFICATION AND CERTIFICATION OF COMPLIANCE

PROJECT TITLE: MINNEAPOLIS CONVENTION CENTER EXTERIOR LIGHT REPLACEMENT PROJECT PHASE 1

<p>Minn. Stat. § 16C.285, Subd. 7. IMPLEMENTATION. ... any prime contractor or subcontractor that does not meet the minimum criteria in subdivision 3 or fails to verify that it meets those criteria is not a responsible contractor and is not eligible to be awarded a construction contract for the project or to perform work on the project...</p>	
<p>Minn. Stat. § 16C.285, Subd. 3. RESPONSIBLE CONTRACTOR, MINIMUM CRITERIA. "Responsible contractor" means a contractor that conforms to the responsibility requirements in the solicitation document for its portion of the work on the project and verifies that it meets the following minimum criteria:</p>	
(1)	<p>The Contractor:</p> <ul style="list-style-type: none">(i) is in compliance with workers' compensation and unemployment insurance requirements;(ii) is currently registered with the Department of Revenue and the Department of Employment and Economic Development if it has employees;(iii) has a valid federal tax identification number or a valid Social Security number if an individual; and(iv) has filed a certificate of authority to transact business in Minnesota with the Secretary of State if a foreign corporation or cooperative.
(2)	<p>The contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section 177.24, 177.25, 177.41 to 177.44, 181.13, 181.14, or 181.722, and has not violated United States Code, title 29, sections 201 to 219, or United States Code, title 40, sections 3141 to 3148. For purposes of this clause, a violation occurs when a contractor or related entity:</p> <ul style="list-style-type: none">(i) repeatedly fails to pay statutorily required wages or penalties on one or more separate projects for a total underpayment of \$25,000 or more within the three-year period;(ii) has been issued an order to comply by the commissioner of Labor and Industry that has become final;(iii) has been issued at least two determination letters within the three-year period by the Department of Transportation finding an underpayment by the contractor or related entity to its own employees;(iv) has been found by the commissioner of Labor and Industry to have repeatedly or willfully violated any of the sections referenced in this clause pursuant to section 177.27;(v) has been issued a ruling or findings of underpayment by the administrator of the Wage and Hour Division of the United States Department of Labor that have become final or have been upheld by an administrative law judge or the Administrative Review Board; or(vi) has been found liable for underpayment of wages or penalties or misrepresenting a construction worker as an independent contractor in an action brought in a court having jurisdiction. Provided that, if the contractor or related entity contests a determination of underpayment by the Department of Transportation in a contested case proceeding, a violation does not occur until the contested case proceeding has concluded with a determination that the contractor or related entity underpaid wages or penalties;*

(3)	The contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section 181.723 or chapter 326B. For purposes of this clause, a violation occurs when a contractor or related entity has been issued a final administrative or licensing order;*
(4)	The contractor or related entity has not, more than twice during the three-year period before submitting the verification, had a certificate of compliance under section 363A.36 revoked or suspended based on the provisions of section 363A.36, with the revocation or suspension becoming final because it was upheld by the Office of Administrative Hearings or was not appealed to the office;*
(5)	The contractor or related entity has not received a final determination assessing a monetary sanction from the Department of Administration or Transportation for failure to meet targeted group business, disadvantaged business enterprise, or veteran-owned business goals, due to a lack of good faith effort, more than once during the three-year period before submitting the verification;*
	* Any violations, suspensions, revocations, or sanctions, as defined in clauses (2) to (5), occurring prior to July 1, 2014, shall not be considered in determining whether a contractor or related entity meets the minimum criteria.
(6)	The contractor or related entity is not currently suspended or debarred by the federal government or the state of Minnesota or any of its departments, commissions, agencies, or political subdivisions; and
(7)	All subcontractors that the contractor intends to use to perform project work have verified to the contractor through a signed statement under oath by an owner or officer that they meet the minimum criteria listed in clauses (1) to (6).

Minn. Stat. § 16C.285, Subd. 5. SUBCONTRACTOR VERIFICATION.
<p>A prime contractor or subcontractor shall include in its verification of compliance under subdivision 4 a list of all of its first-tier subcontractors that it intends to retain for work on the project.</p> <p>If a prime contractor or any subcontractor retains additional subcontractors on the project after submitting its verification of compliance, the prime contractor or subcontractor shall obtain verifications of compliance from each additional subcontractor with which it has a direct contractual relationship and shall submit a supplemental verification confirming compliance with subdivision 3, clause (7), within 14 days of retaining the additional subcontractors.</p> <p>A prime contractor shall submit to the contracting authority upon request copies of the signed verifications of compliance from all subcontractors of any tier pursuant to subdivision 3, clause (7). A prime contractor and subcontractors shall not be responsible for the false statements of any subcontractor with which they do not have a direct contractual relationship. A prime contractor and subcontractors shall be responsible for false statements by their first-tier subcontractors with which they have a direct contractual relationship only if they accept the verification of compliance with actual knowledge that it contains a false statement.</p>

Minn. Stat. § 16C.285, Subd. 4. **VERIFICATION OF COMPLIANCE.**

A contractor responding to a solicitation document of a contracting authority shall submit to the contracting authority a signed statement under oath by an owner or officer verifying compliance with each of the minimum criteria in subdivision 3 at the time that it responds to the solicitation document.

A contracting authority may accept a sworn statement as sufficient to demonstrate that a contractor is a responsible contractor and shall not be held liable for awarding a contract in reasonable reliance on that statement. Failure to verify compliance with any one of the minimum criteria or a false statement under oath in a verification of compliance shall render the prime contractor or subcontractor that makes the false statement ineligible to be awarded a construction contract on the project for which the verification was submitted.

A false statement under oath verifying compliance with any of the minimum criteria may result in termination of a construction contract that has already been awarded to a prime contractor or subcontractor that submits a false statement. A contracting authority shall not be liable for declining to award a contract or terminating a contract based on a reasonable determination that the contractor failed to verify compliance with the minimum criteria or falsely stated that it meets the minimum criteria.

CERTIFICATION

By signing this document I certify that I am an owner or officer of the company, and I swear under oath that:

- 1) My company meets each of the Minimum Criteria to be a responsible contractor as defined herein and is in compliance with Minn. Stat. § 16C.285,**
- 2) I have included Attachment A-1 with my company's solicitation response, and**
- 3) if my company is awarded a contract, I will also submit Attachment A-2 as required.**

Authorized Signature of Owner or Officer:

Printed Name:

Title:

Date:

Company Name:

NOTE: Minn. Stat. § 16C.285, Subd. 2, (c) If only one prime contractor responds to a solicitation document, a contracting authority may award a construction contract to the responding prime contractor even if the minimum criteria in subdivision 3 are not met.

ATTACHMENT A-1

FIRST-TIER SUBCONTRACTORS LIST

SUBMIT WITH PRIME CONTRACTOR RESPONSE

PROJECT TITLE: MINNEAPOLIS CONVENTION CENTER EXTERIOR LIGHT REPLACEMENT PROJECT PHASE 1

Minn. Stat. § 16C.285, Subd. 5. A prime contractor or subcontractor shall include in its verification of compliance under subdivision 4 a list of all of its first-tier subcontractors that it intends to retain for work on the project. ...

FIRST TIER SUBCONTRACTOR NAMES (Legal name of company as registered with the Secretary of State)	Name of city where company home office is located

ATTACHMENT A-2

ADDITIONAL SUBCONTRACTORS LIST

PRIME CONTRACTOR TO SUBMIT AS SUBCONTRACTORS ARE ADDED TO THE PROJECT

PROJECT TITLE: MINNEAPOLIS CONVENTION CENTER EXTERIOR LIGHT REPLACEMENT PROJECT PHASE 1

This form must be submitted to the Project Manager or individual as identified in the solicitation document.

Minn. Stat. § 16C.285, Subd. 5. ... If a prime contractor or any subcontractor retains additional subcontractors on the project after submitting its verification of compliance, the prime contractor or subcontractor shall obtain verifications of compliance from each additional subcontractor with which it has a direct contractual relationship and shall submit a supplemental verification confirming compliance with subdivision 3, clause (7), within 14 days of retaining the additional subcontractors. ...

ADDITIONAL SUBCONTRACTOR NAMES (Legal name of company as registered with the Secretary of State)	Name of city where company home office is located

ADDITIONAL SUBCONTRACTOR NAMES (Legal name of company as registered with the Secretary of State)	Name of city where company home office is located

SUPPLEMENTAL CERTIFICATION FOR ATTACHMENT A-2	
<p>By signing this document I certify that I am an owner or officer of the company, and I swear under oath that:</p> <p>All additional subcontractors listed on Attachment A-2 have verified through a signed statement under oath by an owner or officer that they meet the minimum criteria to be a responsible contractor as defined in Minn. Stat. § 16C.285.</p>	
Authorized Signature of Owner or Officer:	Printed Name:
Title:	Date:
Company Name:	

Official Publication No. 8401
Bids due: 10 AM, Local Time
Date: February 23rd, 2017

BID FORM

Purchasing Department
330 Second Avenue South - Suite 552
Minneapolis, MN 55401

My /Our bid to provide all materials, equipment, labor and incidentals for the Minneapolis Convention Center Exterior Light Replacement Project Phase 1; all in accordance with your specifications. Please include all applicable sales taxes and fees in your bid pricing.

Lump Sum Bid: \$ _____
Numbers must be legible or bid may be rejected.

A single contract will be awarded to the low, responsive, responsible bidder meeting all specifications.

Please do not attach modifications to the bid terms and conditions or exceptions to the bidding specifications to your bid response. This may cause your bid to be deemed non-responsive.

Successful bidder will be required to enter into a formal contract and provide Performance Bond and Payment Bond in the full amount of the contract.

A contractor responding to this solicitation document swears that they are in compliance with the minimum criteria in Minnesota Statutes, section 16C.285, subdivision 3, and shall upon request submit to the city a signed statement under oath by an owner or officer verifying compliance with each of the minimum criteria.

Please return the following documents with your bid: Bid Form – 2% Bid Deposit – SUBP Participation Form - Prevailing Wage Certificate - Responsible Contractor Verification Form

F.O.B.: Destination _____ Acknowledge Addenda No. _____

Bidder must supply Federal Tax ID No. or Social Security No. _____

If Social Security Number is provided, this individuals name must be included as Bidder.

Bidder affirms that this bid(s) has been arrived at by the bidder independently and has been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other bidder of materials, supplies, equipment and services described in the invitation to Bid, designed to limit independent bidding or competition.

TWO complete bid responses including attachments to be returned, one of which must be an original.

BIDDER _____
CIRCLE ONE (Corporation - Partnership - Individual)

SIGNED BY _____
(Signature) (Printed Name)

ADDRESS _____

CITY _____ STATE _____ ZIP+4 ZIP CODE _____

BUSINESS PHONE (_____) _____ FAX NUMBER _____

E-MAIL ADDRESS: _____

Bid results will be posted at: <http://www.ci.minneapolis.mn.us/finance/procurement/WCMSP-178311>

MCC Exterior Lighting Replacement Project Phase 1 Minneapolis Convention Center

Provide all materials, labor, equipment and incidentals necessary for the removal of old & installation of new exterior light fixtures as noted for the Minneapolis Convention Center, all in accordance with the provided specifications and drawings.

Scope of Work

1. Demolition and or Removal of existing Fixtures
 - a. General Carpentry
 - b. Electrical Labor
2. Purchase of new Fixtures
3. Installation of New Fixtures
 - a. General Carpentry
 - b. Electrical Labor
4. Disposal of old fixtures and demolition materials.

SYMBOL	DESIGNATIONS
SYMBOL SCHEDULE NOTES	
A. THESE SYMBOLS COMPRISE A STANDARD LIST. NOT ALL SYMBOLS MAY APPEAR ON THESE DRAWINGS.	
B. MOUNTING HEIGHTS INDICATED ARE STANDARD. DIMENSIONAL NUMBERS INDICATED AT DEVICES SHALL OVERRIDE THESE STANDARDS. MOUNTED HEIGHTS ARE TO THE CENTER OF THE DEVICE, UNLESS NOTED OTHERWISE.	
C. MOUNTING HEIGHTS INDICATED ARE FOR STUD WALL CONSTRUCTION. WHEN BLOCK OR BRICK CONSTRUCTION IS USED, ADJUST MOUNTING HEIGHTS TO ALIGN DEVICE PLATES WITH RUNNING JOINT.	
D. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.	
GENERAL	
	HEAVY DASHED LINE WEIGHT INDICATES EXISTING ITEM TO BE REMOVED.
	LIGHT SOLID LINE WEIGHT INDICATES EXISTING ITEM TO REMAIN.
	HEAVY SOLID LINE WEIGHT INDICATES NEW ITEM OR NEW LOCATION.
R	REMOVE EXISTING ITEM
RL	REMOVE EXISTING ITEM AND RELOCATE AS INDICATED
X	EXISTING ITEM TO REMAIN
NL	NEW LOCATION FOR RELOCATED ITEM
NOTES & TAGS	
	EQUIPMENT IDENTIFICATION TAG - SEE EQUIP SCHEDULES
#	FEEDER SIZE TAG - SEE POWER RISER SCHEDULE
EA	ELEC EQUIP CONNECTION TAG - SEE EQUIP SCHEDULE
KEY	KEYNOTE
#	MISCELLANEOUS NOTE
RACEWAYS	
	CONDUIT CONCEALED IN CEILING OR WALLS
	CONDUIT CONCEALED IN THE FLOOR OR BELOW
	CONDUIT EXPOSED ON THE CEILING OR WALLS
	CONDUIT BURIED UNDERGROUND (# = DEPTH)
	CONDUIT WITH BEND DOWN
	CONDUIT WITH BEND UP
	CONDUIT WITH BUSHED END
	CONDUIT WITH BREAK OR CONTINUATION
	CIRCUIT HOME RUN - L1 INDICATES PANEL NUMBER
	CONDUCTOR COUNT - UNLESS NOTED OTHERWISE / SHORT HASH INDICATES #1/2 LINE / LONG HASH INDICATES #1/2 NEUTRAL / HASH W/DOT INDICATES #1/2 GROUND
	PULL BOX, SIZE AS NOTED
	JUNCTION BOX - WALL/CEILING MOUNT
	WIREWAY, DUCT BANK, OR FLOOR DUCT AS NOTED
	CABLE TRAY, TYPE/SIZE AS INDICATED

SYMBOL	DESIGNATIONS	MTG HT
LIGHTING		
	LIGHT FIXTURE ID - REFER TO L1 FIXT SCHEDULE (FIXT SCHEDULE OVERRIDES SYMBOL ABBREVIATION)	
	A - INDICATES LIGHT FIXTURE TYPE # - INDICATES CIRCUIT NUMBER B - INDICATES SWITCHING	
	LIGHT FIXTURE CIRCUIT TYPE - NO HATCH INDICATES NORMAL CIRCUIT - ANGLED HATCH INDICATES CRITICAL CIRCUIT - SOLID HATCH INDICATES LIFE SAFETY CIRCUIT	
	TROFFER TYPE LIGHT FIXTURE, SIZE AS INDICATED - CHANNEL OR INDUSTRIAL, LENGTH AS INDICATED	
	DOWNLIGHT CLG FIXT, RECESSED OR SURFACE MOUNT	
	CEILING WALL WASH FIXT, AIMED AS INDICATED	
	SMALL MOUNT FIXTURE OR SCOFFER VERIFY	
	LINEAR RECESSED, LENGTH AS INDICATED VERIFY	
	LINEAR WALL MOUNT FIXT, LENGTH AS INDICATED VERIFY	
	UNDER CABINET FIXTURE, LENGTH AS INDICATED	
	TRACK FIXTURE, NUMBER OF HEADS AS INDICATED	
	EMERGENCY BATTERY LIGHT - WALL CLG MNT VERIFY	
	EXIT LIGHT, FILLED QUADRANT INDICATES FACES - WALL/CEILING MOUNT VERIFY	
	SITE LIGHTING POLE FIXT, ROUND/RECTANGLE HEAD - NUMBER OF HEADS INDICATED	
	SITE LIGHTING POLE FIXT, ROUND/ RECT HEAD	
POWER		
	BRANCH CIRCUIT PANEL VERIFY	
	EQUIPMENT CABINET VERIFY	
SWITCHES AND CONTROLS		
	SINGLE POLE TOGGLE SWITCH 48"	
	DOUBLE POLE TOGGLE SWITCH 48"	
	THREE WAY TOGGLE SWITCH 48"	
	FOUR WAY TOGGLE SWITCH 48"	
	TOGGLE SWITCH - "I" INDICATES SWITCHING 48"	
	PILOT LIGHT TOGGLE SWITCH 48"	
	ILLUMINATED TOGGLE - TOGGLE SWITCH 48"	
	KEYPAD SWITCH 48"	
	MOMENTARY CONTACT TOGGLE SWITCH 48"	
	TIMER SWITCH 48"	
	MULTI SWITCH, MULTI GANG BOX 48"	
	DIMMER SWITCH (# = WATTAGE) 48"	
	OCCUPANCY SENSOR - CLG MOUNT 48"	
	OCCUPANCY SENSOR WALL SWITCH 48"	
	PHOTO ELECTRIC CELL VERIFY	
	TIME CLOCK 60"	
	CONTACTOR 60"	
	RELAY VERIFY	
	PUSH BUTTON STATION - BUTTONS AS INDICATED 48"	

ELECTRICAL ABBREVIATIONS			
A	AMP	M.L.O	MAIN LUG ONLY
AA	AUDIBLE ALARM	MRS	MOTOR RATED SWITCH
AC	ABOVE COUNTER	MSB	MAIN SWITCHBOARD
ADD	ADDENDUM	MT	EMPTY
AFC	AVAILABLE FAULT CURRENT	NC	NORMALLY CLOSED
AFCI	ARC FAULT CIRCUIT INTERRUPTER	NEC	NATIONAL ELECTRICAL CODE
AFF	ABOVE FINISHED FLOOR	NIC	NOT IN CONTRACT
AHU	AIR HANDLING UNIT	NO	NORMALLY OPEN
AL	ALUMINUM	NTS	NOT TO SCALE
ATS	AUTOMATIC TRANSFER SWITCH	OC	ON CENTER
BFC	BELOW FINISHED CEILING	PB	PULL BOX
BPS	BOLTED PRESSURE SWITCH	PB	PUSHBUTTON
C	CONDUIT	PE	PNEUMATIC ELECTRIC
CAB	CABINET	PF	POWER FACTOR
CB	CIRCUIT BREAKER	PH	PHASE
CCTV	CLOSED CIRCUIT TV	PNL	PANEL
CKT	CIRCUIT	PR1	PRIMARY
CU	COPPER	RECEPT	RECEPTACLE
DN	DOWN	REFG	REFRIGERATOR
EC	ELECTRICAL CONTRACTOR	RTU	ROOM TOP UNIT
ELEC	ELECTRIC OR ELECTRICAL	SEC	SECONDARY
EM	EMERGENCY	SPKR	SPEAKER
EMT	ELECTRICAL METALLIC TUBING	SW	SWITCH
ENCL	ENCLOSURE	SWBD	SWITCHBOARD
EP	ELECTRIC PNEUMATIC	TEL	TELEPHONE
EPO	EMERGENCY POWER OFF	TR	TAMPER RESISTANT
EWG	ELECTRIC WATER COOLER	TSTAT	THERMOSTAT
F	FUSE OR FUSED	TYP	TYPICAL
FA	FIRE ALARM	UC	UNDER COUNTER
FACP	FIRE ALARM CONTROL PANEL	UG	UNDERGROUND
FSD	FIRE SMOKE DAMPER	UH	UNIT HEATER
FV	FILM VIEWER	UNO	UNLESS NOTED OTHERWISE
GFI	GROUND FAULT INTERRUPTER	V	VOLT
GND	GROUND	VA	VOLT-AMP
IG	ISOLATED GROUND	VAC	VOLTS ALTERNATING CURRENT
J	JUNCTION BOX	VDC	VOLTS DIRECT CURRENT
KV	KILOVOLT	W	WATT
KVA	KILOVOLT-AMP	WP	WEATHERPROOF
KW	KILOWATT	XFMR	TRANSFORMER
KWH	KILOWATT-HOUR		
MC	MOMENTARY CONTACT		
MCB	MAIN CIRCUIT BREAKER		

Sheet Index - BP-1	
Sheet Number	Sheet Name
E001	ELECTRICAL TITLE SHEET
E050	ELECTRICAL SITE LIGHTING DEMOLITION PLAN
E051.B	LIGHTING DEMOLITION PLAN LEVEL 1 - AREA B
E051.D	LIGHTING DEMOLITION PLAN LEVEL 1 - AREA D
E051.F	LIGHTING DEMOLITION PLAN LEVEL 1 - AREA F
E101.P	LIGHTING DEMOLITION PLAN LEVEL 1 - AREA P
E100	ELECTRICAL SITE LIGHTING PLAN
E101	SITE - ENLARGED PLANS
E102	SITE - ENLARGED PLANS
E201.A	LIGHTING PLAN LEVEL 1 - AREA A
E201.B	LIGHTING PLAN LEVEL 1 - AREA B
E201.D	LIGHTING PLAN LEVEL 1 - AREA D
E201.F	LIGHTING PLAN LEVEL 1 - AREA F
E201.N	LIGHTING PLAN LEVEL 1 - AREA N
E201.O	LIGHTING PLAN LEVEL 1 - AREA O
E201.P	LIGHTING PLAN LEVEL 1 - AREA P

Grand total: 16

GENERAL NOTES:

- CONFIRM SIZES OF EXISTING LUMINAIRES AND PROVIDED LUMINAIRES. PATCH AND PAINT CEILINGS AND WALLS TO ACCOMMODATE SIZE DIFFERENCES.
- CIRCUIT NUMBERS SHOWN FOR INTENT ONLY. FIELD VERIFY EXACT CIRCUIT AND PANEL LOCATION.
- NOT ALL KEY NOTES MAY APPLY TO EVERY SHEET.
- REMOVE EXISTING LIGHT FIXTURES. EXISTING CIRCUITING AND CONTROLS TO REMAIN. SEE LIGHTING PLAN FOR ADDITIONAL INFORMATION.
- CONTRACTOR TO FIELD VERIFY OPERATION AND CONTROLS OF EXISTING FIXTURES TO BE REPLACED WITH NEW IN SAME LOCATION AND IDENTIFY ANY ISSUES PRIOR TO DEMOLITION. CONTRACTOR TO TRACE NON-OPERATIONAL CIRCUITS/CONTROLS BACK TO POINT OF FAILURE AND REPAIR.
- LUMINAIRES TO BE CONTROLLED VIA TIME CLOCK IN EXISTING CONTROL PANEL LOCATED IN SAME ELECTRICAL ROOM AS CIRCUITING PANEL. UTILIZE SPARE 20A RELAY IN EXISTING CONTROL PANEL.
- REFER TO GORPHER STAGE LIGHTING DOCUMENTS FOR CONTROL DIAGRAMS.
- ELECTRICAL RACEWAYS SHALL BE CONCEALED UNLESS NOTED OTHERWISE.
- CONTRACTOR TO FIELD VERIFY OPERATION AND CONTROLS OF EXISTING FIXTURES TO REMAIN AND IDENTIFY ANY ISSUES. CONTRACTOR TO TAKE NON-OPERATIONAL CIRCUITS/CONTROLS BACK TO POINT OF FAILURE AND REPAIR.
- CONTRACTOR TO REPAIR WITH LIKE MATERIALS WHERE SAW-CUTTING IS REQUIRED.
- CONTRACTOR TO PROVIDE ADAPTER PLATES FOR POLE BASES TO MATCH EXISTING HOLE/BOLT PATTERNS.

LINE BID NOTES:

PROVIDE LINE ITEM BIDS FOR THE FOLLOWING:

- SHEET E050, DETAIL E050A, SHEET E101, DETAIL 1E101
- SHEET E050, DETAIL E050B, SHEET E101, DETAIL 2E101
- SHEET E101, DETAIL 3E101
- SHEET E050, DETAIL E050C, SHEET E102, DETAILS 1E102, 2E102
- SHEET E051B, DETAIL 1E051B, SHEET E201B, DETAIL 1E201B, SHEET E051D, DETAIL 1E051D, SHEET E201D, DETAIL 1E201D, SHEET E051F, DETAIL 1E051F, SHEET E201F, DETAIL 1E201F, SHEET E051P, DETAIL 1E051P, SHEET E201P, DETAIL 1E201P
- SHEET E102, DETAILS 1E102, 2E102 - SEE LINE BID NOTE A ON PLAN

PROJECT

Minneapolis
Convention Center

MINNEAPOLIS CONVENTION CENTER
1301 2ND AVENUE SOUTH
MINNEAPOLIS, MN 55403

EXTERIOR LIGHTING REFRESH

DUNHAM

Dunham Associates, Inc.
50 South Sixth Street / Suite 1100
Minneapolis, Minnesota 55402-1540
PHONE 612.465.7550
FAX 612.465.7551
WEB dunhaminc.com
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Signature:

Name: Juh-Y Kim, P.E.
Date: 11/18/2016
Registration Number: 59211

REVISIONS

No.	Date	Description
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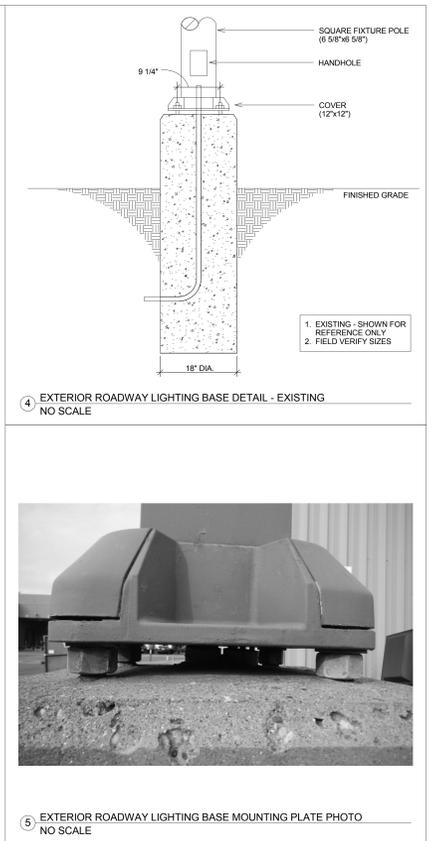
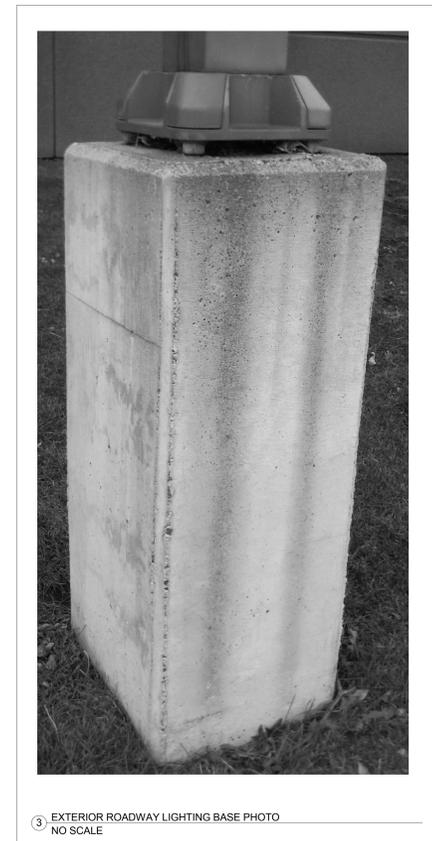
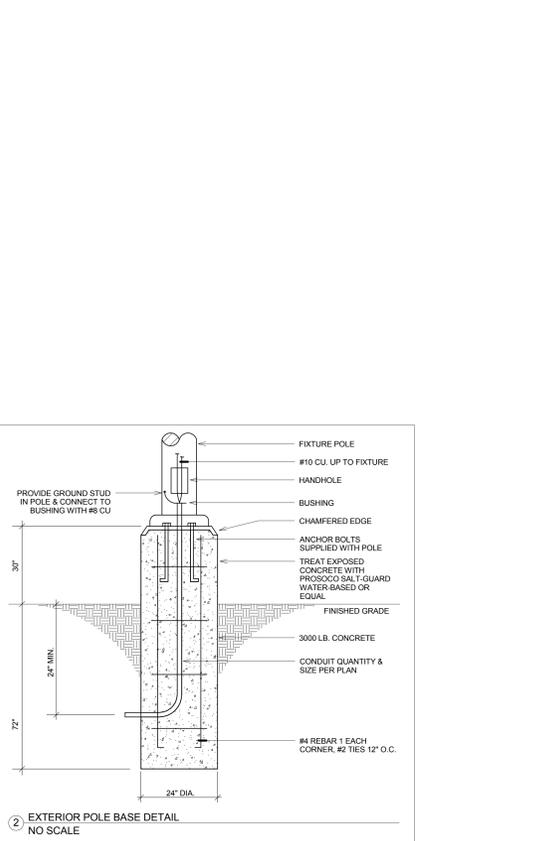
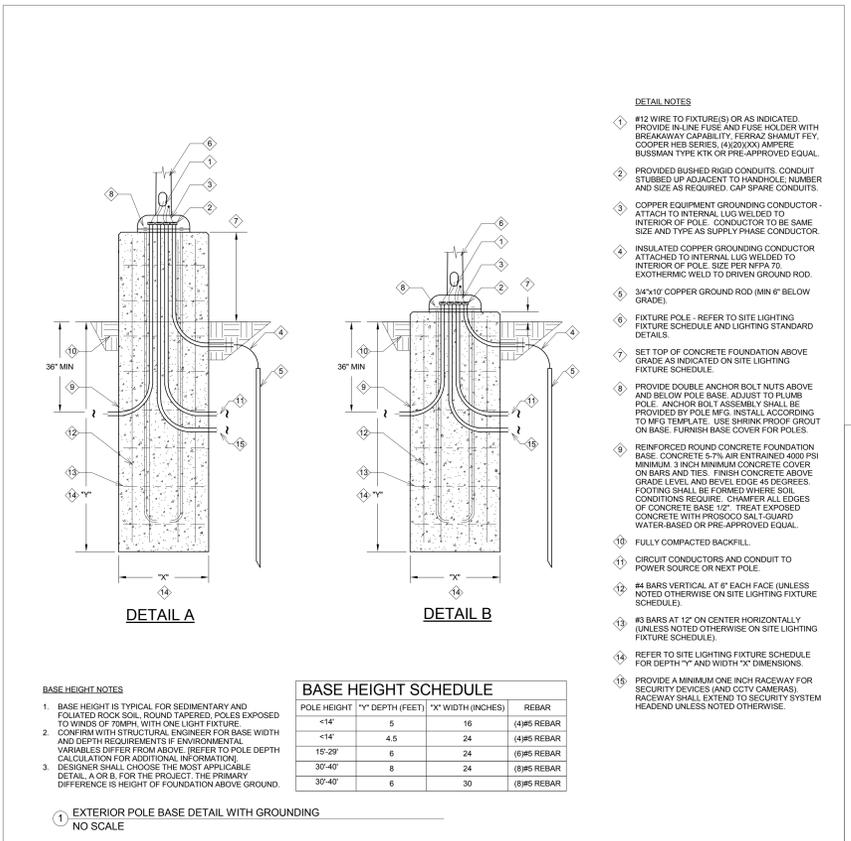
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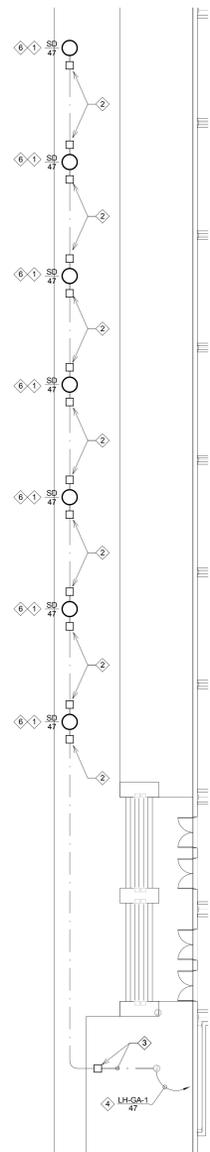
ELECTRICAL TITLE SHEET

BID PACKAGE #1

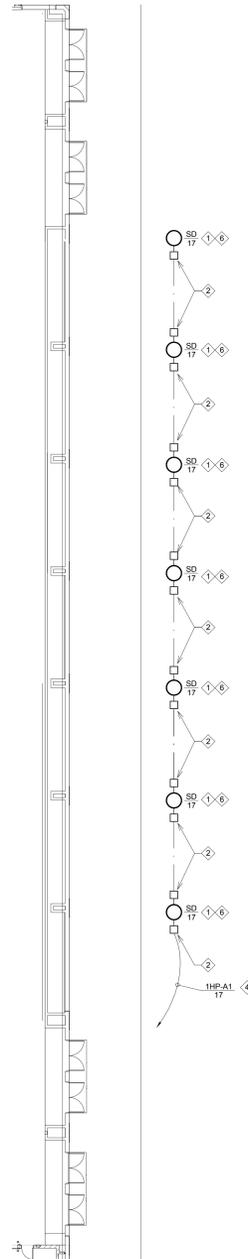
Sheet Number: **E001**
Project Number: 0417025-000.00

