EMERGENCY GENERATOR IMPROVEMENTS
SOUTH CITY AND LARRY H. MILLER CAMPUSES
DFCM PROJECT NO. 05177670

CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2003	National Electrical Code	2002
International Mechanical Code	2003	Uniform Code for Building Conservation	
International Plumbing Code	2003	ADA Accessibility Guildelines	2003
International Fire Code	2003		
International Energy Conservation Code	2003		

A. Occupancy and Group: A-1 A-4 B S-1 _____

Change in Use: Yes _____ No X Mixed Occupancy: Yes X No _____
Special Use and Occupancy (e.g. High Rise, Covered Mall): _____

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one): Existing - Varies by Building

I/A I/B II/A II/B III/A III/B IV/HT V/A V/B

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours): Existing - Varies by Building

North: _____ South: _____ East: _____ West: _____

E. Mixed Occupancies: X Nonseparated Uses: _____

F: Sprinklers: Existing - Varies by Building

Required: _____ Provided: _____ Type of Sprinkler System: _____

G: Number of Stories: Exist. Building Height: Exist.

H: Actual Area per Floor (square feet): Existing

I: Tabular Area: Existing

J: Area Modifications: None

a) $A_a = A_t + \left[\frac{A_t I_f}{100}\right] + \left[\frac{A_t I_s}{100}\right]$ $\quad I_f = 100\left[\frac{F}{P} - 0.25\right]\frac{W}{30}$

b) Sum of the Ratio Calculations for Mixed Occupancies:

$\frac{\text{Actual Area}}{\text{Allowable Area}} \leq 1$

c) Total Allowable Area for:
1) One Story: _____
2) Two Story: $A_a(2)$_____
3) Three Story: $A_a(3)$_____

d) Unlimited Area Building: Yes _____ No _____ Code Section: _____

K. Fire Resistance Rating Requirements for Building Elements (hours). Existing

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls			Floors - Ceiling Floors		
Interior Bearing Walls			Roofs - Ceiling Roofs		
Exterior Non-Bearing Walls			Exterior Doors and Windows		
Structural Frame			Shaft Enclosures		
Partitions - Permanent			Fire Walls		
Fire Barriers			Fire Partitions		
			Smoke Partitions		

L. Design Occupant Load: Existing

Exit Width Required: _____ Exit Width Provided: _____

M. Minimum Number of Required Plumbing Facilities: Existing

a) Water Closets - Required (m) _____ (f) _____ Provided (m) _____ (f) _____
b) Lavatories - Required (m) _____ (f) _____ Provided (m) _____ (f) _____
c) Bath Tubs or Showers: _____
d) Drinking Fountains: _____ Service Sinks: _____

FOOTNOTES:

1) In case of conflict with the U.S. Department of Justice Federal Registers Parts I through V - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.

2) Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:
a) High Rise Requirements.
b) Atriums.
c) Performance Based Criteria.
d) Means or Egress Analysis.
e) Fire Assembly Locator Sheet.
f) Exterior and Interior Accessibility Route.
g) Fire Stopping, Including Tested Design Number.

Salt Lake Community College

SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
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State of Utah-Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

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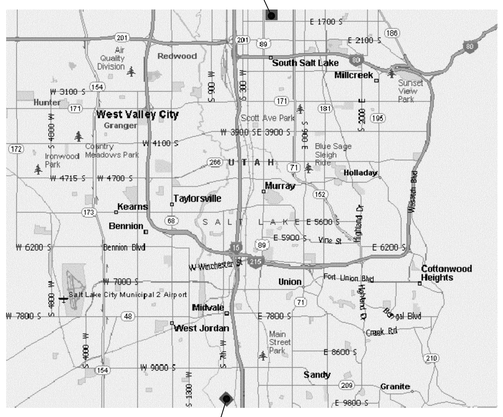

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A4 VICINITY PLAN
NOT TO SCALE

NORTH

DRAWING INDEX

SHEET	NUMBER	SHEET TITLE
1	G-001	LOCATION PLANS, CODE CRITERIA, AND DRAWING INDEX
2	ES101	LARRY H. MILLER CAMPUS - ELECTRICAL SITE PLAN
3	E-101	LARRY H. MILLER CAMPUS - BLDG 1 ELECTRICAL PLANS
4	E-102	LARRY H. MILLER CAMPUS - BLDG 2 ELECTRICAL PLAN
5	E-103	LARRY H. MILLER CAMPUS - BLDG 3 LOWER LEVEL ELECTRICAL PLAN
6	E-104	LARRY H. MILLER CAMPUS - BLDG 3 UPPER LEVEL ELECTRICAL PLAN
7	E-105	LARRY H. MILLER CAMPUS - BLDG 4 LOWER LEVEL MEZZ. ELECTRICAL PLANS
8	E-106	LARRY H. MILLER CAMPUS - BLDG 4 UPPER LEVEL ELECTRICAL PLAN
9	E-401	LARRY H. MILLER CAMPUS - ENLARGED ELECTRICAL ROOMS PLANS
10	E-601	LARRY H. MILLER CAMPUS - SINGLE LINE DIAGRAM AND CONTROL DIAGRAMS
11	E-602	SYMBOL LIST AND SCHEDULES
12	E-107	SOUTH CITY CAMPUS - LOWER LEVEL AND SITE ELECTRICAL PLAN
13	E-108	SOUTH CITY CAMPUS - PARTIAL MAIN LEVEL ELECTRICAL PLAN
14	E-109	SOUTH CITY CAMPUS - PARTIAL LOWER AND MAIN LEVEL ELECTRICAL PLANS
15	E-110	SOUTH CITY CAMPUS - PARTIAL LOWER AND SECOND LEVEL ELECTRICAL PLANS
16	E-603	SOUTH CITY CAMPUS - SINGLE LINE DIAGRAM, SCHEDULES AND DETAILS

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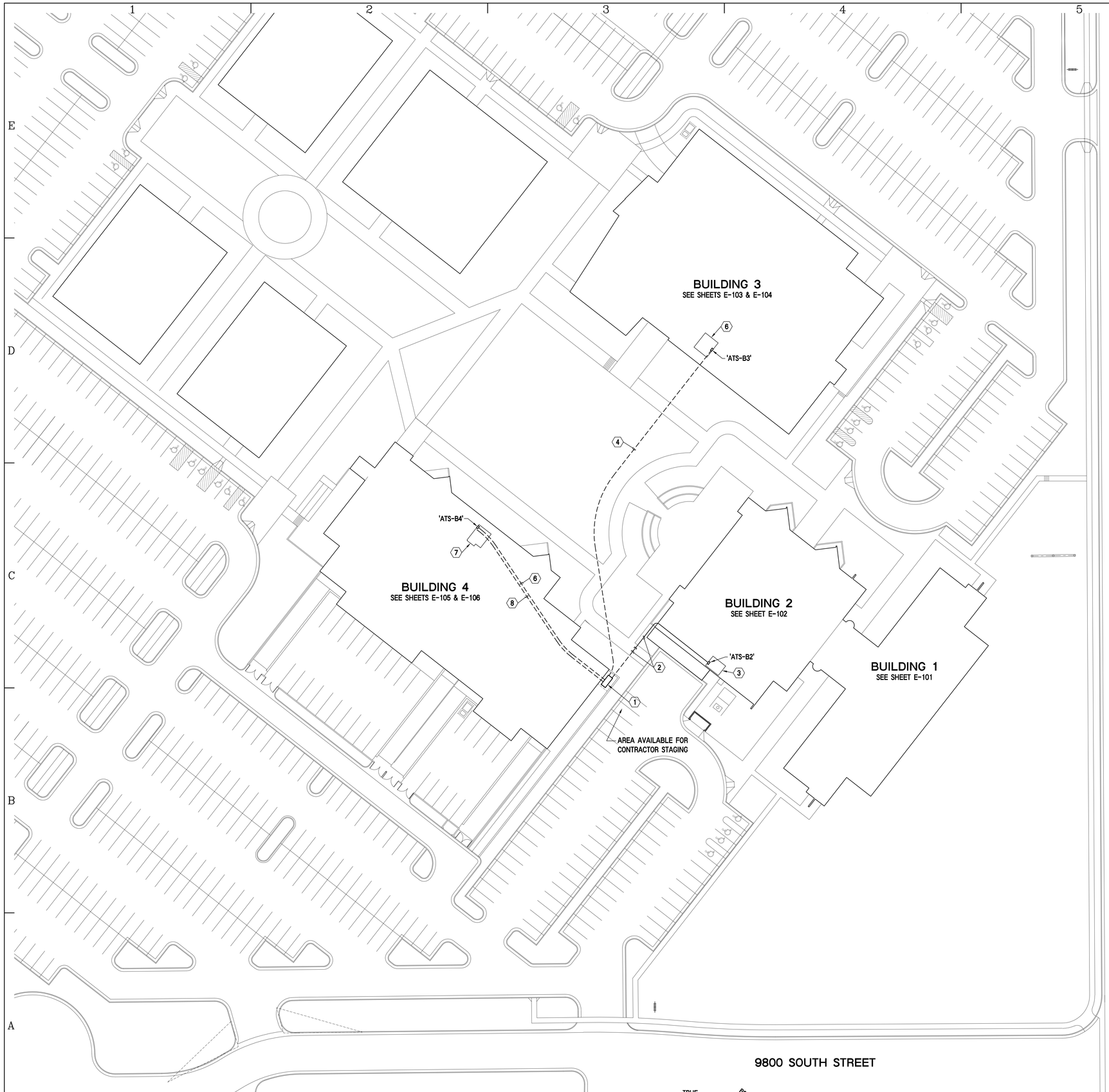
SHEET TITLE:
LOCATION PLAN, CODE CRITERIA, AND DRAWING INDEX

SHEET NUMBER:
G-001

SHEET 1 OF 16



A1 LARRY H. MILLER CAMPUS ELECTRICAL SITE PLAN
SCALE: 1/8" = 1'-0"

GENERAL ELECTRICAL NOTES:

1. SEE GENERAL ELECTRICAL NOTES, SHEET E-101.
2. REPLACE GRASS SOD DISTURBED BY EXCAVATION WITH NEW GRASS SOD IN ACCORDANCE WITH SPECIFICATION SECTION 02170.
3. TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING UNDERGROUND UTILITIES. IMMEDIATELY REPAIR ANY DAMAGE TO EXISTING UNDERGROUND IRRIGATION SPRINKLER SYSTEM, SPRINKLER CONTROL WIRING, WATER LINES, AND OTHER UNDERGROUND UTILITIES.

REFERENCE NOTES:

FOR SHEET LHM ES101 ONLY

1. PROVIDE NEW EMERGENCY GENERATOR, SEE LHM BLDG 4 GENERATOR ENCLOSURE PLAN, SHEET E-601.
2. EXISTING UNDERGROUND 1-1/2" POWER CONDUIT AND 1" GENERATOR CONTROL CONDUIT STUBS FROM GENERATOR ENCLOSURE TO BEYOND EXISTING SIDEWALK. EXTEND CONDUITS TO NEW 'ATS-B2' IN BUILDING 2 ELECT/TELECOMM ROOM. PROVIDE NEW POWER AND CONTROL WIRING AS INDICATED ON LHM SINGLE LINE DIAGRAM, SHEET E-601.
3. PROVIDE NEW AUTOMATIC TRANSFER SWITCH 'ATS-B2' AND NEW EMERGENCY PANELS IN EXISTING BUILDING 2 ELECT/TELECOMM ROOM.
4. EXISTING 4 #4, 1 #8GND, 1-1/2" C, AND 1" GENERATOR CONTROL CONDUIT FROM GENERATOR ENCLOSURE TO PULL BOX IN BUILDING 3 ELECTRICAL ROOM. CONNECT TO NEW 'ATS-B3' AS INDICATED ON LHM SINGLE LINE DIAGRAM, SHEET E-601.
5. PROVIDE NEW AUTOMATIC TRANSFER SWITCH 'ATS-B3' IN EXISTING BUILDING 3 ELECTRICAL ROOM AND CONNECT TO EXISTING EMERGENCY PANELS.
6. EXISTING 4 #4, 1 #8 GND, 1-1/2" C, AND 1" GENERATOR CONTROL CONDUIT FROM GENERATOR ENCLOSURE TO PULLBOX IN BUILDING 4 ELECTRICAL ROOM. CONNECT TO NEW 'ATS-B4' AS INDICATED ON LHM SINGLE LINE DIAGRAM, SHEET E-601.
7. PROVIDE NEW AUTOMATIC TRANSFER SWITCH 'ATS-B4' IN EXISTING BUILDING 4 ELECTRICAL ROOM AND CONNECT TO EXISTING EMERGENCY PANELS.
8. EXISTING UNDERGROUND 1" BRANCH CIRCUIT CONDUIT FROM BLDG 4 PANEL 'L1D' TO GENERATOR ENCLOSURE TO REMAIN. PROVIDE NEW BRANCH CIRCUIT FOR GENERATOR BLOCK HEATER.

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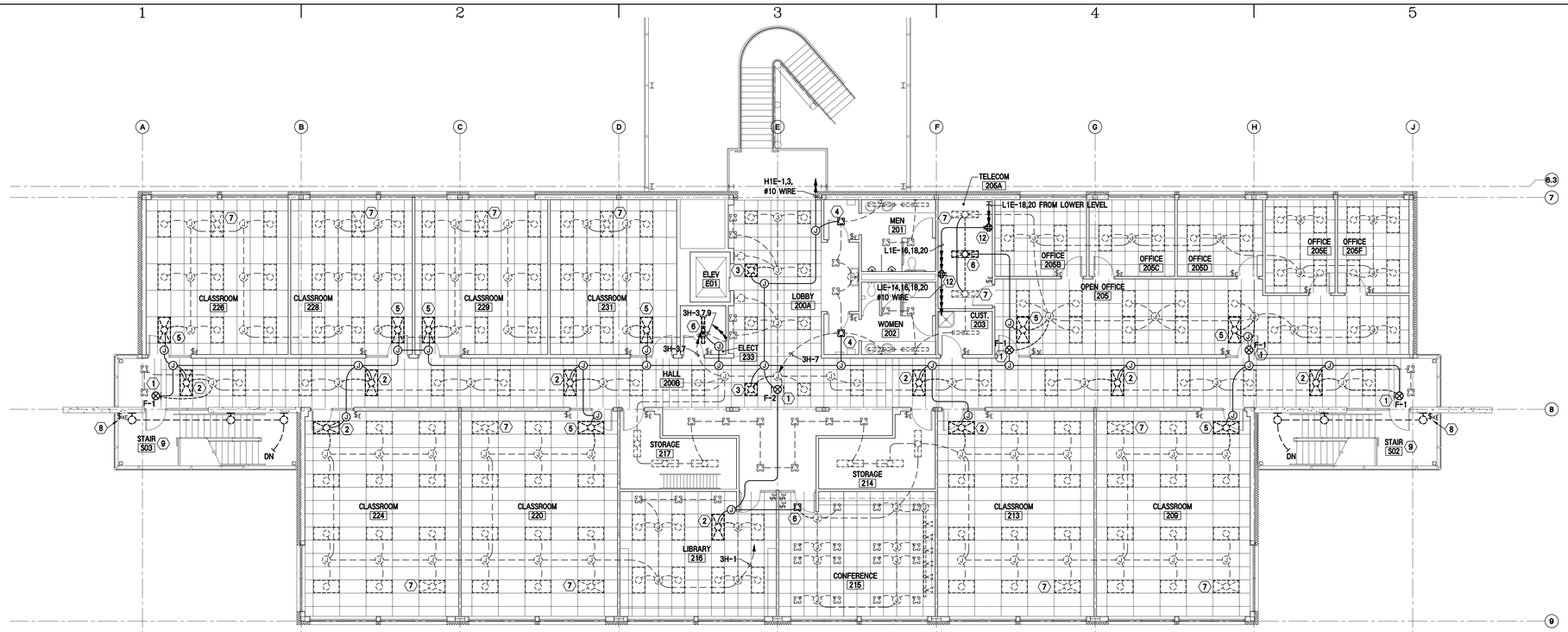
LARRY H. MILLER CAMPUS ELECTRICAL SITE PLAN

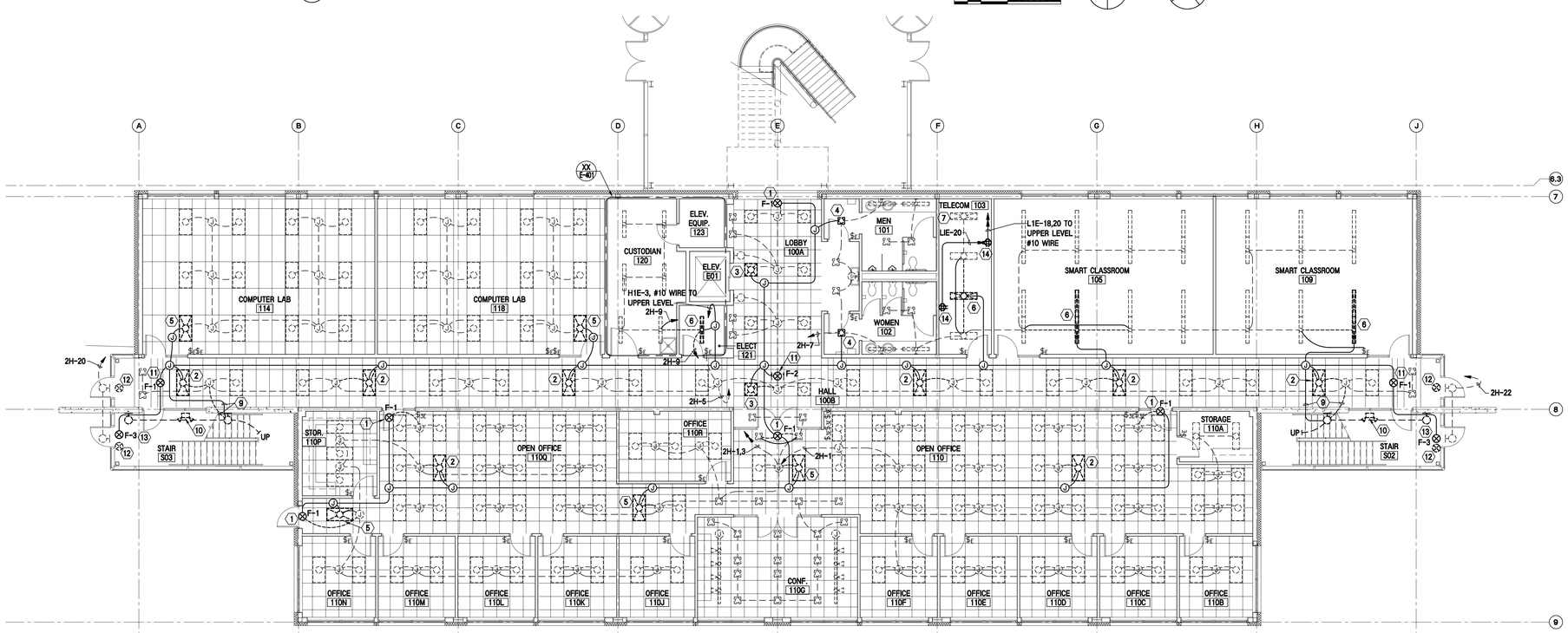
SHEET NUMBER:
LHM
ES101



A1 LARRY H. MILLER CAMPUS BUILDING 1 UPPER LEVEL ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

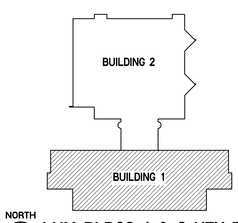
PROJECT NORTH — TRUE NORTH



A1 LARRY H. MILLER CAMPUS BUILDING 1 LOWER LEVEL ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

PROJECT NORTH — TRUE NORTH



LHM BLDGS 1 & 2 KEY PLAN

GENERAL ELECTRICAL NOTES:

1. LOCATIONS OF ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, LIGHT FIXTURES, EQUIPMENT, ETC. WHETHER SPECIFICALLY SHOWN OR NOT.
3. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS TO EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
4. ALL MATERIALS AND EQUIPMENT REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR EXCEPT FOR ITEMS SPECIFICALLY NOTED TO BE SALVAGED FOR OWNER.
5. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND FACILITIES. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.
6. DO NOT INSTALL NEW EMERGENCY BRANCH CIRCUITS IN THE SAME RACEWAY, BOX, ETC., WITH NORMAL POWER WIRING EXCEPT AS ALLOWED BY NEC 700.9 (B).
7. DO NOT REMOVE ANY EXISTING EMERGENCY LIGHTING BATTERY UNITS UNTIL NEW EMERGENCY POWER SYSTEM HAS BEEN INSTALLED AND ACCEPTANCE TESTED AND EMERGENCY LIGHTING IS AVAILABLE FROM THE NEW EMERGENCY POWER SYSTEM.

