

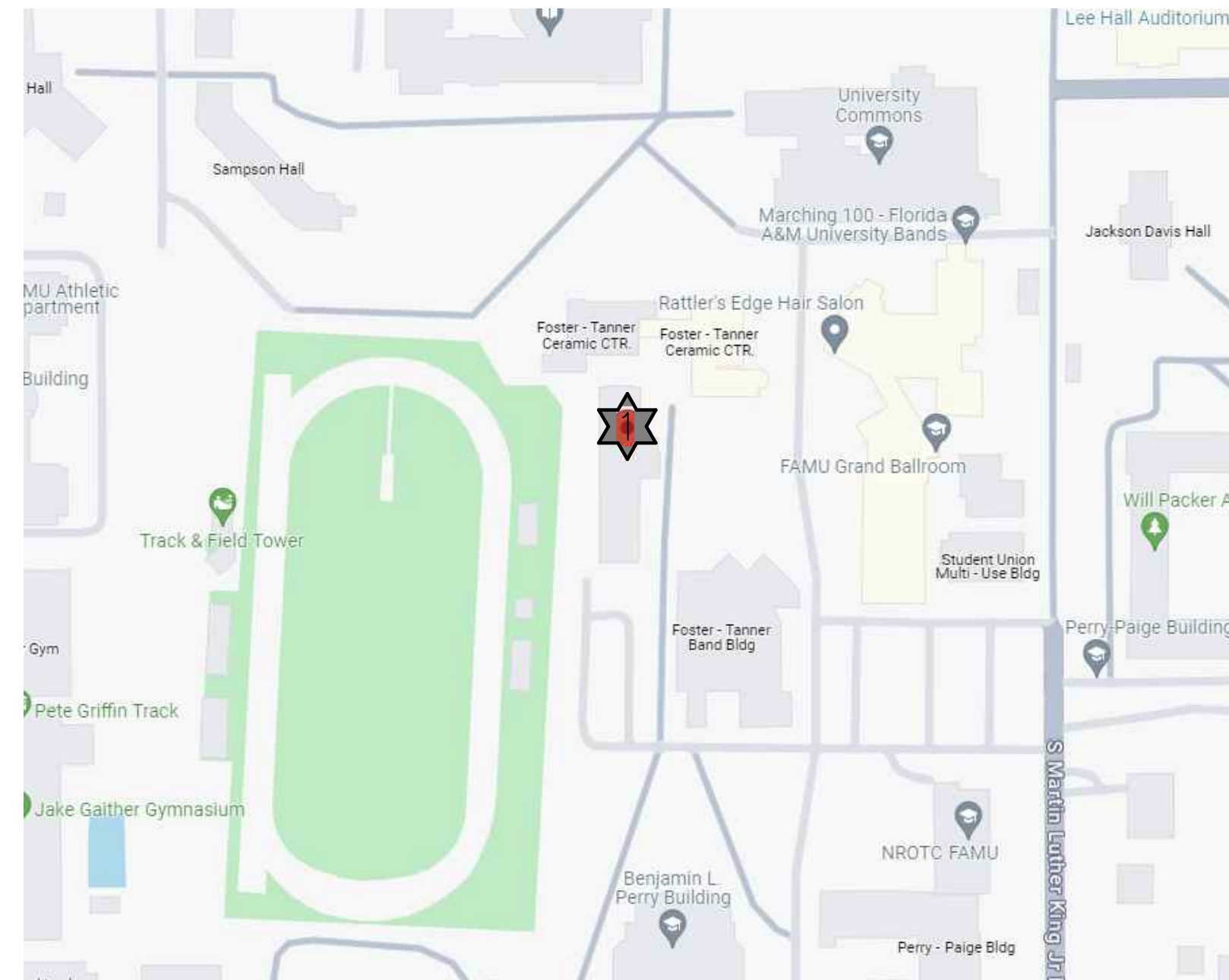
FOSTER-TANNER ELECTRICAL GEAR REPLACEMENT

FOR
FLORIDA A&M UNIVERSITY
TALLAHASSEE, FL

MARCH 29, 2024
FOR CONSTRUCTION

PROJECT LOCATION

FOSTER-TANNER MUSIC CENTER
TALLAHASSEE, FL 32310



CODES AND STANDARDS

FLORIDA BUILDING CODE SEVENTH EDITION, 2020
FLORIDA FIRE PREVENTION CODE SEVENTH EDITION, 2020
STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES, 2014
NATIONAL ELECTRIC CODE, NFPA 70, 2017

INDEX OF DRAWINGS

ELECTRICAL:
E-001 LEGEND & NOTES
E-002 SITE PLAN
E-101 ELECTRICAL GROUND FLOOR POWER PLAN

DESIGN TEAM

ELECTRICAL/PRIME:



WATFORD
ENGINEERING

4452 Clinton Street, Marianna, Florida 32446
850.526.3447 Project Number: 2023-085
Florida Certificate of Authorization: 27825
Anthony L. Davis, PE Florida License 57419

STATEMENT OF COMPLIANCE

TO THE BEST OF MY KNOWLEDGE, THESE DRAWINGS AND THE PROJECT MANUAL ARE COMPLETE AND COMPLY WITH THE FLORIDA BUILDING CODE