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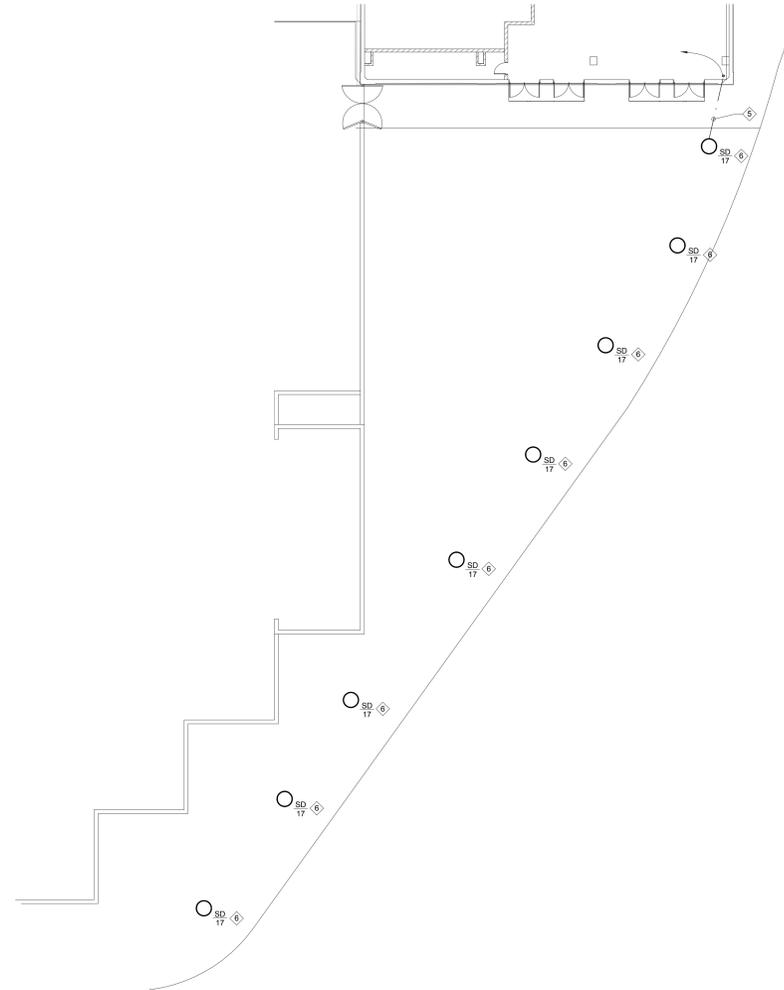




1 WEST SIDEWALK LIGHTING
1/16" = 1'-0"



2 EAST SIDEWALK LIGHTING
1/16" = 1'-0"



3 SOUTH EAST SIDEWALK LIGHTING
1/16" = 1'-0"

KEY NOTES:

- 1 CONNECT LIGHT FIXTURES TO EXISTING CIRCUITING AND CONTROLS.
- 2 PROVIDE WEATHERPROOF JUNCTIONBOX IN GROUND TO INTERCEPT EXISTING CIRCUITING AND CONTROLS. ROUTE NEW CONDUIT TO PROVIDED BASE FOR CONNECTION OF LIGHT FIXTURE. MODIFY EXISTING CIRCUITING TO EXTEND TO LIGHT FIXTURE.
- 3 EXISTING CIRCUITING BETWEEN BUILDING AND SIDEWALK HAS BEEN INTERRUPTED. PROVIDE JUNCTION BOX IN GROUND NEAR SIDEWALK TO INTERCEPT HOMERUN. PROVIDE NEW CONDUIT FROM JUNCTION BOX TO NEAREST EXISTING JUNCTION BOX WITH ENERGIZED CIRCUIT.
- 4 EXISTING HOMERUN, SHOWN FOR CIRCUITING INTENT ONLY. VERIFY EXACT CIRCUITING ON SITE. VERIFY CIRCUIT IS BEING CONTROLLED VIA TIME OF DAY SCHEDULE IN EXISTING CONTROL PANEL LOCATED IN ELECTRICAL ROOM WHERE CIRCUIT IS BEING FED FROM. IF CIRCUIT IS CURRENTLY NOT CONTROLLED PROVIDE CONTACT TO MATCH EXISTING TYPE AND RATINGS. REFER TO COMMER STAGE LIGHTING DRAWINGS FOR MORE INFORMATION. VERIFY TIME OF DAY SCHEDULE WITH OWNER PRIOR TO SETTING SCHEDULE.
- 5 BORE UNDER SIDEWALK FOR ROUTING OF CONDUIT, CIRCUITING AND CONTROLS. HOMERUN TO RUN UNDER EXISTING SIDEWALK AND STUB UP IN BUILDING. ROUTE OVERHEAD TO CLOSEST ELECTRICAL CLOSET TO CONNECT TO EXISTING SITE LIGHTING CIRCUIT IHP-A117. REFER TO DETAIL 2 THIS SHEET FOR CIRCUITING INFORMATION.
- 6 PROVIDE BASE AND MOUNTING ACCESSORIES FOR TYPE SD FIXTURE. REFER TO SCHLER SHOCK DRAWINGS FOR QUANTITY, LOCATION, DETAILS AND OTHER INFORMATION. ROUTE CONDUIT, CIRCUITING AND CONTROLS UNDER GROUND.

PROJECT

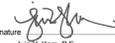


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Signature 
Name Jui-Yi Kam, P.E.
Date 11/18/2016
Registration Number 59211

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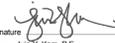
SHEET TITLE

SITE - ENLARGED PLANS

BID PACKAGE #1

Sheet Number:
E101
Project Number:
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SHEET TITLE
**LIGHTING PLAN
LEVEL 1 - AREA F**

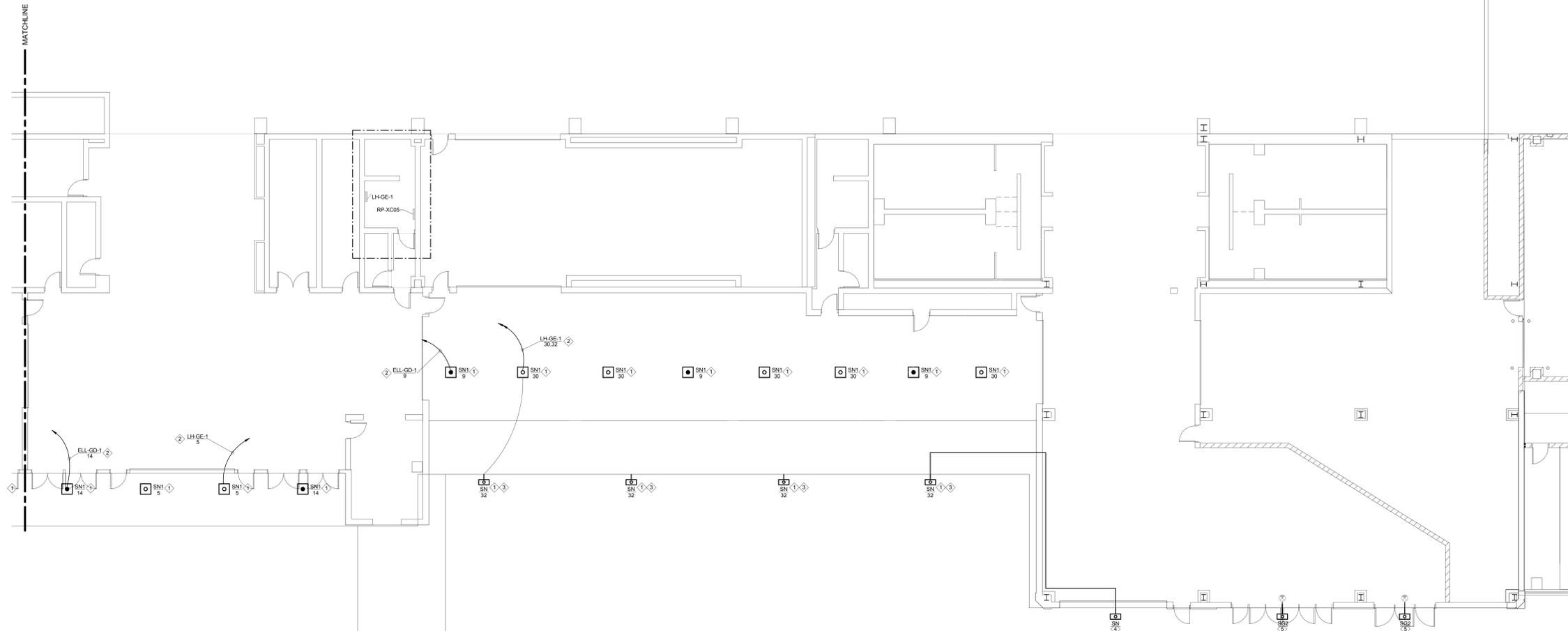
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E201.F

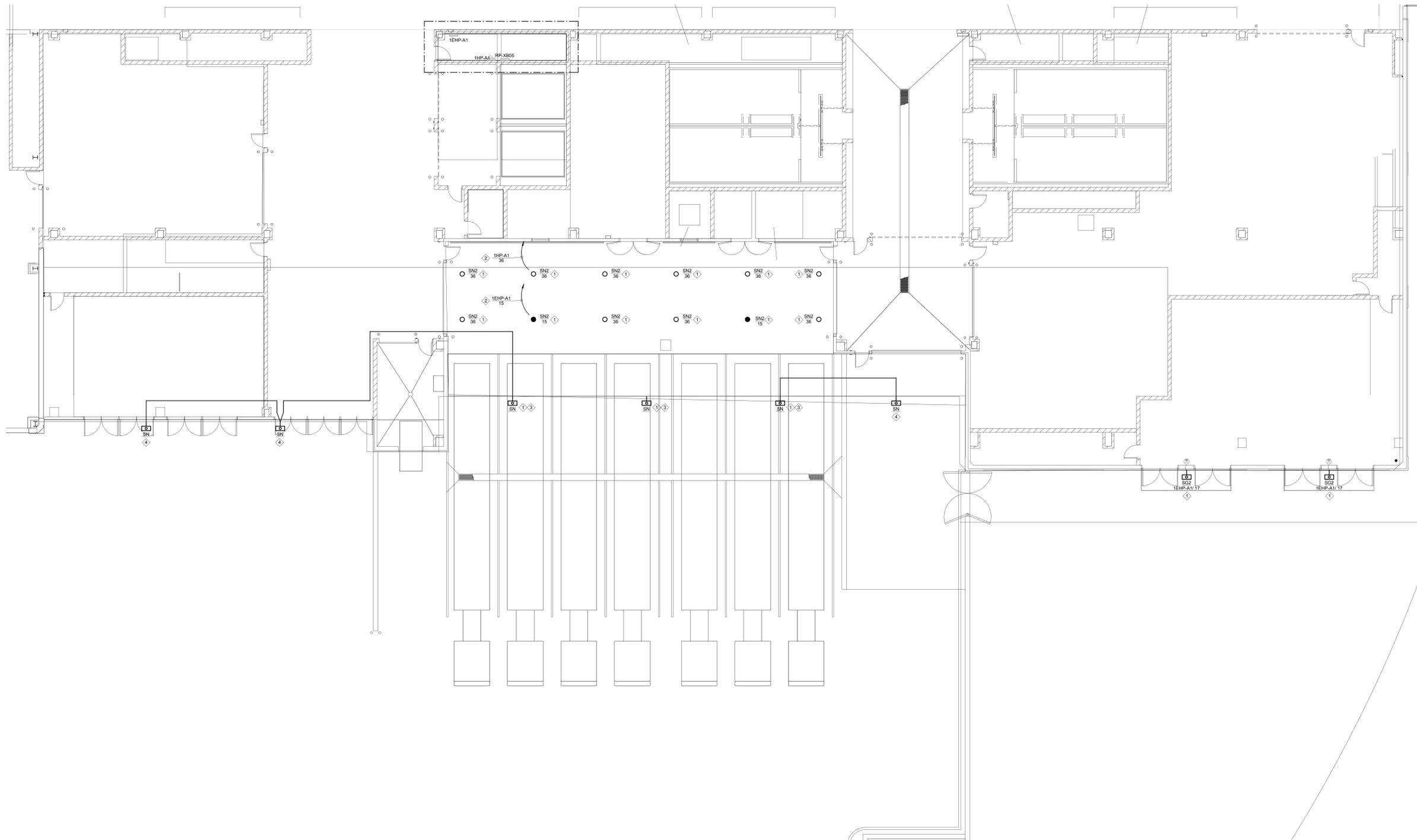
Project Number:
0417025-000-00

KEY NOTES:

- CONNECT REPLACEMENT LIGHT FIXTURES TO EXISTING CIRCUITING AND CONTROLS.
- EXISTING HOMERUN, SHOWN FOR CIRCUITING INTENT ONLY. VERIFY EXACT CIRCUITING ON SITE. VERIFY CIRCUIT IS BEING CONTROLLED VIA TIME OF DAY SCHEDULE IN EXISTING CONTROL PANEL LOCATED IN ELECTRICAL ROOM WHERE CIRCUIT IS BEING FED FROM. IF CIRCUIT IS CURRENTLY NOT CONTROLLED PROVIDE CONTACT TO MATCH EXISTING TYPE AND RATINGS. REFER TO GOPHER STAGE LIGHTING DRAWINGS FOR MORE INFORMATION. VERIFY TIME OF DAY SCHEDULE WITH OWNER PRIOR TO SETTING SCHEDULE.
- LIGHT FIXTURE NOT OPERATIONAL AT TIME OF SURVEY. TRACE CIRCUIT BACK TO NEAREST ENERGIZED LOCATION. PROVIDE NEW CONDUIT, CIRCUITING AND CONTROLS FROM THIS LOCATION TO LIGHT FIXTURE.
- STUB INTO BUILDING AT LIGHT FIXTURE LOCATION AND TIE INTO ADJACENT FLOOD LIGHTING CIRCUIT AND CONTROLS.
- STUB INTO BUILDING AT LIGHT FIXTURE LOCATION AND EXTEND CONDUIT TO EXISTING EMERGENCY LIGHTING CIRCUIT FEEDING EXISTING EXIT SIGN. CONCEAL CONDUIT IN BOXED OUT AREA LOCATED INSIDE ABOVE DOOR. LIGHTING TO BE CONTROLLED BY INTEGRAL PHOTOCELL.



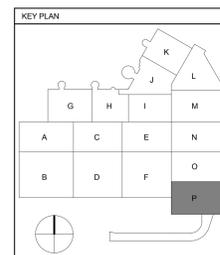
1 LEVEL 1 - LIGHTING PLAN - AREA F
1/8" = 1'-0"



1 LEVEL 1 - LIGHTING PLAN - AREA P
1/8" = 1'-0"

KEY NOTES:

1. CONNECT REPLACEMENT LIGHT FIXTURES TO EXISTING CIRCUITING AND CONTROLS.
2. EXISTING HOMERUN, SHOWN FOR CIRCUITING INTENT ONLY. VERIFY EXACT CIRCUITING ON SITE. VERIFY CIRCUIT IS BEING CONTROLLED VIA TIME OF DAY SCHEDULE IN EXISTING CONTROL PANEL LOCATED IN ELECTRICAL ROOM WHERE CIRCUIT IS BEING FED FROM. IF CIRCUIT IS CURRENTLY NOT CONTROLLED PROVIDE CONTACT TO MATCH EXISTING TYPE AND RATINGS. REFER TO GMP/STAGE LIGHTING DRAWINGS FOR MORE INFORMATION. VERIFY TIME OF DAY SCHEDULE WITH OWNER PRIOR TO SETTING SCHEDULE.
3. LIGHT FIXTURE NOT OPERATIONAL AT TIME OF SURVEY. TRACE CIRCUIT BACK TO NEAREST ENERGIZED LOCATION. PROVIDE NEW CONDUIT, CIRCUITING AND CONTROLS FROM THIS LOCATION TO LIGHT FIXTURE.
4. STUB INTO BUILDING AT LIGHT FIXTURE LOCATION AND TIE INTO ADJACENT FLOOD LIGHTING CIRCUIT AND CONTROLS.
5. STUB INTO BUILDING AT LIGHT FIXTURE LOCATION AND EXTEND CONDUIT TO EXISTING EMERGENCY LIGHTING CIRCUIT FEEDING EXISTING EXIT SIGN. CONICAL CONDUIT IN BOXED OUT AREA LOCATED INSIDE ABOVE DOOR.



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Signature: *[Signature]*
Name: Jun Y. Kim, P.E.
Date: 11/18/2016
Registration Number: 59211

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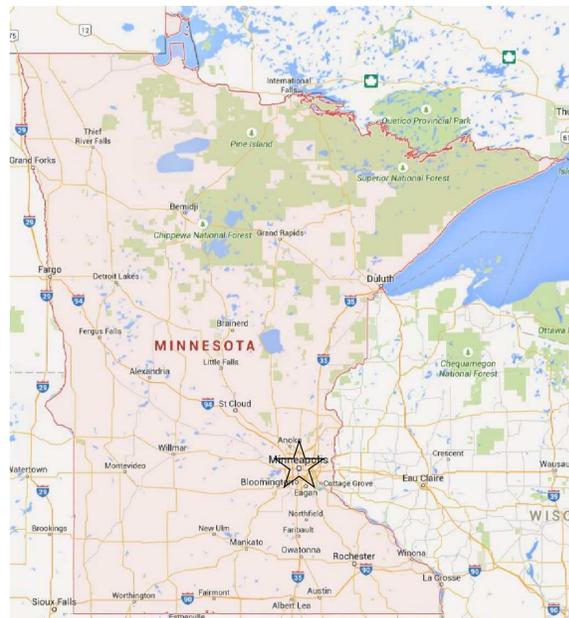
SHEET TITLE
LIGHTING PLAN
LEVEL 1 - AREA P

BID PACKAGE #1

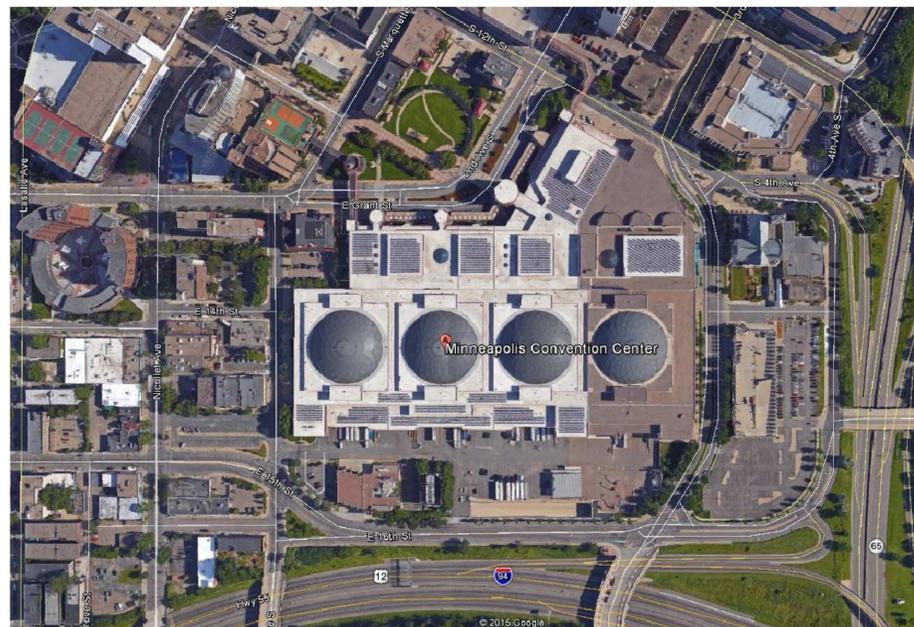
Sheet Number:
E201.P
Project Number:
0417025-000-00

MINNEAPOLIS CONVENTION CENTER

LIGHTING CONTROL SYSTEM UPGRADE



1 MINNESOTA MAP
NO SCALE



2 SITE MAP
NO SCALE

CONSULTANTS

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PERKINS
WILL



ELECTRICAL DRAWINGS DRAWING INDEX

DWG. NO.	DESCRIPTION
E00	COVER SHEET
E01	ABBREVIATIONS
E10	OVERALL BASEMENT LEVEL PLAN
E11	OVERALL MEZZANINE LEVEL PLAN
E12	OVERALL FIRST LEVEL PLAN
E13	OVERALL SECOND LEVEL PLAN
E20M	BASEMENT LEVEL AREA M - ELECTRICAL
E20N	BASEMENT LEVEL AREA N - ELECTRICAL
E20O	BASEMENT LEVEL AREA O - ELECTRICAL
E20P	BASEMENT LEVEL AREA P - ELECTRICAL
E21G	MEZZANINE LEVEL AREA G - ELECTRICAL
E21M	MEZZANINE LEVEL AREA M - ELECTRICAL
E21N	MEZZANINE LEVEL AREA N - ELECTRICAL
E21O	MEZZANINE LEVEL AREA O - ELECTRICAL
E21P	MEZZANINE LEVEL AREA P - ELECTRICAL
E22A	FIRST LEVEL AREA A - ELECTRICAL
E22B	FIRST LEVEL AREA B - ELECTRICAL
E22C	FIRST LEVEL AREA C - ELECTRICAL
E22D	FIRST LEVEL AREA D - ELECTRICAL
E22E	FIRST LEVEL AREA E - ELECTRICAL
E22F	FIRST LEVEL AREA F - ELECTRICAL
E22G	FIRST LEVEL AREA G - ELECTRICAL
E22H	FIRST LEVEL AREA H - ELECTRICAL
E22I	FIRST LEVEL AREA I - ELECTRICAL
E22J	FIRST LEVEL AREA J - ELECTRICAL
E22K	FIRST LEVEL AREA K - ELECTRICAL
E22L	FIRST LEVEL AREA L - ELECTRICAL
E22M	FIRST LEVEL AREA M - ELECTRICAL
E22N	FIRST LEVEL AREA N - ELECTRICAL
E22O	FIRST LEVEL AREA O - ELECTRICAL
E22P	FIRST LEVEL AREA P - ELECTRICAL
E23A	SECOND LEVEL AREA A - ELECTRICAL
E23B	SECOND LEVEL AREA B - ELECTRICAL
E23C	SECOND LEVEL AREA C - ELECTRICAL
E23D	SECOND LEVEL AREA D - ELECTRICAL
E23E	SECOND LEVEL AREA E - ELECTRICAL
E23F	SECOND LEVEL AREA F - ELECTRICAL
E23G	SECOND LEVEL AREA G - ELECTRICAL
E23H	SECOND LEVEL AREA H - ELECTRICAL
E23I	SECOND LEVEL AREA I - ELECTRICAL
E23J	SECOND LEVEL AREA J - ELECTRICAL
E23K	SECOND LEVEL AREA K - ELECTRICAL
E23L	SECOND LEVEL AREA L - ELECTRICAL
E23M	SECOND LEVEL AREA M - ELECTRICAL
E23N	SECOND LEVEL AREA N - ELECTRICAL
E23O	SECOND LEVEL AREA O - ELECTRICAL
E40	ONE-LINE DIAGRAMS
E41	ONE-LINE DIAGRAMS
E42	ONE-LINE DIAGRAMS
E43	ONE-LINE DIAGRAMS
E44	ONE-LINE DIAGRAMS
E45	ONE-LINE DIAGRAMS
E46	EQUIPMENT RACKS/PANEL SCHEDULES
E47	EQUIPMENT RACKS/PANEL SCHEDULES

CONSTRUCTION SET
NOVEMBER 02, 2015

FOR REFERENCE
ONLY

**MINNEAPOLIS
CONVENTION
CENTER:
LIGHTING CONTROL
SYSTEM UPGRADE**



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ABBREVIATIONS

1. NOT ALL ABBREVIATIONS MAY BE USED ON THIS PROJECT

A	- AMPERES	EB	- ELECTRONIC BALLAST	INCAND	- INCANDESCENT	R	- REFRIGERATOR
AC	- ABOVE COUNTER	EC	- ELECTRICAL CONTRACTOR	INFO	- INFORMATION	RA	- RETURN AIR
ACCU	- AIR COOLED CONDENSING UNIT	ECH	- ELECTRIC CABINET HEATER	INST	- INSTALLATION	REC	- RECESSED
AF	- AMP FUSE	EF	- EXHAUST FAN	INSUL	- INSULATED/INSULATOR	RCR	- RECOVER
AFF	- ABOVE FINISHED FLOOR	EHC	- ELECTRIC HEATING COIL	INV	- INVERTER	RECPT	- RECEPTACLE
AHJ	- AUTHORITY HAVING JURISDICTION	EL	- ELECTRICAL, ELECTRIC	JB	- JUNCTION BOX	REF	- REFERENCE, REFER TO
AHU	- AIR HANDLING UNIT	ELEV	- ELEVATOR OR ELEVATION	KA	- THOUSAND AMPS	REQD	- REQUIRED
ALT	- ALTERNATE	EM	- EMERGENCY	L	- LAMP	REV	- REVISION
AL	- ALUMINUM	EQ	- EQUAL EQUIPMENT	LOP	- LIGHTING CONTROL PANEL	REQ	- REQUEST TO EXIT
AMP	- AMPLIFIER	ERU	- ENERGY RECOVERY UNIT	LI	- LAY IN	RLA	- RUNNING LOAD AMPS
ANN	- ANNUNCIATOR	EUH	- ELECTRIC UNIT HEATER	LOC	- LOCATION, LOCATE	RM	- ROOM
ARCH	- ARCHITECTURAL	EW	- ELECTRIC WATER COOLER	LRA	- LOCKED ROTOR AMPS	RFM	- REVOLUTIONS PER MINUTE
ATR	- ALL THREAD ROD	EWB	- ELECTRIC WATER HEATER	LTS	- LIGHTING	RTU	- ROOF TOP UNIT
ATS	- AUTOMATIC TRANSFER SWITCH	EX	- EXISTING	LTS	- LIGHTS	SA	- SUPPLY AIR
ATC	- AUTOMATIC TEMP CONTROL	EXH	- EXHAUST	LV	- LOW VOLTAGE	SB	- SCOREBOARD
AV	- AUDIO VISUAL	EXPL	- EXPLOSION PROOF	M. MNT	- MAINTENANCE	SC	- SHORT CIRCUIT
AUX	- AUXILIARY	F	- FUSE OR FRONT	MAG	- MAGNETIC	SCH	- SCHEDULE
BAL	- BALLAST	F	- DEGREES FAHRENHEIT	MAU	- MAKE UP AIR UNIT	SEC	- SECTION OR SECURITY
BAT	- BATTERY	FF	- FOR	MAU	- MAKE UP AIR UNIT	SF	- SQUARE FEET
BB	- BACK BOX	FA	- FIRE ALARM	MC	- MECHANICAL CONTRACTOR	SHT	- SHEET
BFC	- BELOW FINISHED GRADE	FAMP	- FIRE ALARM ANNUNCIATOR PANEL	MCA	- MINIMUM CIRCUIT AMPS	SIM	- SIMILAR TO
BK	- BLACK	FANN	- FIRE ALARM ANNUNCIATOR PANEL	MCB	- MAIN CIRCUIT BREAKER	SP	- SUMP PUMP
BKR	- BREAKER	FACP	- FIRE ALARM CONTROL PANEL	MCC	- MOTOR CONTROL CENTER	SPEC	- SPECIFICATION
BGL	- BOTTOM OF	FD	- FIRE DAMPER	MDP	- MAIN DISTRIBUTION FRAME	SQ	- SQUARE
BOT	- BOTTOM	FDA	- FOOD & DRUG ADMINISTRATION	MDP	- MAIN DISTRIBUTION PANEL	S/S	- STAINLESS STEEL
BR	- BRANCH	FED	- FEDERAL	MICRW	- MICROWAVE	STD	- STANDARD
BTU	- BRITISH THERMAL UNIT	FIXT	- FIXTURE, LUMINAIRE	MFR	- MANUFACTURER	STP	- SHIELDED TWISTED PAIR
BZ	- BRONZE	FJA	- FULL LOAD AMPERES	MFS	- MAXIMUM FUSE SIZE	SURF	- SURFACE MOUNT
C	- CONDUIT, CEILING, CONDUCTOR	FL FR	- FLOOR, FLORESCENT	MH	- METAL HALIDE, MOUNTING HEIGHT, MANHOLE	SW	- SWITCH
CAB	- CABINET	FO	- FIBER OPTICS	MIN	- MINIMUM	SWBD	- SWITCHBOARD
CALC	- CALCULATION	FS	- FLOW SWITCH OR FLOOR SINK	MLO	- MAIN LUGS ONLY	SYS	- SYSTEM
CAT	- CATALOG	FSD	- COMBINATION FIRE AND SMOKE DAMPER	MOP	- MAX OVERCURRENT PROTECTION	TCC	- TEMPERATURE CONTROL CONTRACTOR
CB	- CIRCUIT BREAKER	FT	- FEET	MSB	- MAIN SWITCHBOARD	TOP	- TEMPERATURE CONTROL PANEL
CBIC	- CIRCUIT BREAKER INTERRUPTING CURRENT	FUT	- FUTURE	MTD	- MOUNTED	TD	- TIME DELAY
CCT	- CIRCUIT	FURN	- FURNISHED	MTG	- MOUNTING	TEL	- TELEPHONE
C/C	- CENTER TO CENTER	FUS	- FUSE, FUSED, FUSIBLE	MTL	- MATERIAL	TEMP	- TEMPORARY, TEMPERATURE
C/FL	- COMPACT FL	GRD/G	- GROUND	MTR	- MOTOR OR METER	TP	- TAMPERPROOF
CNT	- CIRCUIT	GA	- GFI ABOVE COUNTER, GAUGE IDF	N	- NEUTRAL	TRT	- TRIPLE TUBE
CLG/C	- CEILING	GAL	- GALLONS	NA	- NOT APPLICABLE	TS	- TIME SWITCH
COL	- COLUMN	GARB	- GARBAGE DISPOSAL	NC	- NORMALLY CLOSED	STAT	- THERMOSTAT
COMM	- COMMUNICATIONS	GC	- GENERAL CONTRACTOR	NEC	- NATIONAL ELECTRICAL CODE	TV	- TELEVISION
COMP	- COMPRESSOR	GEN	- GENERATOR	NEF	- NON FUSED	TVS	- TRANSIENT VOLTAGE SURGE SUPPRESSOR
COND	- CONDUCTOR	GFI	- GROUND FAULT CIRCUIT INTERRUPTER	NIC	- NOT IN CONTRACT	TOP	- TOPICAL
CONN	- CONNECTION	GFP	- GROUND FAULT PROTECTION	NL	- NIGHT LIGHT	U	- URINAL
CONTR	- CONTROLLER, CONTRACTOR	GPM	- GALLONS PER MINUTE	N.O.	- NORMALLY OPEN	UBC	- UNITED BUILDING CODE
CP	- COMMON PLATE	GW	- GFI WEATHERPROOF	NORM	- NORMALLY	UG	- UNDER GROUND
CR	- CARD READER	GWL	- GFI WEATHERPROOF IN USE, LOCKABLE	NIS	- NOT TO SCALE	UH	- UNIT HEATER
CT	- CURRENT TRANSFORMER	H	- HIGH, HOT	OC	- ON CENTER	UNV	- UNIVERSAL
CTR	- CENTER	HACR	- HVAC CB	OCP	- OVERCURRENT PROTECTION	UTIL	- UTILITY
CU	- COPPER	HAL	- HALOGEN	OD	- OUTSIDE DIMENSION, OUTSIDE DIAMETER	UTP	- UNSHIELDED TWISTED PAIR
CUH	- CABINET UNIT HEATER	HC	- HEATING COIL	OH	- OVERHEAD	V	- VOLT
D	- DEDICATED CIRCUIT	HD	- HEAVY DUTY	OL	- OUTLET, OVERLOAD	VA	- VOLT-AMPS
dB	- DECIBEL	HID	- HIGH INTENSITY DISCHARGE	OP	- OPERATOR	VAV	- VAV BOX
DED	- DEDICATED CIRCUIT	HP	- HORSE POWER	P	- PUMP, POLE	VERT	- VERTICAL
DEV	- DEVICE	HPS	- HIGH PRESSURE SODIUM	PC	- PHOTO CONTROL	VFD	- VARIABLE FREQUENCY DRIVE
DF	- DOUBLE FACE	HSA	- HAND-OFF-AUTO	#, PH	- PHASE	WG	- WIRE GUARD
DN	- DIAMETER, DIAGRAM	HS	- HAND STATION	PH	- PENTHOUSE	WC	- WATER CLOSET
DISC	- DISCONNECT	HT	- HEIGHT	PNL	- PANEL, PANEL BOARD	WH	- WATER HEATER
DISP	- DISPOSAL	HTR	- HEATER	PR	- PAIR	WP	- WEATHERPROOF, NEMA 3R IF ENCLOSURE
DISTR	- DISTRIBUTION	HVAU	- HEATING & VENTILATING UNIT	PRI	- PRIMARY	W/	- WITH
DN	- DOWN	HW	- HOT WATER	PRV	- PRIVATE	W/O	- WITHOUT
DNLT	- DOWNLIGHT	HWB	- HOT WATER HEATER	PROJ	- PROJECTOR	XMR	- TRANSFORMER
DS	- DUTY STATION	ID	- INSIDE DIMENSION	PRV	- POWER ROOF VENT	1P2D	- SINGLE POLE 20A
DTL	- DETAIL	IN	- INCHES	PS	- PULSE START/POWER SUPPLY	3P3W	- 3 POLE 30A WITH 3 30A FUSES
DWG	- DRAWING	INB/OUT	- INBOARD/OUTBOARD	QTY	- QUANTITY	3P3D	- 3 POLE 30A CB



BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-26-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions

Keyplan

NO	ISSUE	DATE
Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	

Title

ABBREVIATIONS

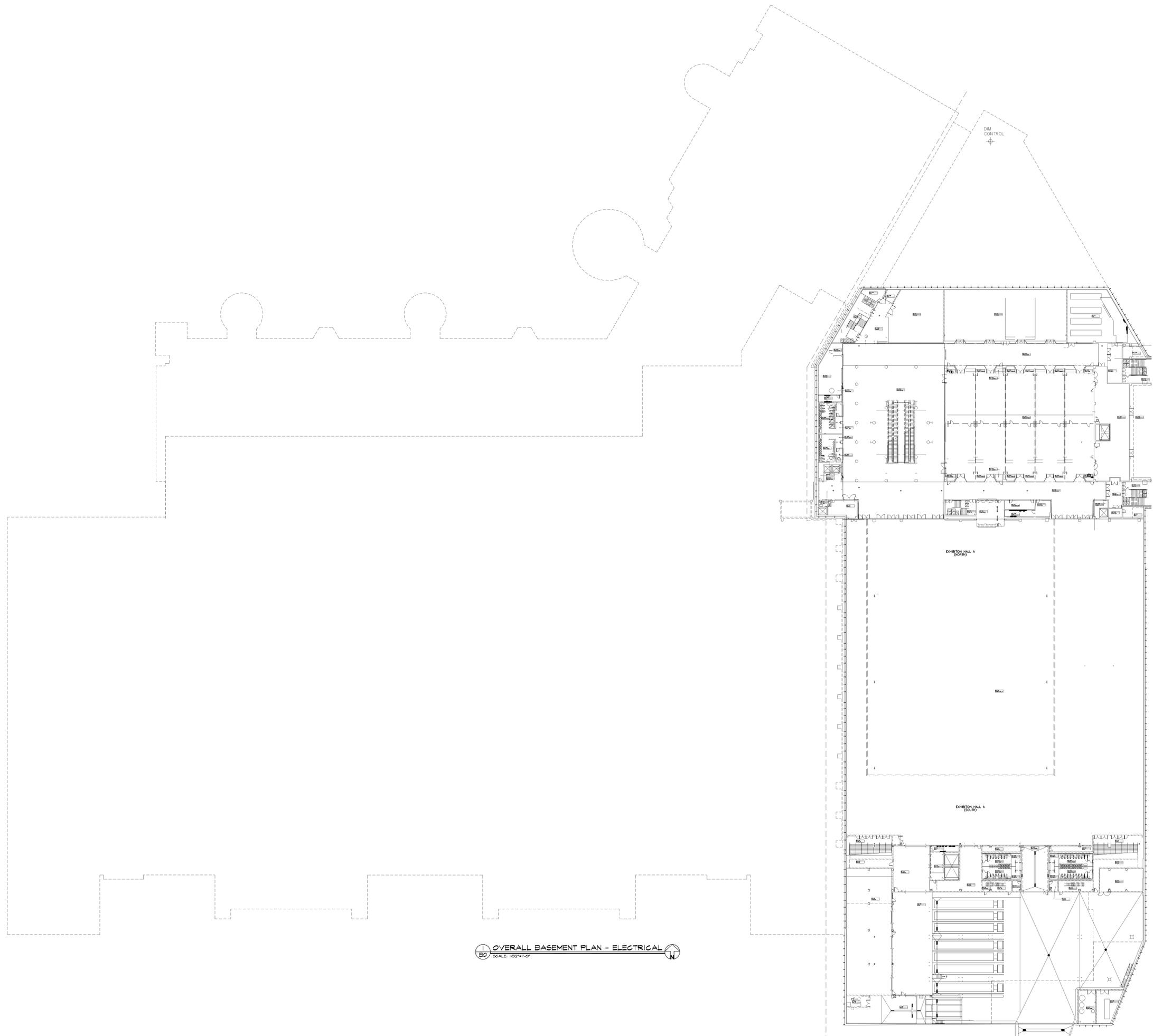
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Sheet
E01

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OVERALL BASEMENT PLAN - ELECTRICAL
SCALE: 1/8"=1'-0"

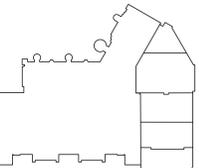


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Approved	T. VAREBERG	
Title		

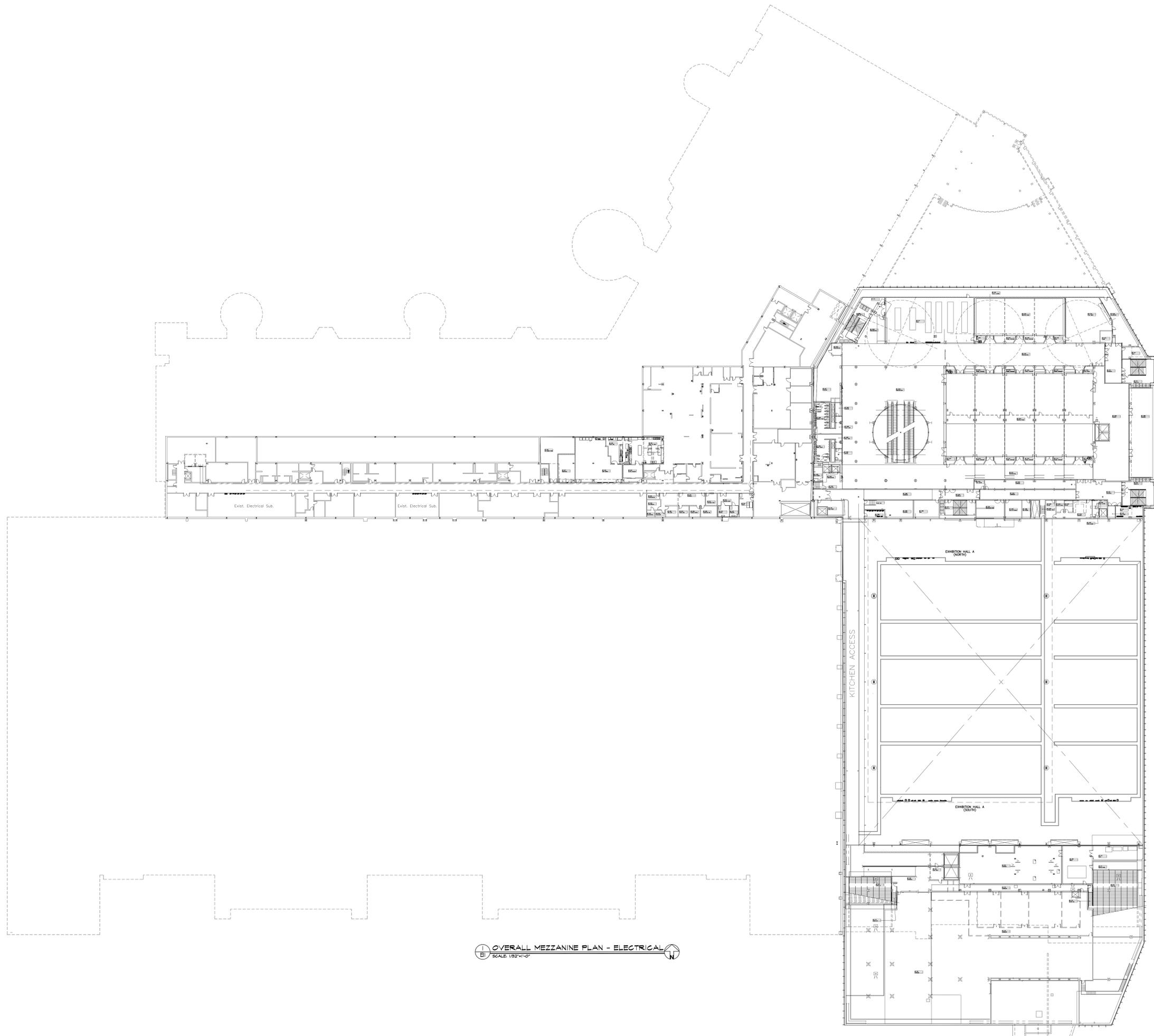
**OVERALL
BASEMENT PLAN -
ELECTRICAL**

FOR REFERENCE
ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet

E10

**MINNEAPOLIS
CONVENTION
CENTER:
LIGHTING CONTROL
SYSTEM UPGRADE**



OVERALL MEZZANINE PLAN - ELECTRICAL
SCALE: 1/8"=1'-0"

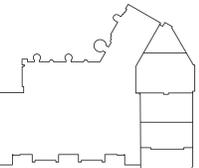


BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions

Keyplan



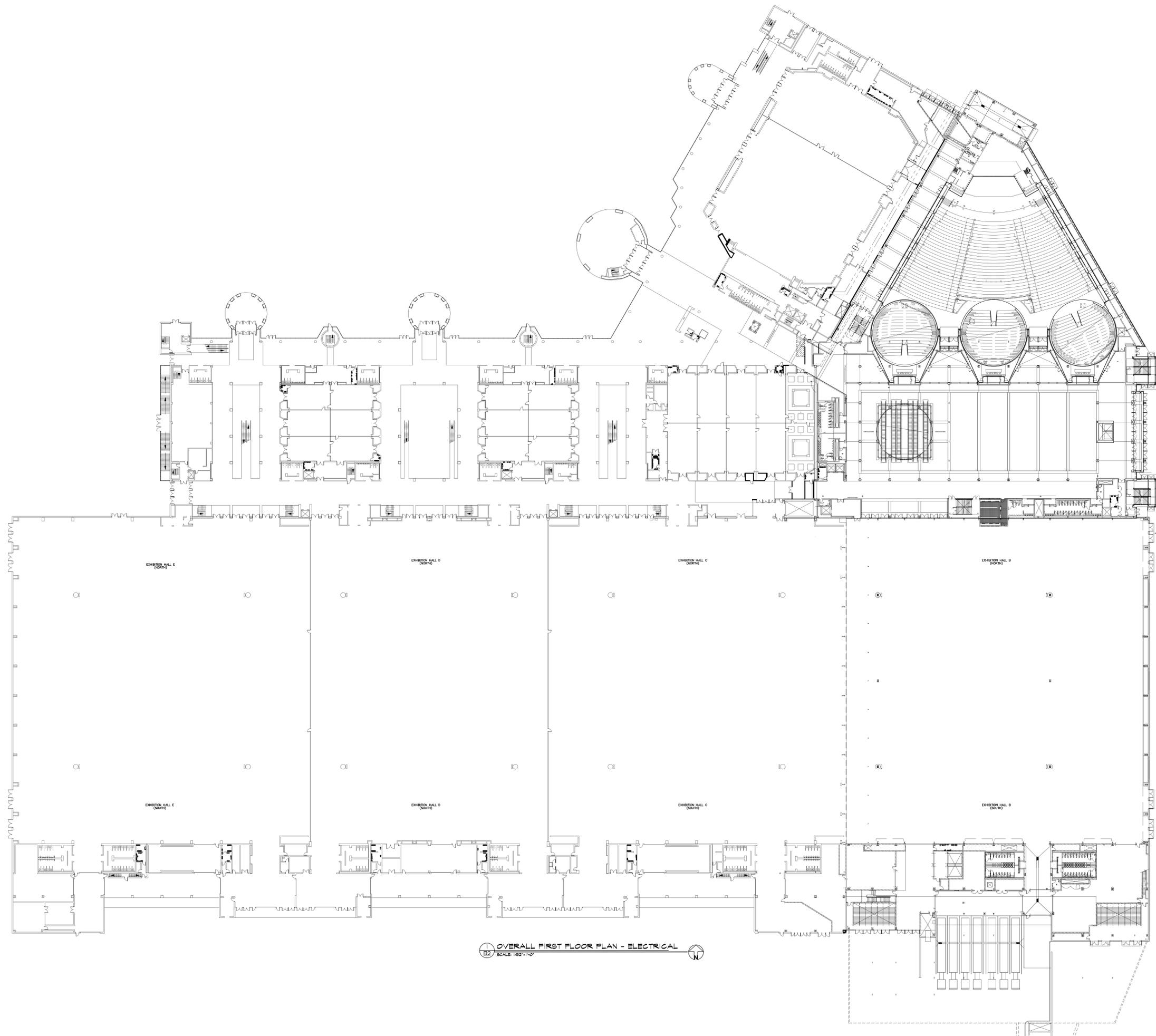
NO.	ISSUE	DATE
Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	
Title		

**OVERALL
MEZZANINE PLAN
- ELECTRICAL**

FOR REFERENCE
ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet

E11



OVERALL FIRST FLOOR PLAN - ELECTRICAL
 SCALE: 1/8"=1'-0"

**MINNEAPOLIS
 CONVENTION
 CENTER:
 LIGHTING CONTROL
 SYSTEM UPGRADE**

**VAREBERG
 ENGINEERING**
 CONSULTING ENGINEERS

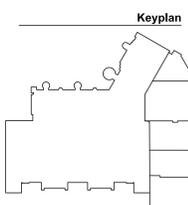
1331 52nd Ave S
 Fargo, ND 58103
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 701.224.0276

NO.	ISSUE	DATE
1	BID SET	7-10-15
2	ADDENDUM #1	7-23-15
3	ADDENDUM #3	7-30-15
4	ADDENDUM #4	8-20-15
5	ADDENDUM #5	8-06-15
6	CONSTRUCTION SET	11-02-15

NO.	ISSUE	DATE

NO.	ISSUE	DATE

Revisions



NO.	ISSUE	DATE

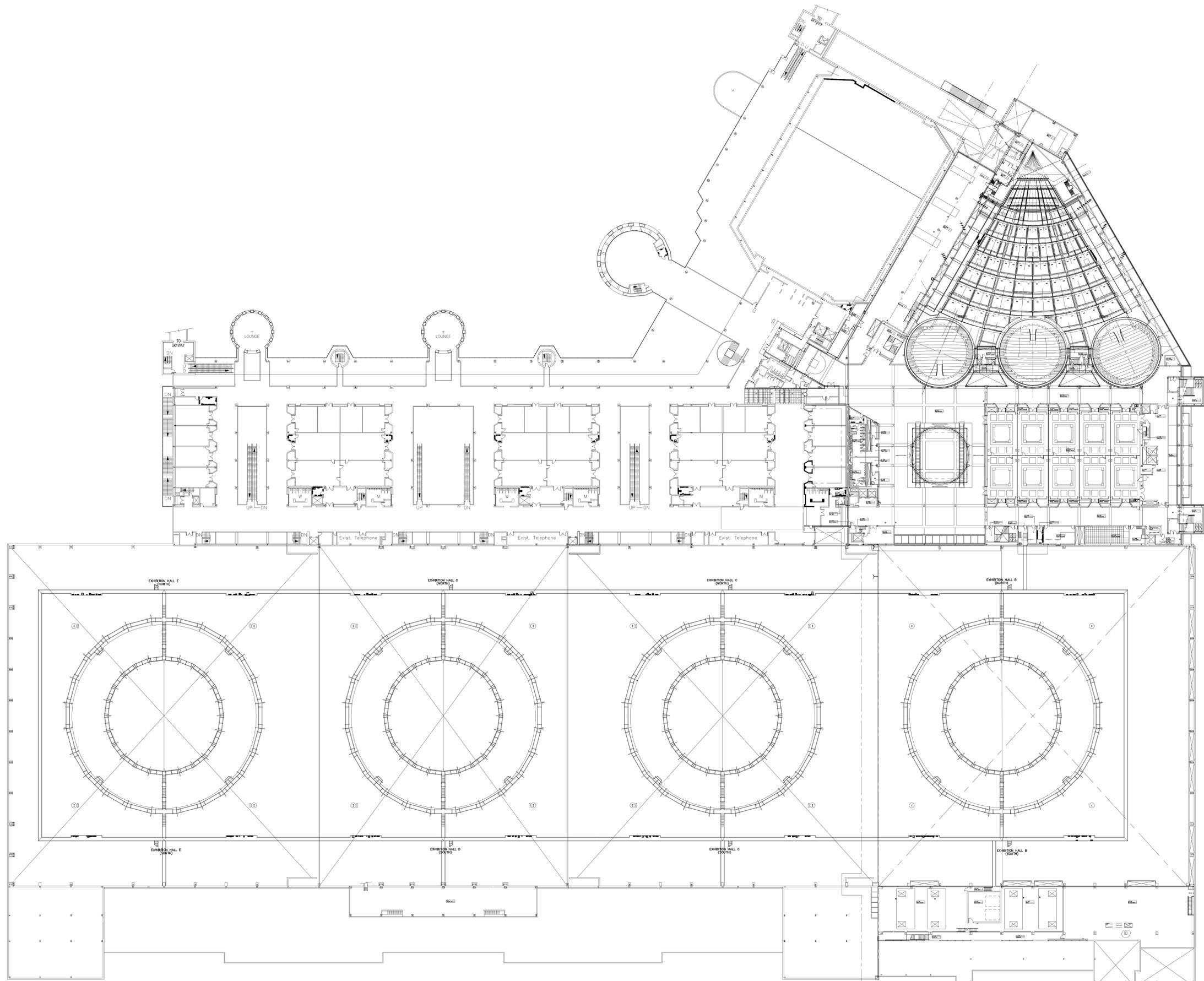
**OVERALL FIRST
 FLOOR PLAN -
 ELECTRICAL**

FOR REFERENCE
 ONLY

CONSTRUCTION SET
 NOVEMBER 02, 2015

Sheet
E12

**MINNEAPOLIS
CONVENTION
CENTER:
LIGHTING CONTROL
SYSTEM UPGRADE**



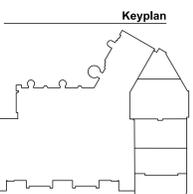
OVERALL SECOND FLOOR PLAN - ELECTRICAL
SCALE: 1/8"=1'-0"



BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions



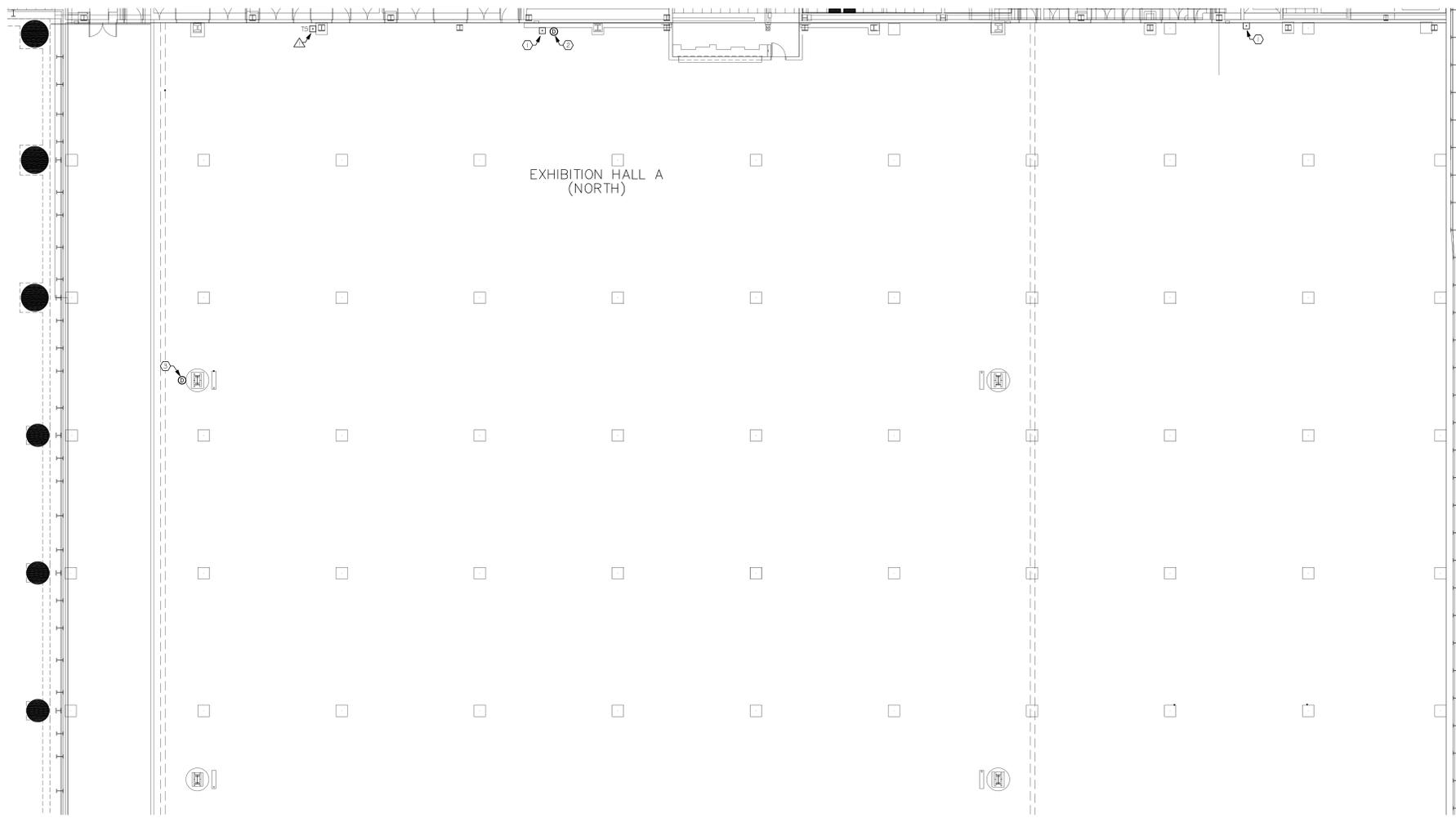
NO.	ISSUE	DATE
Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	
Title		

**OVERALL
SECOND FLOOR
PLAN -
ELECTRICAL**

Sheet

E13

FOR REFERENCE
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CONSTRUCTION SET
NOVEMBER 02, 2015



EXHIBITION HALL A
(NORTH)

BASEMENT LEVEL AREA N - ELECTRICAL
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A NY REMOVED EQUIPMENT SHALL GO TO THE OWNER, SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL DEMOLITION NOTES

- △ REMOVE EXISTING TOUCH SCREEN CONTROL PANEL AND ALL ASSOCIATED WIRING. PROVIDE BLANK STAINLESS STEEL PLATE.

ELECTRICAL NOTES

- ① REPLACE EXISTING LOCAL LIGHTING CONTROL STATION WITH NEW 10-BUTTON PRESET STATION WITH CUSTOM STAINLESS STEEL PLATE. ROUTE NEW CONTROL WIRING VIA EXISTING CONDUIT TO EQUIPMENT RACK ON CATWALK.
- ② REPLACE EXISTING CONTROL RECEPTACLE PANEL (CRP) WITH NEW 4-GANG STEEL PLATE, (2) DIM OUTPUT RECEPTACLES, (1) DIM INPUT RECEPTACLE, AND (1) NETWORK RECEPTACLE. ROUTE NEW CONTROL WIRING VIA EXISTING CONDUIT TO EQUIPMENT RACK ON CATWALK.
- ③ REPLACE EXISTING CONTROL RECEPTACLE PANEL (CRP) WITH NEW 6-GANG STEEL PLATE, (2) DIM OUTPUT RECEPTACLES, AND (1) DIM INPUT RECEPTACLE. RECONNECT TO EXISTING CONTROL NETWORK CABLES.

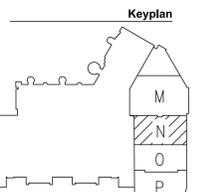
**MINNEAPOLIS
CONVENTION
CENTER:
LIGHTING CONTROL
SYSTEM UPGRADE**



BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions



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Approved	T. VAREBERG	
Title		

**BASEMENT LEVEL
AREA N -
ELECTRICAL**

FOR REFERENCE
ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

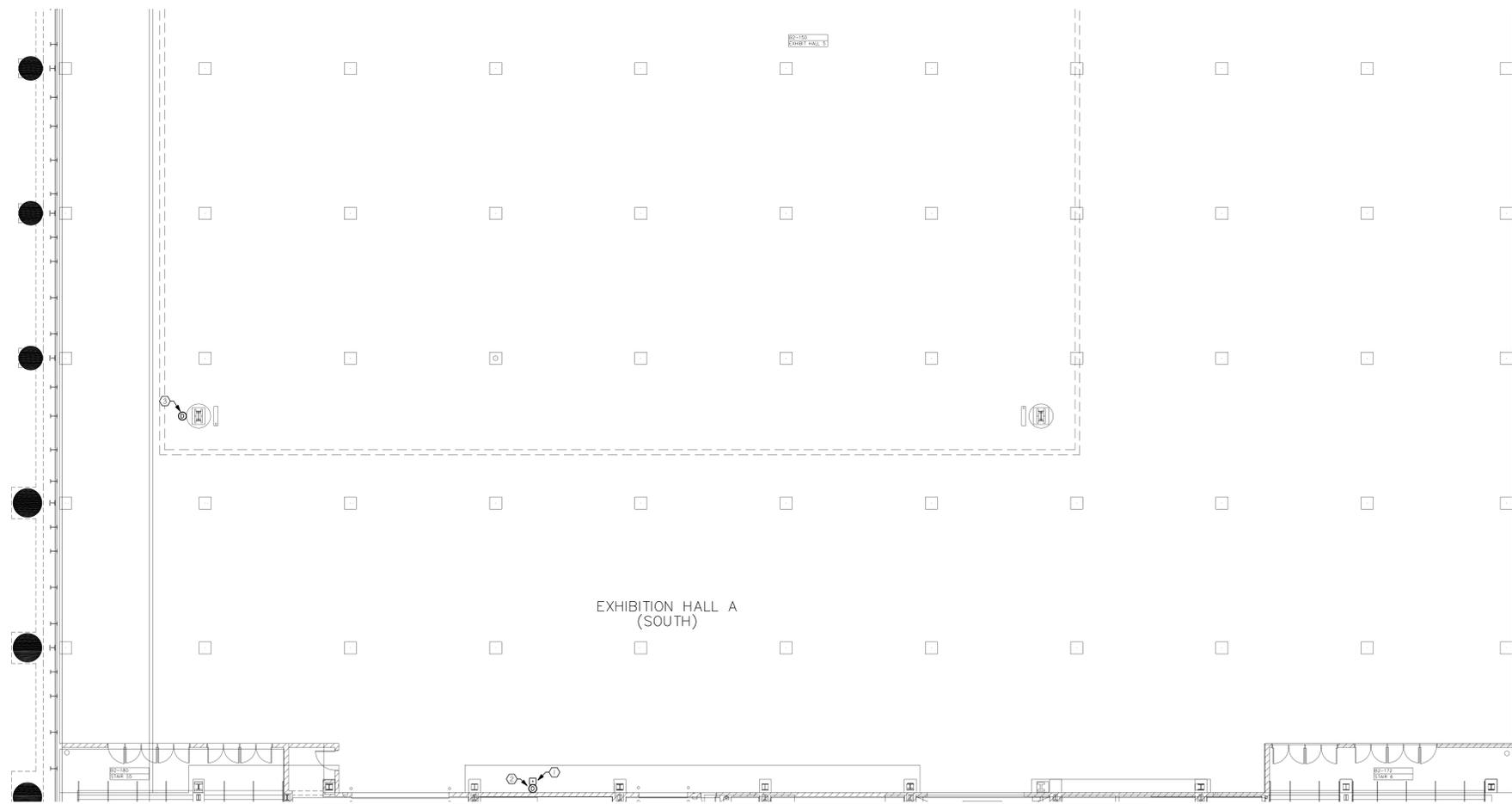
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GENERAL NOTES

1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A BY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL NOTES

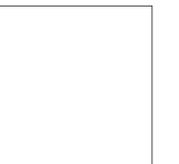
1. REPLACE EXISTING LOCAL LIGHTING CONTROL STATION WITH NEW 10-BUTTON PRESET STATION WITH CUSTOM STAINLESS STEEL PLATE. ROUTE NEW CONTROL WIRING VIA EXISTING CONDUIT TO EQUIPMENT RACK ON CATWALK.
2. REPLACE EXISTING CONTROL RECEPTACLE PANEL (CRP) WITH NEW 4-GANG STEEL PLATE. (2) DMX OUTPUT RECEPTACLES, (1) DMX INPUT RECEPTACLE, AND (1) NETWORK RECEPTACLE. ROUTE NEW CONTROL WIRING VIA EXISTING CONDUIT TO EQUIPMENT RACK ON CATWALK.
3. REPLACE EXISTING CONTROL RECEPTACLE PANEL (CRP) WITH NEW 6-GANG STEEL PLATE. (2) DMX OUTPUT RECEPTACLES, AND (1) DMX INPUT RECEPTACLE. RECONNECT TO EXISTING CONTROLNWORK CABLES.



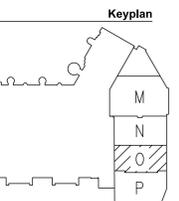
BASEMENT LEVEL AREA O - ELECTRICAL
SCALE: 3/8"=1'-0"



BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions

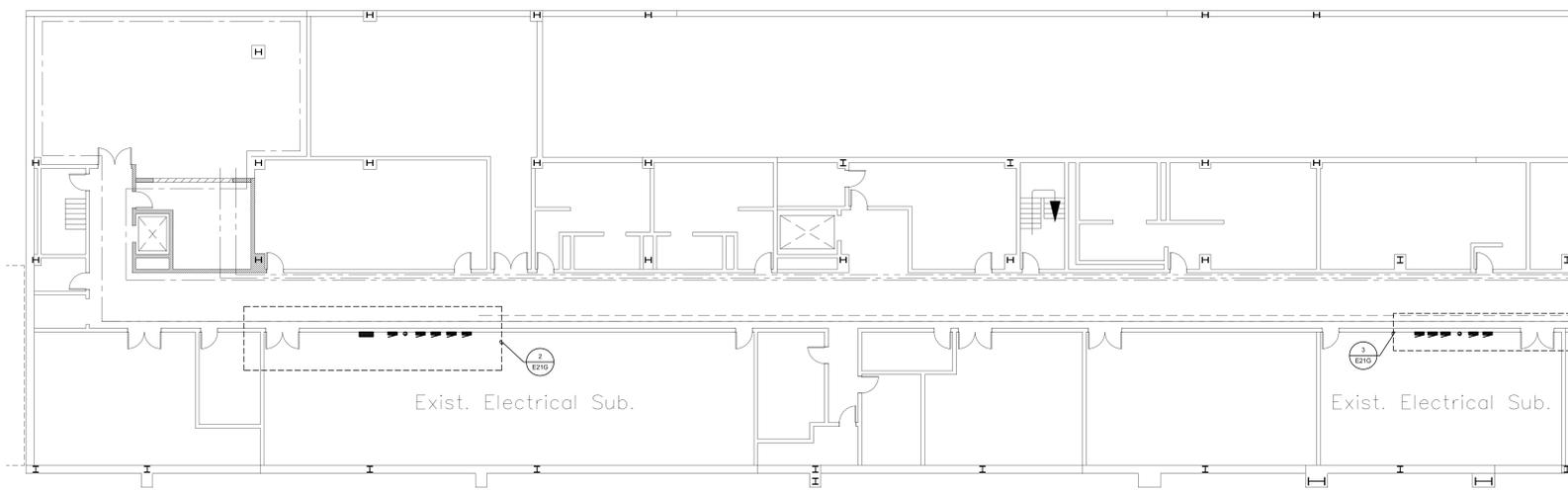


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Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	
Title		

BASEMENT LEVEL AREA O - ELECTRICAL

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet
E200

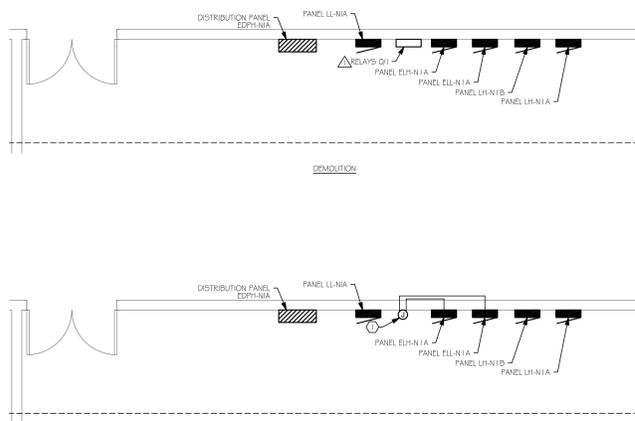


MEZZANINE LEVEL AREA G - ELECTRICAL
SCALE: 3/32"=1'-0"

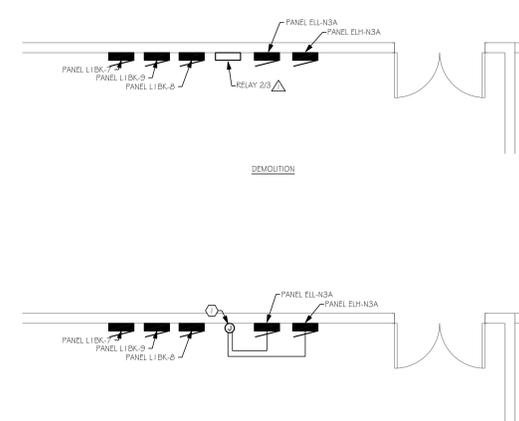
- GENERAL NOTES**
1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
 2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
 3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
 4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A NY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SPECIAL INTERESTOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
 5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

- ELECTRICAL DEMOLITION NOTES**
1. REMOVE EXISTING RELAY PANEL. BRANCH CIRCUIT WIRING SHALL REMAIN AND SHALL BE EXTENDED DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL.