REFERENCE NOTES:

FOR SHEET E-101 ONLY

1. REPLACE EXISTING BATTERY BACKUP EXIT LIGHT WITH NEW AC ONLY EXIT LIGHT. REMOVE EXISTING NORMAL POWER BRANCH CIRCUIT AND CONNECT TO NEW EMERGENCY BRANCH CIRCUIT.
2. REMOVE BATTERY PACK FROM EXISTING 2' x 4', 3 LAMP LAY-IN FIXTURE. CONNECT 2 LAMP BALLAST, WHERE AVAILBLE, TO NEW EMERGENCY BRANCH CIRCUIT. EXISTING 1 LAMP BALLAST TO REMAIN SWITCHED WITH GENERAL ROOM LIGHTING. REMOVE ALL ABANDONED NORMAL POWER BRANCH CIRCUIT WIRING AND CONDUIT.
3. REMOVE BATTERY PACK FROM EXISTING 2' x 2', 2 LAMP LAY-IN FIXTURE. REMOVE EXISTING NORMAL POWER BRANCH CIRCUIT AND CONNECT NEW EMERGENCY BRANCH CIRCUIT.
4. REMOVE BATTERY PACK FROM EXISTING RECESSED COMPACT FLUORESCENT FIXTURE AND CONNECT TO NEW EMERGENCY BRANCH CIRCUIT. PROVIDE BARRIER IN EXISTING FIXTURE JUNCTION BOX AS REQUIRED TO SEPARATE NORMAL POWER WIRING FROM EMERGENCY POWER WIRING.
5. EXISTING 2' x 4', 3 LAMP LAY-IN FIXTURE. CONNECT 2 LAMP BALLAST, WHERE AVAILBLE, TO NEW EMERGENCY BRANCH CIRCUIT. EXISTING 1 LAMP BALLAST TO REMAIN SWITCHED WITH GENERAL ROOM LIGHTING. REMOVE ALL ABANDONED NORMAL POWER BRANCH CIRCUIT WIRING AND CONDUIT.
6. CONNECT EXISTING FIXTURE TO NEW EMERGENCY BRANCH CIRCUIT. REMOVE AND RECONNECT EXISTING NORMAL POWER BRANCH CIRCUIT AS REQUIRED TO SEPARATE NORMAL POWER WIRING FROM EMERGENCY POWER WIRING.
7. REMOVE BATTERY PACK FROM EXISTING FIXTURE. RECONNECT FIXTURE FROM UNSWITCHED 'NIGHT LIGHT' CIRCUIT TO GENERAL ROOM LIGHTING CIRCUIT CONTROLLED BY SWITCH.
8. REMOVE EXISTING SWITCH AND WIRING CONTROLLING EXISTING STAIRWAY LIGHTING AND PROVIDE BLANK STAINLESS STEEL COVERPLATE ON EXISTING OUTLET BOX.
9. CONNECT EXISTING STAIRWAY LIGHTS TO NEW EMERGENCY BRANCH CIRCUIT AND REMOVE EXISTING NORMAL POWER BRANCH CIRCUIT.
10. REMOVE EXISTING EMERGENCY LIGHTING BATTERY UNIT INCLUDING ABANDONED WIRING, EXPOSED CONDUIT, EXPOSED BOXES, ETC.. PROVIDE BLANK COVERPLATE FOR FLUSH OUTLET BOXES WHERE REQUIRED TO MATCH COLOR OF EXISTING WALL.
11. PROVIDE NEW EXIT LIGHT IN EXISTING CEILING AND CONNECT TO NEW EMERGENCY BRANCH CIRCUIT.
12. REMOVE EXISTING SELF-LUMINOUS EXIT SIGN MOUNTED TO DOOR FRAME. PROVIDE NEW FLAT HEAD SCREWS, COLORED TO MATCH DOOR FRAME, IN EXISTING SCREW HOLES. COUNTERSINK EXISTING HOLES SUCH THAT NEW SCREWS WILL BE FLUSH TO DOOR FRAME.
13. PROVIDE NEW PENDANT MOUNTED EXIT LIGHT TO REPLACE EXISTING SELF-LUMINOUS EXIT SIGN.
14. PROVIDE NEW RECEPTACLES IN EXISTING TELECOM ROOM. FIELD VERIFY LOCATION WITH SLCC TO ALLOW CONNECTION OF ESSENTIAL TELECOM EQUIPMENT.

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LARRY H. MILLER CAMPUS BLDG 1 ELECTRICAL PLANS

SHEET NUMBER:
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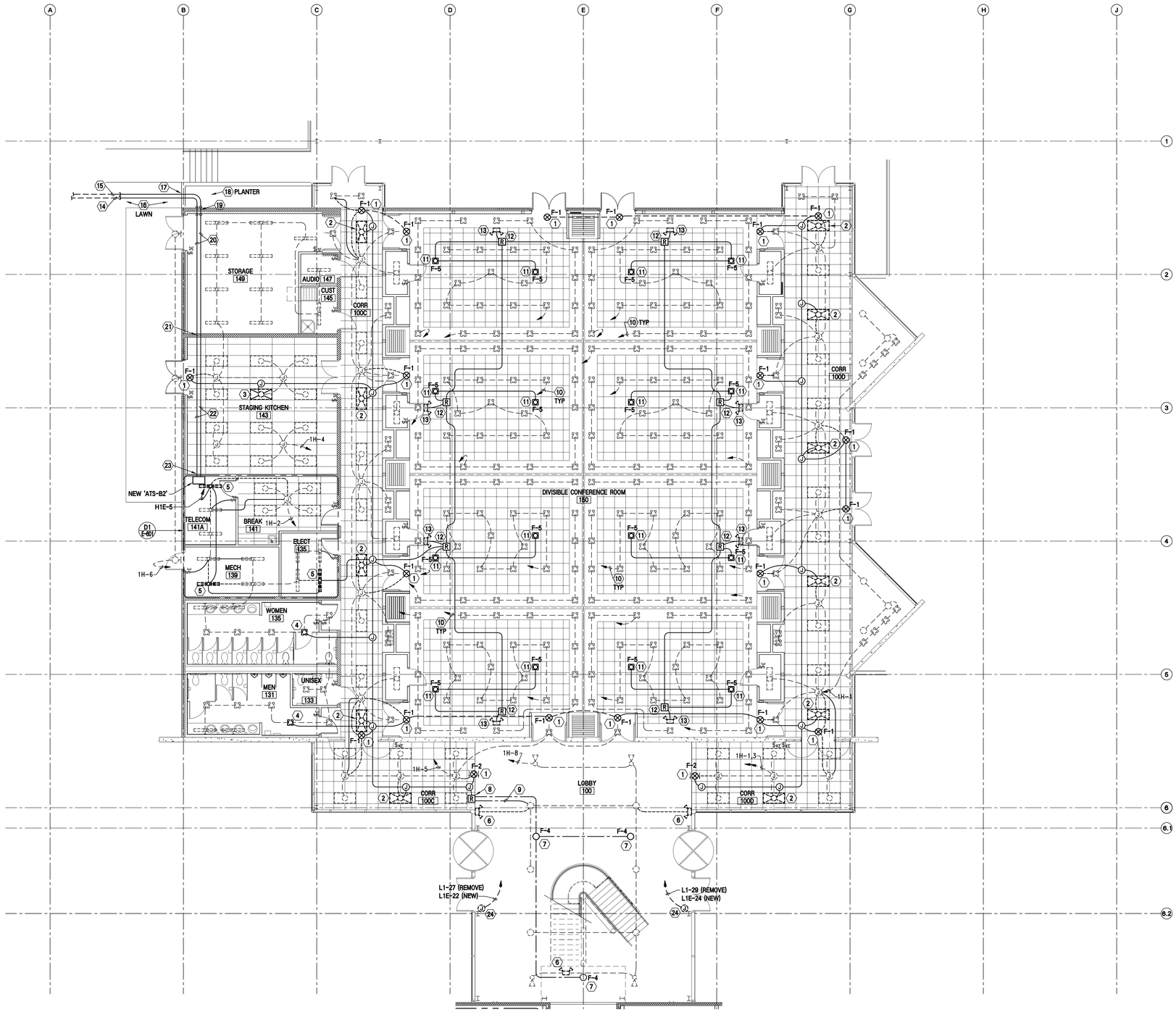
SHEET 3 OF 16



A1 LARRY H. MILLER CAMPUS BUILDING 2 ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

PROJECT NORTH

TRUE NORTH

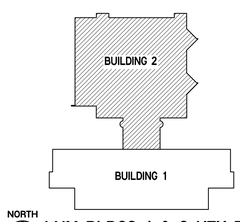
GENERAL ELECTRICAL NOTES:

1. SEE GENERAL ELECTRICAL NOTES, SHEET E-101.

REFERENCE NOTES:

FOR SHEET E-102 ONLY

1. REPLACE EXISTING BATTERY BACKUP EXIT LIGHT WITH NEW AC ONLY EXIT LIGHT. REMOVE EXISTING NORMAL POWER BRANCH CIRCUIT AND CONNECT TO NEW EMERGENCY BRANCH CIRCUIT.
2. REMOVE BATTERY PACK FROM EXISTING 2' x 4', 3 LAMP LAY-IN FIXTURE. CONNECT 2 LAMP BALLAST, WHERE AVAILBLE, TO NEW EMERGENCY BRANCH CIRCUIT. EXISTING 1 LAMP BALLAST TO REMAIN SWITCHED WITH GENERAL ROOM LIGHTING. REMOVE ALL ABANDONED NORMAL POWER BRANCH CIRCUIT WIRING AND CONDUIT.
3. EXISTING 2' x 4', 3 LAMP LAY-IN FIXTURE. CONNECT 2 LAMP BALLAST, WHERE AVAILBLE, TO NEW EMERGENCY BRANCH CIRCUIT. EXISTING 1 LAMP BALLAST TO REMAIN SWITCHED WITH GENERAL ROOM LIGHTING. REMOVE ALL ABANDONED NORMAL POWER BRANCH CIRCUIT WIRING AND CONDUIT.
4. CONNECT EXISTING RECESSED COMPACT FLUORESCENT FIXTURE TO NEW EMERGENCY BRANCH CIRCUIT. PROVIDE BARRIER IN EXISTING FIXTURE JUNCTION BOX AS REQUIRED TO SEPARATE NORMAL POWER WIRING FROM EMERGENCY POWER WIRING.
5. CONNECT EXISTING FIXTURE TO NEW EMERGENCY BRANCH CIRCUIT. REMOVE AND RECONNECT EXISTING NORMAL POWER BRANCH CIRCUIT AS REQUIRED TO SEPARATE NORMAL POWER WIRING FROM EMERGENCY POWER WIRING.
6. REMOVE EXISTING EMERGENCY LIGHTING BATTERY UNIT INCLUDING ABANDONED WIRING, EXPOSED CONDUIT, EXPOSED BOXES, ETC.. PROVIDE BLANK COVERPLATE FOR FLUSH OUTLET BOXES WHERE REQUIRED TO MATCH COLOR OF EXISTING WALL.
7. PROVIDE NEW SURFACE MOUNTED COMPACT FLUORESCENT FIXTURE AND CONNECT TO NEW EMERGENCY BRANCH CIRCUIT. FIELD COORDINATE EXACT LOCATIONS WITH EXISTING STRUCTURE, DUCTWORK, PIPING, ETC..
8. PROVIDE NEW EMERGENCY SHUNT RELAY AND ON-DELAY TIMING RELAY IN ACCESSIBLE CEILING SPACE. SEE LOBBY LIGHTING CONTROL WIRING DIAGRAM, SHEET E-601.
9. CONNECT UNSWITCHED CONDUCTOR OF GENERAL ROOM LIGHTING BRANCH CIRCUIT TO COIL OF NEW EMERGENCY SHUNT RELAY.
10. EXISTING CONFERENCE ROOM CIRCUITS TO DIMMER IN ELECTRICAL ROOM TO REMAIN. FIELD VERIFY EXISTING CIRCUITING.
11. PROVIDE NEW RECESSED MOUNTED COMPACT FLUORESCENT FIXTURE IN EXISTING CEILING AND CONNECT TO NEW EMERGENCY BRANCH CIRCUIT. FIELD COORDINATE EXACT LOCATIONS WITH EXISTING CEILING, DUCTWORK, PIPING, ETC..
12. PROVIDE NEW EMERGENCY SHUNT RELAY IN ACCESSIBLE CEILING SPACE. SEE TYPICAL MEETING ROOM LIGHTING CONTROL WIRING DIAGRAM, SHEET E-601.
13. REMOVE EXISTING EMERGENCY LIGHTING UNIT BATTERY AND LAMPS. PROVIDE NEW BLANK COVERPLATE FOR EXISTING FLUSH HOUSING PAINTED TO MATCH WALL. EXTEND EXISTING UNSWITCHED DIMMER CIRCUIT TO COIL OF NEW EMERGENCY SHUNT RELAY.
14. EXISTING 1" GENERATOR CONTROL CONDUIT UNDERGROUND FROM BUILDING #4. EXTEND CONDUIT TO NEW 'ATS-B2' AND PROVIDE NEW GENERATOR CONTROL WIRING AS REQUIRED BY GENERATOR MANUFACTURER.
15. EXISTING 1-1/2" POWER CONDUIT UNDERGROUND FROM BUIILDING 4. EXTEND CONDUIT TO NEW 'ATS-B2' AND PROVIDE NEW CONDUCTORS AS SHOWN ON LHM SINGLE LINE DIAGRAM, SHEET E-601.
16. REPAIR EXISTING GRASS SOD TO MATCH ORIGINAL CONDITION UPON COMPLETION OF BACKFILLING, INCLUDING INSTALLATION OF NEW GRASS SOD, REPAIR OF IRRIGATION SPRINKLER SYSTEM, ETC..
17. CORE-DRILL EXISTING PLANTER FOUNDATION WALL FOR NEW CONDUIT PENETRATIONS. PROVIDE RIGID STEEL CONDUIT TO EXTEND MINIMUM 3 FEET BEYOND EACH SIDE OF THE WALL.
18. REPAIR EXISTING PLANTING AREA TO MATCH ORIGINAL CONDITION UPON COMPLETION OF BACKFILLING, INCLUDING INSTALLATION OF NEW PLANTS, REPAIR OF IRRIGATION SPRINKLER SYSTEM, ETC..
19. CORE-DRILL EXISTING EXTERIOR WALL FOR NEW CONDUIT PENETRATION APPROXIMATELY 6" ABOVE INTERIOR FLOOR. PROVIDE TYPE 'LB' CONDUIT BODIES ON INTERIOR AND EXTERIOR OF BUILDING. SEAL EXTERIOR WALL WITH NON-SHRINK EPOXY GROUT TO MATCH COLOR OF BRICK WALL. SEAL INTERIOR WALL WITH DRYWALL PLASTER, SANDED AND PAINTED TO MATCH EXISTING WALL.
20. INSTALL NEW CONDUIT EXPOSED THROUGH EXISTING STORAGE ROOM. INSTALL AS HIGH AS POSSIBLE TO ALLOW MAXIMUM HEADROOM ON EXISTING MEZZANINE STORAGE.
21. CORE-DRILL AND FIRE-SEAL EXISTING CONCRETE WALL FOR NEW CONDUIT PENETRATIONS.
22. INSTALL NEW CONDUIT CONCEALED ABOVE EXISTING CEILING THROUGH STAGING KITCHEN.
23. FIRE SEAL CONDUIT PENETRATION THROUGH EXISTING WALL.
24. RECONNECT POWER FOR ADA DOOR OPERATORS FROM EXISTING CIRCUIT TO NEW EMERGENCY BRANCH CIRCUIT AS SHOWN.