ENGINEER OF RECORD: ANTHONY L. DAVIS, PE FL LICENSE 57419

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Anthony L Davis, State of Florida, Professional Engineer, License No. 57419
This item has been digitally signed and sealed by Anthony L Davis on the date indicated here.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Florida A & M University
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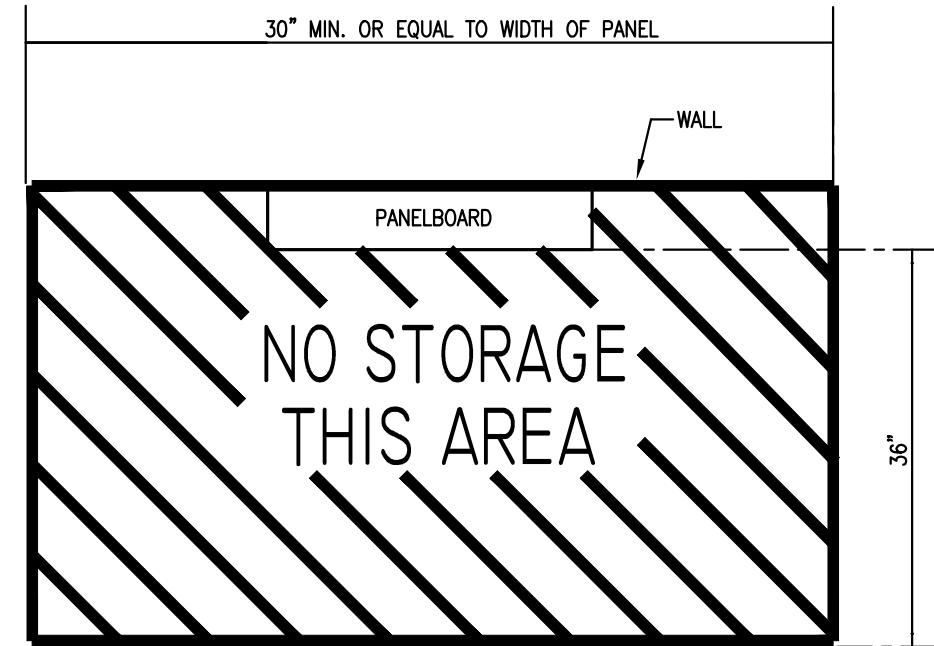
PROJECT NUMBER: 2023-085
DATE: 03-29-2024
DRAWN BY: KEF
DESIGNED BY: ALD

ELECTRICAL GENERAL NOTES, LEGEND AND SCHEDULES

E-001

ELECTRICAL GENERAL NOTES

- CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO A/V DRAWINGS FOR REQUIRED RACEWAYS, EXACT SIZE, AND LOCATION OF EQUIPMENT WHICH IS FURNISHED BY OTHERS AND CONNECTED BY ELECTRICAL.
- RECEPTACLES, SWITCHES AND COVERPLATES COLOR SHALL BE SELECTED BY THE ARCHITECT FROM STANDARD COLORS.
- LOCATION OF LIGHTING FIXTURES, DISCONNECT SWITCHES, ETC. FOR AUDIO-VISUAL EQUIPMENT/ROOM SHALL BE COORDINATED WITH FINAL 'AV' EQUIPMENT LOCATIONS TO PROVIDE NATIONAL ELECTRIC CODE REQUIRED ACCESS SPACE.
- FINAL CONNECTION TO ALL MOTORS SHALL BE WITH FLEXIBLE CONDUIT CONNECTION.
- ALL EXIT AND EMERGENCY FIXTURES SHALL BE CONNECTED TO LIGHT CIRCUIT AHEAD OF LOCAL SWITCH.
- ALL PANELBOARDS, BACKBOARDS, TERMINAL CABINETS, ETC SHALL HAVE CUSTOM ENGRAVED MICARTA NAMEPLATE MECHANICALLY AFFIXED IDENTIFYING SYSTEM.
- GENERAL CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. FAILURE TO DO SO INDICATES THAT THE CONTRACTOR ACCEPTS THE CONDITIONS AS THEY EXIST, AND SHALL PERFORM THE WORK REQUIRED AS SHOWN AND SPECIFIED.
- THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND REVIEW THE AUDIO-VISUAL AND SPECIAL EQUIPMENT SUBMITTALS PRIOR TO SUBMITTING THE ELECTRICAL SUBMITTALS. ANY ELECTRICAL EQUIPMENT, CONDUIT, AND WIRE SIZE CHANGES RESULTING FROM THIS REVIEW SHALL ALSO BE SUBMITTED FOR APPROVAL.
- FURNISH ALL EQUIPMENT AND LABOR, PERFORM ALL LABOR WITH SUPERVISION, BEAR ALL EXPENSES, AS NECESSARY FOR THE SATISFACTORY COMPLETION OF ALL WORK READY FOR OPERATION.
- COMPLY WITH ALL LOCAL CODE, LAWS, AND ORDINANCES APPLICABLE TO ELECTRICAL WORK, THE STATE BUILDING CODE, 2017 NATIONAL ELECTRIC CODE AND 2020 FBC. OBTAIN ALL PERMITS REQUIRED BY LOCAL ORDINANCES.
- OBTAIN ARCHITECT'S/ENGINEER'S APPROVAL OF ALL LIGHT FIXTURES, SWITCHES, RECEPTACLES, PANELBOARDS, ETC. PRIOR TO PURCHASING.
- TERMINATIONS FOR ALL EQUIPMENT SHOWN TO HAVE TEMPERATURE RATING OF 75deg C PER NEC 2011 ART. 110.14 & TABLE 310.15(B)(16).
- WHERE USED, PROVIDE MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE CIRCUIT BREAKERS SERVING MULTI-WIRE BRANCH CIRCUITS IN ACCORDANCE WITH NEC 210.4(B).