- ELECTRICAL NOTES**
1. INTERCEPT AND EXTEND ALL BRANCH CIRCUIT WIRING DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL. PROVIDE ALL ADDITIONAL WIRING/CONDUITS AS REQUIRED.



LARGE SCALE ROOM BI-060 - ELECTRICAL
SCALE: 1/4"=1'-0"



LARGE SCALE ROOM BI-020 - ELECTRICAL
SCALE: 1/4"=1'-0"

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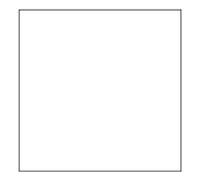
MINNEAPOLIS CONVENTION CENTER: LIGHTING CONTROL SYSTEM UPGRADE

VAREBERG ENGINEERING
CONSULTING ENGINEERS

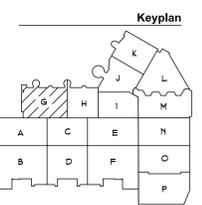
ELECTRICAL ENGINEER
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Fargo, ND 58103
701.224.0606
701.224.0676



BID SET	7-10-15
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ADDENDUM #3	7-30-15
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CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions



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Sheet Information		
Date	10 JULY 2015	
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Checked	T. VAREBERG	
Approved	T. VAREBERG	

MEZZANINE LEVEL AREA G - ELECTRICAL

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet
E21G

MINNEAPOLIS CONVENTION CENTER: LIGHTING CONTROL SYSTEM UPGRADE

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ELECTRICAL ENGINEER
1331 52nd Ave S
Fargo, ND 58103
1 701 224-9606
1 701 224-9076

GENERAL NOTES

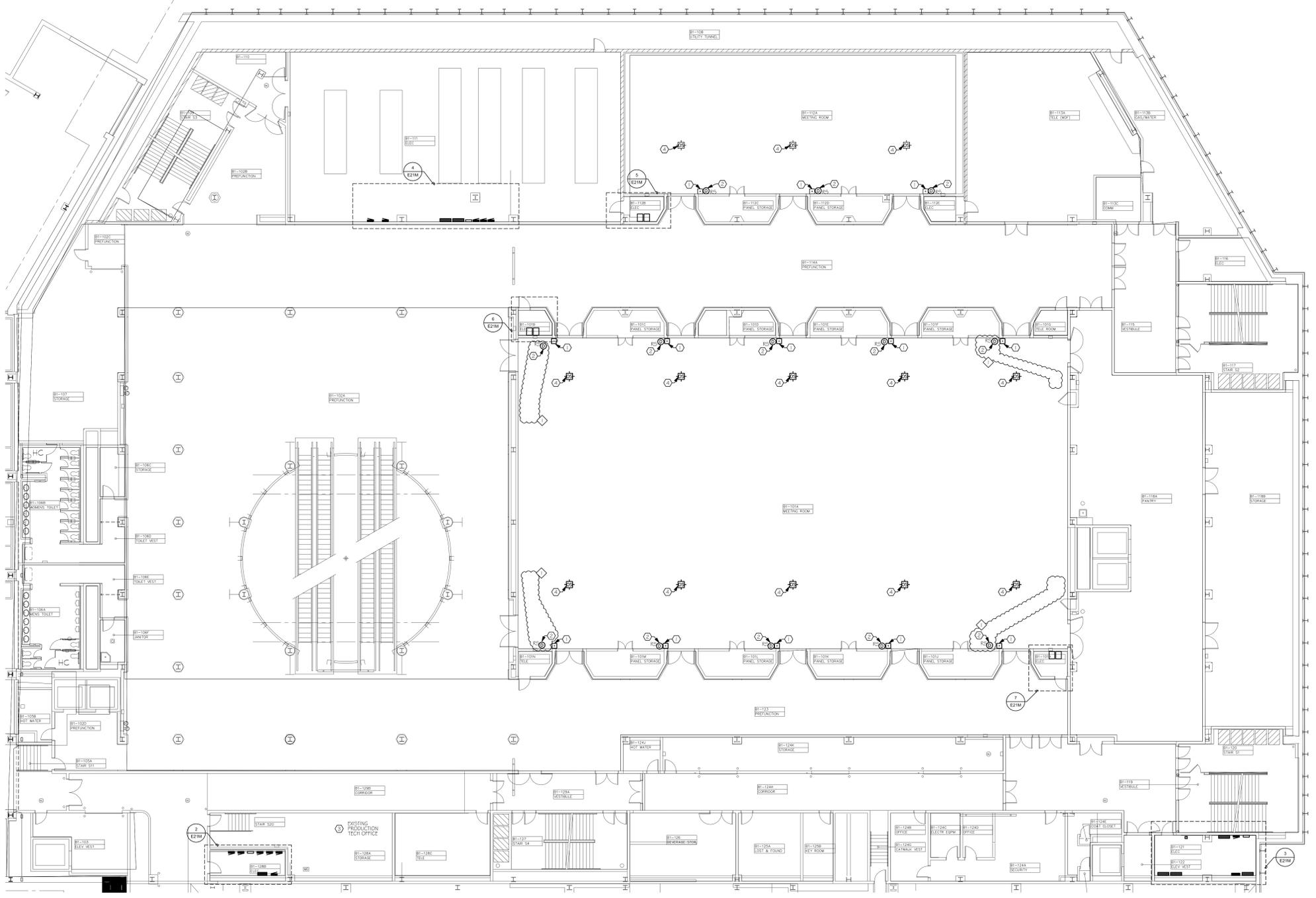
- FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
- MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
- ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANEL LOCKERS, RELAY PANELS AND DIMMER CABINETS.
- UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A NY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
- REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

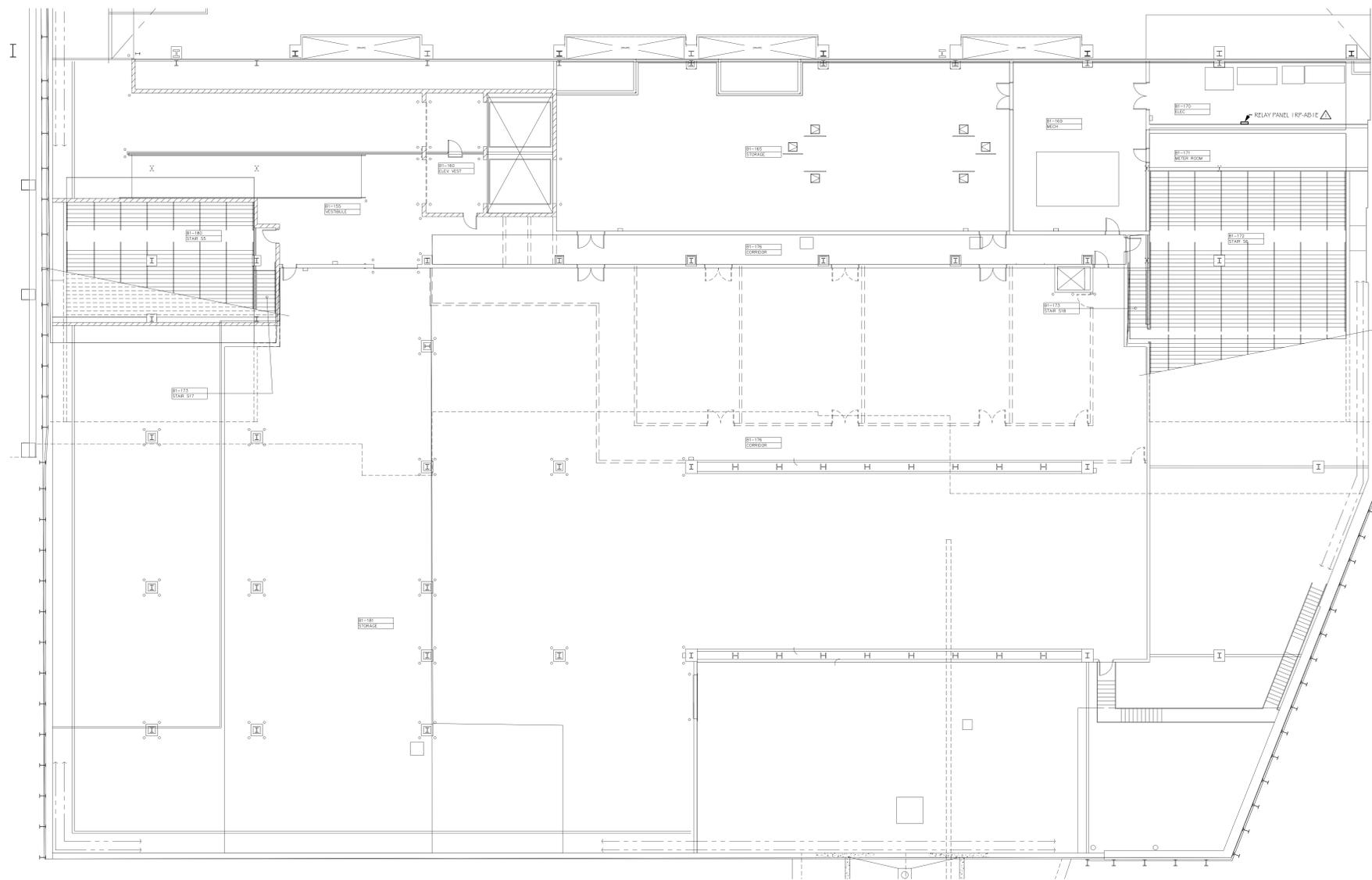
ELECTRICAL DEMOLITION NOTES

- △ REMOVE EXISTING RELAY PANEL. BRANCH CIRCUIT WIRING SHALL REMAIN AND SHALL BE EXTENDED DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL.
- △ REMOVE EXISTING ROOM COMBINE PANEL AND ALL ASSOCIATED WIRING.
- △ REMOVE EXISTING STATION POWER SUPPLY AND ALL ASSOCIATED WIRING.

ELECTRICAL NOTES

- ① REPLACE EXISTING LOCAL LIGHTING CONTROL STATION WITH NEW 10-BUTTON PRESET STATION WITH CUSTOM STEEL PLATE. ROUTE NEW CONTROL CABLE UP INTO CEILING SPACE AND DOWN TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM # B1-1011H.
- ② REPLACE EXISTING RECEPTACLE WITH NEW REMOTE TOUCH SCREEN RECEPTACLE. ROUTE NEW CONTROL CABLE UP INTO CEILING SPACE AND DOWN TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM # B1-1011H.
- ③ PROVIDE NEW DATA RACK WITH BRANCH FIBER OPTIC SWITCH, TOUCH SCREEN INTERFACE AND 24" TOUCH SCREEN. VERIFY EXACT LOCATION WITH OWNER. REFER TO DETAIL ON SHEET E47.
- ④ PROVIDE NEW CEILING MOUNTED OCCUPANCY SENSOR IN EXISTING INFRARED SENSOR LOCATION (BE SENSOR TO BE REMOVED). ROUTE NEW CONTROL CABLE THROUGH CEILING SPACE TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM # B1-1011H.
- ⑤ INTERCEPT AND EXTEND ALL BRANCH CIRCUIT WIRING DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL. PROVIDE ALL ADDITIONAL WIRING/ACCESSORIES AS REQUIRED.
- ⑥ PROVIDE NEW RELAY PANEL. RECONNECT ALL EXISTING WIRING.
- ⑦ PROVIDE NEW PROCESSOR AND POWER MODULE IN EXISTING DIMMER PANEL. PROVIDE NEW COOLING FAN AND THROUGH-ROOF CLEAN AIR DIMMER MODULES AND RACK.
- ⑧ PROVIDE NEW TOUCH SCREEN WITH LOCKABLE COVER. PROVIDE WIRING AS REQUIRED TO REPEATER IN THIS ROOM.
- ⑨ PROVIDE WALL MOUNTED PARADIGM REPEATER (ETC #P-DREP-W).
- ⑩ PROVIDE 120V CONVENIENCE RECEPTACLE. CONNECT TO NEAREST EXISTING RECEPTACLE CIRCUIT.





MEZZANINE LEVEL AREA P - ELECTRICAL
SCALE: 3/8"=1'-0"

GENERAL NOTES

1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANEL LOGS/RELAY PANELS AND RACKS CABINETS.
4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR ANY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

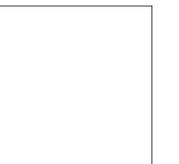
ELECTRICAL DEMOLITION NOTES

- △ REMOVE EXISTING RELAY PANEL AND ALL ASSOCIATED WIRING.

**MINNEAPOLIS CONVENTION CENTER:
LIGHTING CONTROL SYSTEM UPGRADE**

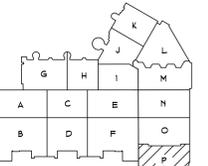


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ADDENDUM #3	7-30-15
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ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions

Keyplan



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Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	
Title		

MEZZANINE LEVEL AREA P - ELECTRICAL

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet
E21P



FIRST LEVEL AREA A - ELECTRICAL
 SCALE: 3/32"=1'-0"

- GENERAL NOTES**
1. FIELD VERIFY DUCT ROUTING OF ALL CABLES WITH OWNER.
 2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
 3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELS/BOXES RELAY PANELS AND DIMMER CABINETS.
 4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR ANY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
 5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

- ELECTRICAL NOTES**
1. PROVIDE 2-PORT DMX INPUT PLATE, W/ 5-PIN MALE IN 2-GANG BOX, FLUSH MOUNTED IN EXISTING COLUMN SPRT. ROUTE DMX NETWORK CABLE TO 6-PORT DMX MERGER LOCATED AT CATWALK. REFER TO 3E23A.

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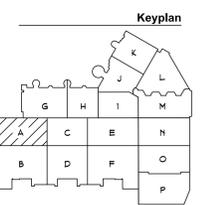
**MINNEAPOLIS CONVENTION CENTER:
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 1 701.224.0606
 1 701.224.0676



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Approved	T. VAREBERG	

FIRST LEVEL AREA A - ELECTRICAL

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E22A

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LIGHTING CONTROL SYSTEM UPGRADE**



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Fargo, ND 58103
1 701 224-0606
1 701 224-0676

GENERAL NOTES

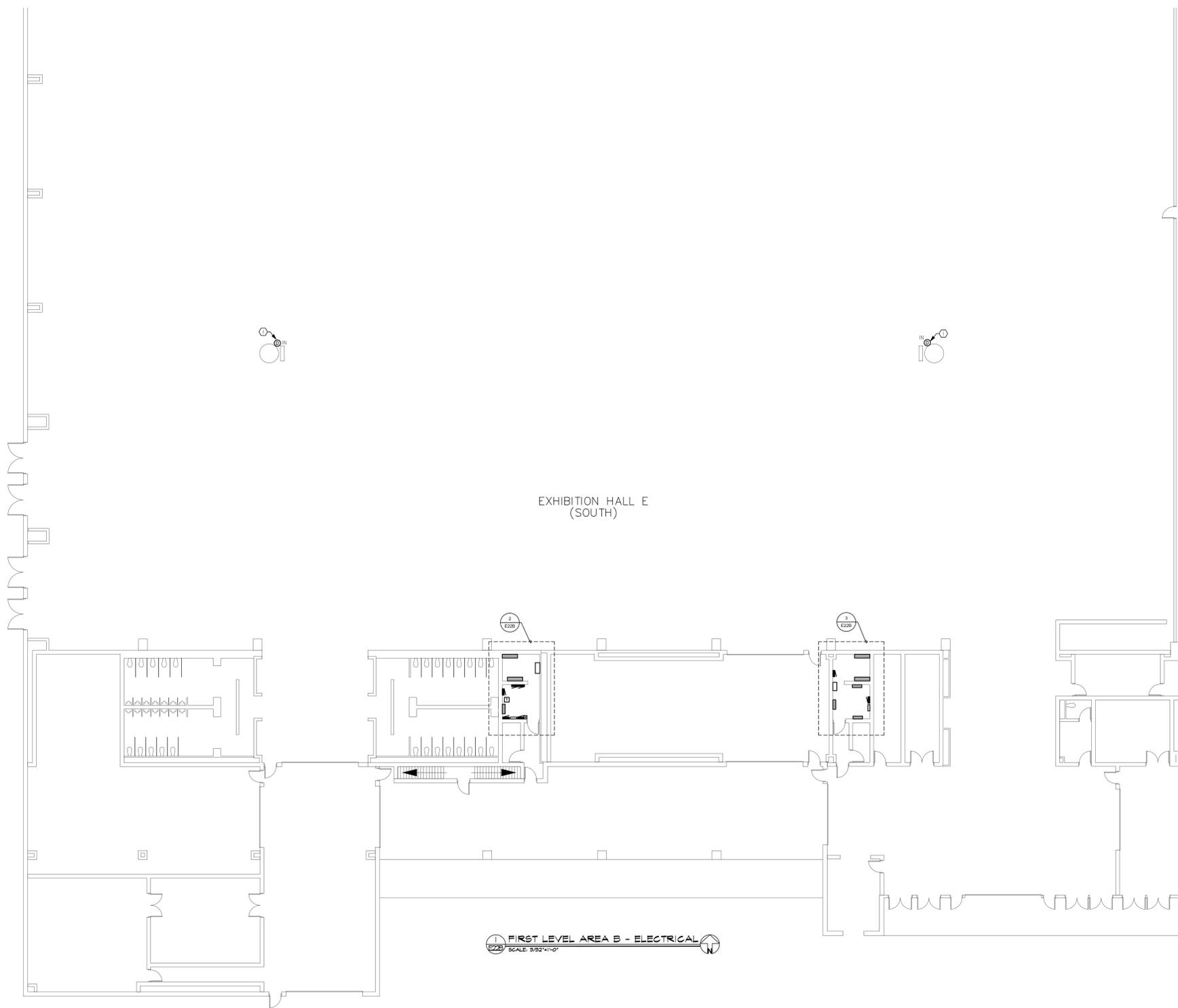
1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A NY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL DEMOLITION NOTES

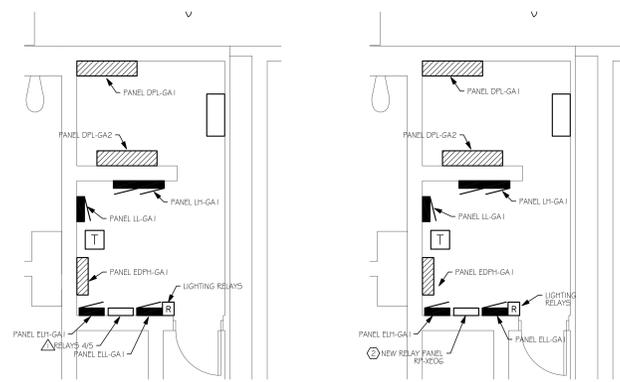
- △ REMOVE EXISTING RELAY PANEL. ALL BRANCH CIRCUIT WIRING SHALL REMAIN FOR CONNECTION TO NEW RELAY PANEL.

ELECTRICAL NOTES

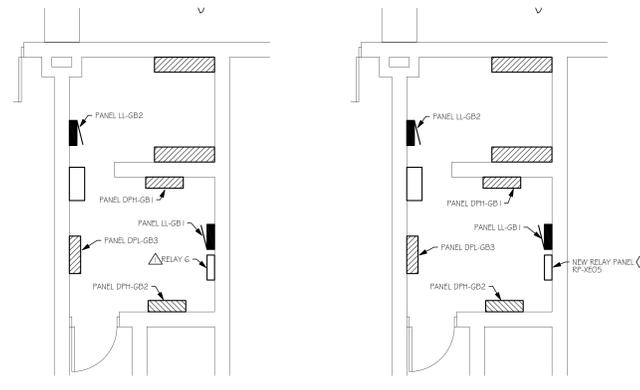
- ① PROVIDE 2-PORT DMX INPUT PLATE WITH 5-PIN MALE IN 2-GANG BOX, FLUSH MOUNTED IN EXISTING COLUMN SKIRT. ROUTE TO DMX NETWORK. CABLES TO 6-PORT DMX MERGER LOCATED AT GYMNASIUM. REFER TO SHEET E44.
- ② PROVIDE NEW RELAY PANEL. RECONNECT ALL EXISTING BRANCH CIRCUITS.



FIRST LEVEL AREA B - ELECTRICAL
SCALE: 3/32"=1'-0"

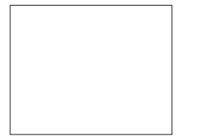


LARGE SCALE ROOM L1-105C - ELECTRICAL
SCALE: 1/4"=1'-0"



LARGE SCALE ROOM L1-105E - ELECTRICAL
SCALE: 1/4"=1'-0"

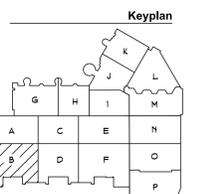
FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015



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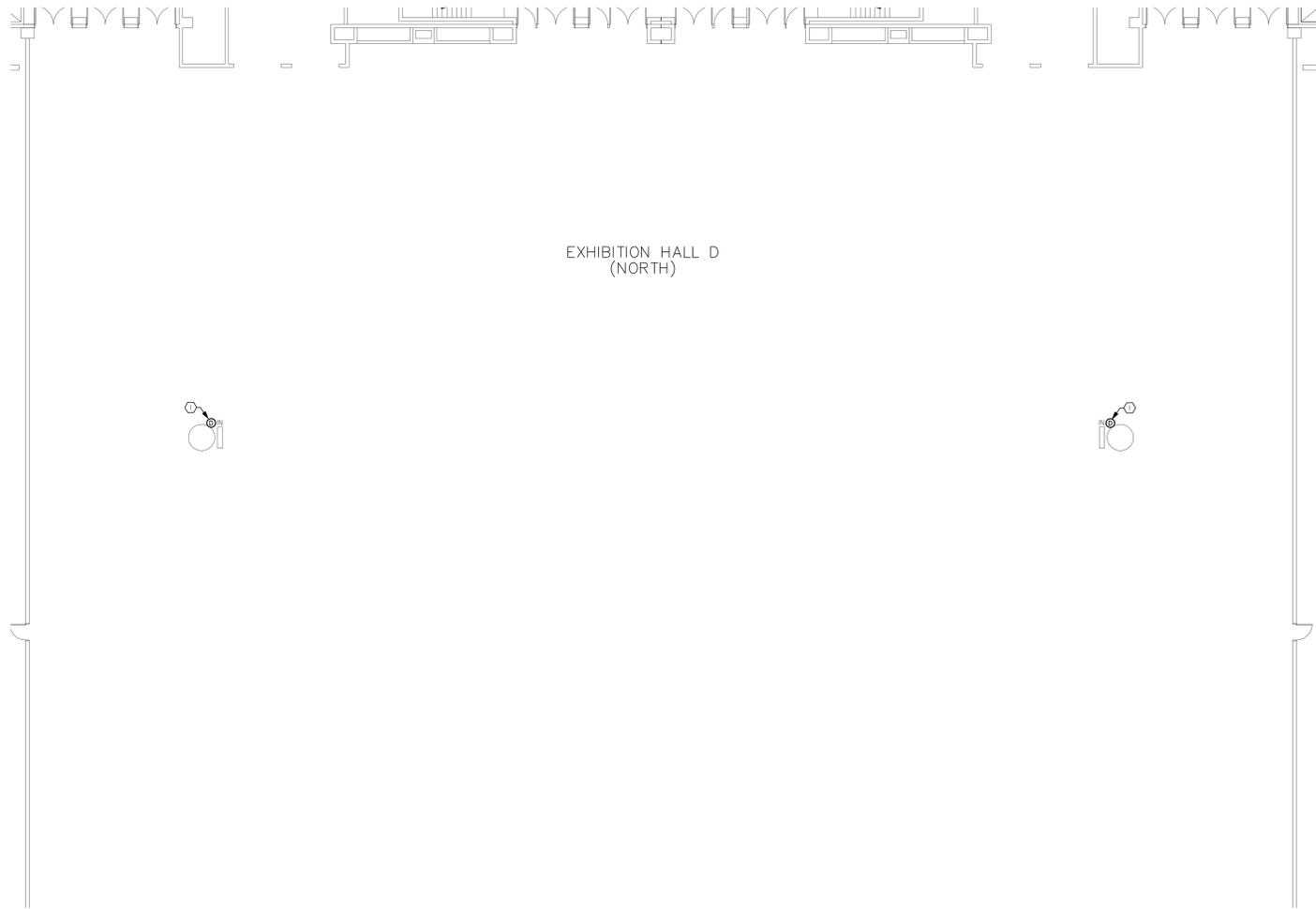


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Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	

Title

FIRST LEVEL AREA B - ELECTRICAL

Sheet
E22B



EXHIBITION HALL D
(NORTH)

1 FIRST LEVEL AREA C - ELECTRICAL
E22C SCALE: 3/32"=1'-0"

GENERAL NOTES

1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A NY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL NOTES

1. PROVIDE 2-PORT DMX INPUT PLATE (W/ 5-PIN MALE) IN 2-GANG BOX, FLUSH MOUNTED IN EXISTING COLUMN NEXT TO EXISTING DMX NETWORK CABLE TO 6-PORT DMX MERGER LOCATED AT CATWALK. REFER TO 3E23C.

PERKINS+WILL

84 10th St. South
Suite 200
Minneapolis, MN 55403
612.851.5000
612.851.5001
www.perkinswill.com

**MINNEAPOLIS
CONVENTION
CENTER:**

**LIGHTING CONTROL
SYSTEM UPGRADE**



VAREBERG
ENGINEERING
CONSULTING ENGINEERS

ELECTRICAL ENGINEER
1331 52nd Ave S
Fargo, ND 58103
1 701.224.0606
1 701.224.0676

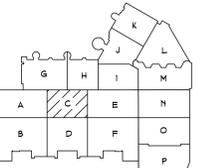


BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions

Keyplan



NO.	ISSUE	DATE
Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	
Title		

**FIRST LEVEL
AREA C -
ELECTRICAL**

FOR REFERENCE
ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet
E22C

**MINNEAPOLIS CONVENTION CENTER:
LIGHTING CONTROL SYSTEM UPGRADE**

VAREBERG ENGINEERING
CONSULTING ENGINEERS
ELECTRICAL ENGINEER
1331 52nd Ave S
Fargo, ND 58103
1 701 224-0606
1 701 224-0676

GENERAL NOTES

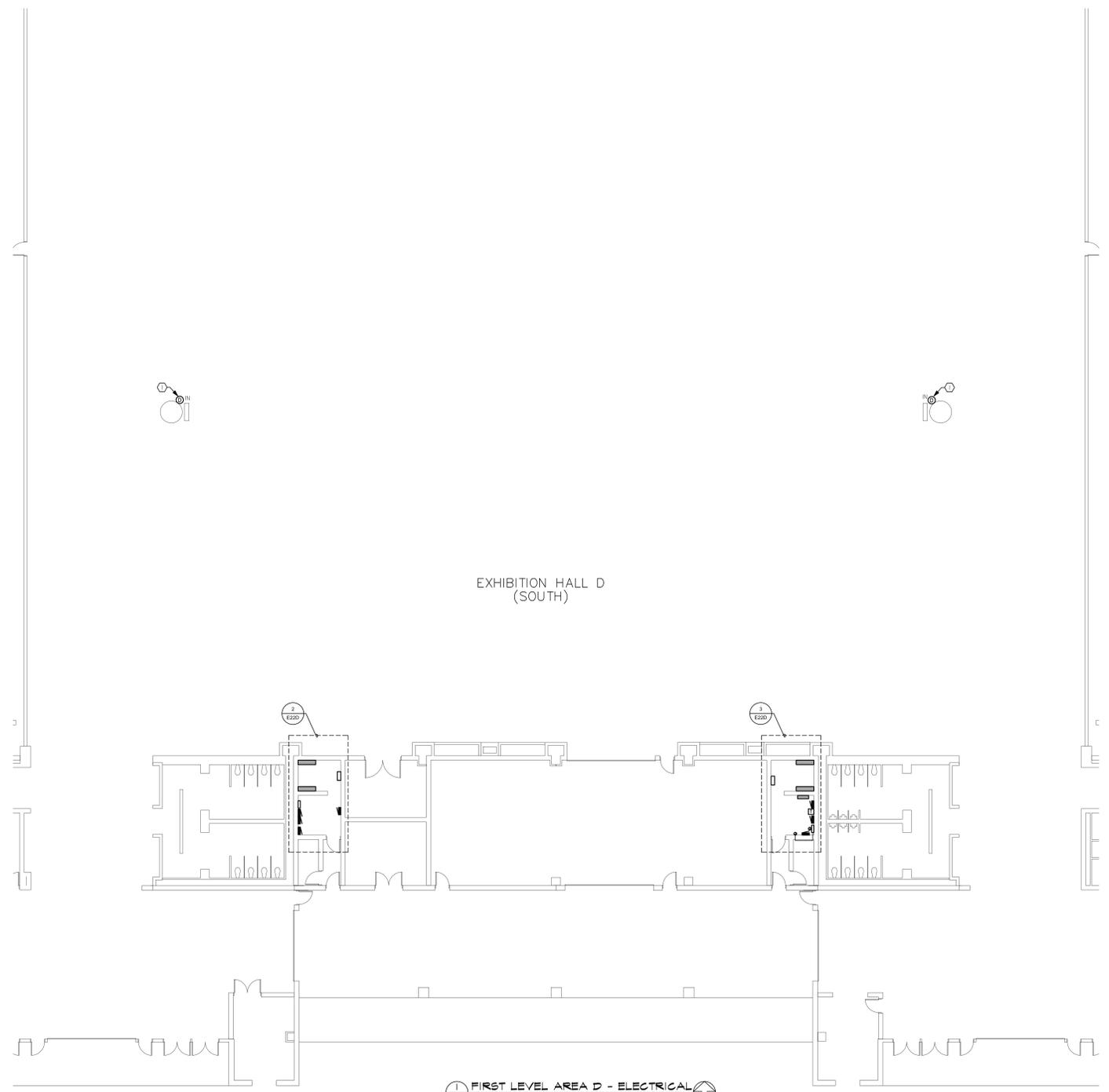
1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A NY REMOVED EQUIPMENT SHALL GO TO THE OWNER, SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR, ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL DEMOLITION NOTES

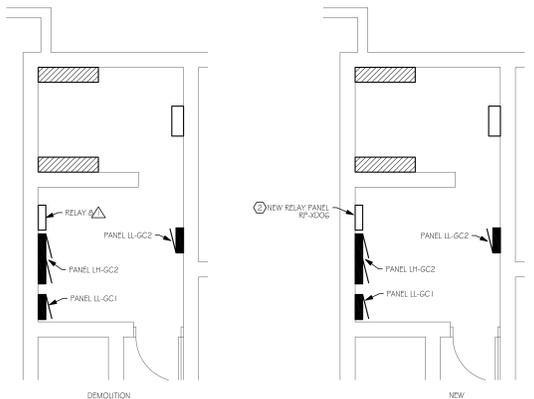
- △ REMOVE EXISTING RELAY PANEL. ALL BRANCH CIRCUIT WIRING SHALL REMAIN FOR CONNECTOR TO NEW RELAY PANEL.