LHM BLDGS 1 & 2 KEY PLAN

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RAYMOND G. KOLKMAN
175780
STATE OF UTAH

CONSULTANTS:

PROJECT:

Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

AND

LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
SANDY, UTAH

REVISIONS:

MARK	DATE	DESCRIPTION

ISSUE TYPE: CONSTRUCTION DOCUMENTS
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DFCM PROJECT NO.: 05177670
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CAD DWG FILE: LHM E-101.dwg
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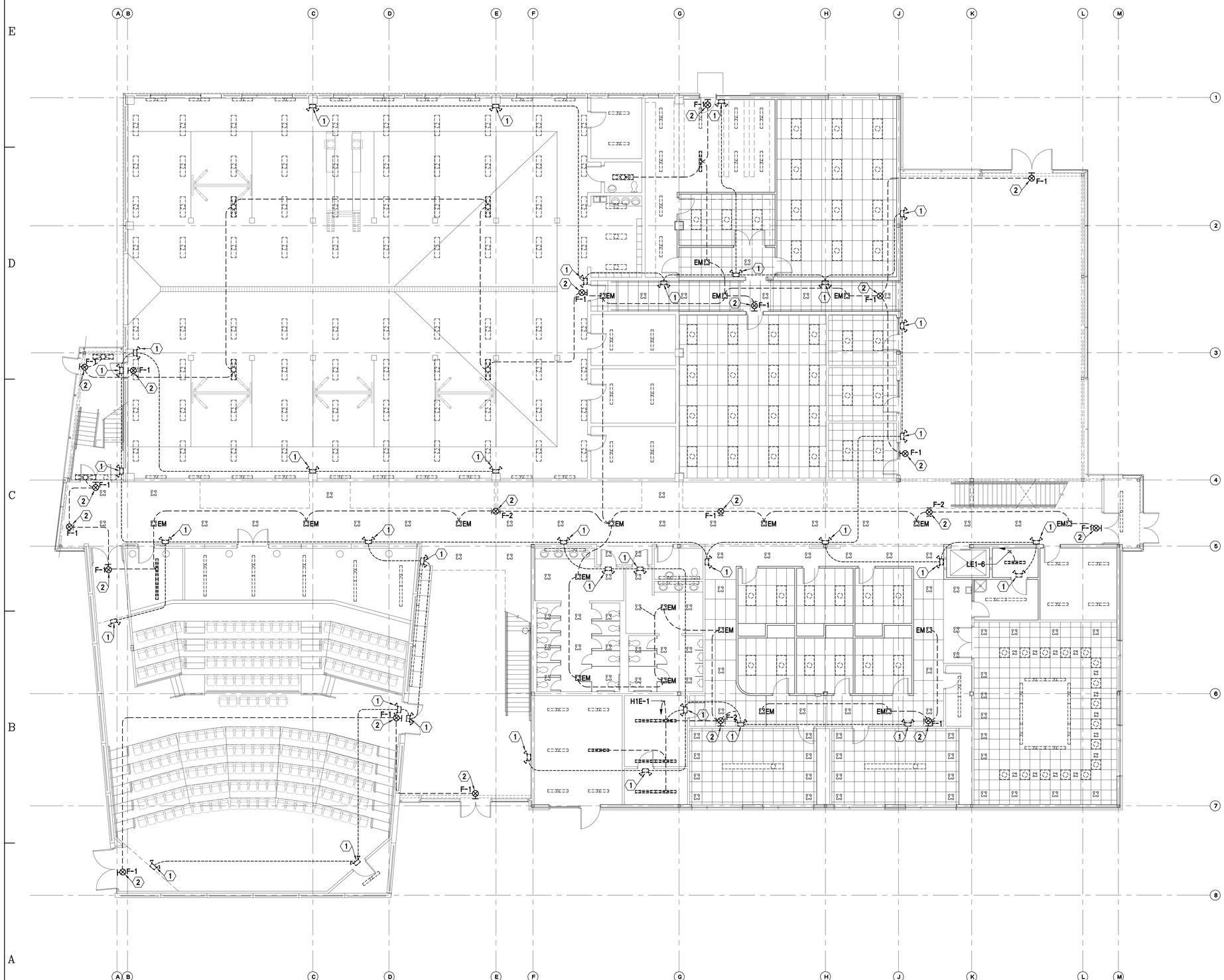
SHEET TITLE:
LARRY H. MILLER CAMPUS BLDG 2 ELECTRICAL PLAN

SHEET NUMBER:
LHM
E-102

GENERAL ELECTRICAL NOTES:

1. SEE GENERAL ELECTRICAL NOTES, SHEET E-101.



REFERENCE NOTES:

FOR SHEET E-103 ONLY

1. REMOVE EXISTING EMERGENCY LIGHTING BATTERY UNIT INCLUDING ABANDONED WIRING, EXPOSED CONDUIT, EXPOSED BOXES, ETC. PROVIDE BLANK COVERPLATE FOR FLUSH OUTLET BOXES WHERE REQUIRED TO MATCH COLOR OF EXISTING WALL.
2. REPLACE EXISTING BATTERY BACKUP EXIT LIGHT WITH NEW AC ONLY EXIT LIGHT AND RECONNECT TO EXISTING EMERGENCY BRANCH CIRCUIT.

A1 LARRY H. MILLER CAMPUS BUILDING 3 LOWER LEVEL ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

PROJECT NORTH

TRUE NORTH

State of Utah
Department of Administrative Services

Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267

Internet: http://dfcm.state.ut.us

PROJECT ENGINEER:

THOMAS & KOLKMAN ENGINEERING CO. INC.
64 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84115
TELEPHONE: (801) 484-8161
FACSIMILE: (801) 484-3538

REGISTERED PROFESSIONAL ENGINEER
RAYMOND G. KOLKMAN
175780
16106
STATE OF UTAH

CONSULTANTS:

PROJECT:

Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

AND

LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
SANDY, UTAH

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ISSUE TYPE: CONSTRUCTION DOCUMENTS

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DFCM PROJECT NO.: 05177670

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SHEET TITLE:

LARRY H. MILLER CAMPUS BLDG 3 LOWER LEVEL ELECTRICAL PLAN

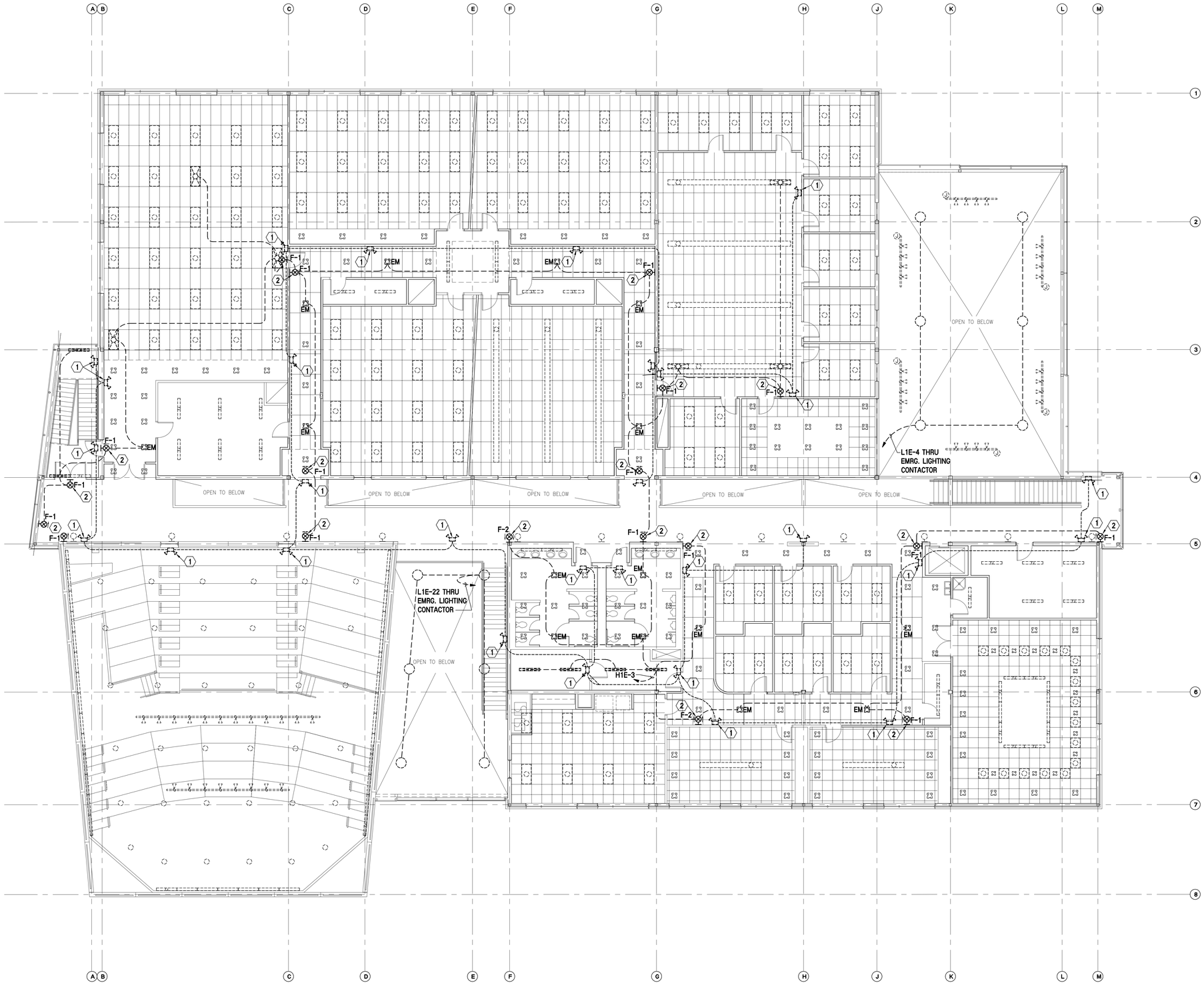
SHEET NUMBER:

LHM

E-103

GENERAL ELECTRICAL NOTES:

1. SEE GENERAL ELECTRICAL NOTES, SHEET E-101.



REFERENCE NOTES:

FOR SHEET E-104 ONLY

1. REMOVE EXISTING EMERGENCY LIGHTING BATTERY UNIT INCLUDING ABANDONED WIRING, EXPOSED CONDUIT, EXPOSED BOXES, ETC. PROVIDE BLANK COVERPLATE FOR FLUSH OUTLET BOXES WHERE REQUIRED TO MATCH COLOR OF EXISTING WALL.
2. REPLACE EXISTING BATTERY BACKUP EXIT LIGHT WITH NEW AC ONLY EXIT LIGHT AND RECONNECT TO EXISTING EMERGENCY BRANCH CIRCUIT.

A1 LARRY H. MILLER CAMPUS BUILDING 3 UPPER LEVEL ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

PROJECT NORTH

TRUE NORTH

State of Utah
Department of Administrative Services

Division of Facilities Construction & Management
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Salt Lake City, Utah 84114
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Fax: (801) 538 - 3267

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REGISTERED PROFESSIONAL ENGINEER
RAYMOND G. KOLKMAN
175780
16106
STATE OF UTAH

CONSULTANTS:

PROJECT:

Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

SOUTH CITY CAMPUS
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SANDY, UTAH

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SHEET TITLE:

LARRY H. MILLER CAMPUS
BLDG 3 UPPER LEVEL
ELECTRICAL PLAN

SHEET NUMBER:

LHM
E-104

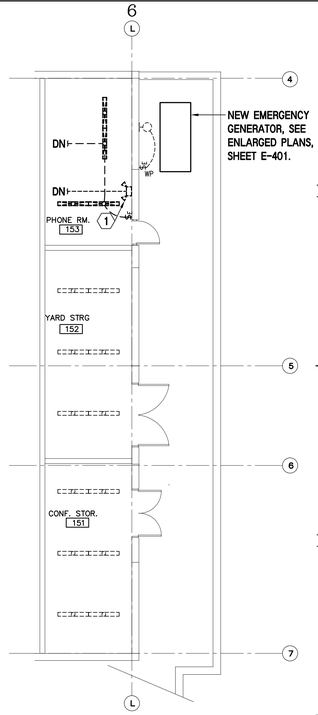
REFERENCE NOTES:

FOR SHEET E-105 ONLY

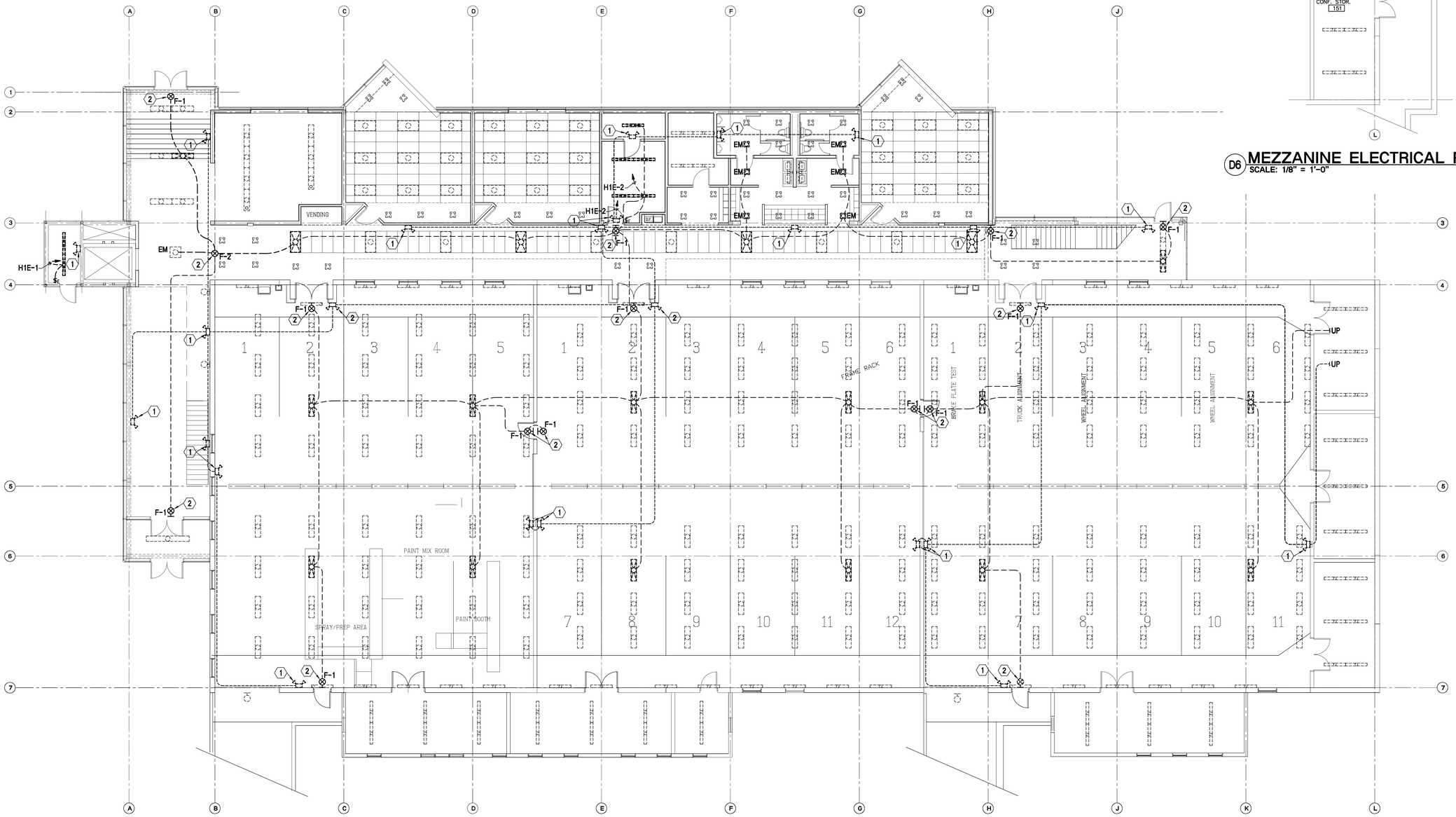
1. REMOVE EXISTING EMERGENCY LIGHTING BATTERY UNIT INCLUDING ABANDONED WIRING, EXPOSED CONDUIT, EXPOSED BOXES, ETC.. PROVIDE BLANK COVERPLATE FOR FLUSH OUTLET BOXES WHERE REQUIRED TO MATCH COLOR OF EXISTING WALL.
2. REPLACE EXISTING BATTERY BACKUP EXIT LIGHT WITH NEW AC ONLY EXIT LIGHT AND RECONNECT TO EXISTING EMERGENCY BRANCH CIRCUIT.

GENERAL ELECTRICAL NOTES:

1. SEE GENERAL ELECTRICAL NOTES, SHEET E-101.



D6 MEZZANINE ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"



A1 LARRY H. MILLER CAMPUS BUILDING 4 LOWER LEVEL ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

PROJECT NORTH
TRUE NORTH

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
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REGISTERED PROFESSIONAL ENGINEER
RAYMOND G. KOLKMAN
175780
STATE OF UTAH

CONSULTANTS:

PROJECT:

Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

AND

LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
SANDY, UTAH

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SHEET TITLE:
LARRY H. MILLER CAMPUS BLDG 4 LOWER LEVEL AND MEZZ. ELECTRICAL PLANS

SHEET NUMBER:
LHM
E-105

REFERENCE NOTES:

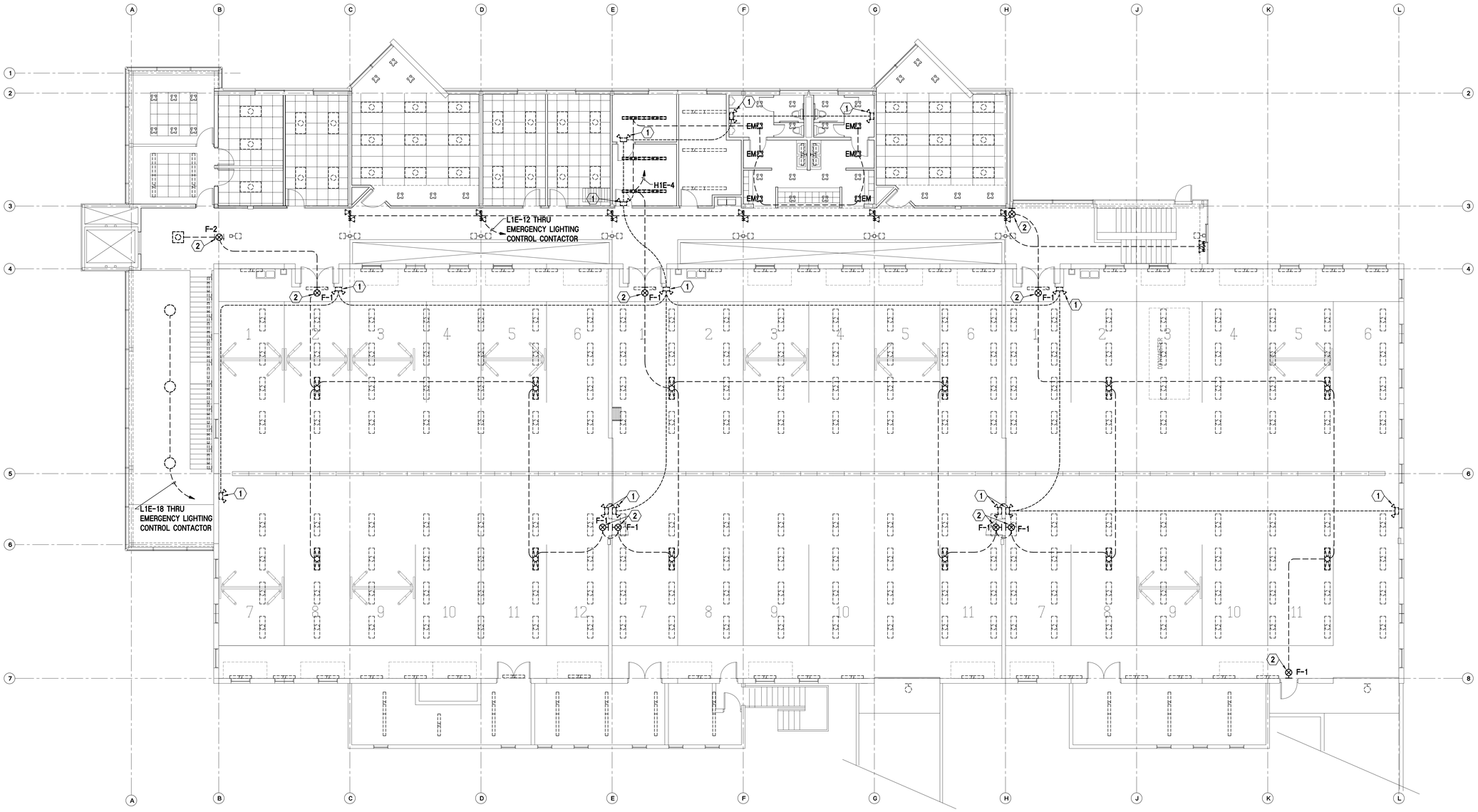
FOR SHEET LHM E-106 ONLY

1. REMOVE EXISTING EMERGENCY LIGHTING BATTERY UNIT INCLUDING ABANDONED WIRING, EXPOSED CONDUIT, EXPOSED BOXES, ETC.. PROVIDE BLANK COVERPLATE FOR FLUSH OUTLET BOXES WHERE REQUIRED TO MATCH COLOR OF EXISTING WALL.