TYPICAL CLEARANCE AT ELECTRICAL PANELS
NOT TO SCALE

DEMOLITION NOTES

- ALL EXISTING SYSTEMS AND CONDITIONS SHOWN ON THE PLANS ARE APPROXIMATE. THE EXISTING ELECTRICAL CIRCUITS OF POWER, RECEPTACLES, LIGHTING, ETC. BEING REMOVED MAY NOT BE SHOWN ON THESE DOCUMENTS, BUT ARE TO BE REMOVED AS REQUIRED TO BUILD THIS PROJECT AND TO PERMIT NEW FINISHES, WALLS, ETC. THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS PRIOR TO BEGINNING ANY WORK AND SHALL NOTIFY THE ARCHITECT OF DISCREPANCIES. FAILURE TO DO SO INDICATES THAT THE CONTRACTOR ACCEPTS THE CONDITIONS AS THEY EXIST AND SHALL PERFORM ANY ADDITIONAL WORK NECESSARY TO PERFORM THE WORK AS SHOWN AND SPECIFIED.
- IF A DEVICE IS BEING REMOVED AND THE CIRCUIT FEEDS OTHER LOADS FROM THE DEVICE, THEN THE WIRING SHALL BE MADE CONTINUOUS TO THE REMAINING LOADS. NO CIRCUIT CONTINUITY SHALL BE LOST.
- IF A DEVICE IS BEING REMOVED AND NOT PART OF A DEMO WALL, THAT LOCATION SHALL BE RESTORED TO MATCH ADJACENT SURFACE.
- REMOVE ALL DISCONNECTS, WIRING, AND CONDUITS SERVING MECHANICAL EQUIPMENT BEING REMOVED OR RELOCATED.
- CONTRACTOR TO REMOVE ALL CONDUITS, & ASSOCIATED WIRING FROM DEVICES BEING REMOVED BACK TO PANEL UNLESS NOTED OTHERWISE. WHEN ALL LOADS ON EXISTING BREAKERS ARE REMOVED, RELABEL BREAKER AS 'SPARE'.

ARC FLASH WARNING LABEL

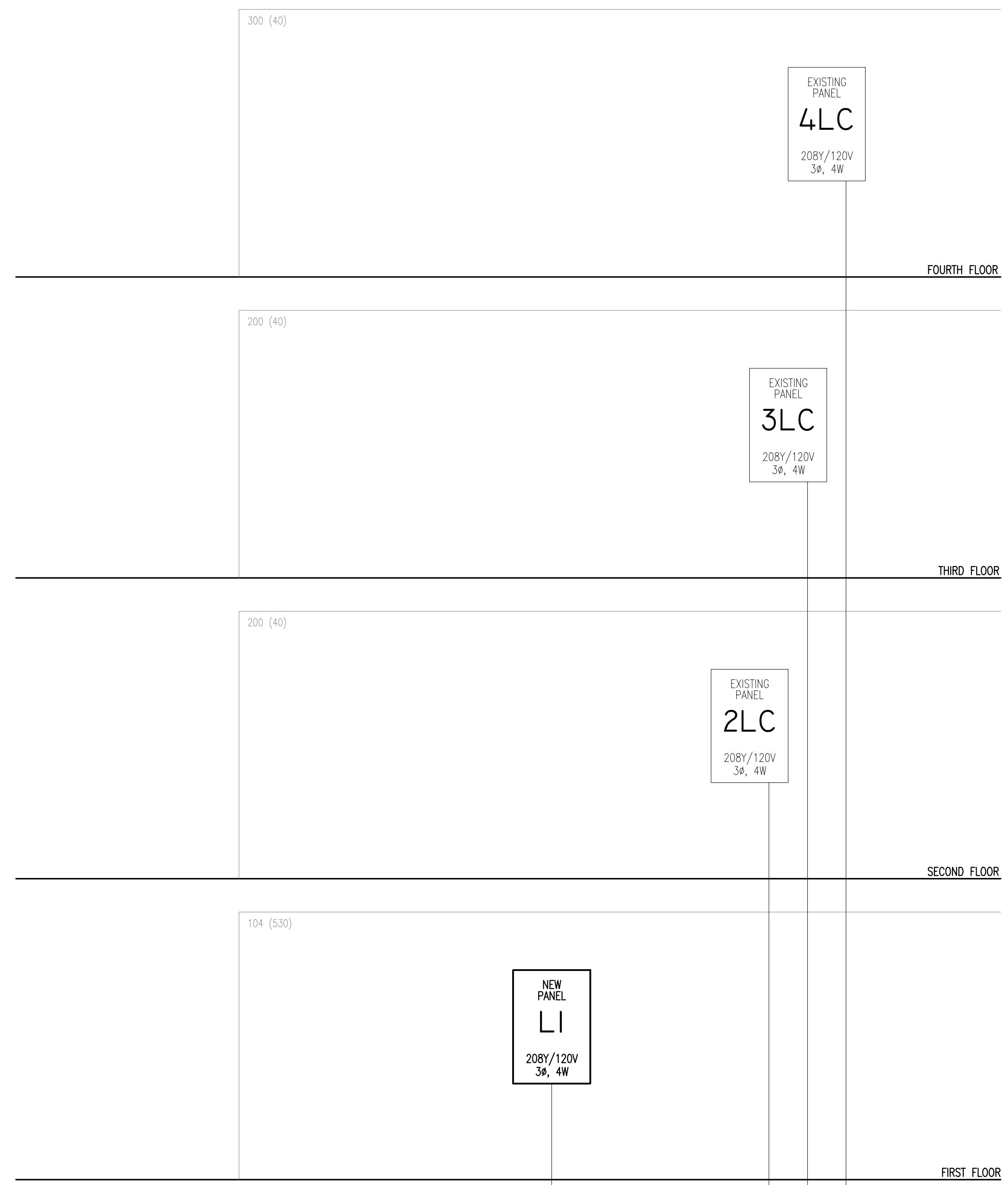
NOTES:

- PROVIDE SELF-ADHESIVE VINYL LABEL TO AFFIX TO ELECTRICAL EQUIPMENT TO WARN OF ARC FLASH HAZARDS.
- THE LABEL FORMAT AND TEXT SHALL BE IN ACCORDANCE WITH THE FIGURE.
- THE LABEL SHALL BE LOCATED ON THE EQUIPMENT TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.
- THE SIZE OF THE LABEL SHALL BE MINIMUM:

EQUIPMENT TYPE	HEIGHT	WIDTH
INDOOR	2'	3'
OUTDOOR	3'	4.5'

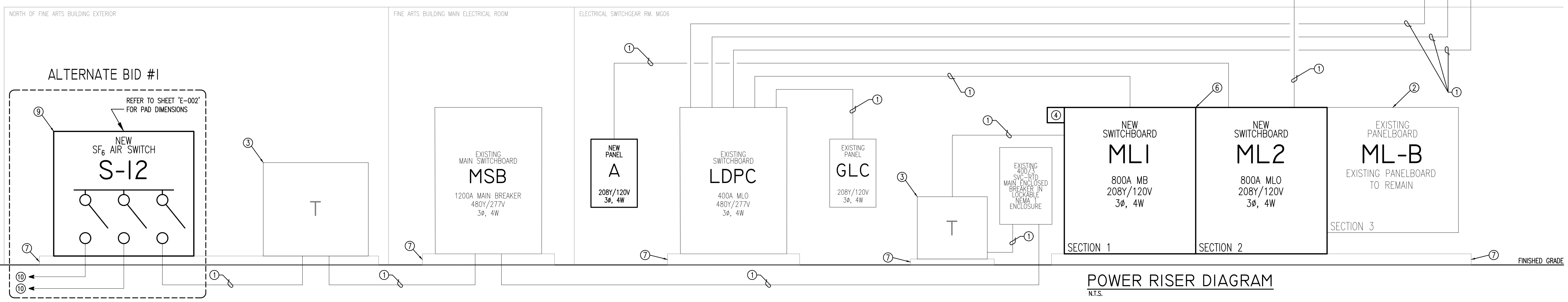
ELECTRICAL LEGEND

- PANELS AND POWER**
- 120/208 VOLT PANELBOARD
 - EXISTING 120/208 VOLT PANELBOARD
 - NON-FUSIBLE DISCONNECT SWITCH: XX/YY/ZZ WHERE X INDICATES AMPERAGE, Y INDICATES # OF POLES, AND Z INDICATES NEMA RATING
- MISCELLANEOUS**
- A.F.F. ABOVE FINISH FLOOR
 - B.F.C. BELOW FINISHED CEILING
- BRANCH CIRCUITING**
- RUN CONCEALED UNDER FLOOR OR IN GRADE
 - RUN CONCEALED IN CEILING OR WALLS
 - HOME RUN TO PANEL: ANY CIRCUIT WITHOUT FURTHER IDENTIFICATION INDICATES 2#12, 1#12 GROUND - 1/2" C; 3#12, 1#12 GROUND - 1/2" C; ETC. AS PER NEC. LETTERS AND NUMERALS INDICATE PANEL AND CIRCUIT NUMERALS INDICATE PANEL AND CIRCUIT NUMBER.
 - LIQUID-TIGHT FLEXIBLE CONDUIT CONNECTION
 - SURFACE MOUNTED CONDUIT; RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES



KEYNOTES:

- EXISTING FEEDER TO REMAIN. RECONNECT TO NEW EQUIPMENT WHERE APPLICABLE.
- EXISTING PANELBOARD SECTION 'ML-B' TO REMAIN AND BE RECONNECTED TO NEW SWITCHGEAR 'ML'. PANELBOARD IS SIEMENS TYPE 25, 208Y/120V, 800A M.L.O.
- EXISTING 300KVA, 480V-208Y/120 DRY-TYPE TRANSFORMER TO REMAIN. RECONNECT TO NEW SWITCHGEAR.
- EC SHALL INSTALL EXISTING SURGE SUPPRESSOR IN NEW SWITCHGEAR 'ML'.
- 45KVA DRY TYPE TRANSFORMER; 480Y/277V - 208Y/120V.
- REPLACE EXISTING 800A, 208Y/120V, 3Ø, 4W SWITCHGEAR WITH NEW 800A, 208Y/120V, 3Ø, 4W SWITCHGEAR. SECTION 'ML-1' IS 1600A M.B. AND SECTION 'ML-2' CONTAINS BRANCH CIRCUITS BREAKERS. NEW SWITCHGEAR 'ML-2' SHALL HAVE ADEQUATE SPACES TO RE-FEED ALL EXISTING EQUIPMENT. REFER TO SHEET 'E-101' FOR SWITCHGEAR 'ML2' SCHEDULE. NEW SWITCHGEAR GROUND IS TO BE BONDED TO EXISTING SERVICE ENTRANCE GROUND. EXISTING GEAR ITC UNI-POWER.
- EXISTING HOUSEKEEPING PAD TO REMAIN AND MODIFIED (F REQ'D) FOR NEW GEAR.
- 4" HIGH HOUSEKEEPING PAD SHALL BE 4" LARGER THAN FOOTPRINT OF EQUIPMENT. COORDINATE FINAL MOUNTING LOCATION WITH OWNER.
- EXISTING SF6 AIR SWITCH TO BE REPLACED WITH NEW SF6 AIR SWITCH. RECONNECT TO INCOMING UNDERGROUND PRIMARY AND TO EXISTING FEEDER GOING TO EXISTING 750 KVA TRANSFORMER.
- EXISTING UNDERGROUND PRIMARY TO REMAIN. RECONNECT TO NEW SF6 AIR SWITCH.



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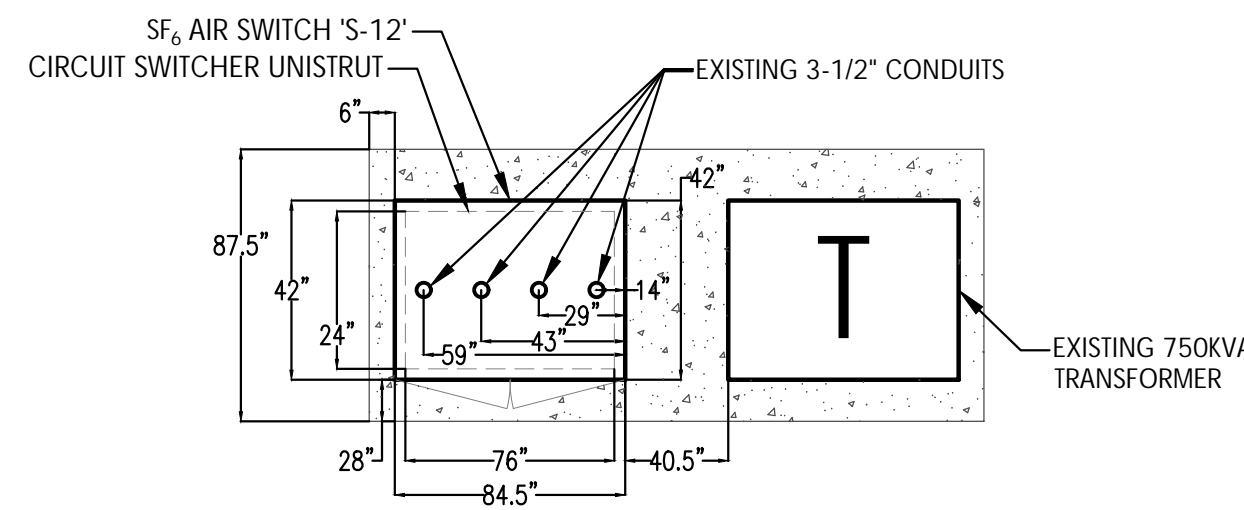
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DRAWN BY: SBH
DESIGNED BY: ALD