ELECTRICAL NOTES

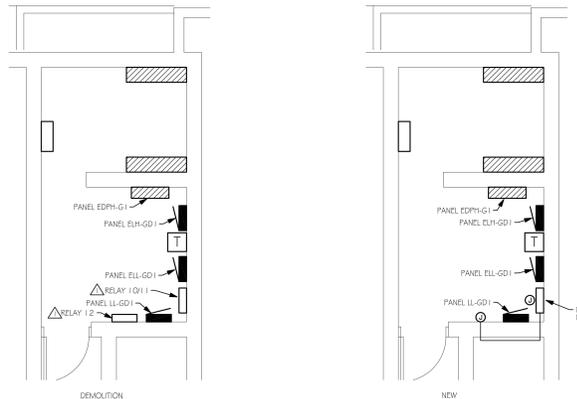
- ① PROVIDE 3-PORT DIMMABLE PLATE (PER 5-FIN MAILED IN 2-GANG BOX, FLUSH MOUNTED IN EXISTING COLUMN SKIRT, ROUTE TO DIM NETWORK, CABLES TO 6-PORT DIMM MERGER, LOCATED AT GATWALK, REFER TO S823A.
- ② PROVIDE NEW RELAY PANEL, RECONNECT ALL EXISTING BRANCH CIRCUITS.



1 FIRST LEVEL AREA D - ELECTRICAL
SCALE: 3/32"=1'-0"



2 LARGE SCALE ROOM LI-169B - ELECTRICAL
SCALE: 1/4"=1'-0"



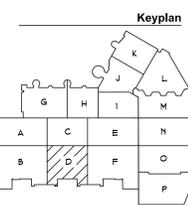
3 LARGE SCALE ROOM LI-169D - ELECTRICAL
SCALE: 1/4"=1'-0"



BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-03-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions



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Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	

Title

FIRST LEVEL AREA D - ELECTRICAL

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet
E22D

**MINNEAPOLIS
CONVENTION
CENTER:
LIGHTING CONTROL
SYSTEM UPGRADE**



ELECTRICAL ENGINEER
VAREBERG
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CONSULTING ENGINEERS
1331 52nd Ave S
Fargo, ND 58103
1 701 224-0606
1 701 224-0676

GENERAL NOTES

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2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
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5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

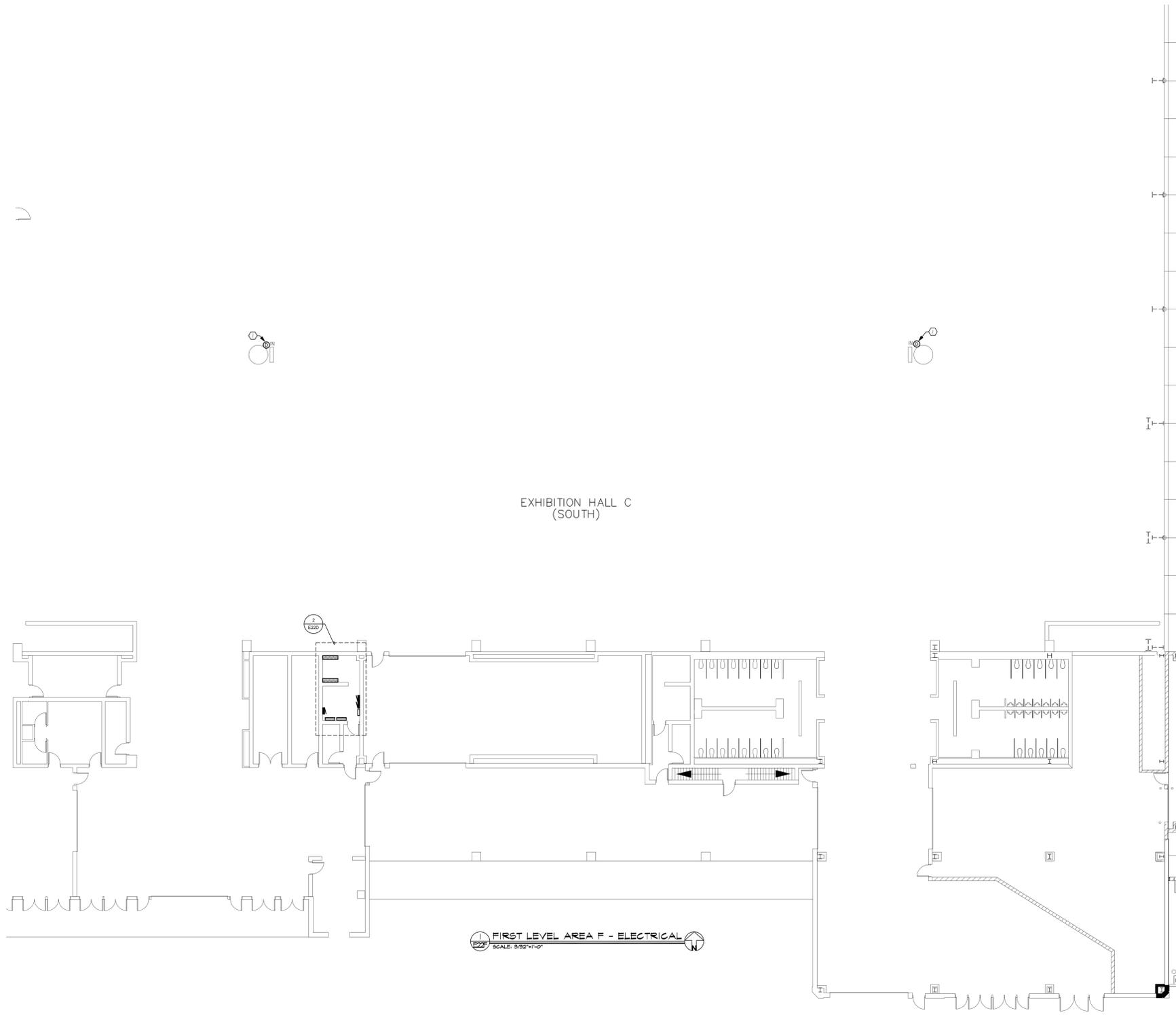
ELECTRICAL DEMOLITION NOTES

- △ REMOVE EXISTING RELAY PANEL. ALL BRANCH CIRCUIT WIRING SHALL REMAIN FOR CONNECTION TO NEW RELAY PANEL.

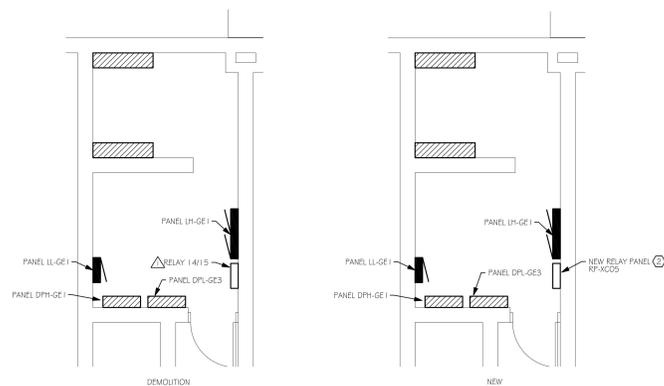
ELECTRICAL NOTES

- ① PROVIDE 3-PORT DIMMABLE INPUT PLATE OVER 5-PIN MALE IN 2-GANG BOX. FLUSH MOUNTED IN EXISTING COLUMN SKIRT. ROUTE G1 DIMM NETWORK CABLES TO 6-PORT DIMM MERGER LOCATED AT GYM WALK. REFER TO S2C3A.
- ② PROVIDE NEW RELAY PANEL. RECONNECT ALL EXISTING BRANCH CIRCUITS.

EXHIBITION HALL C
(SOUTH)



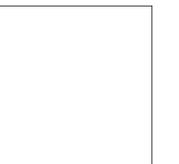
① FIRST LEVEL AREA F - ELECTRICAL
SCALE: 3/32\"/>



② LARGE SCALE ROOM LI-1726 - ELECTRICAL
SCALE: 1/4\"/>

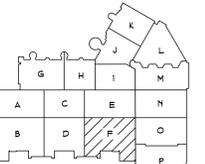


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ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions

Keyplan



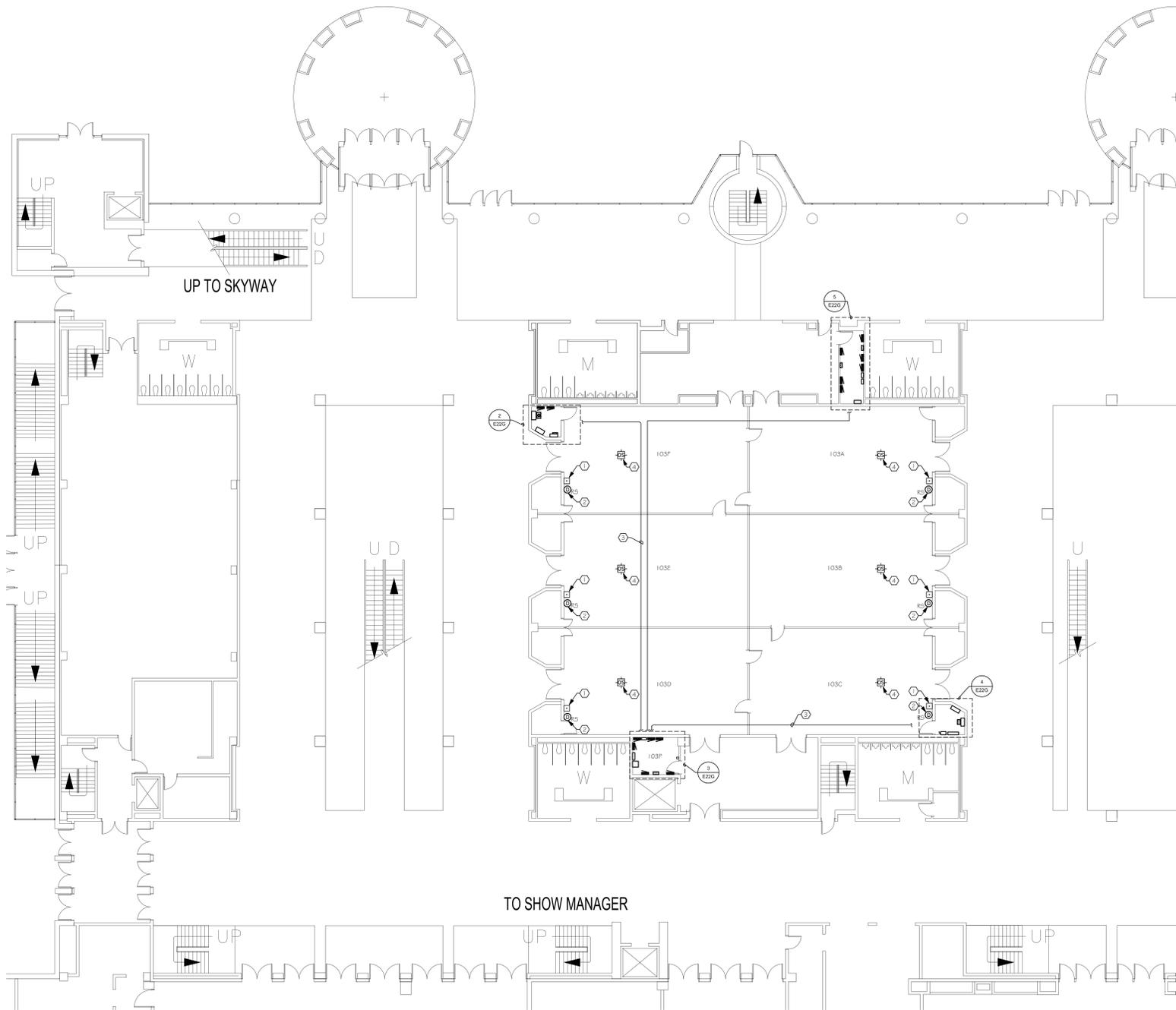
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Checked	T. VAREBERG	
Approved	T. VAREBERG	

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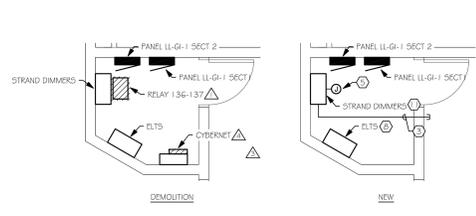
**FIRST LEVEL
AREA F -
ELECTRICAL**

FOR REFERENCE
ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

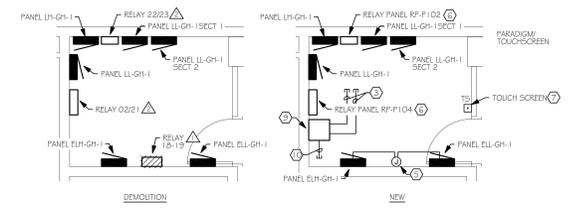
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E22F



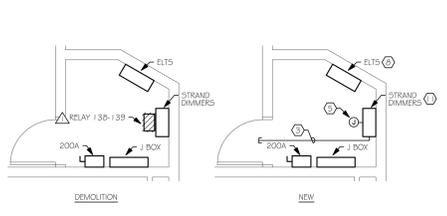
1 FIRST LEVEL AREA G - ELECTRICAL
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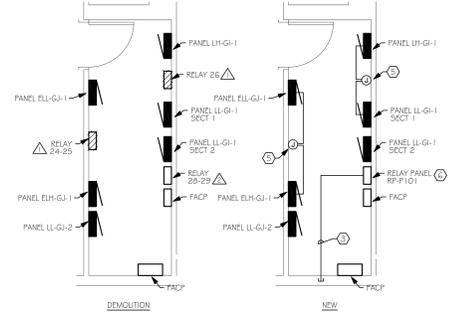
2 ROOM 103F CLOSET - ELECTRICAL
SCALE: 1/4"=1'-0"



3 ROOM 103B - ELECTRICAL
SCALE: 1/4"=1'-0"



4 ROOM 103C CLOSET - ELECTRICAL
SCALE: 1/4"=1'-0"



5 ROOM 112B - ELECTRICAL
SCALE: 1/4"=1'-0"

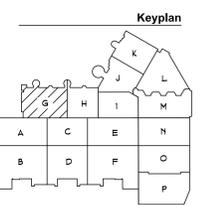
- GENERAL NOTES**
- FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
 - MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
 - ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
 - UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A NY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
 - REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

- ELECTRICAL DEMOLITION NOTES**
- REMOVE EXISTING RELAY PANEL. BRANCH CIRCUIT WIRING SHALL REMAIN AND SHALL BE EXTENDED DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL.
 - REMOVE EXISTING RELAY PANEL. ALL WIRING SHALL REMAIN FOR CONNECTION TO NEW RELAY PANELS.
 - REMOVE EXISTING ROOM COMBINER AND ALL ASSOCIATED WIRING.
 - REMOVE EXISTING 'CYBERNET' EQUIPMENT AND ALL ASSOCIATED WIRING.

- ELECTRICAL NOTES**
- REPLACE EXISTING LOCAL LIGHTING CONTROL STATION WITH NEW 10-BUTTON PRESET STATION WITH 10-POSITION STEEL SLATE. ROUTE NEW CONTROL CABLE UP INTO CEILING SPACE AND DOWN TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM #103F.
 - REPLACE EXISTING RECEPTACLE WITH NEW REMOTE TOUCH SCREEN RECEPTACLE. ROUTE NEW CONTROL CABLE UP INTO CEILING SPACE AND DOWN TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM #103F.
 - ROUTE CONTROL NETWORK CABLES FROM EXISTING STRAND DIMMER CABINETS) AND/OR NEW RELAY PANELS THROUGH CEILING SPACE TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM #103F.
 - PROVIDE NEW CEILING MOUNTED OCCUPANCY SENSOR. FIELD VERIFY OPTIMAL LOCATION. ROUTE NEW CONTROL CABLE THROUGH CEILING SPACE TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM #103F.
 - INTERCEPT AND EXTEND ALL BRANCH CIRCUIT WIRING DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL. PROVIDE ALL ADDITIONAL WIRING/CONDUITS AS REQUIRED.
 - PROVIDE NEW RELAY PANEL. RECONNECT ALL EXISTING WIRING.
 - PROVIDE NEW ETC WALL MOUNTED TOUCH SCREEN. VERIFY EXACT LOCATION. PROVIDE CONTROL WIRING AS REQUIRED TO NEW EQUIPMENT RACK IN THIS ROOM.
 - TEST EXISTING EMERGENCY LIGHTING TRANSFER SWITCH FOR PROPER OPERATION. REPORT ANY DEFICIENCIES TO OWNER.
 - REMOVE NEW LIGHTING EQUIPMENT RACK WITH PARADIGM CONTROLS. REFER TO DETAIL ON SHEET E47.
 - ROUTE (1, 2) CATEGORY 'A' CABLES FROM NEW EQUIPMENT RACK UP TO SWITCH IN EQUIPMENT RACK ON NEXT LEVEL. REFER TO SHEET E22C.
 - PROVIDE NEW PROCESSOR AND COOLING FAN IN EXISTING DIMMER PANEL. THOROUGHLY CLEAN ALL DIMMER MODULES AND ENCLOSURE.

BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date

Revisions



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Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	

FIRST LEVEL AREA G - ELECTRICAL

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet
E22G

**MINNEAPOLIS CONVENTION CENTER:
LIGHTING CONTROL SYSTEM UPGRADE**



GENERAL NOTES

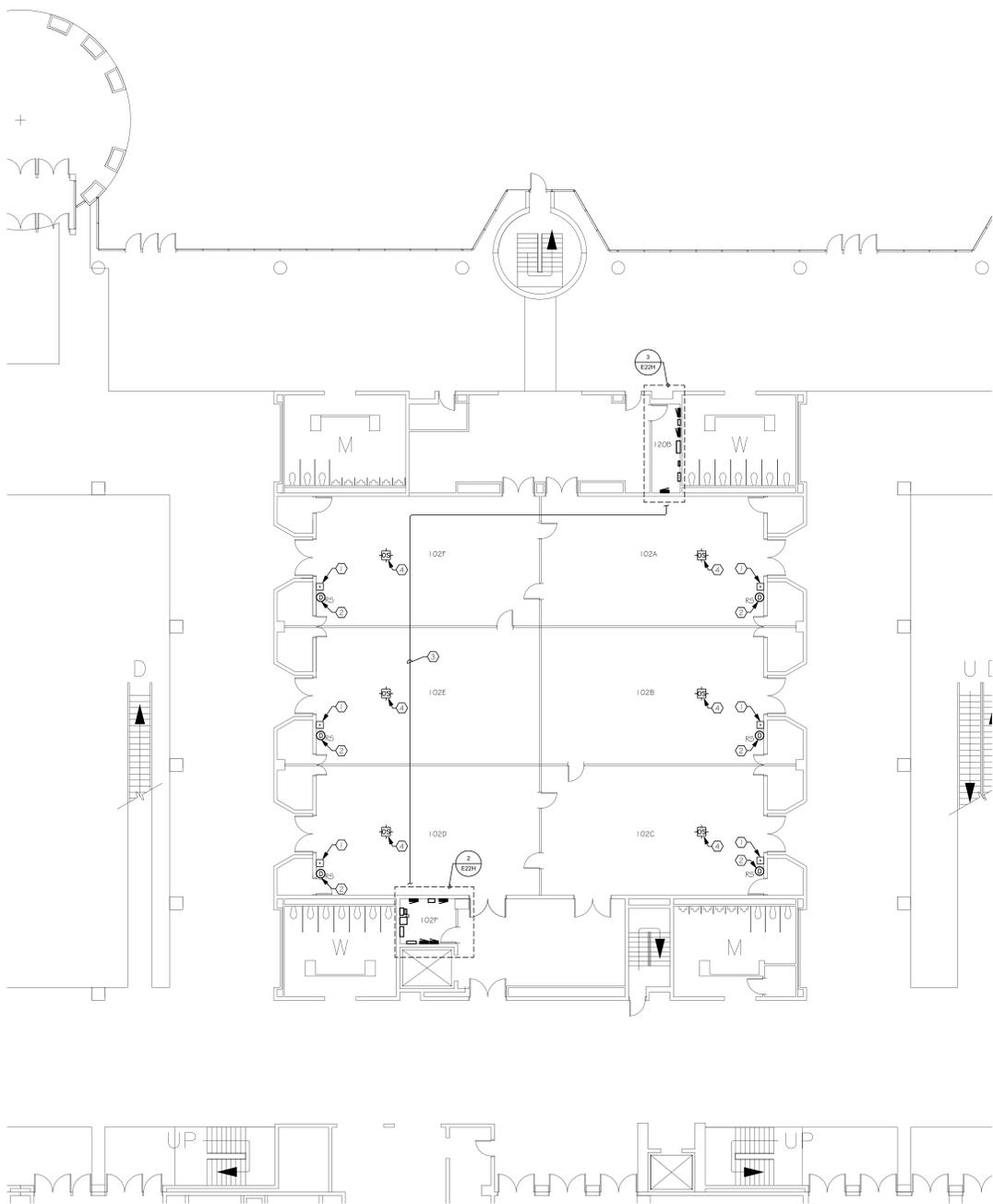
1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEMATIC IN PANELBOARDS, RELAY PANELS AND DIMMER CABINETS.
4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR ANY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMOVED ITEMS.
5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL DEMOLITION NOTES

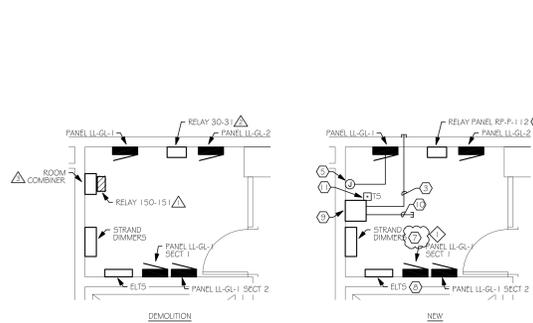
- △ REMOVE EXISTING RELAY PANEL. BRANCH CIRCUIT WIRING SHALL REMAIN AND SHALL BE EXTENDED DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL.
- △ REMOVE EXISTING RELAY PANEL. ALL WIRING SHALL REMAIN FOR CONNECTION TO NEW RELAY PANEL.
- △ REMOVE EXISTING ROOM COMBINER AND ALL ASSOCIATED WIRING.

ELECTRICAL NOTES

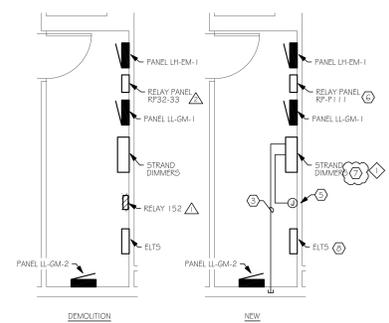
1. REPLACE EXISTING LOCAL LIGHTING CONTROL STATION WITH NEW 1-0-BUTTON PRESET STATION WITH CUSTOM SITES PLATE. ROUTE NEW CONTROL CABLE UP INTO CEILING SPACE AND DOWN TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM # 102P.
2. REPLACE EXISTING RECEPTACLE WITH NEW REMOTE TOUCH-SCREEN RECEPTACLE. ROUTE NEW CONTROL CABLE UP INTO CEILING SPACE AND DOWN TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM # 102P.
3. ROUTE CONTROL NETWORK CABLES FROM EXISTING STRAND DIMMER CABINET(S) AND/OR NEW RELAY PANEL(S), THROUGH CEILING SPACE TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM # 102P.
4. PROVIDE NEW CEILING MOUNTED OCCUPANCY SENSOR. FIELD VERIFY OPTIMAL LOCATION. ROUTE NEW CONTROL CABLE THROUGH CEILING SPACE TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM # 102P.
5. INTERCEPT AND EXTEND ALL BRANCH CIRCUIT WIRING DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL. PROVIDE ALL ADDITIONAL WIRING/CONDUITS AS REQUIRED.
6. PROVIDE NEW RELAY PANEL. RECONNECT ALL EXISTING WIRING.
7. PROVIDE NEW PROCESSOR AND COOLING FAN IN EXISTING DIMMER PANEL. THOROUGHLY CLEAN ALL DIMMER MODULES AND ENCLOSURE.
8. TEST EXISTING EMERGENCY LIGHTING TRANSFER SWITCH FOR PROPER OPERATION. REPORT ANY DEFICIENCIES TO OWNER.
9. PROVIDE NEW LIGHTING EQUIPMENT RACK WITH PARADIGM CONTROLLER. REFER TO DETAIL ON SHEET E47.
10. ROUTE (12) CATEGORY SE CABLES FROM NEW EQUIPMENT RACK UP TO SWITCH IN EQUIPMENT RACK ON NEXT LEVEL. REFER TO SHEET E23H.
11. PROVIDE NEW ETC WALL MOUNTED TOUCH SCREEN. VERIFY EXACT LOCATION. PROVIDE CONTROL WIRING AS REQUIRED TO NEW EQUIPMENT RACK IN THIS ROOM.



1 FIRST LEVEL AREA H - ELECTRICAL
SCALE: 3/32"=1'-0"



2 ROOM 102P AREA - ELECTRICAL
SCALE: 1/4"=1'-0"



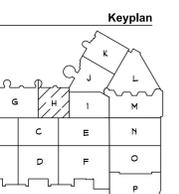
3 ROOM 102B - ELECTRICAL
SCALE: 1/4"=1'-0"



BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions



NO.	ISSUE	DATE
Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	

Title

FIRST LEVEL AREA H - ELECTRICAL

Sheet

E22H

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

**MINNEAPOLIS CONVENTION CENTER:
LIGHTING CONTROL SYSTEM UPGRADE**

VAREBERG ENGINEERING
CONSULTING ENGINEERS
1331 52nd Ave S
Fargo, ND 58103
701.224.9606
701.224.9676

GENERAL NOTES

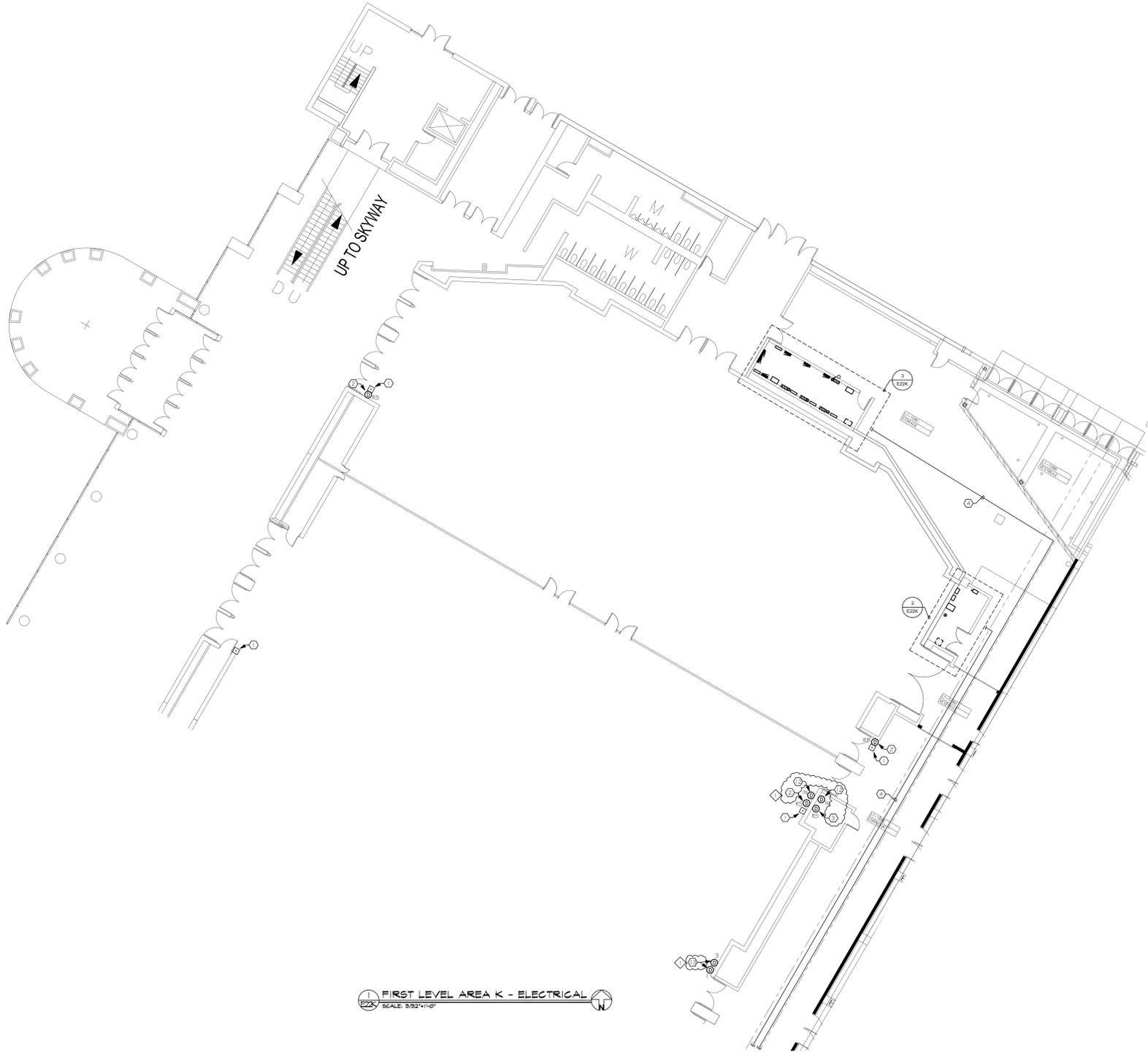
1. FIELD VERIFY DUCT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULES IN PANELBOARDS, RELAY PANELS AND DIMMER CABINETS.
4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A NY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROTECT DISPOSE OF ANY REMAINING ITEMS.
5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL DEMOLITION NOTES

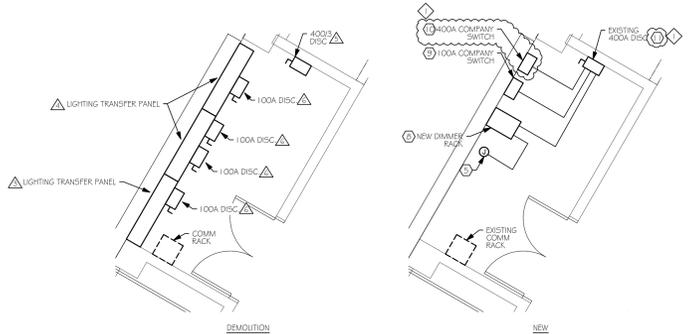
- ▲ REMOVE EXISTING RELAY PANEL. BRANCH CIRCUIT WIRING SHALL REMAIN AND SHALL BE EXTENDED DIRECTLY TO ASSOCIATED DIMMERPOWER PANEL.
- ▲ REMOVE EXISTING RELAY PANEL. ALL WIRING SHALL REMAIN FOR CONNECTION TO NEW RELAY PANEL.
- ▲ REMOVE EXISTING LIGHTING TRANSFER PANEL AND ALL ASSOCIATED WIRING.
- ▲ REMOVE EXISTING LIGHTING TRANSFER PANEL. WIRWAYS AND JUNCTION BOXES MAY REMAIN AS NEEDED FOR EXTENSION TO NEW DIMMER RACK.
- ▲ EXISTING 400A MAIN DISCONNECT TO REMAIN.
- ▲ REMOVE EXISTING 100A DISCONNECT AND ALL ASSOCIATED WIRING/TRACEWAY.