2. REPLACE EXISTING BATTERY BACKUP EXIT LIGHT WITH NEW AC ONLY EXIT LIGHT AND RECONNECT TO EXISTING EMERGENCY BRANCH CIRCUIT.

GENERAL ELECTRICAL NOTES:

1. SEE GENERAL ELECTRICAL NOTES, SHEET E-101.



A1 LARRY H. MILLER CAMPUS BUILDING 4 UPPER LEVEL ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

PROJECT NORTH

TRUE NORTH

State of Utah
Department of Administrative Services

Division of Facilities Construction & Management
4110 State Office Building
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Fax: (801) 538 - 3267

Internet: http://dfcm.state.ut.us

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REGISTERED PROFESSIONAL ENGINEER
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175780
STATE OF UTAH

CONSULTANTS:

PROJECT:

Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

AND

LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
SANDY, UTAH

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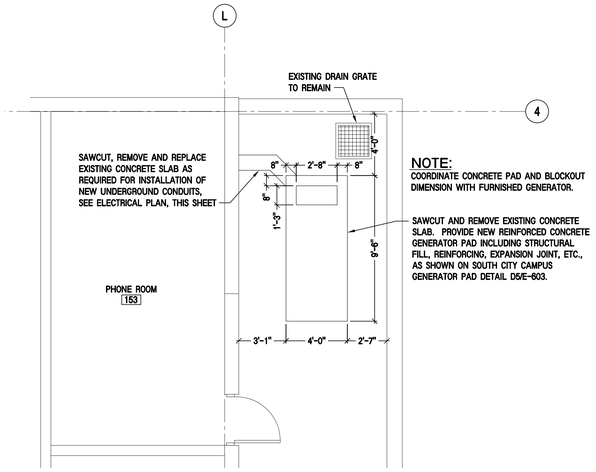
SHEET TITLE:

LARRY H. MILLER CAMPUS
BLDG 4 UPPER LEVEL
ELECTRICAL PLAN

SHEET NUMBER:

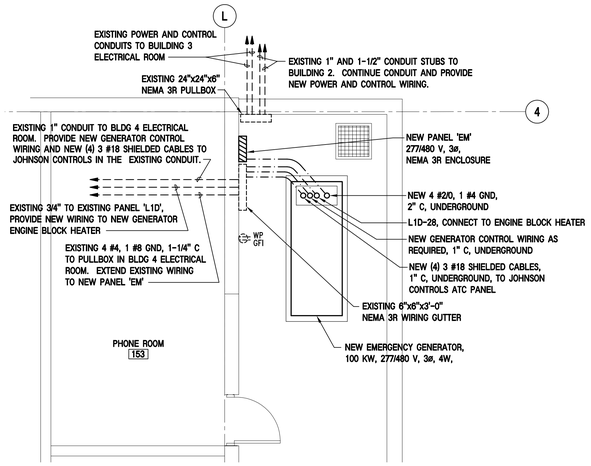
LHM
E-106

SHEET 8 OF 16



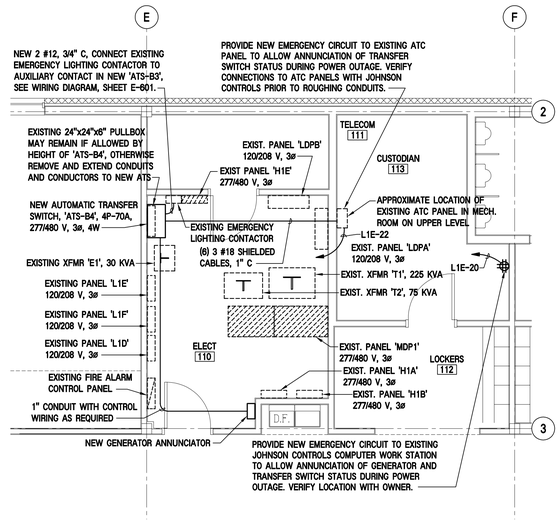
LHM BUILDING 4 ENLARGED GENERATOR ENCLOSURE PLAN

D1 SCALE: 1/4" = 1'-0"



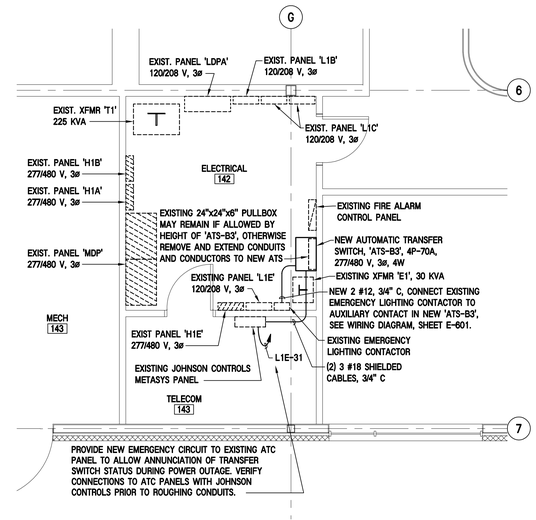
LHM BUILDING 4 GENERATOR ENCLOSURE ELECTRICAL PLAN

C1 SCALE: 1/4" = 1'-0"



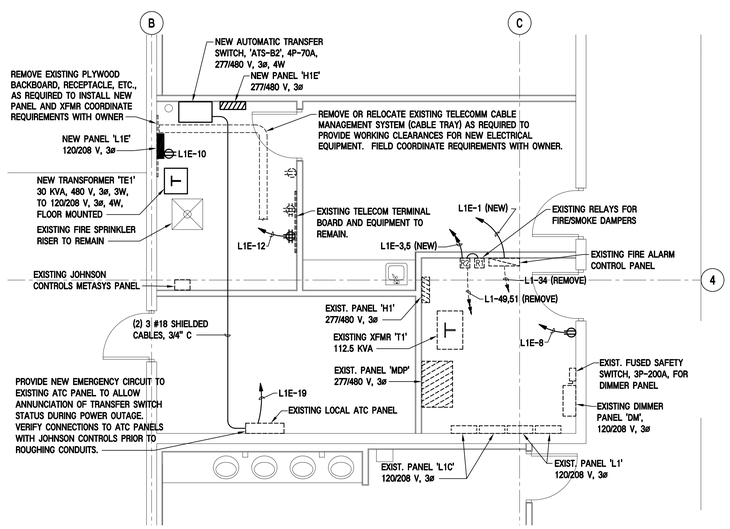
LHM BUILDING 4 LOWER LEVEL ENLARGED ELECT ROOM PLAN

C3 SCALE: 1/4" = 1'-0"



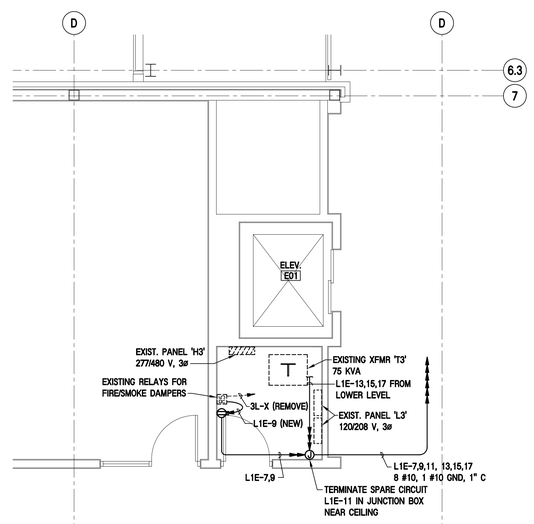
LHM BUILDING 3 LOWER LEVEL ENLARGED ELECT ROOM PLAN

C5 SCALE: 1/4" = 1'-0"



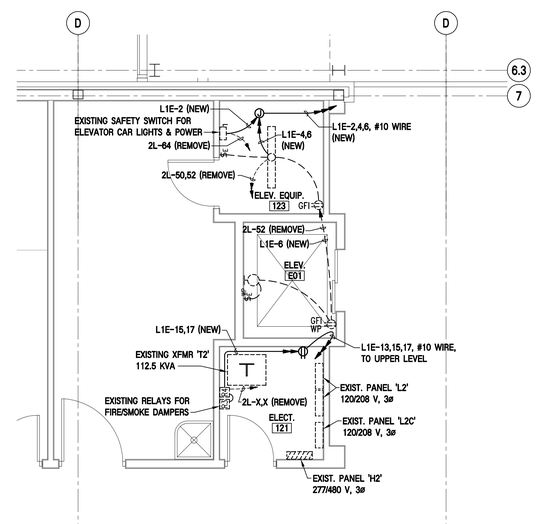
LHM BUILDING 2 ENLARGED ELECTRICAL ROOM PLAN

A1 SCALE: 1/4" = 1'-0"



LHM BUILDING 1 UPPER LEVEL ENLARGED ELECT ROOM PLAN

A3 SCALE: 1/4" = 1'-0"



LHM BUILDING 1 LOWER LEVEL ENLARGED ELECT ROOM PLAN

A5 SCALE: 1/4" = 1'-0"

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267
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PROJECT ENGINEER:
THOMAS & KOLKMAN ENGINEERING CO. INC.
64 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84115
TELEPHONE: (801) 484-8161
FACSIMILE: (801) 484-3538

REGISTERED PROFESSIONAL ENGINEER RAYMOND G. KOLKMAN 175780 STATE OF UTAH

CONSULTANTS:

PROJECT:

Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

AND

LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
SANDY, UTAH

REVISIONS:

MARK	DATE	DESCRIPTION

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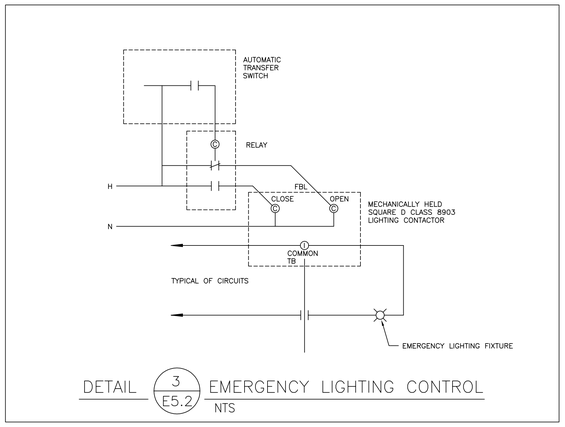
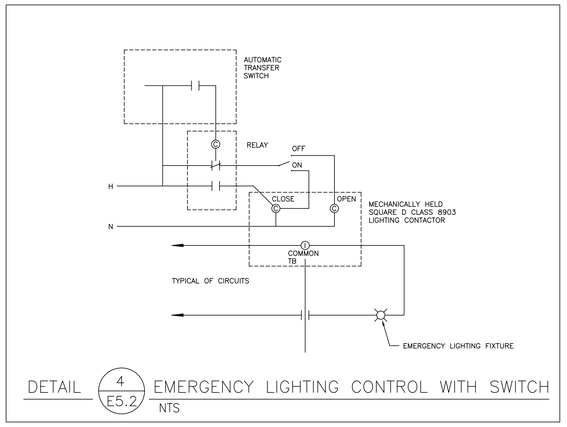
SHEET TITLE:
LARRY H. MILLER CAMPUS ENLARGED ELECTRICAL ROOMS PLANS

SHEET NUMBER:
LHM
E-401



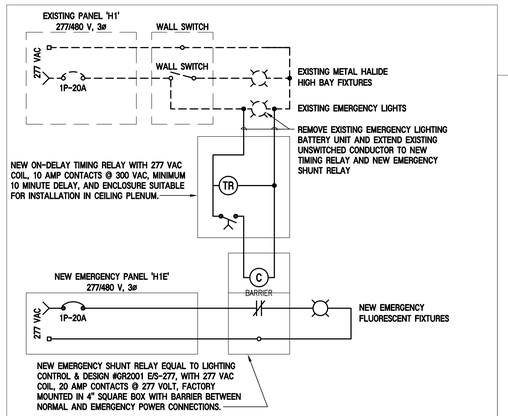
DETAIL 3/E5.2 EMERGENCY LIGHTING CONTROL
NTS



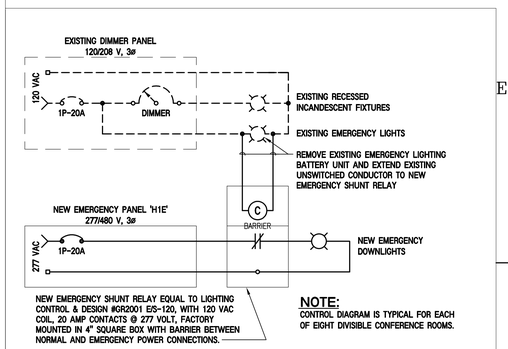
DETAIL 4/E5.2 EMERGENCY LIGHTING CONTROL WITH SWITCH
NTS

NOTE:
CONTROL DIAGRAMS FROM ORIGINAL BUILDING ELECTRICAL DRAWINGS FOR REFERENCE. EMERGENCY LIGHTING CONTACTORS HAVE BEEN INSTALLED. THIS CONTRACTOR TO MAKE CONTROL CONNECTIONS TO NEW AUTOMATIC TRANSFER SWITCHES AS SHOWN AND LEAVE EMERGENCY LIGHTING IN PROPER WORKING ORDER.

D1 LHM BUILDINGS 3 & 4 EMERGENCY LIGHTING CONTROL WIRING DIAGRAMS
SCHEMATIC

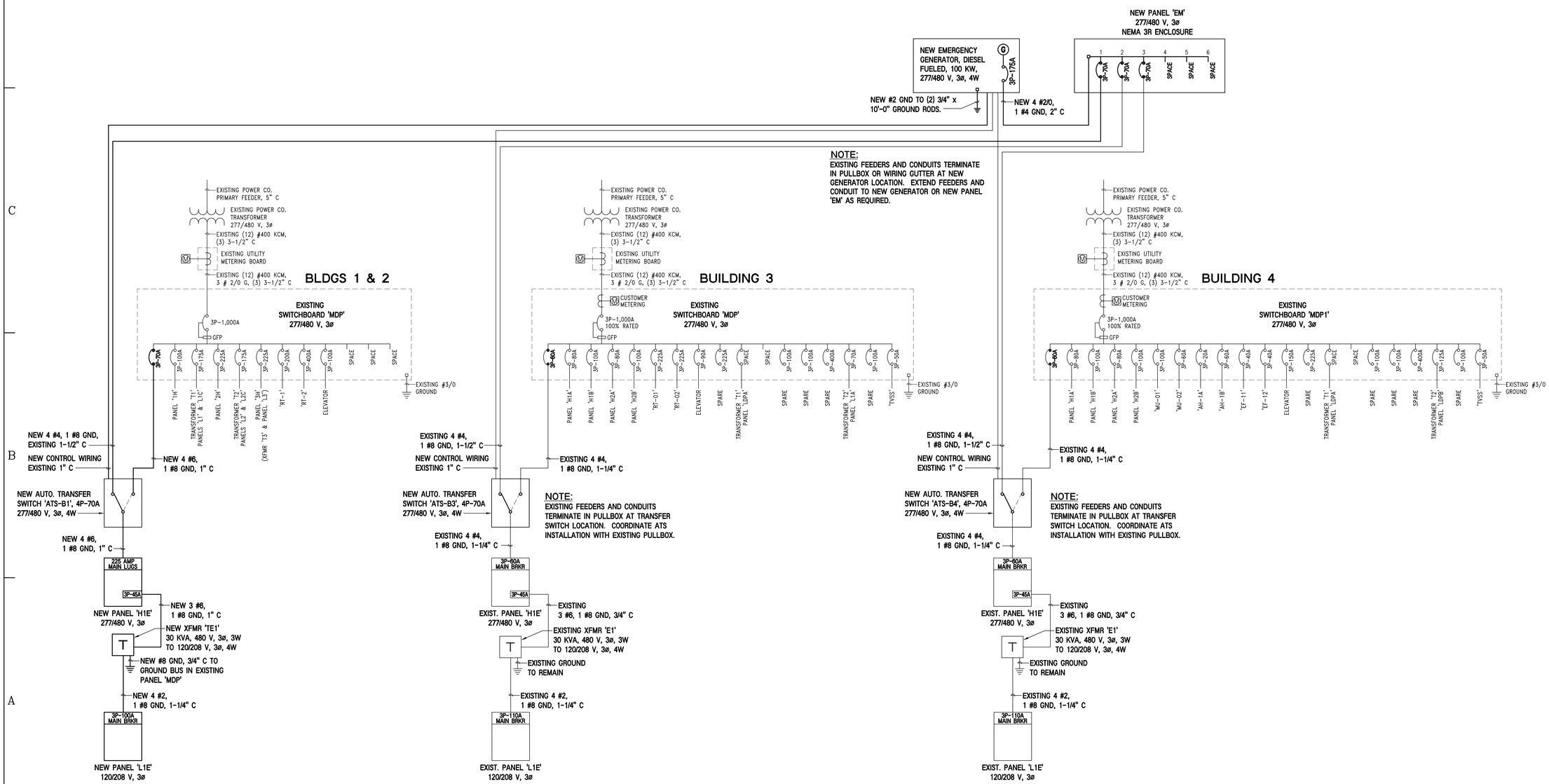


D4 BLDGS 1 & 2 LOBBY EMERGENCY LIGHTING CONTROL WIRING DIAGRAM
SCHEMATIC



NOTE:
CONTROL DIAGRAM IS TYPICAL FOR EACH OF EIGHT DIVISIBLE CONFERENCE ROOMS.