SITE PLAN

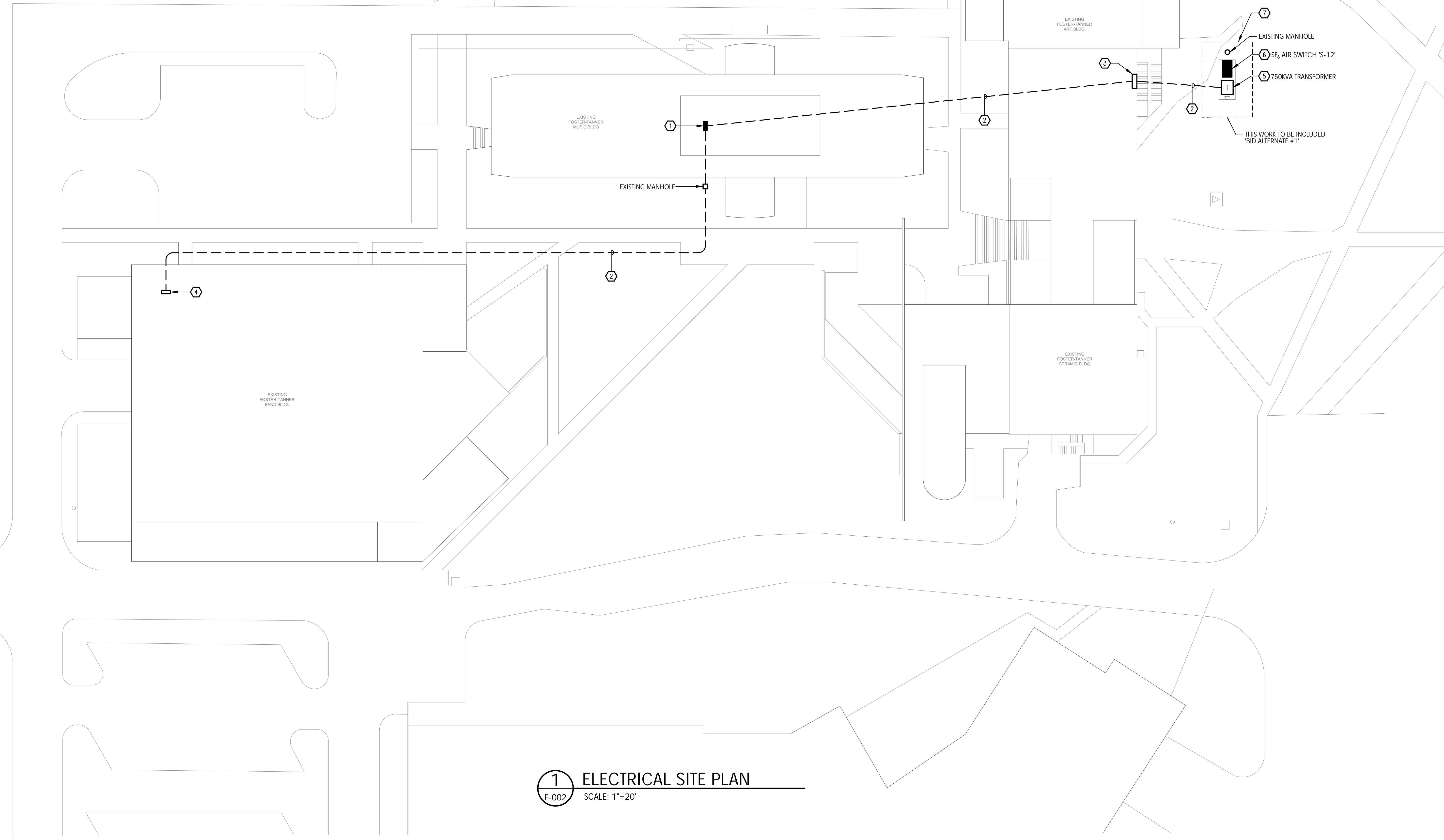
E-002

SHEET NOTES

- ① 800A 208Y/120V SWITCHBOARD 'ML' TO BE REPLACED. SEE SHEET 'E-001'.
- ② EXISTING UNDERGROUND FEEDER TO REMAIN.
- ③ EXISTING MAIN SWITCHBOARD TO REMAIN.
- ④ EXISTING PANEL TO REMAIN.
- ⑤ EXISTING 750 KVA TRANSFORMER TO REMAIN.
- ⑥ SF₆ AIR SWITCH 'S-12' TO BE REPLACED WITH NEW SF₆ AIR SWITCH. RECONNECT NEW SWITCH TO EXISTING UNDERGROUND PRIMARY AND TO EXISTING TRANSFORMER. SEE SHEET 'E-001' FOR DETAILS.
- ⑦ SEE 'CIRCUIT SWITCHER EXISTING CONCRETE PAD DIMENSIONS', THIS SHEET, FOR MORE DETAILS.



② CIRCUIT SWITCHER EXISTING CONCRETE PAD DIMENSIONS
E-002 SCALE: N.T.S.



① ELECTRICAL SITE PLAN
E-002 SCALE: 1"=20'