ELECTRICAL NOTES

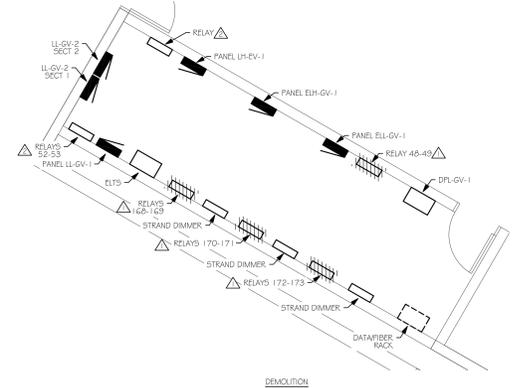
1. REPLACE EXISTING LOCAL LIGHTING CONTROL STATION WITH NEW 10 BUTTON PRESET STATION WITH CUSTOM STEEL PLATE. ROUTE NEW CONTROL CABLE UP INTO CEILING SPACE AND DOWN TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM #140.
2. REPLACE EXISTING RECEPTACLE WITH NEW REMOTE TOUCH SCREEN RECEPTACLE. ROUTE NEW CONTROL CABLE TO NEW PROCESSOR IN ROOM #140.
3. PROVIDE NEW REMOTE TOUCH SCREEN RECEPTACLE. ROUTE CONTROL CABLE TO NEW PROCESSOR IN ROOM #140.
4. PROVIDE NEW CONTROL CABLE BETWEEN NEW PROCESSOR AND DIMMER RACKS.
5. INTERCEPT AND EXTEND ALL BRANCH CIRCUIT WIRING DIRECTLY TO ASSOCIATED DIMMERPOWER PANEL. PROVIDE ALL ADDITIONAL WIRWAYS/CONDUIT AS REQUIRED.
6. PROVIDE NEW RELAY PANEL. RECONNECT ALL EXISTING WIRING.
7. PROVIDE NEW PROCESSOR AND COOLING FAN IN EXISTING DIMMER PANEL. THOROUGHLY CLEAN PANEL AND ALL DIMMER MODULES.
8. PROVIDE NEW 96-CIRCUIT DIMMER RACK. RECONNECT EXISTING FEEDER AND BRANCH CIRCUIT.
9. PROVIDE NEW 200A COMPANY SWITCH. ROUTE #430+GND, 2" C. TO LOAD SIDE OF EXISTING 400A DISCONNECT.
10. PROVIDE NEW 400A COMPANY SWITCH. ROUTE 125 SECTS OF #430+GND, 2" C. TO LOAD SIDE OF EXISTING 400A DISCONNECT.
11. PROVIDE SUB-FEED LUGS AS REQUIRED TO ACCOMMODATE FEEDERS TO NEW COMPANY SWITCH.
12. PROVIDE NEW DMX INPUT RECEPTACLES. ROUTE CONTROL CABLE TO NEW PROCESSOR IN ROOM #140.
13. REPLACE EXISTING RECEPTACLE WITH NEW DMX OUTPUT RECEPTACLES. ROUTE CONTROL CABLES TO NEW PROCESSOR IN ROOM #140.



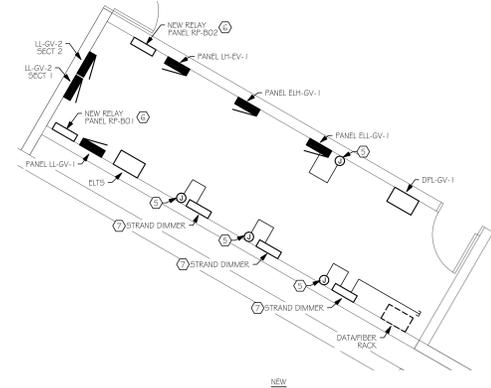
FIRST LEVEL AREA K - ELECTRICAL
SCALE: 3/32"=1'-0"



ROOM LI-150 - ELECTRICAL
SCALE: 1/4"=1'-0"

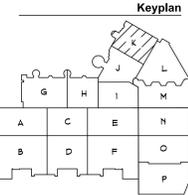


ROOM 158 - ELECTRICAL
SCALE: 1/4"=1'-0"



BID SET	7-10-15
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Title

FIRST LEVEL AREA K - ELECTRICAL

Sheet
E22K

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

**MINNEAPOLIS CONVENTION CENTER:
LIGHTING CONTROL SYSTEM UPGRADE**



GENERAL NOTES

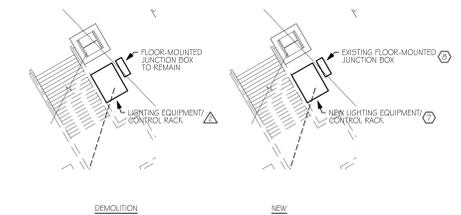
1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
4. UNLESS NOTES OTHERWISE, FIRST RIGHT OF REFUSAL FOR ANY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
5. REFER TO SHEETS E40 THROUGH E44 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.
6. COMPLETELY REMOVE ANY UNUSED CONDUCTORS.

ELECTRICAL DEMOLITION NOTES

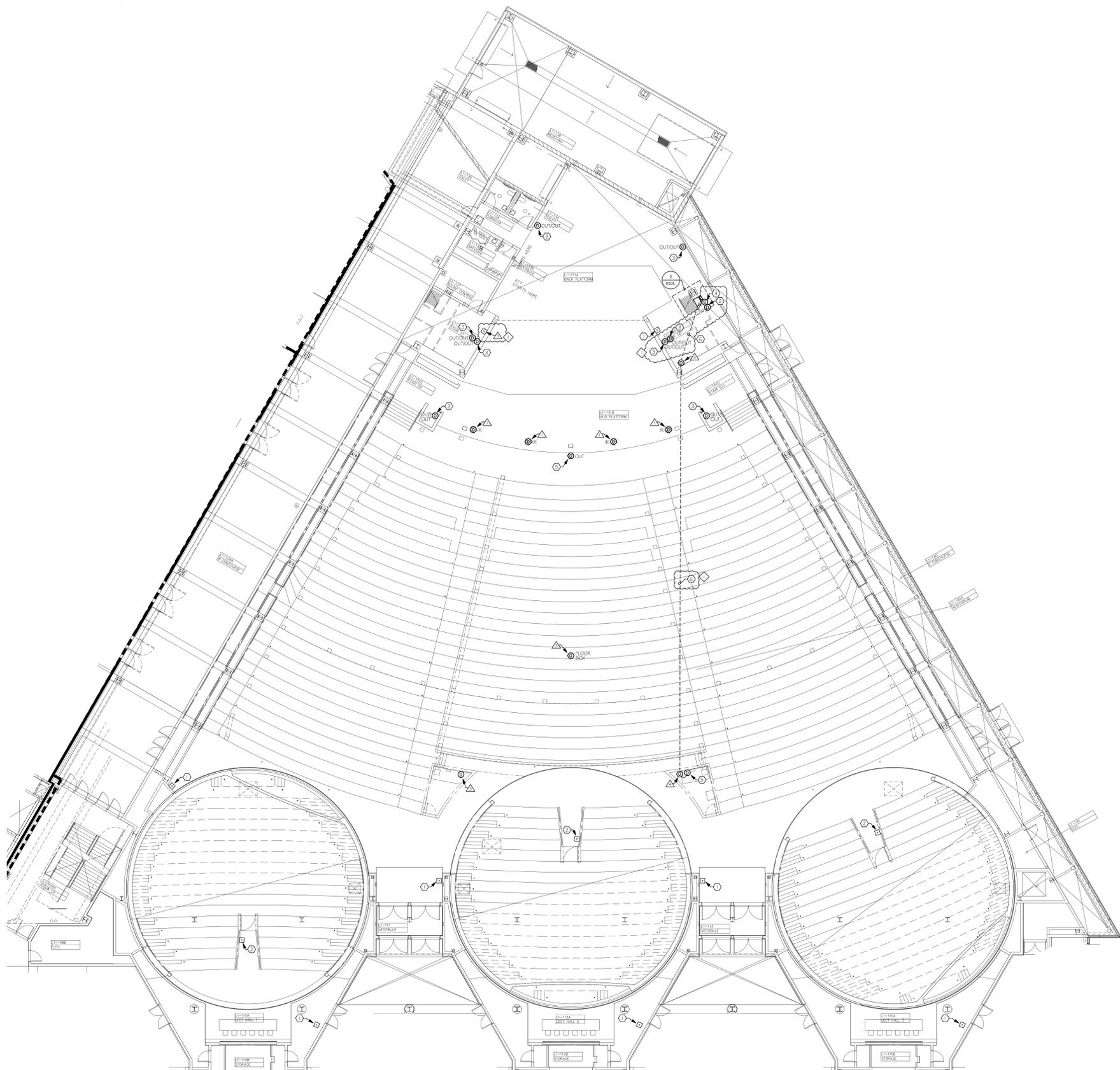
- ▲ REMOVE EXISTING REMOTE WIRING RECEIVER AND ALL ASSOCIATED WIRING. PROVIDE BLANK COVER TO MATCH BACKGROUND.
- ▲ REMOVE EXISTING LIGHTING EQUIPMENT AND ASSOCIATED RACK. ALL WIRING SHALL REMAIN FOR CONNECTION TO NEW EQUIPMENT.
- ▲ REMOVE EXISTING LIGHTING CONTROL STATION AND ALL ASSOCIATED WIRING. PROVIDE FULL STRING FOR FUTURE USE. PROVIDE BLANK STAINLESS STEEL COVER.
- ▲ REMOVE EXISTING LIGHTING CONTROL STATION AND ALL ASSOCIATED WIRING. PROVIDE BLANK STAINLESS STEEL COVER. CONDUIT SHALL REMAIN FOR NEW CONDUCTORS.

ELECTRICAL NOTES

- ① REPLACE EXISTING LOCAL LIGHTING CONTROL STATION WITH NEW LOCAL CONTROL STATION WITH CUSTOMER-SPECIFIED PLATE (SEE SCHEDULE). PROVIDE BLANK STAINLESS STEEL COVER TO MATCH BACKGROUND.
- ② PROVIDE NEW CONTROL RECEPTACLE PANEL WITH 6-GANG STEEL PLATE AND (6) DIMM INPUT RECEPTACLES. ROUTE NEW CONTROL CABLES TO NEW EQUIPMENT RACK VIA EXISTING JUNCTION BOX.
- ③ REPLACE EXISTING CONTROL RECEPTACLE PANEL WITH NEW 6-GANG STEEL PLATE AND (6) DIMM INPUT RECEPTACLES. ROUTE NEW CONTROL CABLES TO NEW EQUIPMENT RACK VIA EXISTING JUNCTION BOX.
- ④ PROVIDE NEW CONTROL RECEPTACLE PANEL WITH 6-GANG STEEL PLATE AND (6) DIMM OUTPUT RECEPTACLES. ROUTE NEW CONTROL CABLES TO NEW EQUIPMENT RACK VIA EXISTING JUNCTION BOX.
- ⑤ REPLACE EXISTING CONTROL RECEPTACLE PANEL WITH NEW 7-GANG STEEL PLATE, (6) DIMM INPUT RECEPTACLES AND (1) UNISON RECEPTACLE. CONNECT DIMM TO (5) EXISTING CATEGORY 3 CABLES AND (1) NEW CATEGORY 3 CABLES ROUTED VIA EXISTING SPARE CONDUIT SHOWN. CONNECT UNISON RECEPTACLE TO NEW "U" CABLE ROUTED VIA SPARE CONDUIT SHOWN.
- ⑥ EXISTING CONDUIT TO BE USED FOR NEW CABLES BETWEEN LIGHTING CONTROL BOOTH AND STAGE-MOUNTED LIGHTING EQUIPMENT RACK.
- ⑦ PROVIDE NEW LIGHTING EQUIPMENT CONTROL RACK. RECONNECT EXISTING CONDUCTORS/CABLES SERVING NEW EQUIPMENT TO NEW LIGHTING CONTROL RACK.
- ⑧ INTERCEPT AND EXTEND ALL CONDUCTORS/CABLES FROM NEW DEVICES TO NEW LIGHTING EQUIPMENT CONTROL RACK.



2 AUDITORIUM CONTROL RACK LOCATION
SCALE: 1/4"=1'-0"



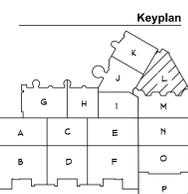
1 FIRST LEVEL AREA L - ELECTRICAL
SCALE: 3/32"=1'-0"



BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions



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Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	

Title

FIRST LEVEL AREA L - ELECTRICAL

Sheet

E22L

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

**MINNEAPOLIS CONVENTION CENTER:
LIGHTING CONTROL SYSTEM UPGRADE**



ELECTRICAL ENGINEER
1331 52nd Ave S
Fargo, ND 58103
701.224.0606
701.224.0676

GENERAL NOTES

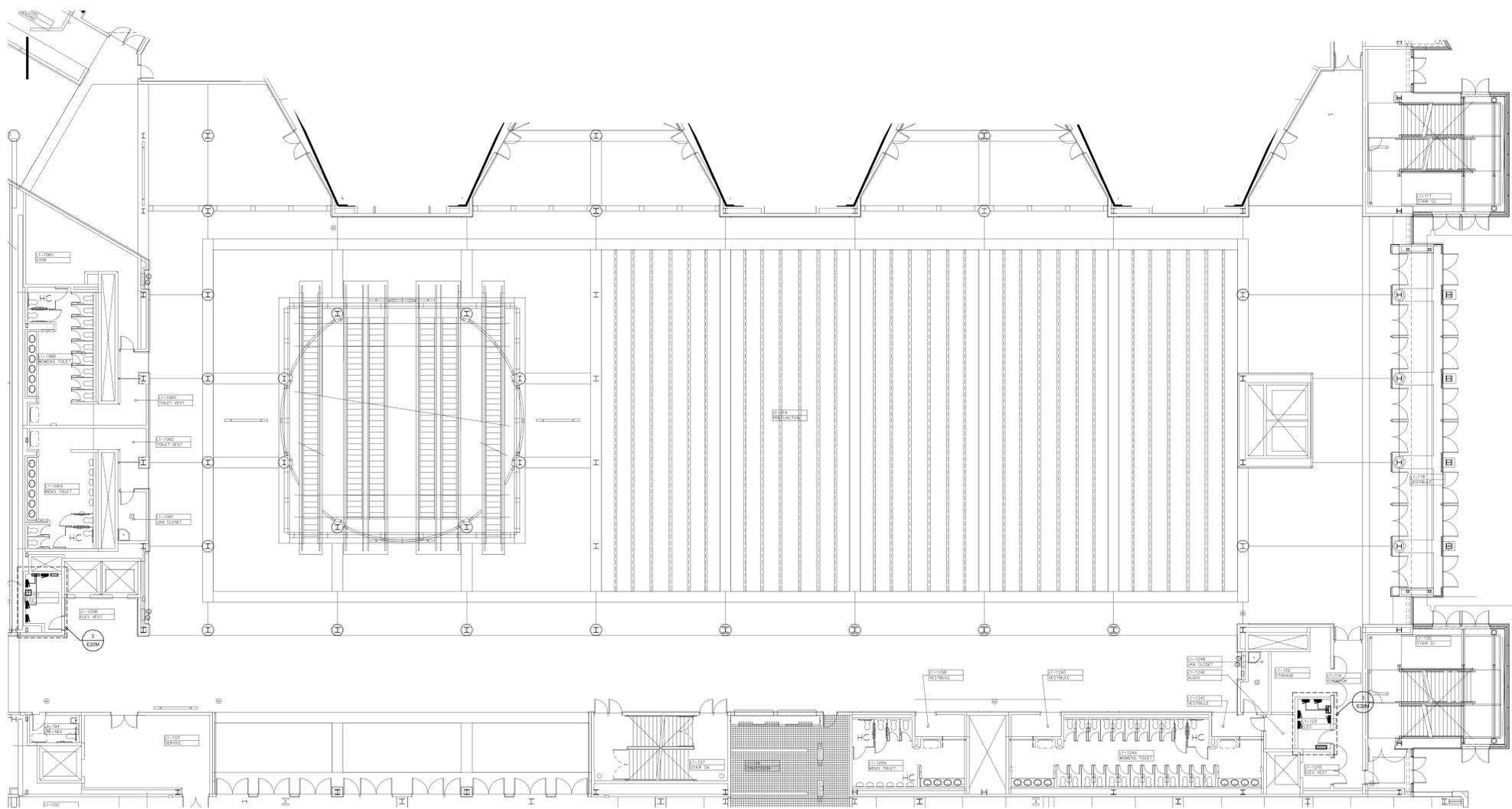
- FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
- MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
- ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELS/BOXES RELAY PANELS AND DIMMER CABINETS.
- UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A NY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
- REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL DEMOLITION NOTES

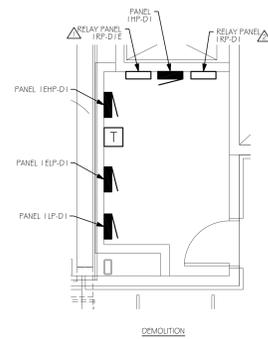
- REMOVE EXISTING RELAY PANEL. BRANCH CIRCUIT WIRING SHALL REMAIN AND SHALL BE EXTENDED DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL.
- REMOVE EXISTING RELAY PANEL. ALL WIRING SHALL REMAIN FOR CONNECTION TO NEW RELAY PANEL.

ELECTRICAL NOTES

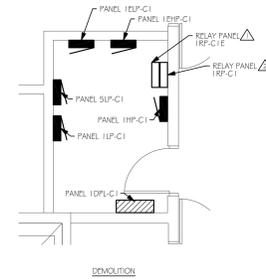
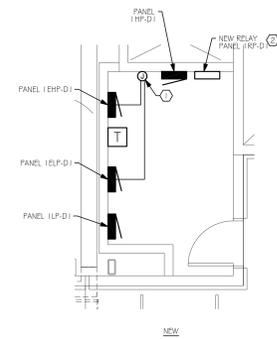
- INTERCEPT AND EXTEND ALL BRANCH CIRCUIT WIRING DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL. PROVIDE ALL ADDITIONAL WIRING/CONDUITS AS REQUIRED.
- PROVIDE NEW RELAY PANEL. RECONNECT ALL EXISTING WIRING.



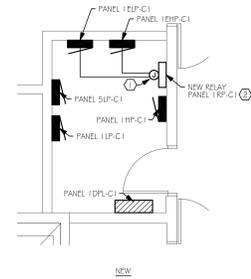
FIRST LEVEL AREA M - ELECTRICAL
SCALE: 3/8"=1'-0"



ROOM LI-107 - ELECTRICAL
SCALE: 1/4"=1'-0"



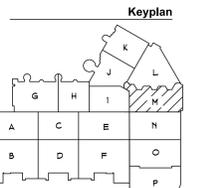
ROOM LI-123 - ELECTRICAL
SCALE: 1/4"=1'-0"



BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #5	8-20-15
ADDENDUM #6	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions



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Drawn	A. VAGLEJ, MAUER	
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Approved	T. VAREBERG	

Title

FIRST LEVEL AREA M - ELECTRICAL

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet
E22M



GENERAL NOTES

1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR ANY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL NOTES

- PROVIDE 2-PORT DMX INPUT PLATE (0.1R, 5-PIN, MALE) IN 2-GANG BOX, FLUSH MOUNTED IN EXISTING COLUMN BRACKET. ROUTE (1) DMX NETWORK CABLE TO 6-PORT DMX MERGER LOCATED AT CATWALK. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

**MINNEAPOLIS CONVENTION CENTER:
LIGHTING CONTROL SYSTEM UPGRADE**

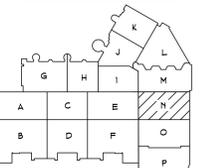


BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions

Keyplan



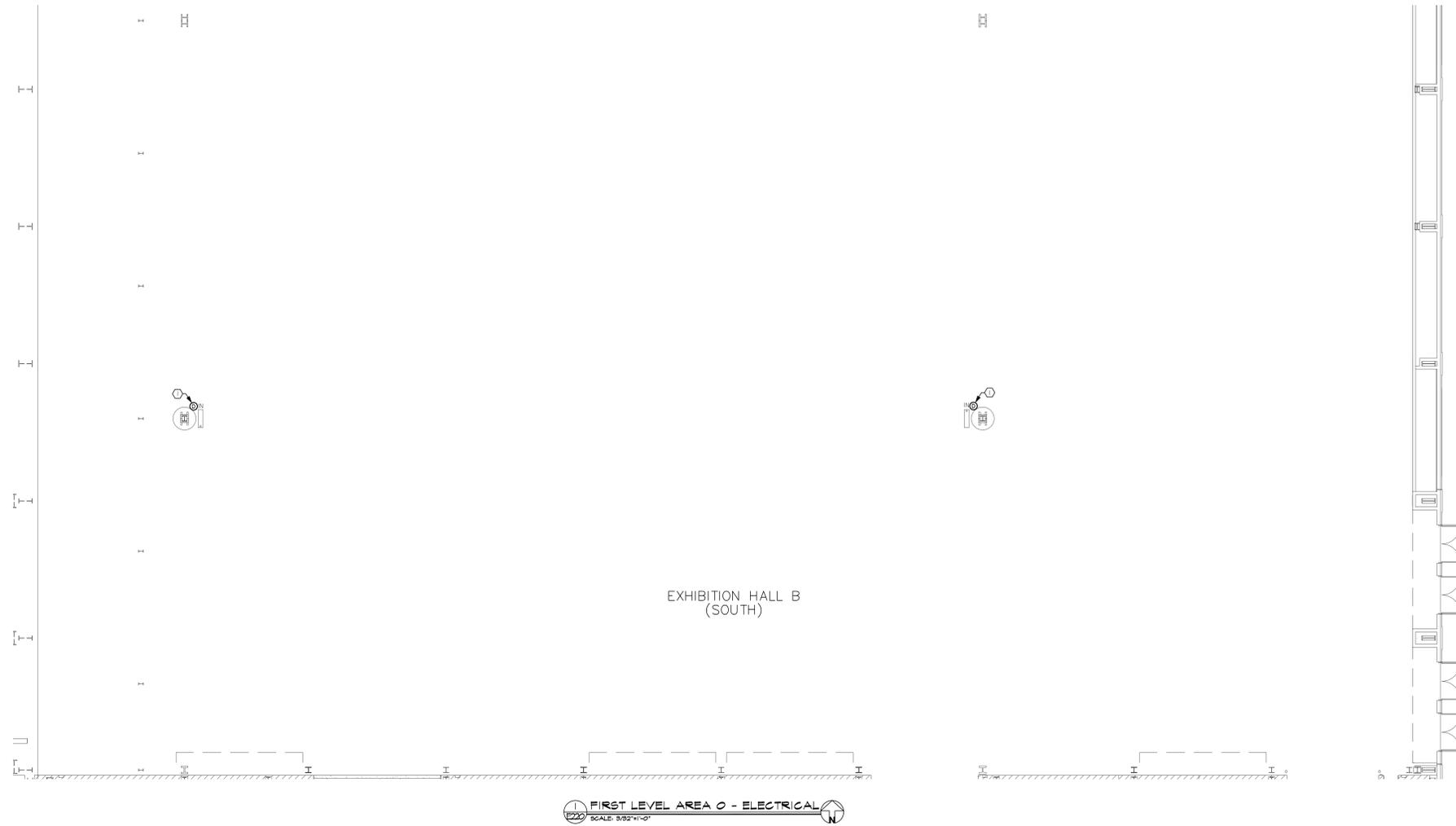
NO.	ISSUE	DATE
Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	
Title		

FIRST LEVEL AREA N - ELECTRICAL

Sheet

E22N

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015



- GENERAL NOTES**
1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
 2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
 3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DRAWER CABINETS.
 4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A 10' REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
 5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

- ELECTRICAL NOTES**
- PROVIDE 2-PORT DMX INPUT PLATE (0.5\"/>

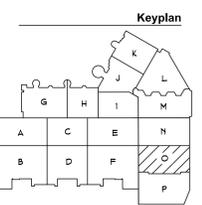
**MINNEAPOLIS CONVENTION CENTER:
LIGHTING CONTROL SYSTEM UPGRADE**

VAREBERG ENGINEERING
CONSULTING ENGINEERS

1331 52nd Ave S
Fargo, ND 58103
701.224.0606
701.224.0676

BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date

Revisions

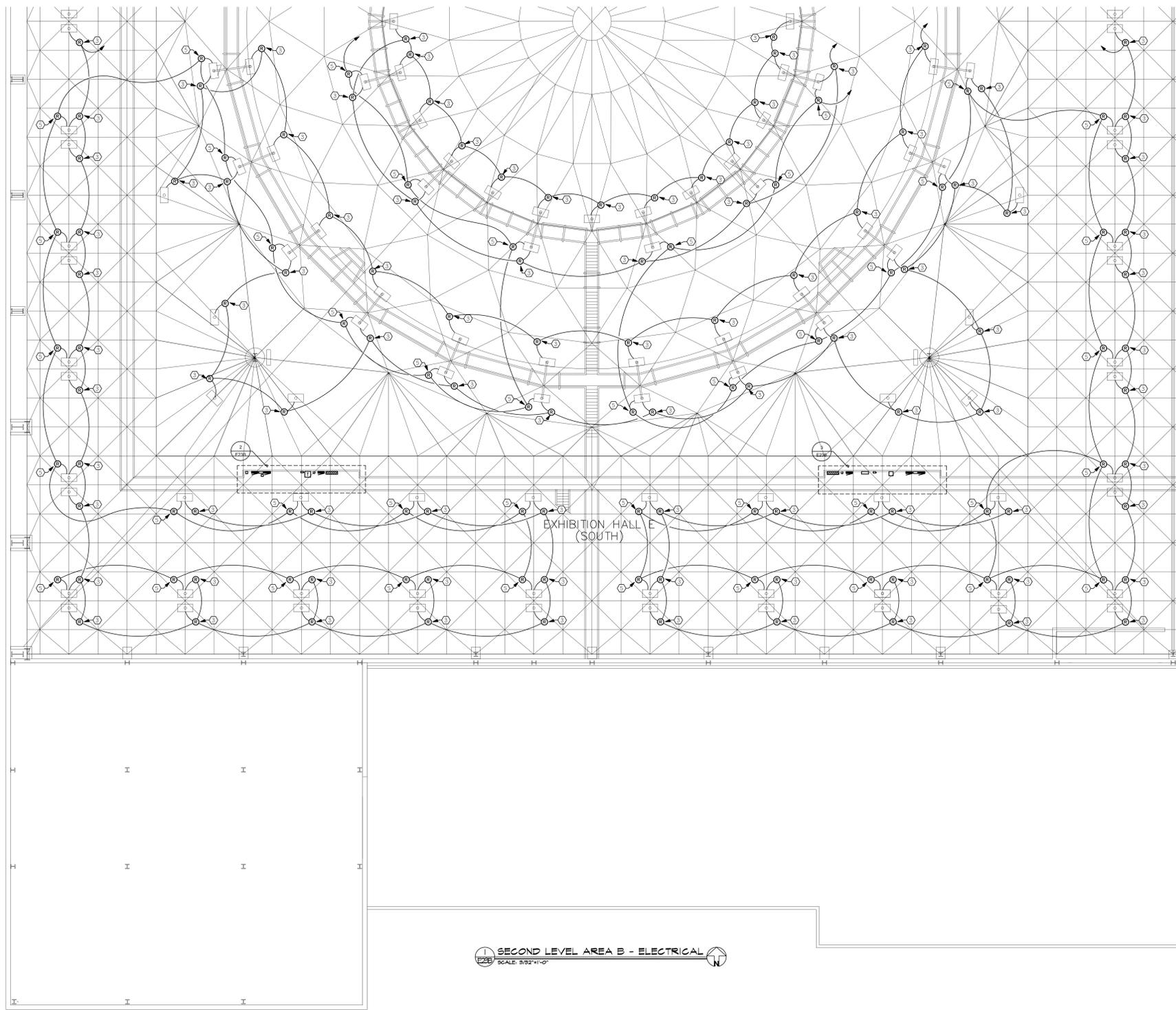


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Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	

FIRST LEVEL AREA O - ELECTRICAL

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet
E220



1 SECOND LEVEL AREA B - ELECTRICAL
 E23B SCALE: 3/32"=1'-0"

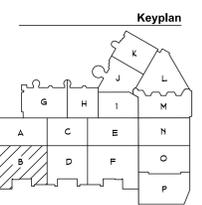
- GENERAL NOTES**
- FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
 - MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
 - ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
 - UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR ANY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
 - REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

- ELECTRICAL DEMOLITION NOTES**
- △ REMOVE EXISTING G.F. RELAY PANEL. BRANCH CIRCUIT WIRING SHALL REMAIN FOR CONNECTION TO NEW RELAY PANEL.
 - △ REMOVE ALL INTERNAL COMPONENTS OF EXISTING G.F. RELAY PANEL. ENCLOSURE SHALL REMAIN FOR USE AS JUNCTION BOX. EXTEND EXISTING BRANCH CIRCUIT WIRING DIRECTLY TO ADJACENT PANELS.
 - △ REMOVE EXISTING EMERGENCY LIGHTING INTERFACE PANEL AND ALL ASSOCIATED WIRING.
 - △ REMOVE EXISTING EXTERIOR LIGHTING RELAYS. BRANCH CIRCUIT WIRING SHALL REMAIN FOR CONNECTION TO NEW RELAY PANEL.

- ELECTRICAL NOTES**
- PROVIDE NEW RELAY PANEL. RECONNECT ALL EXISTING BRANCH CIRCUITS.
 - EXTEND EXISTING EMERGENCY CIRCUIT BRANCH WIRING FROM EXISTING JUNCTION BOX TO ADJACENT EMERGENCY PANEL. EXTEND EXISTING NON-EMERGENCY BRANCH WIRING TO NEAREST 120/208V PANEL.
 - PROVIDE CAPTIVATION RELAY AND 0-10V CONTROL MODULE (PHILIPS # DC-0RD-NM) MOUNTED ADJACENT TO EXISTING LIGHTING CIRCUIT JUNCTION BOXES. PROVIDE CONNECTION AS REQUIRED TO EXISTING LED FUTURE NORMAL CIRCUIT. REFER TO DETAIL #E23A. PROVIDE WIRING AS INDICATED TO NEW EQUIPMENT RACK LOCATED AT NE CATWALK.
 - EXTEND EXISTING EXTERIOR LIGHTING BRANCH CIRCUIT WIRING TO NEW RELAY PANEL.
 - PROVIDE CAPTIVATION RELAY AND 0-10V CONTROL MODULE (PHILIPS # DC-0RD-NM) MOUNTED ADJACENT TO EXISTING LIGHTING CIRCUIT JUNCTION BOXES. PROVIDE CONNECTION AS REQUIRED TO EXISTING LED FUTURE EMERGENCY CIRCUIT. REFER TO DETAIL #E23A. PROVIDE WIRING AS INDICATED TO NEW EQUIPMENT RACK LOCATED AT NE CATWALK.