D6 BLDG 2 CONF. ROOMS EMERGENCY LIGHTING CONTROL WIRING DIAGRAM
SCHEMATIC



A1 LARRY H. MILLER CAMPUS EMERGENCY POWER SINGLE LINE DIAGRAM
SCALE: SCHEMATIC

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
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Salt Lake City, Utah 84114
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FACSIMILE: (801) 484-3538

REGISTERED PROFESSIONAL ENGINEER
RAYMOND G. KOLKMAN
175780
16106
STATE OF UTAH

CONSULTANTS:

PROJECT:

Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

SOUTH CITY CAMPUS
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SALT LAKE CITY, UTAH

AND

LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
SANDY, UTAH

REVISIONS:

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SHEET TITLE:
LARRY H. MILLER CAMPUS SINGLE LINE DIAGRAM AND CONTROL DIAGRAMS

SHEET NUMBER:
LHM
E-601

EXISTING PANEL 'H1E', BUILDING 3
SIEMENS TYPE 'S2'
3 POLE 60 AMP MAIN BREAKER

20,000 A.I.C.
277/480 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	LIGHTING LEVEL 1			2,390	5,700			3,310			LIGHTING LEVEL ONE	1	20	2
3	1	20	LIGHTING LEVEL 2			1,540		4,240		2,700			LIGHTING LEVEL TWO			4
5	3	20	PANEL 'L1E' VIA XFMR 'E1'			9,525			9,525				SPARE			6
7	-	-	-			9,325	9,325						SPARE			8
9	-	-	-			8,195		8,195					SPARE			10
11	1	20	SPARE						0				SPARE			12
13			SPARE				0						SPARE			14
15			SPARE					0					SPARE			16
17			SPARE						0				SPARE	1	20	18
19			SPARE				0						SPACE	1		20
21	1	20	SPARE					0								22
23	1	20	SPACE						0							24
25							0									26
27								0								28
29									0							30
31							0									32
33								0								34
35									0							36
37							0									38
39								0								40
41	1	20	SPACE						0				SPACE	1		42
							15,025	12,435	9,525							

TOTAL CONNECTED LOAD: 36,985 VA 44 AMPS FEEDER: EXISTING 4 #4, 1 #8 GND, 1-1/4" C
CALCULATED FEEDER DEMAND, NEC 220: 40,356 VA 49 AMPS

NOTE: EXISTING PANELBOARD TO REMAIN, SHOWN FOR LOAD REFERENCE ONLY.

EXISTING PANEL 'L1E', BUILDING 3
SIEMENS TYPE 'S1', BOLT-ON
3 POLE 110 AMP MAIN BREAKER

10,000 A.I.C. FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	ELEV PIT			500	1,400			900			LIGHTING HALL 200	1	20	2
3			ELEV EQUIP RM RECP			500		1,100		600			LIGHTING SHOW ROOM			4
5			ELEV LIGHTS AND POWER			1,000			1,070	70			SOUND CONSOLE			6
7			PHONEBOARDS 142			1,000	2,000			1,000			DIMMER			8
9			PHONEBOARDS 142			1,000		2,000		1,000			PHONEBOARDS 242			10
11			PHONEBOARDS 142			1,000			2,000	1,000			PHONEBOARDS 242			12
13			PHONEBOARDS 142			1,000	2,000			1,000			PHONEBOARDS 242			14
15			PHONEBOARDS 142			1,000		2,000		1,000			PHONEBOARDS 242			16
17			PHONEBOARDS 142			1,000			2,000	1,000			PHONEBOARDS 242			18
19			SPRINKLER BELL			500	1,500			1,000			PHONEBOARDS 242			20
21			FACP RACK			500		1,100		600			LIGHTING LOBBY			22
23			FACP RACK			500			500				SPARE			24
25			FACP RACK			500	500						SPARE			26
27			FACP RACK			500		500					SPARE			28
29			AUDITORIUM			1,000			1,000				SPARE	1	20	30
31			ATC PANEL			500	500						SPACE	1		32
33	1	20	FIRE DAMPERS			1,000		1,000					SPACE	1		34
35	1		SPACE						0				SPACE	1		36
37							1,625			1,625			DIMMER 'B'	3	40	38
39								1,625		1,625			-	-	-	40
41	1		SPACE						1,625	1,625			-	-	-	42
							9,525	9,325	8,195							

TOTAL CONNECTED LOAD: 27,045 VA 75 AMPS FEEDER: 4 #2, 1 #6 GND, 1-1/4" C
CALCULATED FEEDER DEMAND, NEC 220: 27,931 VA 78 AMPS

NOTE: EXISTING PANELBOARD TO REMAIN, SHOWN FOR LOAD REFERENCE ONLY.

EXISTING PANEL 'H1E', BUILDING 4
SIEMENS TYPE 'S2'
3 POLE 60 AMP MAIN BREAKER

20,000 A.I.C.
277/480 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	ELEV EQUIP ROOM			140	3,450			3,310			LIGHTING LEVEL ONE	1	20	2
3			SPARE					2,700		2,700			LIGHTING LEVEL TWO			4
5			SPARE						0				SPARE			6
7			SPARE				0						SPARE			8
9			SPARE					0					SPARE			10
11			SPARE						0				SPARE			12
13			SPARE				0						SPARE			14
15			SPARE					0					SPARE			16
17			SPARE						0				SPARE			18
19			SPARE				0						SPARE			20
21	1	20	SPARE					0					SPARE	1	20	22
23	1	20	SPACE						0				SPACE	1		24
25							0									26
27								0								28
29									0							30
31							0									32
33								0								34
35	1	20	SPACE						0							36
37	3	50	PANEL 'L1E' VIA XFMR 'E1'			13,000	13,000									38
39	-	-	-			10,000		10,000								40
41	-	-	-			10,300			10,300				SPACE	1		42
							16,450	12,700	10,300							

TOTAL CONNECTED LOAD: 39,450 VA 47 AMPS FEEDER: EXISTING 4 #4, 1 #8 GND, 1-1/4" C
CALCULATED FEEDER DEMAND, NEC 220: 31,438 VA 38 AMPS

NOTE: EXISTING PANELBOARD TO REMAIN, SHOWN FOR LOAD REFERENCE ONLY.

EXISTING PANEL 'L1E', BUILDING 4
SIEMENS TYPE 'S1', BOLT-ON
3 POLE 110 AMP MAIN BREAKER

10,000 A.I.C. FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	ELEV PIT			500	1,500			1,000			PHONEBOARDS 210	1	20	2
3			ELEV EQUIP RM RECP			500		1,500		1,000			PHONEBOARDS 210			4
5			PHONEBOARDS 111			1,000			2,000	1,000			PHONEBOARDS 210			6
7			PHONEBOARDS 111			1,000	2,000			1,000			ELEV CAB LTS & POWER			8
9			PHONEBOARDS 111			1,000		1,000					SPARE			10
11			PHONEBOARDS 111			1,000			1,000				SPARE			12
13			PHONEBOARDS 153			1,000	2,000			1,000			FIRE/SMOKE DAMPERS			14
15			PHONEBOARDS 153			1,000		1,000					SPARE			16
17			PHONEBOARDS 153			1,000			1,300	300			LIGHTING STAIRS			18
19			PHONEBOARDS 153			1,000	1,500			500			ATC WORK STATION, CUST 113			20
21			PHONEBOARDS 153			1,000		1,500		500			ATC PANEL, MECH 212			22
23			PHONEBOARDS 153			1,000			1,000				SPARE			24
25			PHONEBOARDS 153			1,000	2,000			1,000			FACP			26
27			SPARE					1,000		1,000			OUTLET AT REGISTER			28
29			SPARE						1,000	1,000			PHONEBOARD			30
31			PHONEBOARDS 111			1,000	2,000			1,000			PHONEBOARD			32
33			PHONEBOARDS 210			1,000		2,000		1,000			PHONEBOARD			34
35			PHONEBOARDS 210			1,000			2,000	1,000			PHONEBOARD			36
37			PHONEBOARDS 210			1,000	2,000			1,000			PHONEBOARD			38
39			PHONEBOARDS 210			1,000		2,000		1,000			PHONEBOARD			40
41	1	20	PHONEBOARDS 210			1,000			2,000	1,000			SPRINKLER BELL	1	20	42
							13,000	10,000	10,300							

TOTAL CONNECTED LOAD: 33,300 VA 92 AMPS FEEDER: 4 #2, 1 #6 GND, 1-1/4" C
CALCULATED FEEDER DEMAND, NEC 220: 23,750 VA 66 AMPS

NOTE: EXISTING PANELBOARD TO REMAIN, SHOWN FOR LOAD REFERENCE ONLY.

FIXTURE SCHEDULE

SYMBOL	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP
F-1	EXITRONIX LIGHTOLIER LITHONIA MCPHILBEN PRESCOLITE SURE-LITES	G400-LB-WW LD-A-1-G-W LE-S-W-1-G-120/277 30VL-1-W-G IMX1GAW CX-6-1-G-W	UNIVERSAL MOUNTED, SINGLE FACE, LIGHT EMITTING DIODE (LED) EXIT LIGHT WITH DIE CAST ALUMINUM HOUSING, WHITE FINISH, GREEN LETTERS ON STENCIL FACE, UNIVERSAL KNOCKOUT CHEVRON ARROWS AND 120/277 DUAL VOLTAGE INPUT.	FURNISHED W/ FIXTURE
F-2	LIGHTGUARD LIGHTOLIER LITHONIA MCPHILBEN PRESCOLITE SURE-LITES	G400U-LB-WW LD-A-2-G-W LE-S-W-2-G-120/277 30VL-2-W-G IMX2GAW CX-6-2-G-W	SAME AS F-2 EXCEPT DOUBLE FACED	FURNISHED W/ FIXTURE
F-3	EXITRONIX LIGHTOLIER LITHONIA MCPHILBEN PRESCOLITE SURE-LITES	G402-LB-WW-E2-E12 LD-A-1-G-W/CXPKITW-36 LE-S-W-1-G-120/277/ELA-SS36 SSL-1-12/27-W-G/SSLPKIT36W IMX1GAW-PMCW36 CX-6-1-G-W/CAX36PKWH	SAME AS F-1 EXCEPT PENDANT MOUNTED WITH 36" STEM	FURNISHED W/ FIXTURE
F-4	OMEGA	CM8-2H-32PLT-SC-CSSF-ALA-U	SURFACE MOUNTED COMPACT FLUORESCENT DOWNLIGHT WITH ALUMINUM HOUSING, CLEAR SEMI-SPECULAR REFLECTOR, ALUMINUM PAINT FINISH, AND 120/277 VOLT <10% THD ELECTRONIC BALLAST.	2CFM32W/35K
F-5	CAPRI	CM8-F126/32/42-U-HB6	RECESSED COMPACT FLOURESCENT DOWNLIGHT WITH WHITE REFLECTOR, NOMINAL 8" DIAMETER APERATURE AND 120/277 VOLT <10% THD ELECTRONIC BALLAST.	1CFM32W/35K
F-6	CAPRI	CM8R-F126/32/42-U-H85	RECESSED COMPACT FLOURESCENT DOWNLIGHT WITH SPECULAR CLEAR LOW IRRIDESCENT ALZAK REFLECTOR, NOMINAL 8" DIAMETER APERATURE AND 120 VOLT <10% THD ELECTRONIC BALLAST.	1CFM32W/35K

NEW PANEL 'H1E', BUILDING 2
TYPE 'SE', BOLT-ON
3 POLE 100 AMP MAIN LUGS

14,000 A.I.C. FULLY RATED
277/480 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	LTS, BLDG 1 UPPER LEVEL	29		1,925	1,925						SPARE	1	20	2
3			LTS, BLDG 1 LOWER LEVEL	41		2,250		2,250					SPARE			4
5			LTS, BUILDING 2	57		2,310			2,310				SPARE			6
7			SPARE				0						SPARE			8
9			SPARE					0					SPARE			10
11	1	20	SPARE						0				SPARE	1	20	12
13	1		SPACE				0						SPACE	1		14
15								0								16
17									0							18
19							0									20
21								0								22
23									0				SPACE	1		24
25							4,260			4,260			PANEL 'L1E' VIA XFMR	3	45	26
27								4,985		4,985			-	-	-	28
29	1		SPACE						4,150	4,150			-	-	-	30
							6,185	7,235	6,460							

TOTAL CONNECTED LOAD: 19,880 VA 24 AMPS FEEDER: 4 #4, 1 #8 GND, 1-1/4" C
CALCULATED FEEDER DEMAND, NEC 220: 23,245 VA 28 AMPS

NEW PANEL 'L1E', BUILDING 2
TYPE 'S1', BOLT-ON
3 POLE 100 AMP MAIN BREAKER

10,000 A.I.C. FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	FIRE ALARM SYSTEM			1,500	2,500			1,000			ELEV CAB LTS & POWER	1	20	2
3			SMOKE DAMPERS, BLDG 2			1,000		1,245		245	1	1	ELEV RM LIGHT & RECEPT.			4
5			SMOKE DAMPERS, BLDG 2			1,000			1,230	230	1	1	ELEV PIT LIGHT & RECEPT.			6
7			REC, BLDG 1 UPPER ELECT RM	1		180	360			180	1		REC, MAIN ELECT. ROOM			8
9			SMOKE DMPRS, BLDG 1, UPPER			1,000		1,180		180	1		REC, BELOW PANEL			10
11			SPARE TO BLDG 1 UPPER						360	360	2		REC, TELE BOARD, RM 141A			12
13			REC, BLDG 1 LOWER ELECT RM	1		180	540			360	2		REC, TELE BOARD, RM 205A			14
15			SMOKE DMPRS, BLDG 1, LOWER			1,000		1,360		360	2		REC, TELE BOARD, RM 205A			16
17			SMOKE DMPRS, BLDG 1, LOWER			1,000			1,360	360	2		REC, TELE BOARD, RM 103			18
19			ATC PANEL, MECH ROOM			500	860			360	2		REC, TELE BOARD, RM 103			20
21			SPARE					1,200		1,200			AUTO ADA DOOR, SOUTH			22
23			SPARE						1,200	1,200			AUTO ADA DOOR, SOUTH			24
25			SPARE				0						SPARE			26
27			SPARE					0					SPARE			28
29	1	20	SPARE						0				SPARE	1	20	30
31	1		SPACE				0						SPACE	1		32
33								0								34
35									0							36
37							0									38
39								0								40
41	1		SPACE						0				SPACE	1		42
							4,260	4,985	4,150							

TOTAL CONNECTED LOAD: 13,395 VA 37 AMPS FEEDER: 4 #2, 1 #8 GND, 1-1/4" C
CALCULATED FEEDER DEMAND, NEC 220: 15,139 VA 42 AMPS

NEW PANEL 'EM'
TYPE 'S2', BOLT-ONE
3 POLE 225 AMP MAIN LUGS

NEMA 3R ENCLOSURE
COPPER BUSSING

14,000 A.I.C., FULLY RATED
277/480 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	3	70	BUILDINGS 1 & 2			6,185	21,210			15,025			BUILDING 3	3	70	2
	-	-	-			7,235		19,670		12,435			-	-	-	
	-	-	-			6,460			15,985	9,525			-	-	-	
3	3	70	BUILDING 4			16,450	16,450						SPACE	3	100	4
	-	-	-			12,700		12,700					-	-	-	
	-	-				10,300			10,300				-	-	-	
5	3	100	SPACE				0						SPACE	3	100	6
	-	-						0					-	-	-	
	-	-	-						0				-	-	-	
							37,660	32,370	26,285							

TOTAL CONNECTED LOAD: 96,315 VA 116 AMPS FEEDER: 4 #2/0, 1 #4 GND, 2" C
CALCULATED FEEDER DEMAND, NEC 220: 88,779 VA 107 AMPS

SYMBOL LIST

SYMBOL	DESCRIPTION
	NEW CEILING MOUNTED FIXTURE
	NEW WALL MOUNTED FIXTURE
	NEW RECESSED FIXTURE
	NEW FLUORESCENT FIXTURE
	NEW EXIT LIGHT WITH ARROW INDICATING DIRECTION OF EXIT
	EXISTING CEILING MOUNTED FIXTURE
	EXISTING WALL MOUNTED FIXTURE
	EXISTING RECESSED FIXTURE
	EXISTING FLUORESCENT FIXTURE
	EXISTING EXIT LIGHT
	EXISTING FIXTURE CONNECTED TO EMERGENCY BRANCH CIRCUIT
	EXISTING EMERGENCY LIGHTING BATTERY UNIT INDICATING LAMP HEADS
$	EXISTING SINGLE POLE SWITCH
$3	EXISTING THREE WAY SWITCH
J	NEW JUNCTION BOX
J	EXISTING JUNCTION BOX
	NEW DUPLEX CONVENIENCE OUTLET
	NEW DOUBLE DUPLEX CONVENIENCE OUTLET
	EXISTING DUPLEX CONVENIENCE OUTLET
GFI	OUTLET WITH GROUND FAULT CIRCUIT INTERRUPTER
	NEW POWER PANELBOARD, 120/208 VOLT, 3 PHASE
	NEW POWER PANELBOARD, 277/480 VOLT, 3 PHASE
	EXISTING POWER PANELBOARD, 120/208 VOLT, 3 PHASE
	EXISTING POWER PANELBOARD, 277/480 VOLT, 3 PHASE
A-13.5	NEW 3 PHASE, 4 WIRE HOMERUN INDICATING PANEL AND CIRCUIT NUMBERS
	NEW BRANCH CIRCUIT CONCEALED IN WALL OR CEILING
	NEW BRANCH CIRCUIT CONCEALED IN FLOOR OR WALL
	NEW BRANCH CIRCUIT EXPOSED ON WALL OR CEILING
	EXISTING BRANCH CIRCUIT
F-2	FIXTURE SCHEDULE SYMBOL
1	REFERENCE NOTE SYMBOL
102	ROOM NUMBER
15 E-601	DETAIL NUMBER OR SECTION LETTER SHEET ON WHICH DETAIL OR SECTION IS SHOWN
WP	INDICATES ITEM IN WEATHERPROOF (NEMA 3R MINIMUM) ENCLOSURE