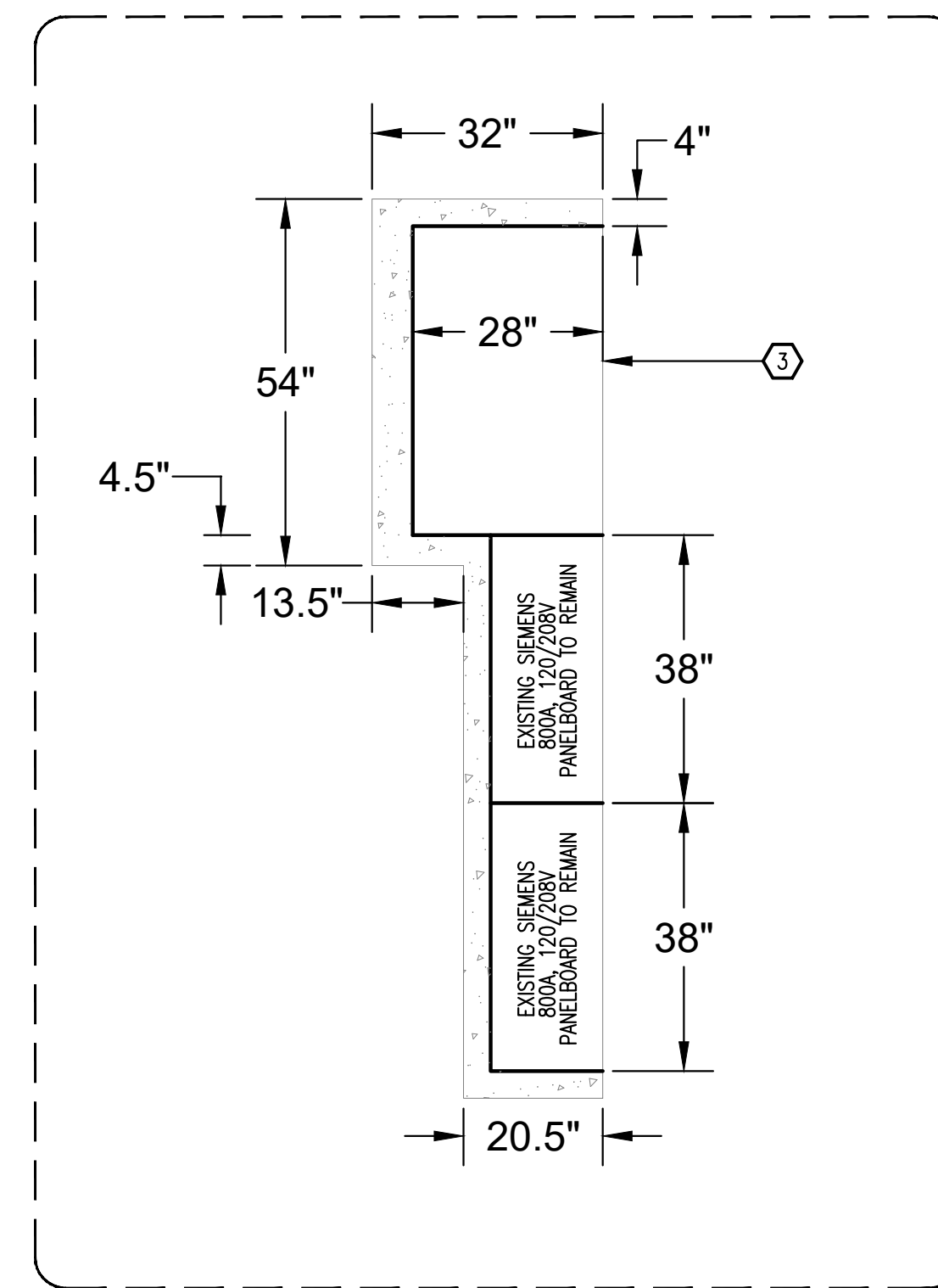
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GENERAL NOTES

- ALL FEDERAL PACIFIC EQUIPMENT BEING REMOVED IS TO BE RETURNED TO OWNER.
- ALL ITE EQUIPMENT BEING REMOVED IS TO BE RETURNED TO OWNER.

SHEET NOTES

- REPLACE EXISTING ITE, 800 AMP, 208Y/120V, 3Ø, 4W, 2-SECTION SWITCHBOARD WITH NEW 800 AMP, 208Y/120V, 3Ø, 4W, SWITCHBOARD. RECONNECT TO EXISTING FEEDER FROM EXISTING SIEMENS STEP-DOWN TRANSFORMER LOCATED IN ELECTRICAL SWITCHGEAR RM. MG06. LABEL NEW SWITCHBOARD 'ML'. INSTALL NEW BREAKERS SIZED TO MATCH BREAKERS IN SWITCHBOARD BEING REPLACED. RECONNECT ALL EXISTING LOADS TO NEW SWITCHBOARD. REFER TO SWITCHBOARD SCHEDULE ON THIS SHEET AND RISER DIAGRAM ON SHEET 'E-001' FOR MORE INFORMATION.
- EXISTING SWITCHBOARD SECTION 'ML-B' IN ELECTRICAL SWITCHGEAR RM. MG06 WAS ADDED IN A PREVIOUS PROJECT. THE 800 AMP ITE SWITCHBOARD IN ELECTRICAL SWITCHGEAR RM. MG06, THAT IS BEING REPLACED WITH NEW SWITCHBOARD, 'ML', WAS CONNECTED TO SWITCHBOARD SECTION 'ML-B' SWITCHBOARD 'A' AND EXISTING FEEDER TO SWITCHBOARD 'B' ARE TO REMAIN AS IS. RECONNECT EXISTING FEEDER TO NEW SWITCHBOARD 'B'. NOTE: EC TO ENSURE THE GROUND OF NEW SWITCHBOARD 'B' IS BONDED TO THE GROUND OF EXISTING MAIN SWITCHBOARD 'A'.
- PRIOR TO SUBMITTING BID, EC SHALL MAKE SITE VISIT AND ASCERTAIN ALL CONDITIONS NECESSARY FOR PROVIDING AN ACCURATE BID. IF THE EXISTING CONCRETE HOUSE-KEEPING PAD REQUIRES MODIFYING FOR NEW GEAR, EC SHALL INCLUDE IN BID.