NO.	ISSUE	DATE
◇	BID SET	7-10-15
◇	ADDENDUM #1	7-23-15
◇	ADDENDUM #3	7-30-15
◇	ADDENDUM #4	8-20-15
◇	ADDENDUM #5	8-06-15
◇	CONSTRUCTION SET	11-02-15
	Drawing Issue	Date

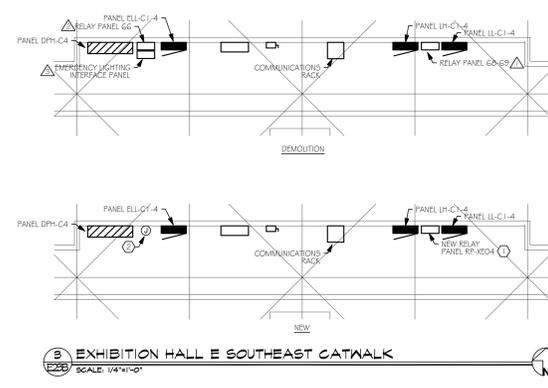
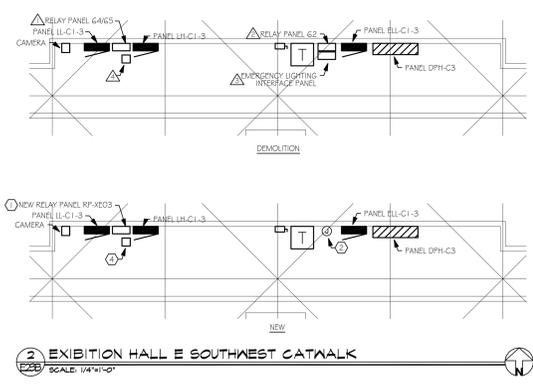
Revisions



NO.	ISSUE	DATE
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Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	
Title		

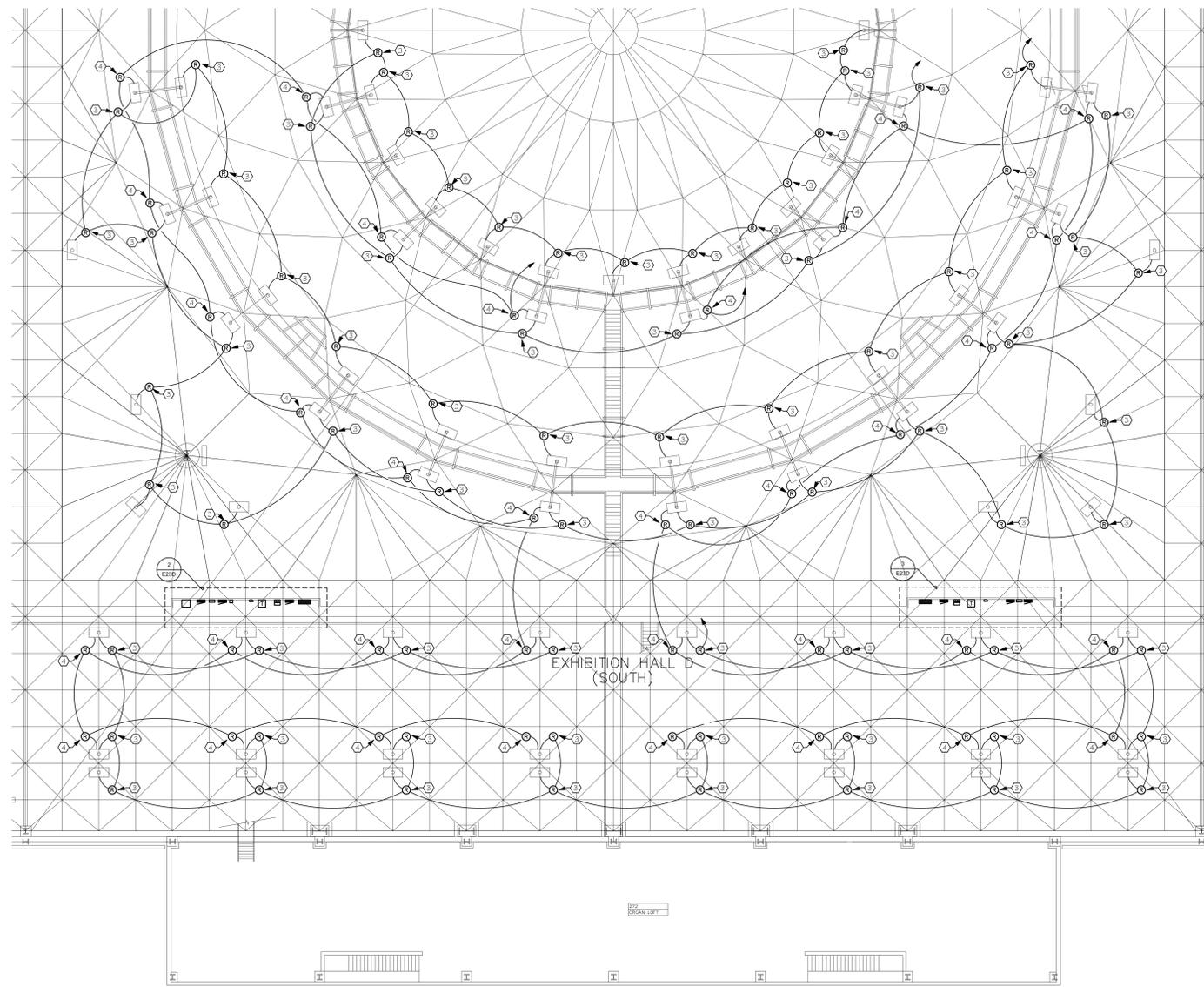
SECOND LEVEL AREA B - ELECTRICAL

Sheet
E23B

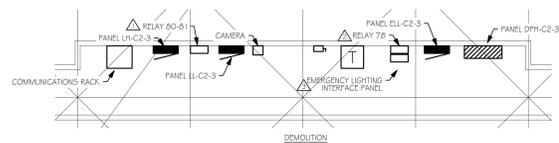


FOR REFERENCE ONLY

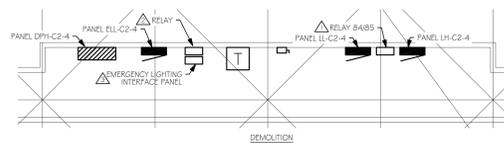
CONSTRUCTION SET
 NOVEMBER 02, 2015



1 SECOND LEVEL AREA D - ELECTRICAL
SCALE: 3/32"=1'-0"



2 EXHIBITION HALL D SOUTHWEST CATWALK
SCALE: 1/4"=1'-0"



3 EXHIBITION HALL D SOUTHEAST CATWALK
SCALE: 1/4"=1'-0"

GENERAL NOTES

- FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
- MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
- ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELS/BOXES RELAY PANELS AND DIMMER CABINETS.
- UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A NY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
- REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL DEMOLITION NOTES

- REMOVE EXISTING G.E. RELAY PANEL BRANCH CIRCUIT WIRING SHALL REMAIN FOR CONNECTION TO NEW RELAY PANEL.
- REMOVE ALL INTERNAL COMPONENTS OF EXISTING G.E. RELAY PANEL ENCLOSURE SHALL REMAIN FOR USE AS JUNCTION BOX. EXTEND EXISTING BRANCH CIRCUIT WIRING DIRECTLY TO ADJACENT PANEL(S).
- REMOVE EXISTING EMERGENCY LIGHTING INTERFACE PANEL AND ALL ASSOCIATED WIRING.

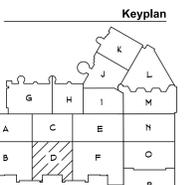
ELECTRICAL NOTES

- PROVIDE NEW RELAY PANEL RECONNECT ALL EXISTING BRANCH CIRCUITS.
- EXTEND EXISTING EMERGENCY CIRCUIT BRANCH WIRING FROM EXISTING JUNCTION BOX TO ADJACENT EMERGENCY PANEL. EXTEND EXISTING NON-EMERGENCY BRANCH WIRING TO NEAREST FLOORBOY PANEL.
- PROVIDE CAPTIVATION RELAY AND 0-10V CONTROL MODULE (PHILIPS # DC-080-NA) MOUNTED ADJACENT TO EXISTING LIGHTING CIRCUIT JUNCTION BOXES. PROVIDE CONNECTION AS REQUIRED TO EXISTING 0-10V CONTROL CIRCUIT. REFER TO DETAIL 4E22A. PROVIDE WIRING AS INDICATED TO NEW EQUIPMENT RACK LOCATED AT NE CATWALK.
- PROVIDE CAPTIVATION RELAY AND 0-10V CONTROL MODULE (PHILIPS # DC-080-NA) MOUNTED ADJACENT TO EXISTING LIGHTING CIRCUIT JUNCTION BOXES. PROVIDE CONNECTION AS REQUIRED TO EXISTING 0-10V CONTROL CIRCUIT. REFER TO DETAIL 4E22A. PROVIDE WIRING AS INDICATED TO NEW EQUIPMENT RACK LOCATED AT NE CATWALK.

NO.	ISSUE	DATE
Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLE/J. MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	
Title		
SECOND LEVEL AREA D - ELECTRICAL		
Sheet E23D		

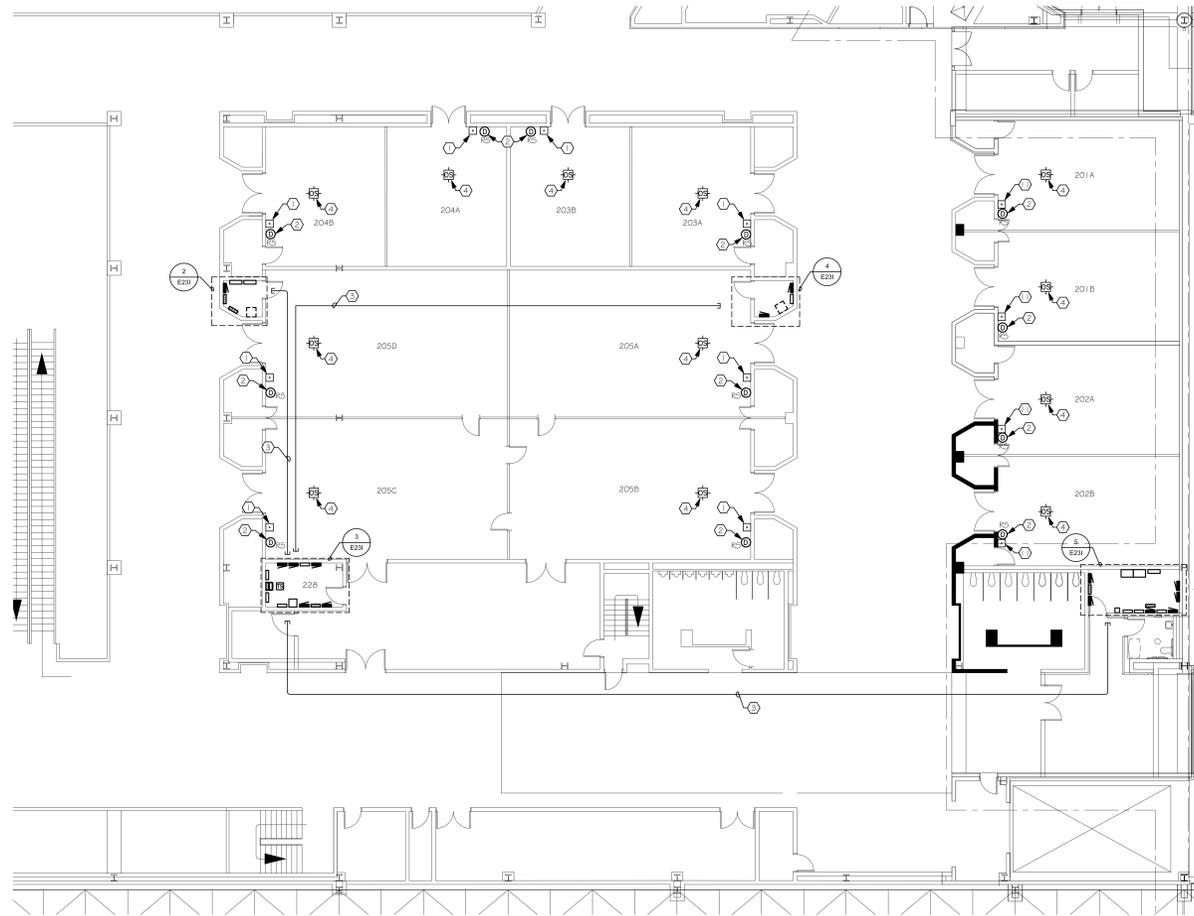
NO.	ISSUE	DATE
ADDENDUM #1	7-10-15	
ADDENDUM #3	7-23-15	
ADDENDUM #5	7-30-15	
ADDENDUM #6	8-20-15	
ADDENDUM #5	8-06-15	
CONSTRUCTION SET	11-02-15	
Drawing Issue		Date

NO.	ISSUE	DATE
Revisions		

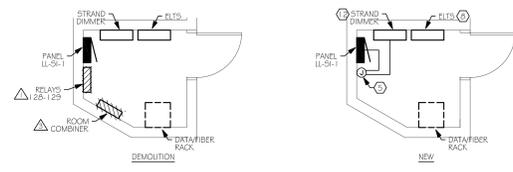


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Drawn	A. VAGLE/J. MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	
Title		
SECOND LEVEL AREA D - ELECTRICAL		
Sheet E23D		

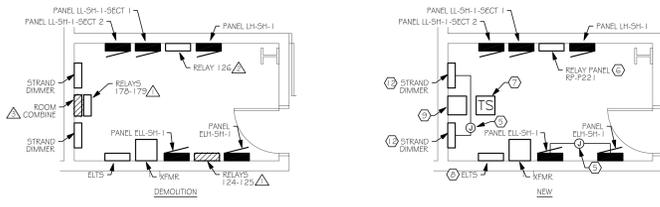
FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015



1 SECOND LEVEL AREA I - ELECTRICAL
SCALE: 3/32"=1'-0"



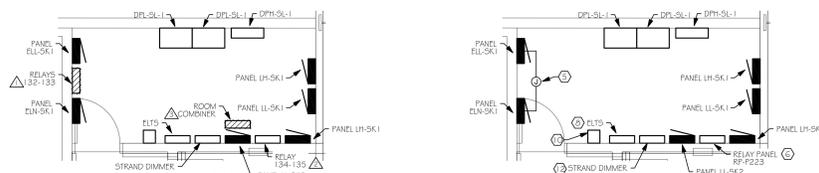
2 ROOM 205D CLOSET - ELECTRICAL
SCALE: 1/4"=1'-0"



3 ROOM 228 - ELECTRICAL
SCALE: 1/4"=1'-0"



4 ROOM 205A CLOSET - ELECTRICAL
SCALE: 1/4"=1'-0"



5 ROOM L2-105D - ELECTRICAL
SCALE: 1/4"=1'-0"

GENERAL NOTES

1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR ANY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

ELECTRICAL DEMOLITION NOTES

- △ REMOVE EXISTING RELAY PANEL. BRANCH CIRCUIT WIRING SHALL REMAIN AND SHALL BE EXTENDED DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL.
- △ REMOVE EXISTING RELAY PANEL. ALL WIRING SHALL REMAIN FOR CONNECTION TO NEW RELAY PANEL.
- △ REMOVE EXISTING ROOM COMBINER AND ALL ASSOCIATED WIRING.

ELECTRICAL NOTES

- REPLACE EXISTING LOCAL LIGHTING CONTROL STATION WITH NEW 10-BUTTON PRESET STATION WITH CUSTOM STEEL PLATE. ROUTE NEW CONTROL CABLE UP INTO CEILING SPACE AND DOWN TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM #228.
- REPLACE EXISTING RECEPTACLE WITH NEW REMOTE TOUCH SCREEN RECEPTACLE. ROUTE NEW CONTROL CABLE UP INTO CEILING SPACE AND DOWN TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM #228.
- ROUTE CONTROLNWOK, CABLES FROM EXISTING STRAND DIMMER CABINET(S) AND NEW RELAY PANELS THROUGH CEILING SPACE TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM #228.
- PROVIDE NEW CEILING MOUNTED OCCUPANCY SENSOR (ETC #P-00). FIELD VERIFY OPTIMAL LOCATION. ROUTE NEW CONTROL CABLE THROUGH CEILING SPACE TO NEW LIGHTING CONTROL EQUIPMENT IN ROOM #228.
- INTERCEPT AND EXTEND ALL BRANCH CIRCUIT WIRING DIRECTLY TO ASSOCIATED DIMMER/POWER PANEL. PROVIDE ALL ADDITIONAL WIRING/CONDUITS AS REQUIRED.
- PROVIDE NEW RELAY PANEL. RECONNECT ALL EXISTING WIRING.
- PROVIDE NEW TOUCHSCREEN.
- TEST EXISTING EMERGENCY LIGHTING TRANSFER SWITCH FOR PROPER OPERATION. REPORT ANY DEFICIENCIES TO OWNER.
- PROVIDE NEW LIGHTING EQUIPMENT RACK WITH 24-PORT FIBER SMD/GRABITE-U-20 CATEGORY 5e CABLED TO LIGHTING EQUIPMENT ON FIRST LEVEL (REFER TO DETAIL OR SHEET E20).
- PROVIDE WALL-MOUNTED PARADIGM REPEATER.
- REPLACE EXISTING LOCAL LIGHTING CONTROL STATION WITH NEW 10-BUTTON PRESET STATION WITH CUSTOM STEEL PLATE. ROUTE NEW CONTROL CABLE UP INTO CEILING SPACE AND DOWN TO NEW REPEATER IN ROOM L2-105D.
- PROVIDE NEW PROCESSOR AND COOLING FAN. THOROUGHLY CLEAN DIMMER MODULES AND ENCLOSURE.

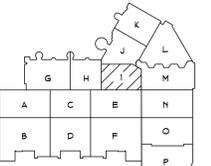


BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #5	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date



Revisions

Keyplan



NO.	ISSUE	DATE
Sheet Information		
Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLE/J. MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	

Title

SECOND LEVEL AREA I - ELECTRICAL

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet
E231



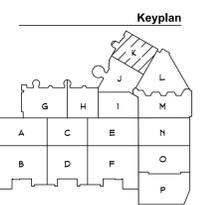
- GENERAL NOTES**
1. FIELD VERIFY EXACT ROUTING OF ALL CABLES WITH OWNER.
 2. MAINTAIN COMMUNICATION PATH AT ANY LOCATION WHERE RELAY PANELS ARE REMOVED AND NOT REPLACED.
 3. ELECTRICAL CONTRACTOR SHALL VERIFY AND DOCUMENT ALL LIGHTING BRANCH CIRCUIT WIRING AND UPDATE SCHEDULE IN PANELBOARDS RELAY PANELS AND DIMMER CABINETS.
 4. UNLESS NOTED OTHERWISE, FIRST RIGHT OF REFUSAL FOR A BY REMOVED EQUIPMENT SHALL GO TO THE OWNER. SECOND RIGHT SHALL GO TO SYSTEM INTEGRATOR. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF ANY REMAINING ITEMS.
 5. REFER TO SHEETS E40 THROUGH E46 FOR LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAMS.

- ELECTRICAL NOTES**
1. PROVIDE RECEPTACLE WITH (3) DMX OUTPUTS MOUNTED AT CATWALK. VERIFY EXACT LOCATION WITH OWNER. ROUTE (3) DMX NETWORK CABLES TO EQUIPMENT IN ROOM # 485. PROVIDE DMX REPAIRS (PATHWAY #485).

**MINNEAPOLIS CONVENTION CENTER:
LIGHTING CONTROL SYSTEM UPGRADE**

BID SET	7-10-15
ADDENDUM #1	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date

Revisions



NO.	ISSUE	DATE

Sheet Information

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Checked: T. VAREBERG
Approved: T. VAREBERG

SECOND LEVEL AREA K - ELECTRICAL

Sheet
E23K

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

**MINNEAPOLIS CONVENTION CENTER:
LIGHTING CONTROL SYSTEM UPGRADE**



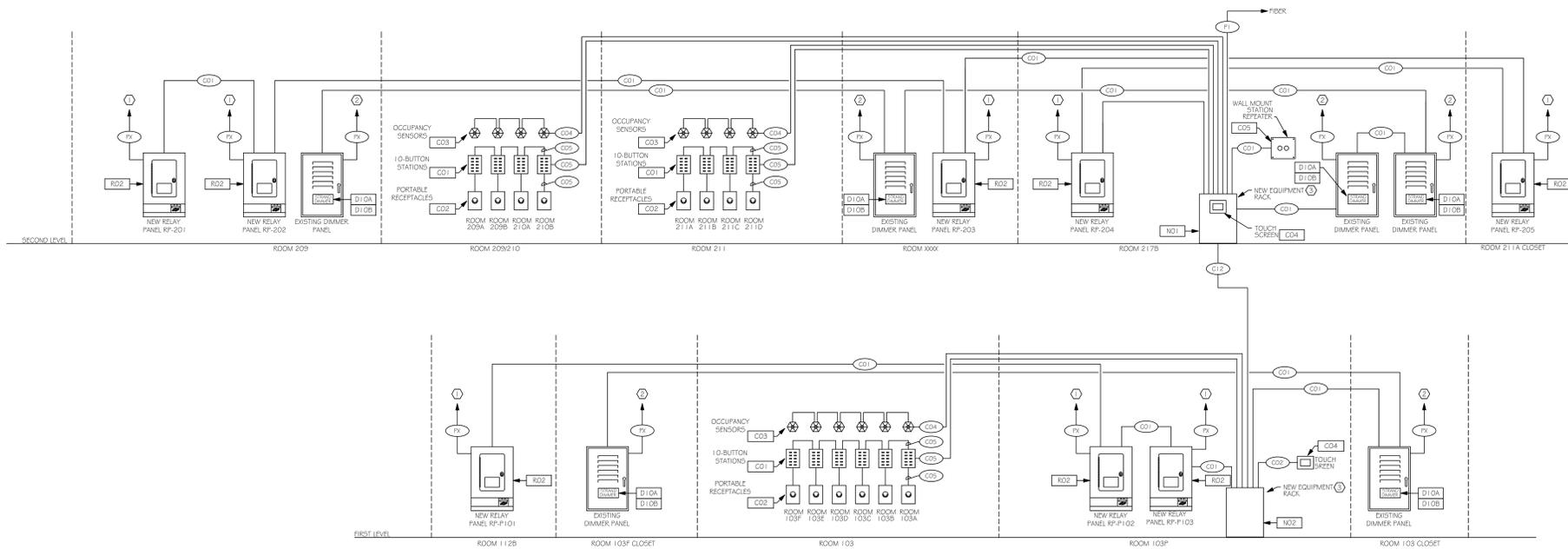
ELECTRICAL ENGINEER
1331 52nd Ave S
Fargo, ND 58103
1 701.224.9698
1 701.234.0076

GENERAL NOTES

1. VERIFY EXACT EQUIPMENT LABELING WITH OWNER.
2. FOR ACTUAL EQUIPMENT LOCATIONS, REFER TO ASSOCIATED ELECTRICAL FLOOR PLANS.

ELECTRICAL NOTES

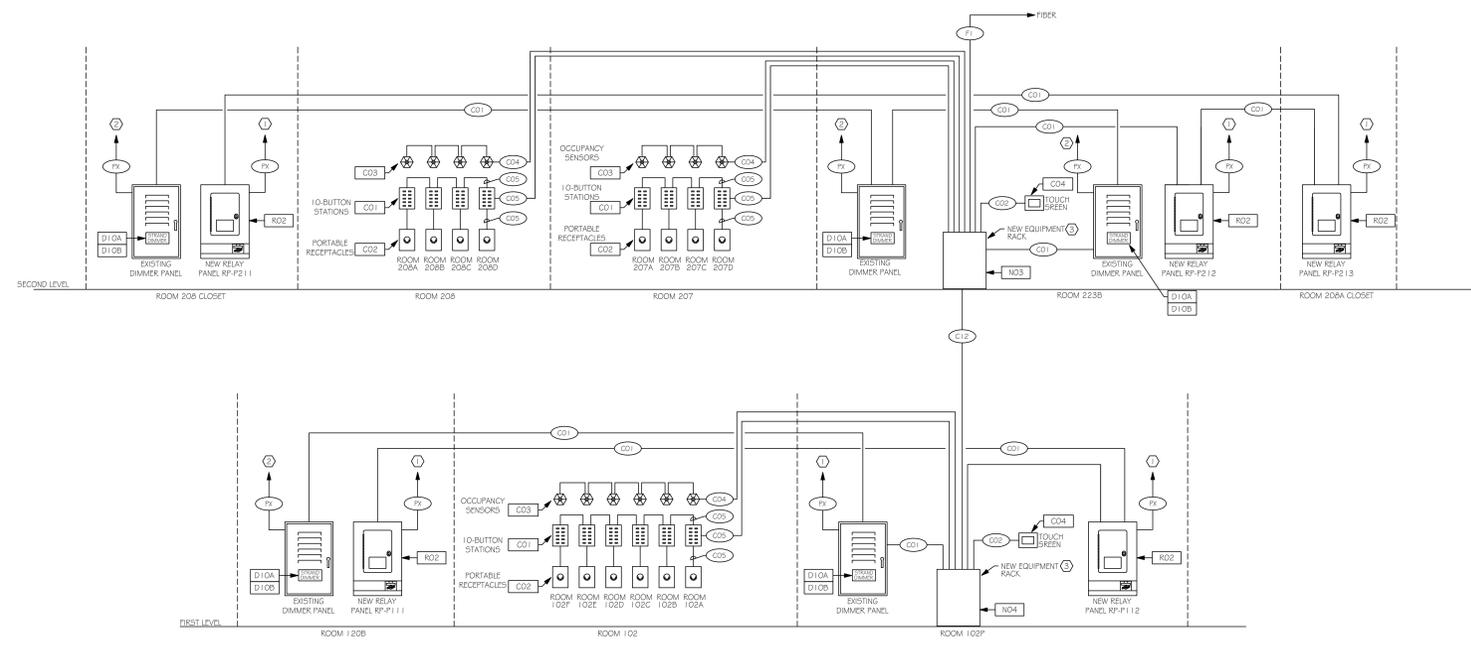
1. RECONNECT EXISTING LIGHTING CIRCUITS TO NEW RELAY CONTROL PANEL. EXTEND WIRING/CONDUITS AS REQUIRED.
2. CONNECT EXISTING LIGHTING CIRCUITS DIRECTLY TO EXISTING DIMMER PANEL. EXTEND WIRING/CONDUITS AS REQUIRED.
3. REFER TO EQUIPMENT RACK DETAILS ON SHEET E47.



1 ONE-LINE DIAGRAM - MEETING ROOMS/PUBLIC SPACES - AREA G
E40 NO SCALE

CABLE SCHEDULE

CABLE ID	DESCRIPTION	CONFIGURATION
CD1	DMX NETWORK CABLE	(1) CATEGORY 5E, FLENUM RATED
CD2	NETWORK/TOUCH SCREEN CABLE	(1) CATEGORY 5E, FLENUM RATED
CD3	OCCUPANCY SENSOR CABLE	(1) BELDEN #5200UE + 1# 14AWG GND
CD4	CONTROL STATION/PORTABLE RECEPTACLE CABLE	(1) BELDEN #5200UE + 2# 16 + 1# 14AWG GND
CD5	CONTROL RACK INTERCONNECT	(1) 2 CATEGORY 5E, FLENUM RATED
CI1	FIBER OPTIC NETWORK CABLE	EXISTING FIBER PROVIDED BY OTHERS, TERMINATED UNDER THE CONTRACT.
FI1	100A FEEDER	4#3 + #5C, 1 1/2" C.
FI2	200A FEEDER	4#30 + 1#6C, 2" C.
FI3	400A FEEDER	(2) 5E75 - 4#30 + 1#6C, 2" C.
FI4	EXISTING BRANCH CIRCUIT/FEEDER WIRING	TO MATCH EXISTING.



2 ONE-LINE DIAGRAM - MEETING ROOMS/PUBLIC SPACES - AREA H
E40 NO SCALE

EQUIPMENT SCHEDULE

EQUIPMENT ID	DESCRIPTION	MANUFACTURER	CAT. NO.	QTY.	SHEET NOS.
CD1	10-BUTTON PRESET STATION WITH CUSTOM STEEL PLATE.	ETC	-	32	E226, E22H, E23G, E23H
CD2	PORTABLE RECEPTACLE.	ETC	SCPB-1 LRS	32	E226, E22H, E23G, E23H
CD3	PIR OCCUPANCY SENSOR.	ETC	F-00C	32	E226, E22H, E23G, E23H
CD4	WALL MOUNT LED TOUCH SCREEN.	ETC	F-157-A	4	E226, E22H, E23G, E23H
CD4A	WALL MOUNT LED TOUCH SCREEN LOCKING COVER.	ETC	F-LED-LS-M	3	E226, E22H, E23H
CD4B	WALL MOUNT LED TOUCH SCREEN SURFACE MOUNT BOX.	ETC	F-LED-LS-MB	3	E226, E22H, E23G
CD4C	LED TOUCH SCREEN RACK MOUNT KIT.	ETC	F-157-AM	1	E23G
CD4D	WALL MOUNT STATION REPAIR KIT.	ETC	F-DRP-W	1	E23G
DI10A	STRAND DIMMER RACK, RETRO FIT PROCESSOR.	JOHNSON SYSTEMS	JS-ENVY	11	E226, E22H, E23G, E23H
DI10B	STRAND DIMMER RACK, RETRO FIT FAN.	JOHNSON SYSTEMS	CF-ENV2	11	E226, E22H, E23G, E23H
NO1	NETWORK EQUIPMENT RACK - REFER TO SHEET E47.	-	-	1	E23G
NO2	NETWORK EQUIPMENT RACK - REFER TO SHEET E47.	-	-	1	E226
NO3	NETWORK EQUIPMENT RACK - REFER TO SHEET E47.	-	-	1	E23H
NO4	NETWORK EQUIPMENT RACK - REFER TO SHEET E47.	-	-	1	E22H
RO2	24-CIRCUIT DMX RELAY PANEL.	ETC	55-24P	1	E226, E22H, E23G, E23H
RO3	48-CIRCUIT DMX RELAY PANEL.	ETC	55-48P	1	E226, E22H, E23G, E23H

BID SET	DATE
ADDENDUM #1	7-10-15
ADDENDUM #2	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date

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Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	
Title		

MINNEAPOLIS CONVENTION CENTER: LIGHTING CONTROL SYSTEM UPGRADE

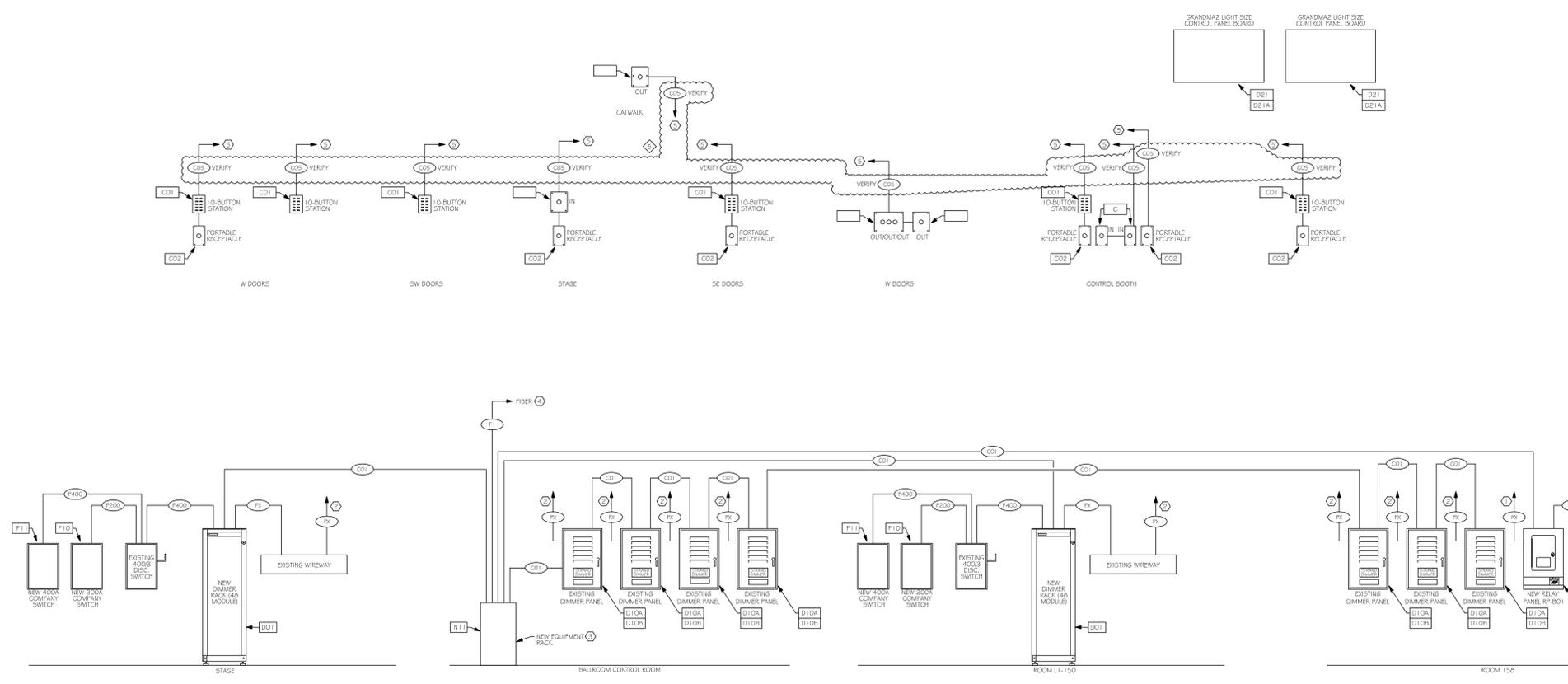
VAREBERG ENGINEERING
CONSULTING ENGINEERS
ELECTRICAL ENGINEER
1331 52nd Ave S
Fargo, ND 58103
1 701 224-0606
1 701 224-0676

GENERAL NOTES
1. VERIFY EXACT EQUIPMENT LABELING WITH OWNER.
2. FOR ACTUAL EQUIPMENT LOCATIONS, REFER TO ASSOCIATED ELECTRICAL FLOOR PLANS.

ELECTRICAL NOTES
① RECONNECT ALL EXISTING BRANCH CIRCUITS TO NEW RELAY PANEL.
② INTERCEPT AND EXTEND EXISTING LIGHTING CIRCUITS DIRECTLY TO DIMMER CONTROL PANEL.
③ REFER TO EQUIPMENT RACK DETAILS ON SHEET E47.
④ CONNECT EXISTING FIBER OPTIC NETWORK CABLE.
⑤ ROUTE NEW CONTROL CABLES THROUGH EXISTING CONDUIT/RACEWAYS TO NEW EQUIPMENT RACK IN ROOM #145.
⑥ REFER TO FLOOR PLAN SHEETS FOR CIRCUITING OF NORMAL AND EMERGENCY CONTROL CIRCUITS.