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267
Internet: http://dfcm.state.ut.us

PROJECT ENGINEER:
THOMAS & KOLKMAN ENGINEERING CO. INC.
64 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84115
TELEPHONE: (801) 484-8161
FACSIMILE: (801) 484-3538

REGISTERED PROFESSIONAL ENGINEER
RAYMOND G. KOLKMAN
175780
16106
STATE OF UTAH

CONSULTANTS:

PROJECT:

Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

AND

LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
SANDY, UTAH

REVISIONS:

MARK	DATE	DESCRIPTION

ISSUE TYPE: CONSTRUCTION DOCUMENTS
ISSUE DATE: JAN. 6, 2006
DFCM PROJECT NO.: 05177670
STATE PROPERTY NO.: VARIOUS
CAD DWG FILE: L-M E-601.dwg
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SHEET TITLE:
SYMBOL LIST AND SCHEDULES

SHEET NUMBER:
E-602

SHEET 11 OF 16

REFERENCE NOTES:
FOR SHEET E-107 ONLY

1. EXISTING ELECTRICAL EQUIPMENT TO REMAIN. SHOWN FOR REFERENCE ONLY.
2. CONNECT NEW EMERGENCY POWER AUTOMATIC TRANSFER SWITCH TO EXISTING 3P-200A SPARE FUSIBLE SWITCH IN EXISTING MAIN PANEL 'MDP', SEE SOUTH CITY CAMPUS POWER RISER DIAGRAM, SHEET E-603.
3. DRILL AND FIRE SEAL EXISTING CONCRETE WALL FOR NEW CONDUIT PENETRATIONS.
4. CORE-DRILL EXISTING EXTERIOR WALL FOR NEW UNDERGROUND CONDUIT PENETRATIONS. SEAL WATERTIGHT WITH O.Z. GEDNEY TYPE 'CMSL' OR LINK SEAL TYPE 'C' CONDUIT SEALING BUSHINGS. PROVIDE RIGID STEEL CONDUIT TO EXTEND MINIMUM 3 FT OUTSIDE OF WALL.
5. PROVIDE TYPE 'LB' CONDUIT BODIES AT INTERIOR OF WALL PENETRATION EXTEND CONDUITS UP TO BOTTOM OF EXPOSED STRUCTURE.
6. EXISTING NATURAL GAS FIRED GENERATOR TO REMAIN FOR OPTIONAL STANDBY POWER SYSTEM.
7. EXISTING 4P-150A, 277/480 V, 3ø, 4W, AUTOMATIC TRANSFER SWITCH TO REMAIN FOR OPTIONAL STANDBY POWER SYSTEM INCLUDING CONNECTIONS TO EXISTING GENERATOR PANELS. PROVIDE NEW ENGRAVED NAMEPLATE: "STANDBY POWER ATS".
8. EXISTING PANEL 'EM' TO REMAIN FOR OPTIONAL STANDBY POWER SYSTEM. PROVIDE NEW ENGRAVED NAMEPLATE: "STANDBY POWER PANEL 'SPH'". RECONNECT EXISTING EMERGENCY CIRCUITS TO NEW EMERGENCY POWER PANEL 'EM'. SEE PANEL SCHEDULES, SHEET E-603, FOR QUANTITY OF CIRCUITS.

REFERENCE NOTES:
FOR SHEET E-107 ONLY

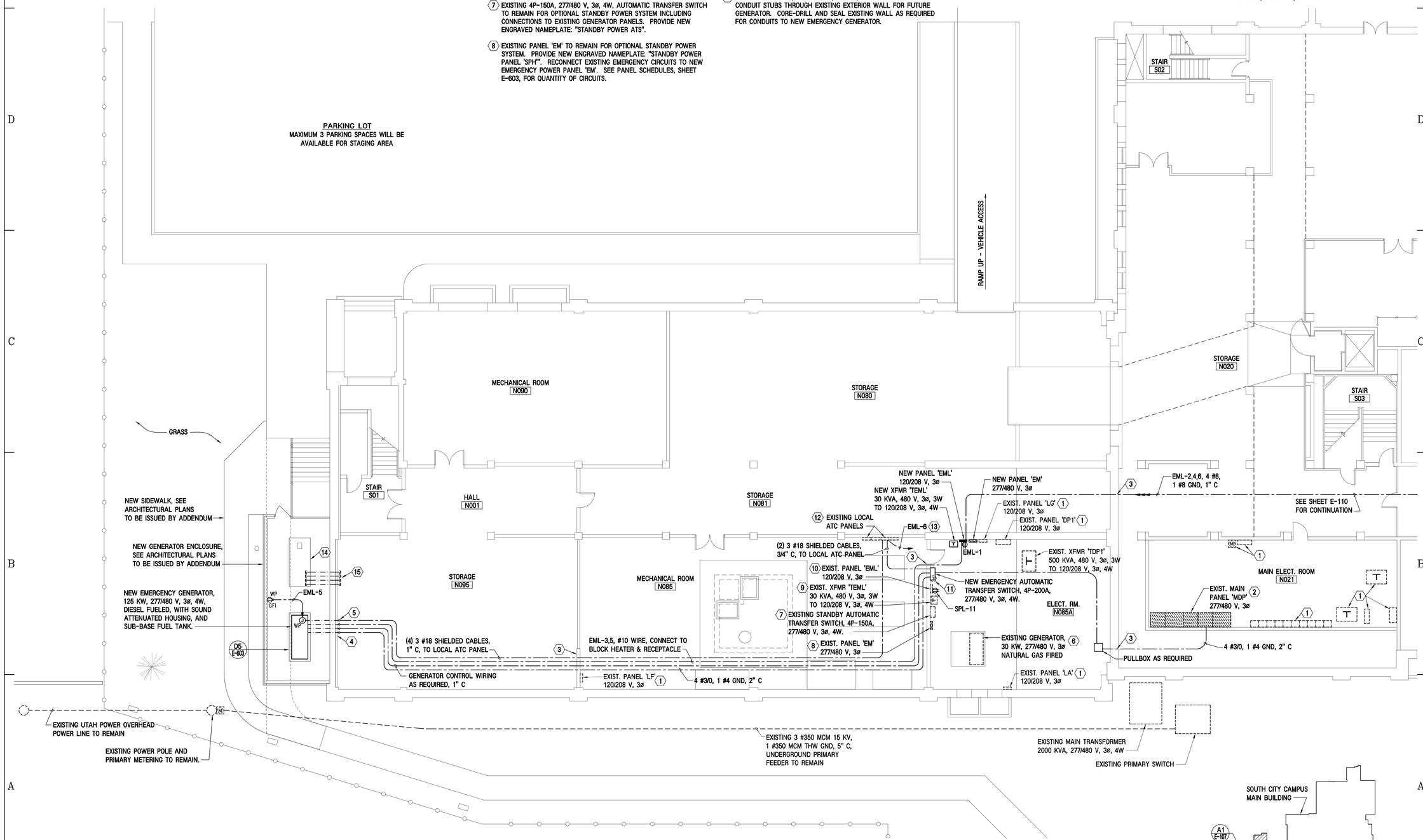
9. EXISTING TRANSFORMER TO REMAIN FOR OPTIONAL STANDBY POWER SYSTEM. PROVIDE NEW ENGRAVED NAMEPLATE: "STANDBY POWER XFMR 'TSPL'".
10. EXISTING PANEL 'EML' TO REMAIN FOR OPTIONAL STANDBY POWER SYSTEM. PROVIDE NEW ENGRAVED NAMEPLATE: "STANDBY POWER PANEL 'SPL'". RECONNECT EXISTING EMERGENCY CIRCUITS TO NEW EMERGENCY POWER PANEL 'EML'. SEE PANEL SCHEDULES, SHEET E-603, FOR QUANTITY OF CIRCUITS.
11. RELOCATE AND RECONNECT EXISTING THERMOSTAT AS REQUIRED TO INSTALL EMERGENCY POWER AUTOMATIC TRANSFER SWITCH.
12. VERIFY CONNECTIONS TO EXISTING LOCAL ATC PANEL WITH JOHNSON CONTROLS PRIOR TO ROUGHING IN CONDUIT TO THE ATC PANEL.
13. PROVIDE NEW EMERGENCY BRANCH CIRCUIT TO EXISTING ATC PANEL TO ALLOW ANNUNCIATION OF GENERATOR STATUS DURING NORMAL POWER OUTAGE.
14. LOCATION FOR FUTURE GENERATOR.
15. PROVIDE 3" POWER, 1" CONTROL, 1" ATC, AND 1" BRANCH CIRCUIT CONDUIT STUBS THROUGH EXISTING EXTERIOR WALL FOR FUTURE GENERATOR. CORE-DRILL AND SEAL EXISTING WALL AS REQUIRED FOR CONDUITS TO NEW EMERGENCY GENERATOR.

GENERAL ELECTRICAL NOTES:

1. LOCATIONS OF ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, LIGHT FIXTURES, EQUIPMENT, ETC. WHETHER SPECIFICALLY SHOWN OR NOT.
3. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS TO EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
4. ALL MATERIALS AND EQUIPMENT REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR EXCEPT FOR ITEMS SPECIFICALLY NOTED TO BE SALVAGED FOR OWNER.

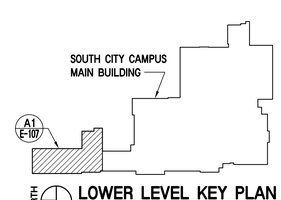
GENERAL ELECTRICAL NOTES:

5. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND FACILITIES. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.
6. TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING UNDERGROUND UTILITIES. IMMEDIATELY REPAIR ANY DAMAGE TO EXISTING UNDERGROUND IRRIGATION SPRINKLER SYSTEM, SPRINKLER CONTROL WIRING, WATER LINES, AND OTHER UNDERGROUND UTILITIES.
7. PROVIDE NEW TYPEWRITTEN INDEX FOR EXISTING PANELBOARDS WHERE REQUIRED TO REFLECT CHANGES IN CIRCUITING.
8. DO NOT INSTALL NEW EMERGENCY BRANCH CIRCUITS IN THE SAME RACEWAY, BOX, ETC., WITH NORMAL POWER WIRING EXCEPT AS ALLOWED BY NEC 700.9 (B).
9. DO NOT DISCONNECT OR REMOVE ANY EXISTING EMERGENCY BRANCH CIRCUIT, EMERGENCY LIGHTING BATTERY UNITS, ETC., UNTIL NEW EMERGENCY POWER SYSTEM HAS BEEN INSTALLED AND ACCEPTANCE TESTED. RECONNECTION OF EXISTING BRANCH CIRCUITS SHALL BE DONE ONLY DURING TIMES WHEN THE BUILDING IS NOT OCCUPIED SUCH AS WEEKENDS, HOLIDAYS, ETC..



A1 SOUTH CITY CAMPUS LOWER LEVEL AND SITE ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

NORTH



LOWER LEVEL KEY PLAN

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267
Internet: http://dfcm.state.ut.us

PROJECT ENGINEER:
THOMAS & KOLKMAN ENGINEERING CO. INC.
64 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84115
TELEPHONE: (801) 484-8161
FACSIMILE: (801) 484-3538

REGISTERED PROFESSIONAL ENGINEER RAYMOND G. KOLKMAN 175780 16106 STATE OF UTAH

CONSULTANTS:

PROJECT:
Salt Lake Community College
EMERGENCY GENERATOR IMPROVEMENTS
SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH
AND
LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
SANDY, UTAH

REVISIONS:

MARK	DATE	DESCRIPTION

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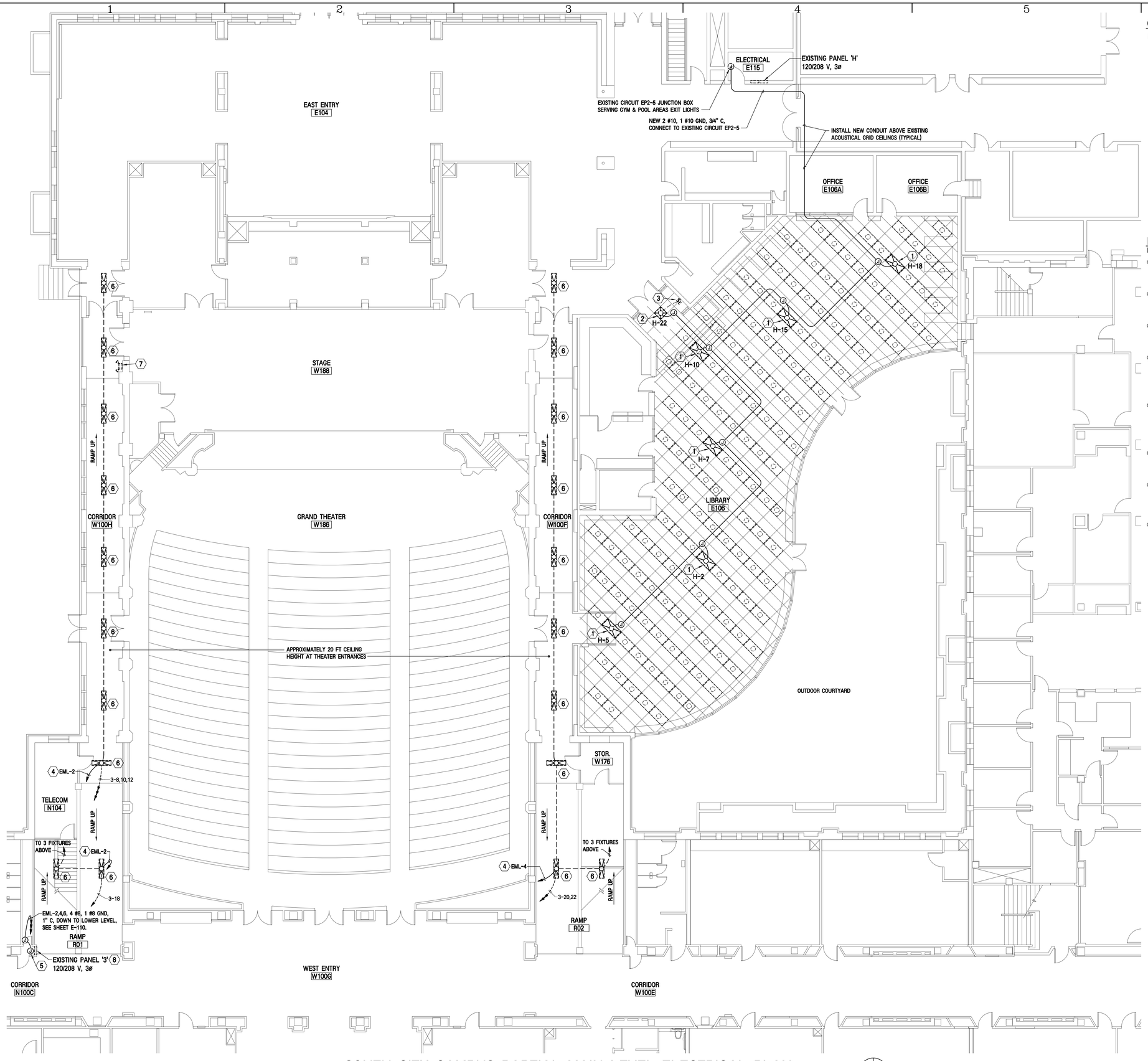
SHEET TITLE:
SOUTH CITY CAMPUS LOWER LEVEL AND SITE ELECTRICAL PLAN

SHEET NUMBER:
SCC
E-107



A1 SOUTH CITY CAMPUS PARTIAL MAIN LEVEL ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

NORTH

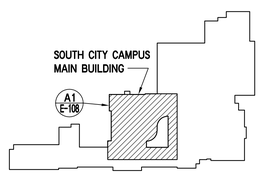
GENERAL ELECTRICAL NOTES:

1. SEE GENERAL ELECTRICAL NOTES, SHEET E-107.

REFERENCE NOTES:

FOR SHEET E-107 ONLY

1. EXISTING 2' x 4', 4 LAMP, LAY-IN FLUORESCENT FIXTURE TO REMAIN. RECONNECT ONE 2 LAMP BALLAST FROM EXISTING CIRCUIT INDICATED AND CONNECT TO NEW UNSWITCHED EMERGENCY CIRCUIT AS SHOWN.
2. EXISTING 2' x 2', 2 LAMP, LAY-IN FLUORESCENT FIXTURE TO REMAIN. RECONNECT FIXTURE FROM EXISTING CIRCUIT INDICATED AND CONNECT TO NEW UNSWITCHED EMERGENCY CIRCUIT AS SHOWN.
3. REMOVE EXISTING SWITCH AND WIRING CONTROLLING EXISTING FIXTURE AND PROVIDE NEW BLANK COVERPLATE ON EXISTING OUTLET BOX.
4. INTERCEPT EXISTING BRANCH CIRCUITS SERVING CORRIDOR AND RAMP LIGHTING AND RECONNECT TO NEW EMERGENCY BRANCH CIRCUIT INDICATED. REPLACE ALL EXISTING BRANCH CIRCUIT CONDUCTORS WITH NEW CONDUCTORS FOR ALL EXISTING BRANCH CIRCUITS SHOWN.
5. CONTRACTOR MAY REMOVE EXISTING INTERIOR WALL FINISH IN PLUMBING CHASE, INTERCEPT EXISTING CIRCUITS, TERMINATE IN NEW JUNCTION BOX, AND CONNECT TO NEW EMERGENCY CIRCUITS AS SHOWN. REPAIR EXISTING WALL AS REQUIRED TO MATCH ORIGINAL CONDITION.
6. EXISTING 4 FT, 2 LAMP SURFACE MOUNTED FLUORESCENT FIXTURE TO REMAIN. CLEAN EXISTING LENS, RELAMP WITH NEW F34T12/35K LAMPS, AND LEAVE IN PROPER WORKING ORDER.
7. REMOVE EXISTING EMERGENCY LIGHTING UNIT WITH BATTERY INCLUDING ALL ABANDONED WIRING, CONDUIT, BOXES, ETC.. CLEAN AND PATCH EXISTING WALL AS REQUIRED TO MATCH SURROUNDING SURFACES.
8. PROVIDE NEW TYPEWRITTEN CIRCUIT INDEX FOR EXISTING PANELBOARD TO REFLECT ALL CHANGES IN CIRCUITING.