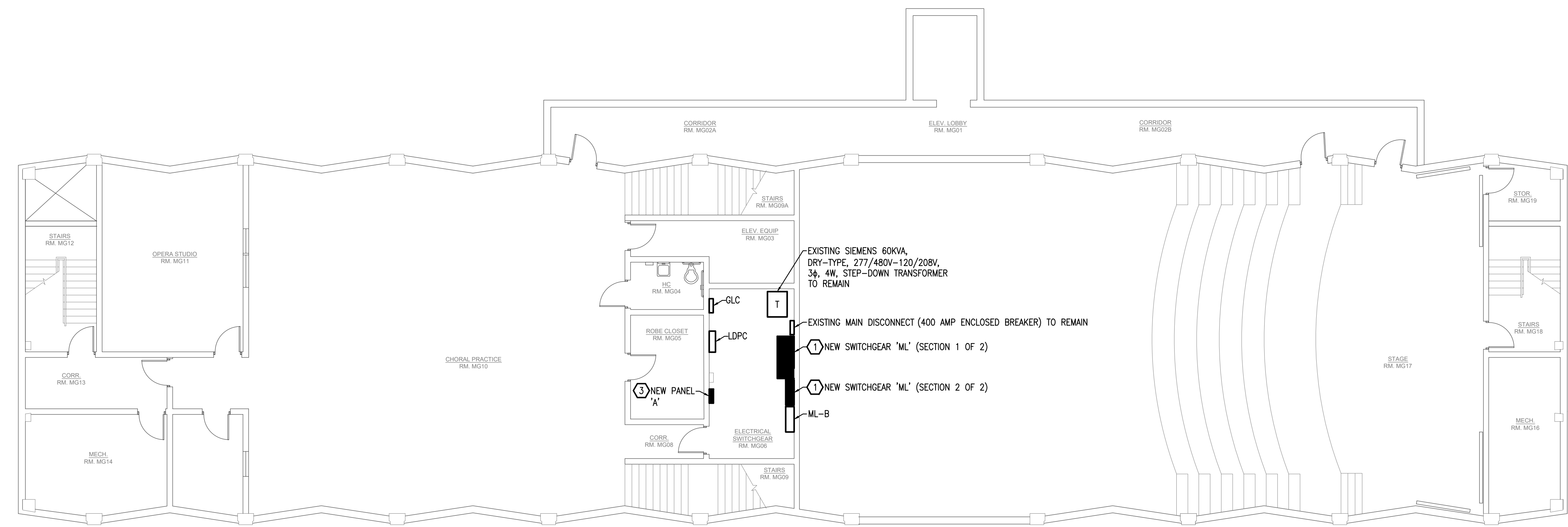


2 SWITCHBOARD 'ML' EXISTING PAD DIMENSIONS
SCALE: N.T.S.

BREAKER INTERRUPTING CAPACITY: 65,000		SWITCHBOARD SCHEDULE ML2				BRACED FOR MINIMUM 65,000 AMPS SYMMETRICAL	
208/120 VOLT, 3Ø, 4W 800 AMP RATED SECTION (800 AMP SUPPLY)							
CKT	EQUIPMENT SERVED	BREAKER		LOAD KVA	BREAKER		CKT
		POLE	TRIP		POLE	TRIP	
1	SPACE ONLY	3	--		20	3	PANEL 'A'
3	PANEL 'L1'	3	70		80	3	SPARE
5	PANEL 'L2'	3	100		100	3	PANEL 'L3'
7	PANEL 'L4'	3	100		--	3	SPACE ONLY
9	SPARE	3	30		--	3	SPACE ONLY
11	SPACE ONLY	3	--		--	3	SPACE ONLY
13	SPARE	3	200		--	3	SPACE ONLY
15	SPACE ONLY	3	--		--	3	SPACE ONLY

120/208 VOLT 3Ø 4W 100 AMP MAIN LUG ONLY		CIRCUIT BREAKER PANEL SCHEDULE PANEL 'A'				SURFACE MOUNTED NEMA 1 ENCLOSURE	
CKT	LOAD DESCRIPTION	BREAKER		LOAD KVA	BREAKER		CKT
		POLE	AMP		AMP	POLE	
1	EXISTING CIRCUIT	1	20		20	1	EXISTING CIRCUIT
3	EXISTING CIRCUIT	1	20		20	1	EXISTING CIRCUIT
5	EXISTING CIRCUIT	1	20		20	1	EXISTING CIRCUIT
7	EXISTING CIRCUIT	1	20		20	1	EXISTING CIRCUIT
9	EXISTING CIRCUIT	1	20		20	1	EXISTING CIRCUIT
11	SPACE ONLY	1	--		--	1	SPACE ONLY
13							
15							
17							
19							
21							
23							

MINIMUM INTERRUPTING CAPACITY: 22,000 AMPS SYMMETRICAL



1 GROUND FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"



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DESIGNED BY: ALD

**ELECTRICAL GROUND
FLOOR POWER PLAN**

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