CABLE SCHEDULE

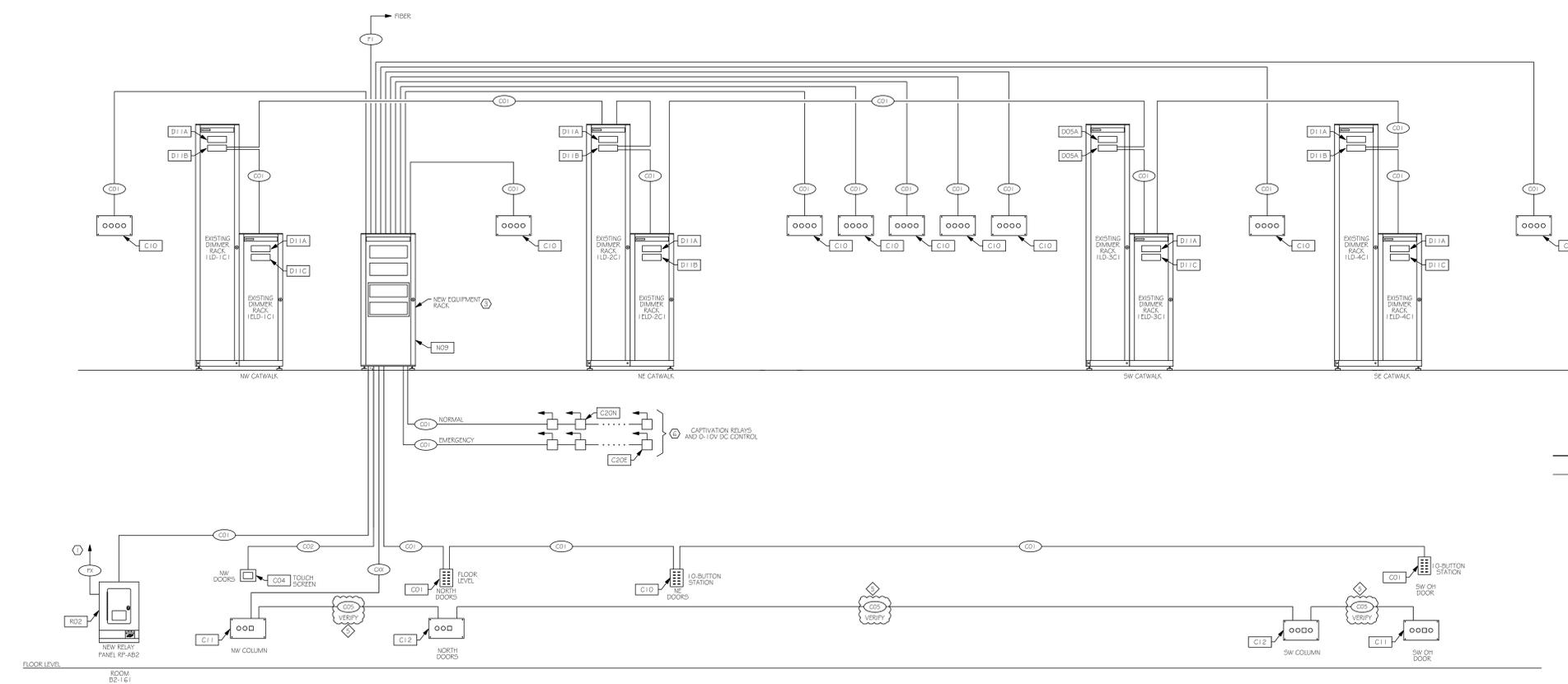
CABLE ID	DESCRIPTION	CONFIGURATION
CO1	DATA NETWORK CABLE	(1) CATEGORY 5E, FLENUM RATED
CO2	NETWORK/FLOOR SCREEN CABLE	(1) CATEGORY 5E, FLENUM RATED
CO4	OCCUPANCY SENSOR CABLE	(1) BOLDEN #5200UE + #1 #14AWG GND
CO5	CONTROL STATION/PORTABLE RECEPTACLE CABLE	(1) BOLDEN #5200UE + #2 #1 G + #1 #14AWG GND
C10	CONTROL RACK INTERCONNECT	(1) CATEGORY 5E, FLENUM RATED
F1	FIBER OPTIC NETWORK CABLE	EXISTING FIBER PROVIDED BY OTHERS, TERMINATED UNDER THE CONTRACT.
F10	100A FEEDER	#83 + #85G, 1 / 12°C
F200	200A FEEDER	#130 + #85G, 2/C
F400	400A FEEDER	#215S + #85G + #44G, 2/C
PK	EXISTING BRANCH CIRCUIT/FEEDER WIRING	TO MATCH EXISTING.



ONE-LINE DIAGRAM - BALLROOM
NO SCALE

EQUIPMENT SCHEDULE (BALLROOM)

EQUIPMENT ID	DESCRIPTION	MANUFACTURER	CAT. NO.	QTY.	SHEET NOS.
CO1	10-BUTTON PRESET STATION WITH CUSTOM STEEL PLATE	ETC	-	3	E20N, E20O
C10	3-GANG, 4-OUTLET DMX RECEPTACLE PANEL (CUSTOM)	ETC	-	9	E20N, E20O, E21N, E21O
DO1	SENSOR 3, 48-MODULE DIMMER RACK	ETC	-	1	
DO1A	STRAND DIMMER RACK RETRO FIT PROCESSOR	ETC	-	7	E21, E23, E23J
DO1B	STRAND DIMMER RACK RETRO FIT FAN	JOHNSON SYSTEMS JS-DN1V	-	7	E21, E23, E23J
DO2	GRANDMA LIGHT CONTROL BOARD	JOHNSON SYSTEMS CF-ENV2	-	2	E21, E23, E23J
DO3	TOURING FLIGHT CASE FOR GRANDMA LIGHT CONTROL BOARD	MALIGHTING	-	2	
DO4	NETWORK EQUIPMENT RACK - REFER TO SHEET E47.	-	-	1	E22J
F10	200A COMPANY SWITCH	-	-	2	E22J, E22K
F11	400A COMPANY SWITCH	-	-	2	E22J, E22K
RO2	24-CIRCUIT DMX RELAY PANEL	ETC	55-241P	1	E22K
RO3	48-CIRCUIT DMX RELAY PANEL	ETC	55481P	1	E22K



ONE-LINE DIAGRAM - EXHIBITION HALL A
NO SCALE

EQUIPMENT SCHEDULE (EXHIBITION HALL A)

EQUIPMENT ID	DESCRIPTION	MANUFACTURER	CAT. NO.	QTY.	SHEET NOS.
CO1	10-BUTTON PRESET STATION WITH CUSTOM STEEL PLATE	ETC	-	3	E20N, E20O
C10	3-GANG, 4-OUTLET DMX RECEPTACLE PANEL (CUSTOM)	ETC	-	9	E20N, E20O, E21N, E21O
C11	4-GANG CONTROL RECEPTACLE PANEL - D10U	ETC	-	2	E20N, E20O
C12	6-GANG CONTROL RECEPTACLE PANEL - D10U	ETC	-	2	E20N, E20O
C20E	CAPTIVATION RELAY 4 0-10V CONTROL (EMERGENCY)	PHILIPS	DC-DND-NA	8	E21N, E21O
C20N	CAPTIVATION RELAY 4 0-10V CONTROL (EMERGENCY)	PHILIPS	DC-DND-NA	8	E21N, E21O
D11A	4-SERIES PROCESSOR	LEVI-TON	-	4	E21N, E21O
D11B	4-SERIES 24" FAN	LEVI-TON	-	4	E21N, E21O
D11C	4-SERIES 24" FAN	LEVI-TON	-	4	E21N, E21O
RO2	24-CIRCUIT DMX RELAY PANEL	ETC	55-241P	1	E20P
NO2	NETWORK EQUIPMENT RACK - REFER TO SHEET E47.	-	-	1	E21N

BID SET	DATE
ADDENDUM #1	7-10-15
ADDENDUM #2	7-23-15
ADDENDUM #3	7-30-15
ADDENDUM #4	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15

Drawing Issue	Date

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Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	

Title

ONE-LINE DIAGRAMS - BALLROOM & EXHIBITION HALL A

FOR REFERENCE ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015

Sheet
E43

**MINNEAPOLIS
CONVENTION
CENTER:
LIGHTING CONTROL
SYSTEM UPGRADE**



ELECTRICAL ENGINEER
1331 52nd Ave S
Fargo, ND 58103
701.224.0606
701.224.0676

GENERAL NOTES

1. VERIFY EXACT EQUIPMENT LABELING WITH OWNER.
2. FOR ACTUAL EQUIPMENT LOCATIONS, REFER TO ASSOCIATED ELECTRICAL FLOOR PLANS.

ELECTRICAL NOTES

1. RECONNECT EXISTING LIGHTING CIRCUITS TO NEW RELAY CONTROL PANEL. EXTEND WIRING/CONDUITS AS REQUIRED.
2. CONNECT EXISTING LIGHTING CIRCUITS DIRECTLY TO EXISTING DIMMER PANEL. EXTEND WIRING/CONDUITS AS REQUIRED.
3. REFER TO EQUIPMENT RACK DETAILS ON SHEET E47.

CABLE SCHEDULE

CABLE ID	DESCRIPTION	CONFIGURATION
CD1	DMX NETWORK CABLE	(1) CATEGORY 5E, PLENUM RATED
CD2	NETWORK/TOUCH SCREEN CABLE	(1) CATEGORY 5E, PLENUM RATED
CD3	OCCUPANCY SENSOR CABLE	(1) BELDEN #5200LE + 1# 14AWG GND
CD4	CONTROL STATION/PORTABLE RECEPTACLE CABLE	(1) BELDEN #5200LE + 2# 16 + 1# 14AWG GND
CD5	CONTROL STATION/PORTABLE RECEPTACLE CABLE	(1) 2) CATEGORY 5E, PLENUM RATED
CD6	FIBER OPTIC NETWORK CABLE	EXISTING FIBER PROVIDED BY OTHERS, TERMINATED UNDER THE CONTRACT.
FD1	100A FEEDER	#4/4 + #6C, 1 1/2" C.
FD2	200A FEEDER	#3/3 + 1#6C, 2" C.
FD3	400A FEEDER	(2) 56TS - #4/3D + 1#4G, 2" C.
FD4	EXISTING BRANCH CIRCUIT/FEEDER WIRING	TO MATCH EXISTING.

EQUIPMENT SCHEDULE

EQUIPMENT ID	DESCRIPTION	MANUFACTURER	CAT. NO.	QTY.	SHEET NOS.
CD1	I/O-BUTTON PRESET STATION WITH CUSTOM STEEL PLATE.	ETC	NFN	33	E20M, E21M, E23M
CD2	PORTABLE RECEPTACLE.	ETC	ECPS-1URS	33	E20M, E21M, E23M
CD3	PIR OCCUPANCY SENSOR.	ETC	P-OCC	33	E20M, E21M, E23M
CD4	WALL MOUNT LCD TOUCH SCREEN.	ETC	P-TS7-4	3	E20M, E21M, E23M
CD4A	WALL MOUNT LCD TOUCH SCREEN LOCKING COVER.	ETC	P-LCD-LC-4	3	E20M, E21M, E23M
CD4B	WALL MOUNT LCD TOUCH SCREEN SURFACE MOUNT BOX.	ETC	P-LCD-SLBB	3	E20M, E21M, E23M
CD5	WALL MOUNT STATION REPEATER.	ETC	P-DREP-W	2	E20M, E21M
DOS1	-S-SERIES PROCESSOR.	LEVITON	-	14	E20M, E21M, E23M
DOS5	-S-SERIES 844 FAN	LEVITON	-	7	E20M, E21M, E23M
DOS6	-S-SERIES 844 FAN	LEVITON	-	7	E20M, E21M, E23M
FD1E	NETWORK EQUIPMENT RACK - REFER TO SHEET E47.	-	-	1	E23M
RD2	24-CIRCUIT DMX RELAY PANEL.	ETC	55-34P	8	E20M, E21M, E23M
RD3	40-CIRCUIT DMX RELAY PANEL.	ETC	55-40P	2	E23M

BID SET	DATE
ADDENDUM #1	7-10-15
ADDENDUM #3	7-23-15
ADDENDUM #5	7-30-15
ADDENDUM #6	8-20-15
ADDENDUM #5	8-06-15
CONSTRUCTION SET	11-02-15
Drawing Issue	Date

Revisions

Keyplan

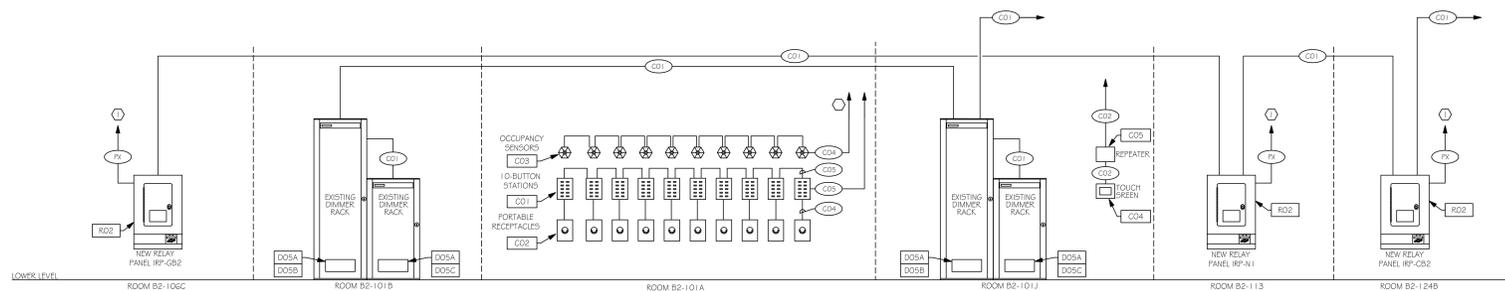
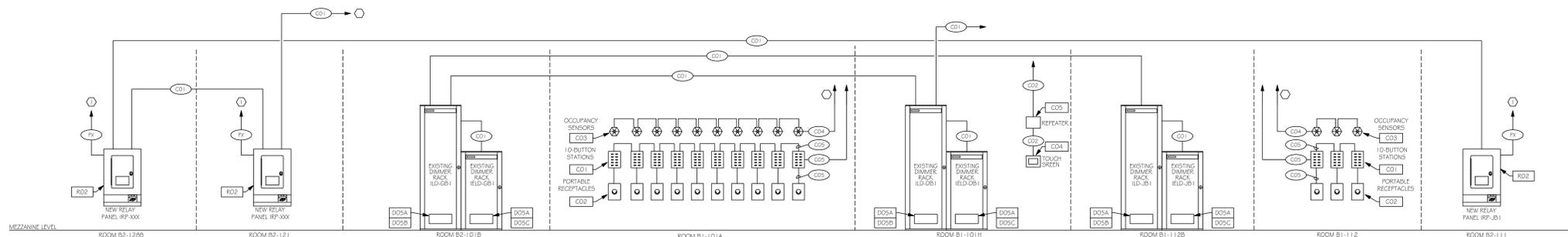
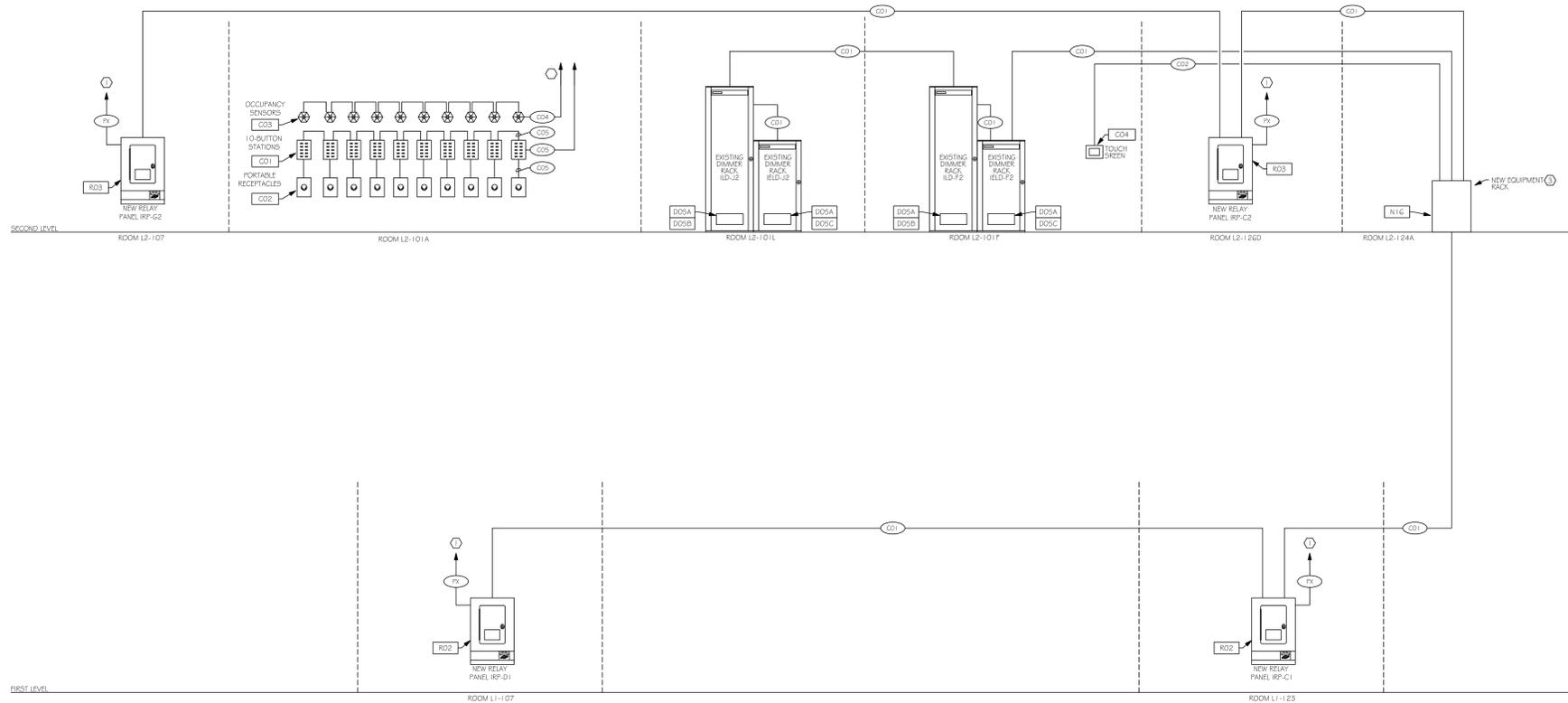
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Date	10 JULY 2015	
Job Number	15020	
Drawn	A. VAGLEJ, MAUER	
Checked	T. VAREBERG	
Approved	T. VAREBERG	

Title

**ONE-LINE
DIAGRAMS -
MEETING ROOMS
& PUBLIC SPACES
- AREA M**

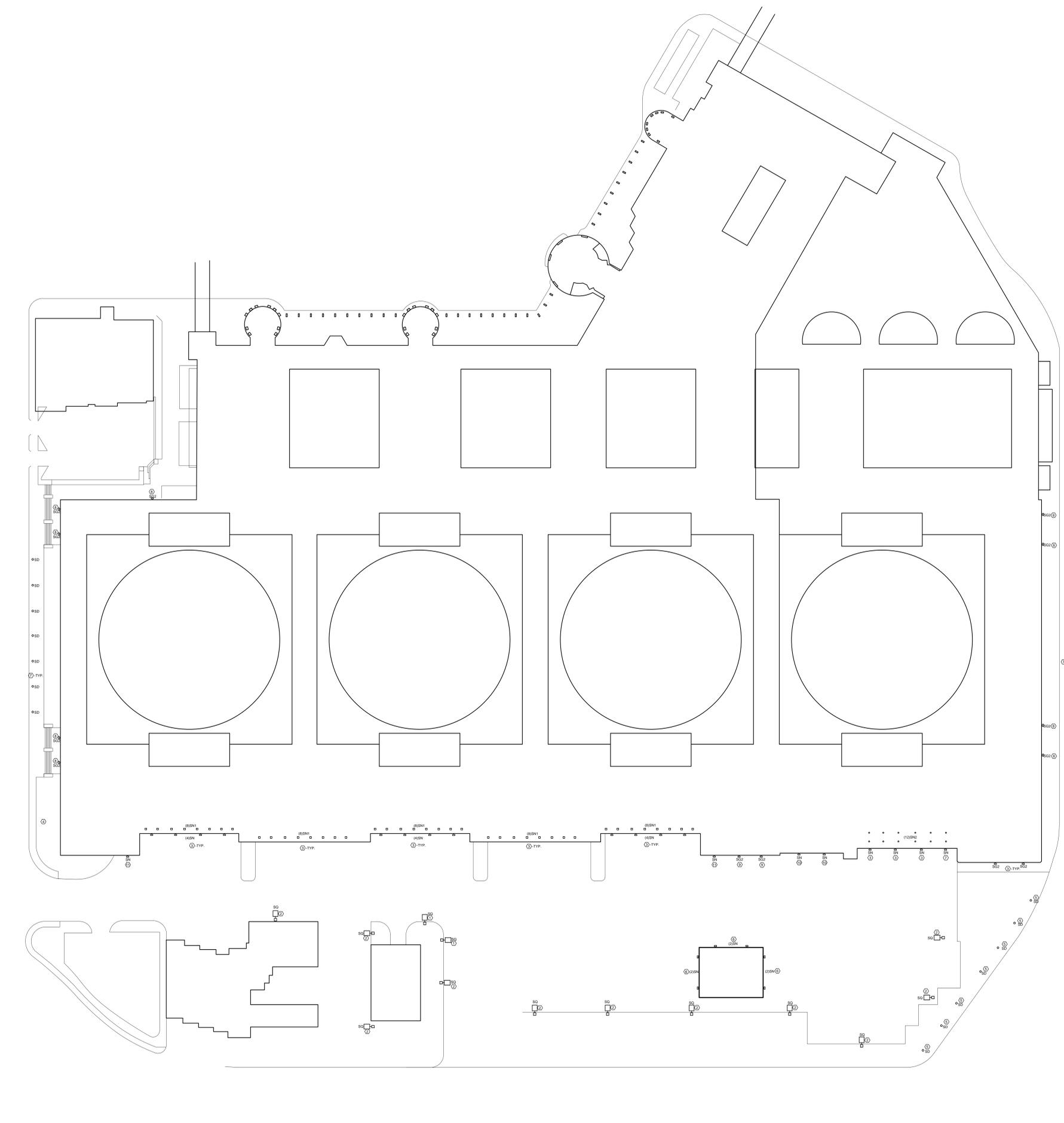
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E46



ONE-LINE DIAGRAM - MEETING ROOMS/PUBLIC SPACES - AREA M
NO SCALE

FOR REFERENCE
ONLY
CONSTRUCTION SET
NOVEMBER 02, 2015



TYPE	REV	FIXTURE TYPE	VOLTAGE	INPUT WATTS	DIMMING	SOURCE	CATALOG NUMBER	REMARKS
SD		Pole	XXX	60	NON-DIM	LED (Included)	BEGA 88 8HPLED-MOD 04H 11'0" with new 1'0" tall pole. CUSTOM COLOR TO MATCH BEGA EMBUSCAGI FINISH	Parkstation Pole
SD2		Surface Sconce	XXX	25	NON-DIM	LED (Included)	HE WILLIAMS WMM-AL20730-T3-CUSTOM RA-ROCK-PC-XXX	Door Exit Light
SN		Surface	XXX	300	NON-DIM	LED (Included)	RAB LIGHTING FXLED000TY-794V6-BROKZE-NON-DIM-XXX	Loading dock light
SM1		Recessed	XXX	75	NON-DIM	LED (Included)	HE WILLIAMS SF-C-522-LED-888P-AF-12125-104MYLAR	Loading under canopy light
SN2		Recessed	XXX	145	NON-DIM	LED (Included)	LITHONIA LDM10RV 27120 L1010V LD MVOLT TRV. Contractor to verify light and trim fits with existing opening. Provide additional trim (per permit to match) (Verify 2 required)	Exit Loading dock light
SD		Pole	XXX	325	NON-DIM	LED (Included)	GAMCO P32-APD-A1-1-4-330LA-WV-BL-PIF WITH HALCO INTERNATIONAL 8333-6550-0000 BLP (trim and custom base plate and oversize base cover. Provide one additional fixture and pole to be delivered to site)	Loading pole light

GENERAL NOTES:

A - CONTRACTOR SHALL VERIFY ALL MOUNTING AND RECESS CONDITIONS PRIOR TO ORDERING FIXTURES

B - CONTRACTOR SHALL PROVIDE ALL HARDWARE, BRACKETS, WIRING, TRANSFORMERS, REMOTE BOXES AND EQUIPMENT TO INSTALL A COMPLETE AND FUNCTIONAL SYSTEM

C - NO SUBSTITUTIONS SHALL BE ACCEPTED WITHOUT PRIOR REVIEW AND WRITTEN APPROVAL BY SCHULER SHOOK

D - LIGHT FIXTURE MANUFACTURERS AND ELECTRICAL CONTRACTORS TO VERIFY COMPATIBILITY OF ALL DIMMING TRANSFORMERS, DRIVERS AND BALLASTS WITH THE LIGHTING CONTROL SYSTEM

E - PRICES SHOWN ARE DISTRIBUTOR NET PRICING AND DO NOT INCLUDE TAXES, FREIGHT, MARK-UP (DISTRIBUTOR OR CONTRACTOR) OR INSTALLATION COST. PRICES ARE PER FIXTURE OR LINEAR FOOT.

F - PRIOR TO ORDERING LUMINAIRES, CONTRACTORS SHALL VERIFY THE COMPATIBILITY OF ALL LED DRIVERS WITH THE CONTROLS BEING ORDERED. WHERE DIMMING IS REQUIRED, CONTROL DRIVERS SHALL BE COMPATIBLE TO ACCESS THE FULL DIMMING CAPABILITY OF THE SPECIFIED LED FIXTURE AND DRIVER COMBINATION. WITH NO VISIBLE FLICKER OR STEPPING (CLARIFY STEPPING). FAILURE TO COORDINATE DIMMERS AND DRIVERS THAT RESULT IN POOR DIMMING PERFORMANCE, AS DETERMINED BY THE LIGHTING DESIGNER AND/OR OWNER OR ELECTRICAL ENGINEER, SHALL BE RECTIFIED BY THE CONTRACTOR AT NO COST TO THE OWNER.

G - CONTRACTOR WILL FAMILIARIZE THEMSELVES WITH ADDRESSING OF LED FIXTURES AT BEGINNING OF PROJECT. PRIOR TO INSTALLATION, CONTRACTOR SHALL PROVIDE A SYSTEMS INTEGRATOR FOR ALL DIMMING SYSTEM.

2 LIGHT FIXTURE SCHEDULE
AL101 SCALE: NO SCALE

GENERAL NOTES:

A. INSTALLATION SHALL CONFORM TO ALL APPLICABLE NEC, UL, STATE AND LOCAL CODES.

B. ALL EMERGENCY EGRESS LIGHTING IS THE RESPONSIBILITY OF THE ELECTRICAL ENGINEER OR ELECTRICAL CONTRACTOR.

C. ALL DIMMING CIRCUITS ARE TWO-WIRE. NO COMMON NEUTRALS SHALL BE USED.

D. FIELD PAINT ALL CONDUIT, JUNCTION BOXES AND HARDWARE TO MATCH ADJACENT SURFACES.

E. ELECTRICAL CONTRACTOR SHALL VERIFY ALL CEILING TYPES, RECESS CONDITIONS, AND MOUNTING HARDWARE REQUIRED PRIOR TO PURCHASE OF ANY LIGHTING FIXTURES.

F. ELECTRICAL CONTRACTOR SHALL VERIFY MOUNTING HEIGHTS OF ALL DECORATIVE FIXTURES WITH SCHULER SHOOK PRIOR TO INSTALLATION.

KEYED NOTES:

1. NEW FIXTURE. PROVIDE NEW BASE. PULL POWER FROM ADJACENT FIXTURE TO THE SOUTH. TRENCH AROUND PIPING, COMING TOWARDS THE BUILDING AS NEEDED. COORDINATE EXACT LOCATION WITH LIGHTING CONSULTANT AND OWNER ON SITE. FIXTURE MUST SITE BETWEEN TREES. COORDINATE TREE PRUNING WITH OWNER.
2. REPLACE FIXTURES IN EXISTING LOCATION. VERIFY MOUNTING AT BASE TO RE-USE EXISTING ANCHOR BOLTS.
3. REPLACE FIXTURES IN EXISTING LOCATION.
4. REMOVE (3) EXISTING FIXTURES AT THIS LOCATION. REMOVE PLINTH, PULL WIRE, AND CAP OVER.
5. TYPE SD POLES TO BE NEW. MOUNT IN GRASS ADJACENT TO THE SIDEWALK. PROVIDE 1'-6" TALL PLINTH. COORDINATE WIRING. ORDERLY RUN CONDUIT ON SURFACE OF SHED. PAINT CONDUIT TO MATCH.
7. REMOVE EXISTING FIXTURE. REMOVE EXISTING PLINTH, PRESERVING THE EXISTING WIRING. INSTALL NEW CONCRETE PLINTH AT 1'-6" OAH. INSTALL POLE ON TOP OF PLINTH.
7. NEW FIXTURE. RUN CONDUIT FROM ADJACENT FIXTURES OF SAME TYPE.
8. NEW FIXTURE. CENTER ON PILASTER BETWEEN DOORS. EMERGENCY CIRCUIT PER ELECTRICAL ENGINEER. DRILL FROM INSIDE. NO SURFACE MOUNTED CONDUIT ALLOWED. EXACT LOCATION TBD PER LIGHTING CONSULTANT ON SITE.
9. NEW FIXTURE. CENTER ABOVE DOORS. EMERGENCY CIRCUIT PER ELECTRICAL ENGINEER. DRILL FROM INSIDE. NO SURFACE MOUNTED CONDUIT ALLOWED. EXACT LOCATION TBD PER LIGHTING CONSULTANT ON SITE.
10. MOUNT FIXTURES ARE TOP OF PARAPET. FEED FROM ROOF.
11. MOUNT CENTERED ABOVE LOADING DOOR. FEED FROM INSIDE. CONNECT TO ADJACENT TYPE SN CIRCUIT.

**THEATRE PLANNERS
LIGHTING DESIGNERS
Schuler Shook**

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THIS DRAWING INDICATES LIGHTING EQUIPMENT LAYOUT AND DESIGN OF LIGHTING SYSTEMS. REVIEW BY A QUALIFIED ENGINEER IS NECESSARY TO ASSURE SAFETY AND CODE COMPLIANCE.

FOR REFERENCE ONLY

REFER TO E-SERIES DRAWINGS FOR ELECTRICAL FEEDS, DISCONNECT SWITCHES, CONDUIT, AND WIRE FOR ALL LIGHTING EQUIPMENT. DIVISION 26 CONTRACTOR SHALL PROVIDE AND INSTALL ALL LIGHTING EQUIPMENT AND CONTROL WIRING INDICATED FOR A COMPLETE AND OPERABLE SYSTEM.

MINNEAPOLIS CONVENTION CENTER
MINNEAPOLIS
MINNESOTA

ARCHITECT:

SCALE: AS NOTED

LAYOUT BY:

DATE: 10-14-16

REVISION HISTORY:

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**EXTERIOR LIGHTING PLAN
BID PACKAGE #1**

MCC EXTERIOR LIGHTING - LIGHT FIXTURE SCHEDULE 11-17-16

BID PACKAGE 1

TYPE	REV.	FIXTURE TYPE	VOLTAGE	INPUT WATTAGE	DIMMING	SOURCE	CATALOG NUMBER	REMARKS	QTY
SD		Pole	XXX	60	NON-DIM	LED (Included)	BEGA 88 994PLED-MOD OAH 11'-0" with new 1'-6" tall plinth. CUSTOM COLOR TO MATCH BEGA EUROCAOT FINISH	Pedestrian Pole	21
SG2		Surface Sconce	XXX	25	NON-DIM	LED (Included)	HE WILLIAMS VWMV-L20/730-T3-CUSTOM RAL-SDGL-PC-XXX	Door Exit Light	13
SN		Surface	XXX	300	NON-DIM	LED (Included)	RAB LIGHTING FXLED300TY-7Hx6V-BRONZE-NON DIM-XXX	Loading flood light	26
SN1		Recessed	XXX	76	NON-DIM	LED (Included)	HE WILLIAMS 50-G-S22-L62/830-F-AF12125-TG/MYLAR	Loading under canopy light	40
SN2		Recessed	XXX	143	NON-DIM	LED (Included)	LITHONIA LDN10RV 27/120 L010W LD MVOLT TRW. Contractor to verify light and trim fits will fit within existing opening. Provide additional trim ring painted to match ceiling if required.	East Loading dock light	12
SQ		Pole	XXX	326	NON-DIM	LED (Included)	GARDCO P32-APD-A1-1-4-330LA-WW-BLP-PTF WITH NAFCO INTERNATIONAL SSS35-505D-Gardco BLP finish and custom base plate and oversize base cover. Provide one additional fixture and pole to be delivered to owner.	Loading pole light	14