NORTH

MAIN LEVEL KEY PLAN

State of Utah
Department of Administrative Services

Division of Facilities
Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267

Internet: http://dfcm.state.ut.us

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THOMAS & KOLKMAN ENGINEERING CO. INC.
64 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84115
TELEPHONE: (801) 484-8161
FACSIMILE: (801) 484-3538

REGISTERED PROFESSIONAL ENGINEER
RAYMOND G. KOLKMAN
175780
STATE OF UTAH

CONSULTANTS:

PROJECT:

Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

AND

LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
SANDY, UTAH

REVISIONS:

MARK	DATE	DESCRIPTION

ISSUE TYPE: CONSTRUCTION DOCUMENTS

ISSUE DATE: JAN. 6, 2006

DFCM PROJECT NO.: 05177670

STATE PROPERTY NO.: VARIOUS

CAD DWG FILE: SCC E-108.dwg

DRAWN BY: W.B.G.

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SHEET TITLE:

SOUTH CITY CAMPUS PARTIAL MAIN LEVEL ELECTRICAL PLAN

SHEET NUMBER:

SCC

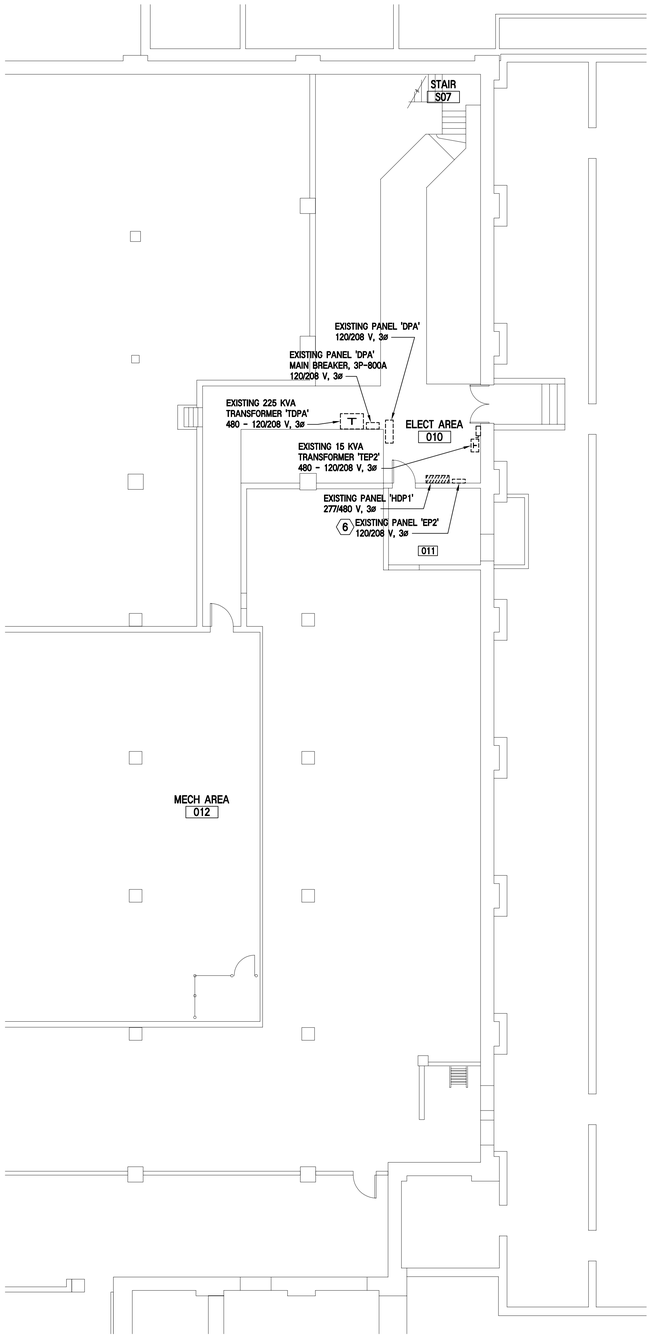
E-108

EXISTING PANEL 'EP2'
ITE-SIEMENS TYPE 'UB', TYPE 'BL' BREAKERS
3 POLE 60 AMP MAIN BREAKER

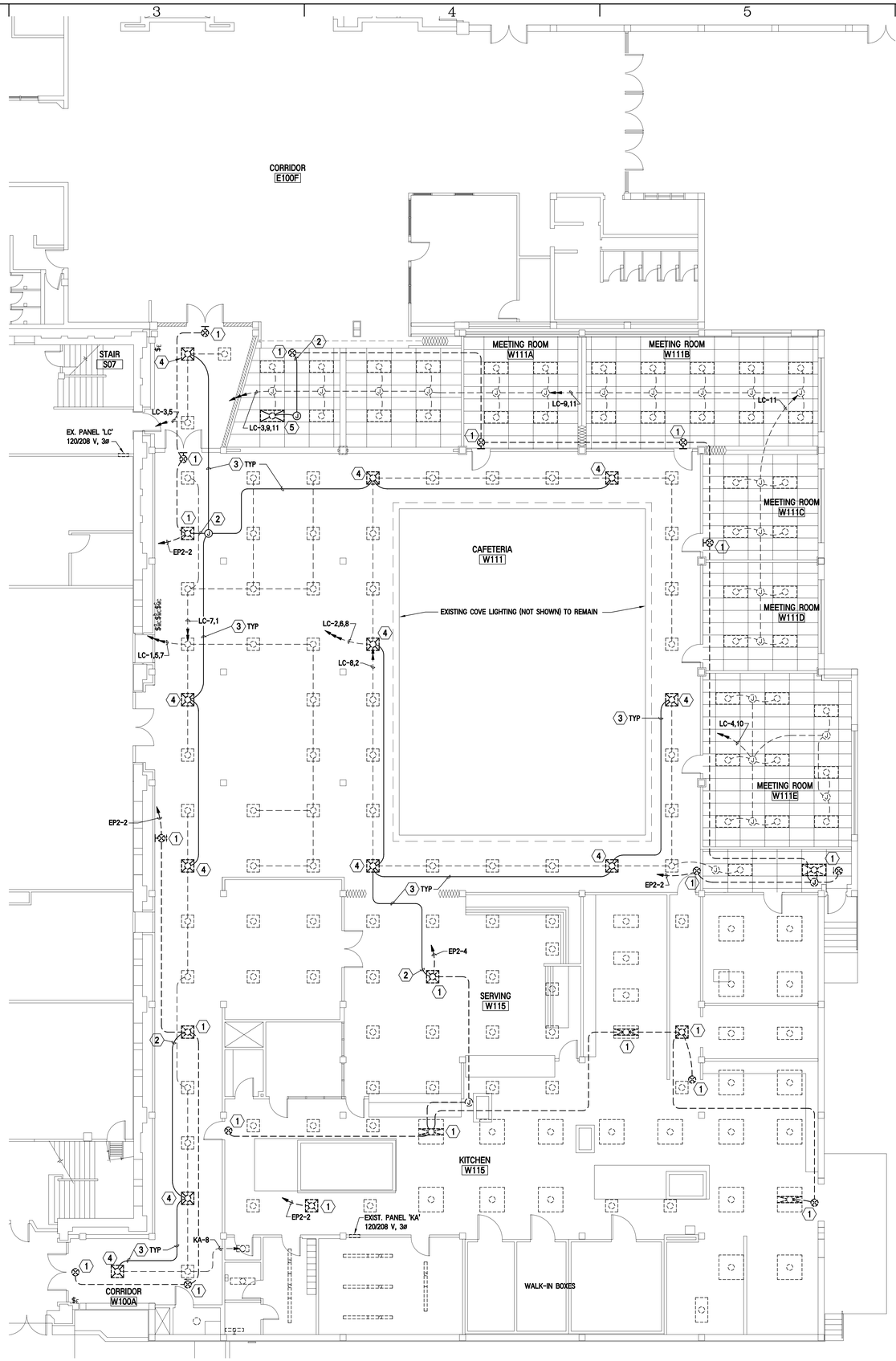
10,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	REC, MECH. ROOM		2	360	1,550			1,190		23	CAFETERIA EM LTS	1	20	2
3	1	20	REC, MECH. ROOM		2	360		1,290		930		10	KITCHEN AREA EM LTS	1	20	4
5	1	20	POOL & GYM EXITS, LIB LTS	31		870			2,370	1,500			PANEL 'EP3' RM W230C	2	30	6
7	1		SPACE				1,500			1,500			-	-	-	8
9	1		SPACE					500		500			BOILER ROOM EM LTS	1	20	10
11	1		SPACE						1,080	1,080		12	POOL AREA EM LIGHTS	1	20	12
13	3	60	MAIN BREAKER				855			855		18	SOUTH GYM AREA EM LTS	1	20	14
15	-	-	-					855		855		17	NORTH GYM AREA EM LTS	1	20	16
17	-	-	-						1,020	1,020		12	GYM EM LIGHTS	1	20	18
							3,905	2,645	4,470							

TOTAL CONNECTED LOAD: 11,020 VA 31 AMPS FEEDER: 4 #6, 1 #8 GND, 1" C
CALCULATED FEEDER DEMAND, NEC 220: 13,595 VA 38 AMPS



A1 PARTIAL LOWER LEVEL ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"



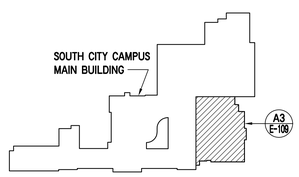
A3 SOUTH CITY CAMPUS PARTIAL MAIN LEVEL ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

GENERAL ELECTRICAL NOTES:

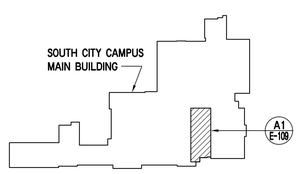
1. SEE GENERAL ELECTRICAL NOTES, SHEET E-107.

REFERENCE NOTES:
FOR SHEET E-108 ONLY

1. EXISTING EXIT LIGHTS AND FIXTURES CONNECTED TO EXISTING EMERGENCY PANEL 'EP2' TO REMAIN. SHOWN FOR REFERENCE ONLY.
2. CONNECT TO EXISTING EMERGENCY LIGHTING BRANCH CIRCUIT AT EXISTING FIXTURE AND EXTEND TO EXISTING FIXTURES AS SHOWN. PROVIDE NEW CEILING ACCESS PANEL WHERE REQUIRED FOR ACCESS TO JUNCTION BOXES.
3. PROVIDE #10 AWG TYPE 'MC' METAL CLAD CABLE TO FISH ABOVE EXISTING HARD CEILINGS. ACCESS CEILING SPACE BY REMOVAL OF EXISTING FLANGED TROFFERS. REINSTALL AND RECONNECT FIXTURES UPON COMPLETION OF WORK.
4. EXISTING 2' x 2', 3 LAMP FLANGED FLUORESCENT TROFFER WITH 2 LAMP AND 1 LAMP BALLAST TO REMAIN. RECONNECT 2 LAMP BALLAST FROM EXISTING NORMAL POWER BRANCH CIRCUIT TO NEW EMERGENCY BRANCH CIRCUIT AS SHOWN. REMOVE ABANDONED NORMAL POWER BRANCH CIRCUIT WIRING.
5. EXISTING 2' x 4', 3 LAMP LAY-IN FLUORESCENT TROFFER WITH 2 LAMP AND 1 LAMP BALLAST TO REMAIN. RECONNECT 2 LAMP BALLAST FROM EXISTING NORMAL POWER BRANCH CIRCUIT TO NEW EMERGENCY BRANCH CIRCUIT AS SHOWN. REMOVE ABANDONED NORMAL POWER BRANCH CIRCUIT WIRING.
6. PROVIDE NEW TYPEWRITTEN INDEX FOR EXISTING PANEL TO REFLECT ALL CHANGES IN CIRCUITING.



NORTH MAIN LEVEL KEY PLAN



NORTH LOWER LEVEL KEY PLAN

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
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Salt Lake City, Utah 84114
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FACSIMILE: (801) 484-3538

REGISTERED PROFESSIONAL ENGINEER
RAYMOND G. KOLKMAN
175780
STATE OF UTAH

CONSULTANTS:

PROJECT:
Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

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1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

AND

LARRY H. MILLER CAMPUS
9750 SOUTH 300 WEST
SANDY, UTAH

REVISIONS:

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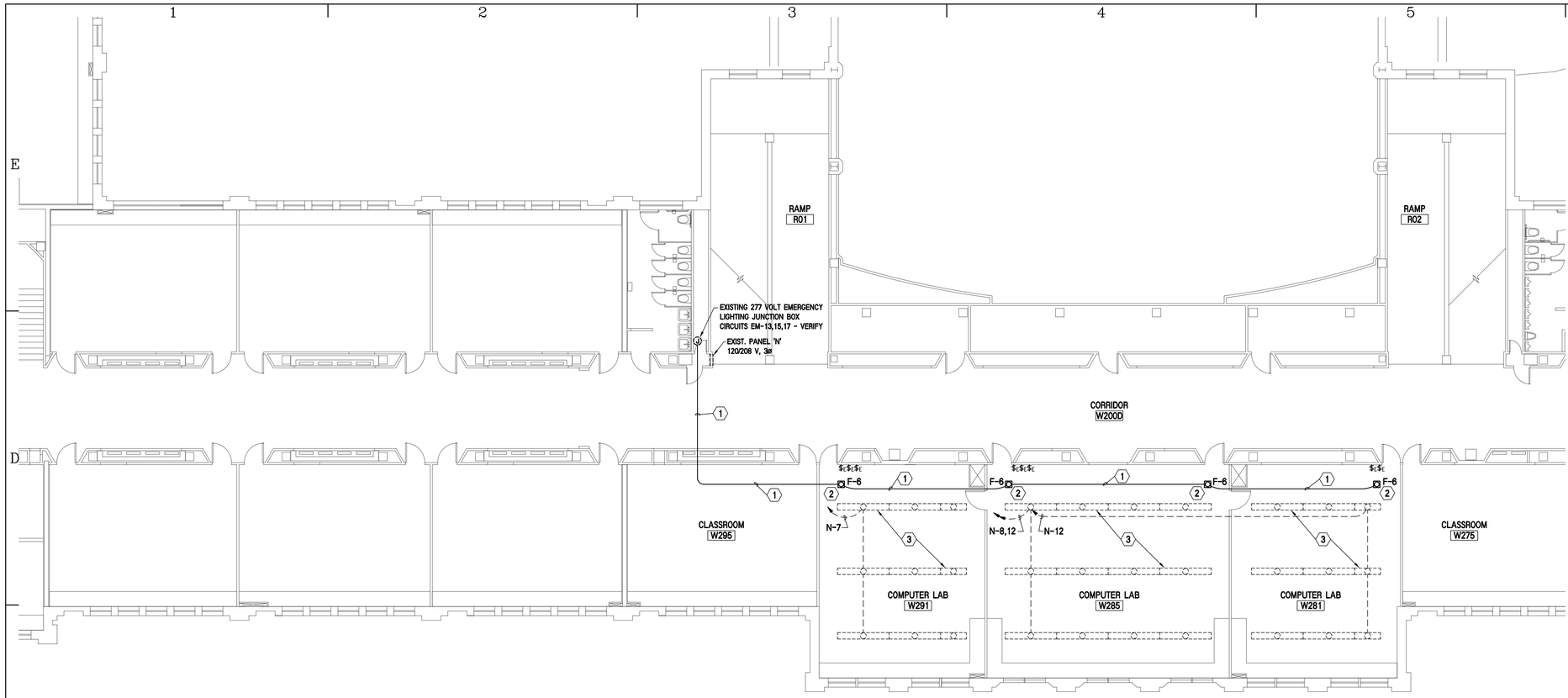
SHEET TITLE:
SOUTH CITY CAMPUS PARTIAL LOWER AND MAIN LEVELS ELECTRICAL PLAN

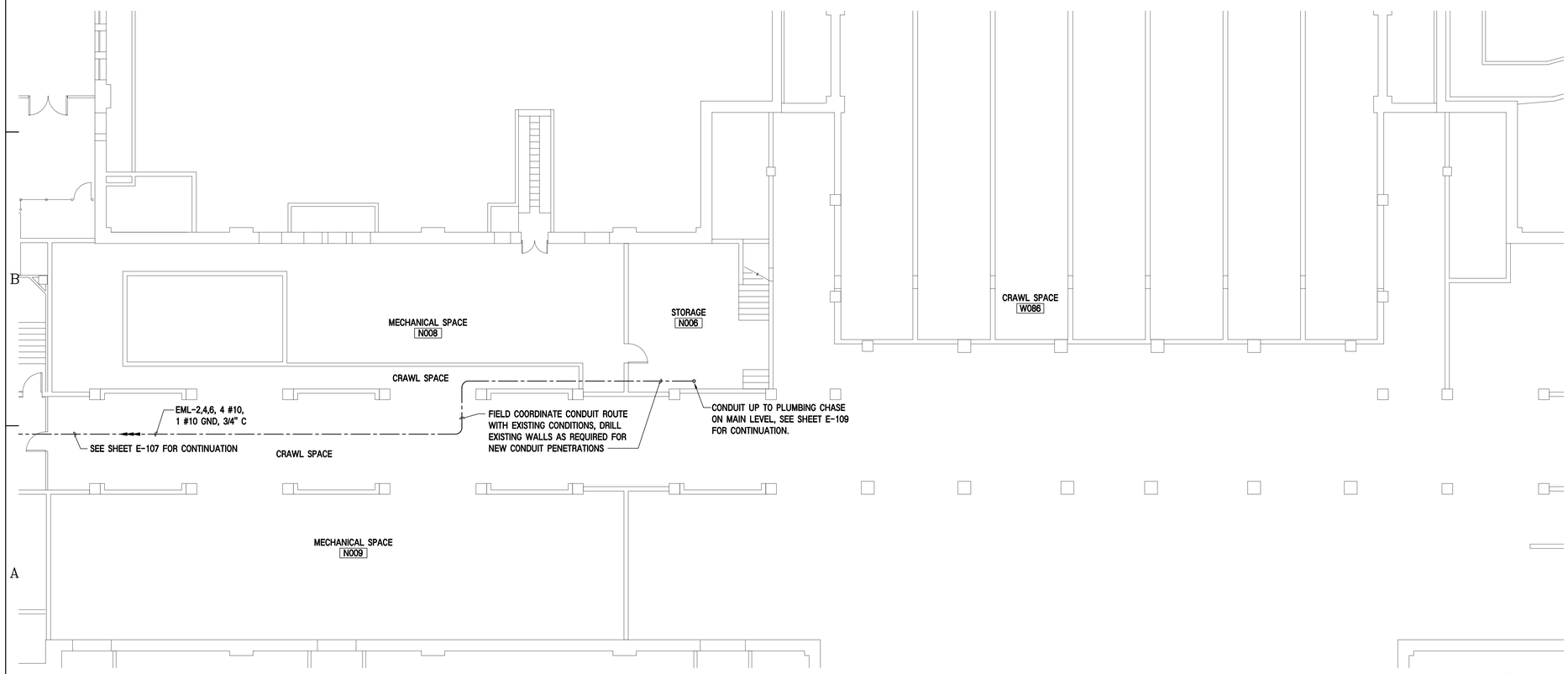
SHEET NUMBER:
SCC
E-109



(C1) SOUTH CITY CAMPUS PARTIAL SECOND LEVEL ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

NORTH



(A1) SOUTH CITY CAMPUS PARTIAL LOWER LEVEL ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

NORTH

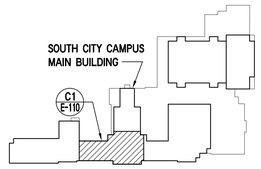
GENERAL ELECTRICAL NOTES:

1. SEE GENERAL ELECTRICAL NOTES, SHEET E-107.

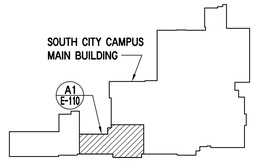
REFERENCE NOTES:

FOR SHEET E-110 ONLY

1. PROVIDE #10 AWG TYPE 'MC' METAL CLAD CABLE TO FISH ABOVE EXISTING HARD CEILINGS. PROVIDE NEW CEILING ACCESS PANELS IN CLASSROOMS AND/OR COMPUTER LABS AS REQUIRED TO ACCESS CEILING SPACE. DO NOT INSTALL ACCESS PANELS IN EXISTING MAIN CORRIDOR CEILING OR DISTURB THE EXISTING MAIN CORRIDOR CEILINGS.
2. INSTALL NEW RECESSED COMPACT FLUORESCENT FIXTURE IN EXISTING CEILING. REPAIR EXISTING CEILING AS REQUIRED TO MATCH SURROUNDING SURFACES.
3. EXISTING PENDANT MOUNTED FLUORESCENT FIXTURES, CIRCUITS, AND SWITCHES TO REMAIN. SHOWN FOR REFERENCE ONLY.



SECOND LEVEL KEY PLAN



LOWER LEVEL KEY PLAN

State of Utah
Department of Administrative Services

Division of Facilities Construction & Management
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Salt Lake City, Utah 84114
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RAYMOND G. KOLKMAN
175780
5/16/06
STATE OF UTAH

CONSULTANTS:

PROJECT:

Salt Lake Community College

EMERGENCY GENERATOR IMPROVEMENTS

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SHEET TITLE:

SOUTH CITY CAMPUS PARTIAL LOWER AND SECOND LEVELS ELECTRICAL PLANS

SHEET NUMBER:

SCC
E-110

SHEET 15 OF 16

EXISTING PANEL 'EM' - DESIGNATE AS PANEL 'SPH'
WESTINGHOUSE TYPE 'PRL2'
3 POLE 60 AMP MAIN BREAKER

14,000 AIC
277/480 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	EM LTS, NORTH BLDG +				0						SPARE	1	20	2
3			EM LTS, NORTH BLDG +					0					SPARE			4
5			EXITS & LTS, BASEMENT +						0				SPARE			6
7			EM LTS, NORTH CENTER +				500			500			JOHNSON CONTROL ✖	1	20	8
9			EM LTS, NORTH CENTER +					0					EMERGENCY PANEL #1 +	2	40	10
11			EXITS - WHITE MARBLE +						0				-	-	-	12
13			EM LTS, WEST CENTER +				0						EMERGENCY PANEL #2 +	3	30	14
15			EM LTS, WEST CENTER +					0					(PNL EP2 - GUN RANGE)	-	-	16
17			EM LTS, WEST CENTER +						0				-	-	-	18
19			LTS, GENERATOR ROOM +				0						EM PANEL, MAINT. AREA +	2	15	20
21			SPARE					0					-	-	-	22
23			SPARE						0				SPARE	1	20	24
25			SPARE				0						SPARE			26
27			SPARE					0					SPARE			28
29			SPARE						0				SPARE			30
31			SPARE				0						SPARE			32
33			SPARE					0					SPARE			34
35			SPARE						0				SPARE	1	20	36
37			SPARE				5,000			5,000			PANEL 'SPL' VIA XFMR ✖	3	40	38
39			SPARE					4,000		4,000			(EXISTING PANEL 'EML')	-	-	40
41	1	20	SPARE						4,180	4,180			-	-	-	42
							5,500	4,000	4,180							

TOTAL CONNECTED LOAD: 13,680 VA 16 AMPS FEEDER: EXISTING 4 #6, 1 #8 GND, 1" C
CALCULATED FEEDER DEMAND, NEC 220: 13,680 VA 16 AMPS

✖ EXISTING CIRCUIT TO REMAIN. LOAD IS ESTIMATED.
+ RECONNECT EXISTING EMERGENCY CIRCUIT TO NEW PANEL 'EM'. INTERCEPT BRANCH CIRCUIT CONDUIT AT CONVENIENT LOCATION, PROVIDE NEW JUNCTION AND NEW BRANCH CIRCUIT TO NEW PANEL. REMOVE ALL ABANDONED WIRING, CONDUIT, BOXES, ETC..
PROVIDE NEW TYPEWRITTEN CIRCUIT INDEX AND NEW ENGRAVED NAMEPLATE.

NEW PANEL 'EM'
TYPE 'PRL2', BOLT-ON
3 POLE 225 AMP MAIN LUGS

14,000 A.I.C. FULLY RATED
277/480 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	EM LTS, NORTH BLDG +			2,000	2,000						SPARE	1	20	2
3			EM LTS, NORTH BLDG +			2,000		2,000					SPARE			4
5			EXITS & LTS, BASEMENT +			2,000			2,000				SPARE			6
7			EM LTS, NORTH CENTER +			2,000	2,000						SPARE	1	20	8
9			EM LTS, NORTH CENTER +			2,000		8,500		6,500			EMERGENCY PANEL #1 +	2	40	10
11			EXITS - WHITE MARBLE +			2,000			8,500	6,500			-	-	-	12
13			EM LTS, WEST CENTER +			2,000	5,905			3,905			EMERGENCY PANEL #2 +	3	30	14
15			EM LTS, WEST CENTER +			2,000		4,645		2,645			(PNL EP2 - GUN RANGE)	-	-	16
17			EM LTS, WEST CENTER +			2,000			6,470	4,470			-	-	-	18
19			LTS, GENERATOR ROOM +			2,000	4,000			2,000			EM PANEL, MAINT. AREA +	2	15	20
21			SPARE					2,000		2,000			-	-	-	22
23			SPARE						0				SPARE	1	20	24
25			SPARE				0						SPARE			26
27			SPARE					0					SPARE			28
29	1	20	SPARE						0				SPARE	1	20	30
31	1		SPACE				0						SPACE	1		32
33								0					SPAC	1		34
35									0				SPACE	1		36
37							1,850			1,850			NEW PANEL 'EML' VIA XFMR	3	45	38
39								1,500		1,500			-	-	-	40
41	1		SPACE						1,350	1,350			-	-	-	42
							15,755	18,645	18,320							

TOTAL CONNECTED LOAD: 52,720 VA 63 AMPS FEEDER: 4 #3/0, 1 #4 GND, 2" C
CALCULATED FEEDER DEMAND, NEC 220: 65,255 VA 78 AMPS

+ EXISTING EMERGENCY CIRCUIT RECONNECTED FROM EXISTING PANEL 'EM'.
LOAD IS ESTIMATED BASED ON EXISTING 30 KW GENERATOR LOADED TO CAPACITY.

EXISTING PANEL 'EML' - DESIGNATE AS PANEL 'SPL'
WESTINGHOUSE TYPE 'PRL1a'
3 POLE 80 AMP MAIN BREAKER

10,000 A.I.C.
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	RM 369 ✖			1,000	2,000			1,000			RM 391 UPPER PLUGS ✖	1	20	2
3	1	30	RM 391 DELL SERVERS ✖			2,000		3,000		1,000			RM 391 UPPER PLUGS ✖			4
5	1	30	RM 391 GRAY CABINET ✖			2,000			3,000	1,000			RM 391 CAMERAS ✖			6
7	1	30	RM 146 (TELECOMM) ✖			2,000	3,000			1,000			RM 146 (TELECOMM) ✖			8
9	1	20^	SPARE					1,000		1,000			RM 391 LOWER PLUGS ✖			10
11	1	20^	REC BELOW PANEL		1	180			1,180	1,000			RM 391 LOWER PLUGS ✖	1	20	12
13	1		SPACE				0						SPACE	1		14
15								0								16
17									0							18
19							0									20
21								0								22
23	1		SPACE						0							24
25	3	80	MAIN BREAKER				0									26
27	-	-						0								28
29	-	-							0				SPACE	1		30
							5,000	4,000	4,180							

TOTAL CONNECTED LOAD: 13,180 VA 37 AMPS FEEDER: EXISTING 4 #4, 1 #8 GND, 1-1/4" C
CALCULATED FEEDER DEMAND, NEC 220: 13,180 VA 37 AMPS

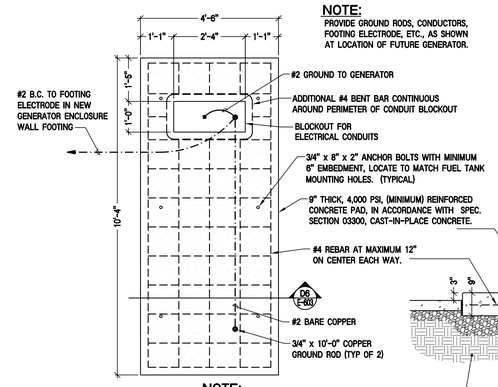
✖ EXISTING CIRCUIT TO REMAIN. LOAD IS ESTIMATED.
^ PROVIDE NEW CUTLER HAMMER TYPE 'BAB' BRANCH CIRCUIT BREAKER.

NEW PANEL 'EML'
TYPE 'PRL1a'
3 POLE 100 AMP MAIN BREAKER

10,000 A.I.C. FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	REC BELOW PANEL		1	180	1,350			1,170		13	LTS, NORTH RAMP & HALL	1	20	2
3			EM GENERATOR BLOCK HTR			1,500		1,500					SPARE TO MAIN LEVEL CHASE			4
5			REC, GENERATOR ENCLOSURE		1	180			1,350	1,170			LTS, SOUTH RAMP & HALL			6
7			ATC PANEL, MECH RM N085			500	500						SPARE			8
9			SPARE					0					SPARE			10
11			SPARE						0				SPARE			12
13			SPARE				0						SPARE			14
15			SPARE					0					SPARE			16
17	1	20	SPARE						0				SPARE	1	20	18
19	1		SPACE				0						SPACE	1		20
21								0								22
23									0							24
25							0									26
27								0								28
29	1		SPACE						0				SPACE	1		30
							1,850	1,500	1,350							

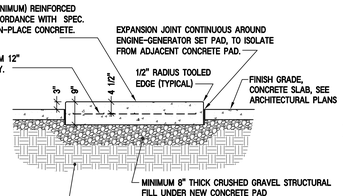
TOTAL CONNECTED LOAD: 4,700 VA 13 AMPS FEEDER: 4 #2, 1 #8 GND, 1-1/4" C
CALCULATED FEEDER DEMAND, NEC 220: 5,410 VA 15 AMPS



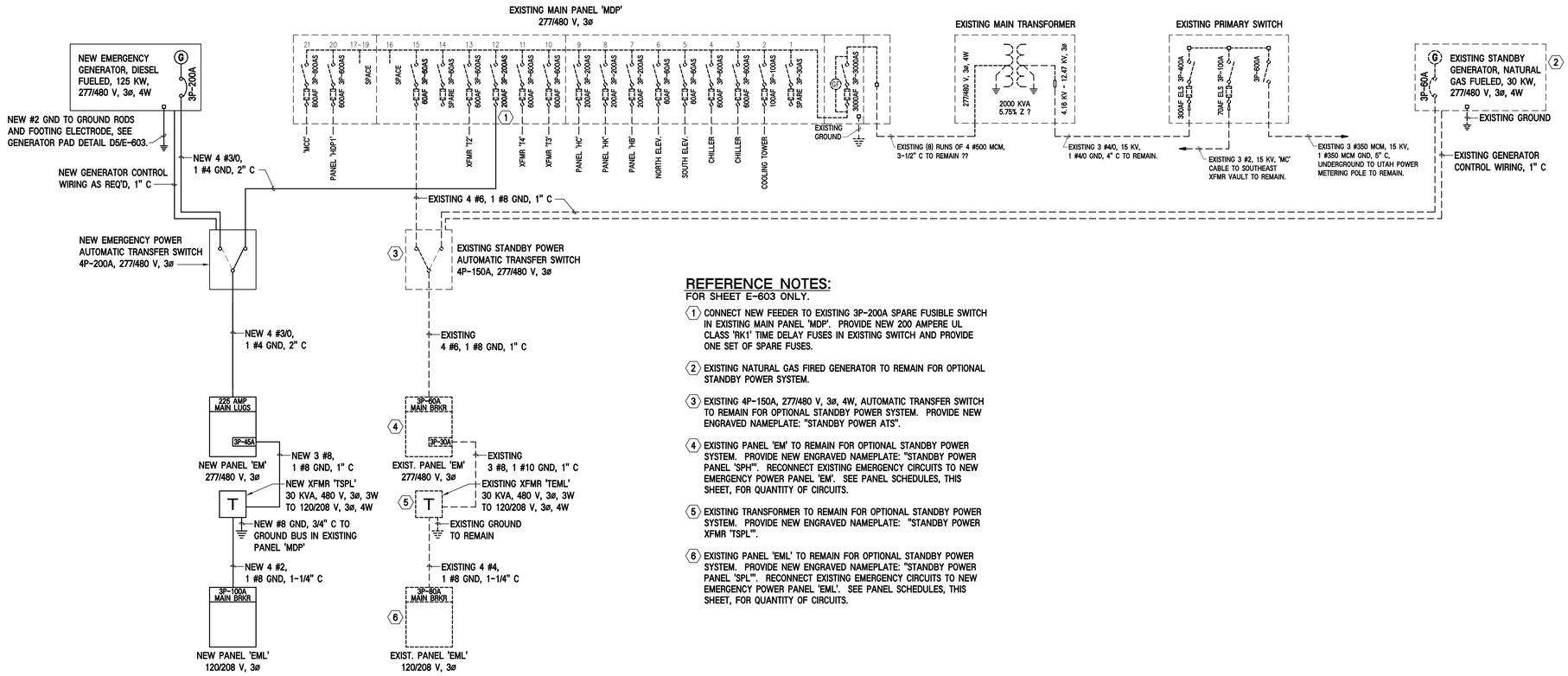
NOTE:
PROVIDE GROUND RODS, CONDUCTORS, FOOTING ELECTRODE, ETC., AS SHOWN AT LOCATION OF FUTURE GENERATOR.

NOTE:
COORDINATE PAD DIMENSIONS AND BLOCKOUT LOCATION WITH FURNISHED GENERATOR SET. PAD SHALL EXTEND MINIMUM 3" BEYOND GENERATOR ENCLOSURE.

D5 GENERATOR PAD DETAIL
SCALE: 1/2" = 1'-0"



D6 GENERATOR PAD SECTION
SCALE: 1/2" = 1'-0"



REFERENCE NOTES:
FOR SHEET E-603 ONLY.

1. CONNECT NEW FEEDER TO EXISTING 3P-200A SPARE FUSIBLE SWITCH IN EXISTING MAIN PANEL 'MDP'. PROVIDE NEW 200 AMPERE UL CLASS 'RK1' TIME DELAY FUSES IN EXISTING SWITCH AND PROVIDE ONE SET OF SPARE FUSES.
2. EXISTING NATURAL GAS FIRED GENERATOR TO REMAIN FOR OPTIONAL STANDBY POWER SYSTEM.
3. EXISTING 4P-150A, 277/480 V, 3ø, 4W, AUTOMATIC TRANSFER SWITCH TO REMAIN FOR OPTIONAL STANDBY POWER SYSTEM. PROVIDE NEW ENGRAVED NAMEPLATE: "STANDBY POWER ATS".
4. EXISTING PANEL 'EM' TO REMAIN FOR OPTIONAL STANDBY POWER SYSTEM. PROVIDE NEW ENGRAVED NAMEPLATE: "STANDBY POWER PANEL 'SPH'". RECONNECT EXISTING EMERGENCY CIRCUITS TO NEW EMERGENCY POWER PANEL 'EM'. SEE PANEL SCHEDULES, THIS SHEET, FOR QUANTITY OF CIRCUITS.
5. EXISTING TRANSFORMER TO REMAIN FOR OPTIONAL STANDBY POWER SYSTEM. PROVIDE NEW ENGRAVED NAMEPLATE: "STANDBY POWER XFMR 'TSPL'".
6. EXISTING PANEL 'EML' TO REMAIN FOR OPTIONAL STANDBY POWER SYSTEM. PROVIDE NEW ENGRAVED NAMEPLATE: "STANDBY POWER PANEL 'SPL'". RECONNECT EXISTING EMERGENCY CIRCUITS TO NEW EMERGENCY POWER PANEL 'EML'. SEE PANEL SCHEDULES, THIS SHEET, FOR QUANTITY OF CIRCUITS.

A2 SOUTH CITY CAMPUS EMERGENCY POWER SINGLE LINE DIAGRAM
SCALE: SCHEMATIC

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CONSULTANTS:

PROJECT:
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EMERGENCY GENERATOR IMPROVEMENTS
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REVISIONS:

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SHEET 16 OF 16