LAGRANGE TECHNOLOGY CENTER

309 CHURCH STREET - LAGRANGE, GA. 30240

L. LEIGH MORGAN
CONSULTING ENGINEER
PO BOX 6 SENOIA, GEORGIA 30276
770-599-3840 (O) / 770-599-0801 (F)

LLM PROJECT NO. 15003

PROJECT INFORMATION

PROJECT DESCRIPTION

THE SCOPE OF WORK PROVIDED BY THIS PROJECT IS THE REPLACEMENT AND UPGRADE OF A PORTION OF THE EXISTING UNINTERRUPTIBLE POWER SYSTEM UNITS PRESENTLY SERVING THE EXISTING FACILITY. ALL WORK SHALL CONFORM TO THE DRAWINGS AND ALL OTHER EXISTING BUILDING CONSTRUCTION AND SYSTEMS SHALL REMAIN AS PRESENTLY INSTALLED.

ALL EXISTING BUILDING LIFE SAFETY/EXIT PLANS INCLUDING PATHS OF TRAVEL, CALCULATED OCCUPANCY LOADS, AND EXIT WIDTHS SHALL REMAIN AS PRESENTLY EXIST AND PREVIOUSLY PERMITTED FOR THE BUILDING USE. THE ELECTRICAL SYSTEMS TO BE REPLACED AND/OR MODIFIED ARE A NOT A PART OF THE LIFE SAFETY EXITING AND EGRESS REQUIREMENTS AND THEREFORE THEIR REPLACEMENT DOES NOT AFFECT ANY OF THESE REQUIREMENTS. THEREFORE THE CURRENT LIFE SAFETY PLAN ON FILE WITH THE CITY OF LAGRANGE IS APPLICABLE THROUGHOUT THE CONSTRUCTION AND WHEN THE PROJECT IS COMPLETED. ALL EXITS SHALL BE KEPT OPEN AT ALL TIMES DURING THE CONSTRUCTION.

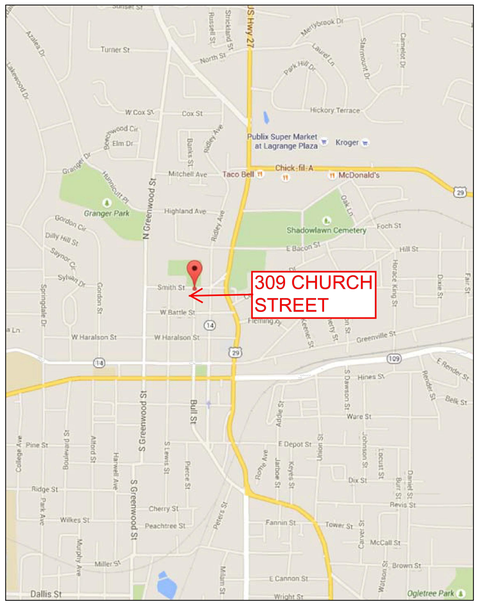
ALL NEW WORK SHALL BE CONFINED TO THE EXISTING DATA CENTER COLOCATION ROOM AND THE ELECTRICAL ROOM AREAS OF THE BUILDING.

CONTACT INFORMATION

REPRESENTING	COMPANY	CONTACT
OWNER'S REPRESENTATIVE	THE CITY OF LAGRANGE, GEORGIA 200 RIDLEY AVENUE LAGRANGE, GEORGIA 30240	MS. MICHELLE LEADY OFFICE (706) 883-2004 MLEADY@LAGRANGEGA.ORG
ENGINEER	L. LEIGH MORGAN - CONSULTING ENGINEER P.O. BOX 6 SENOIA, GEORGIA 30276	MR. L. LEIGH MORGAN OFFICE (770) 599-3840 E-MAIL LEIGHMORGAN@MINDSPRING.COM
ELECTRICAL CONTRACTOR		

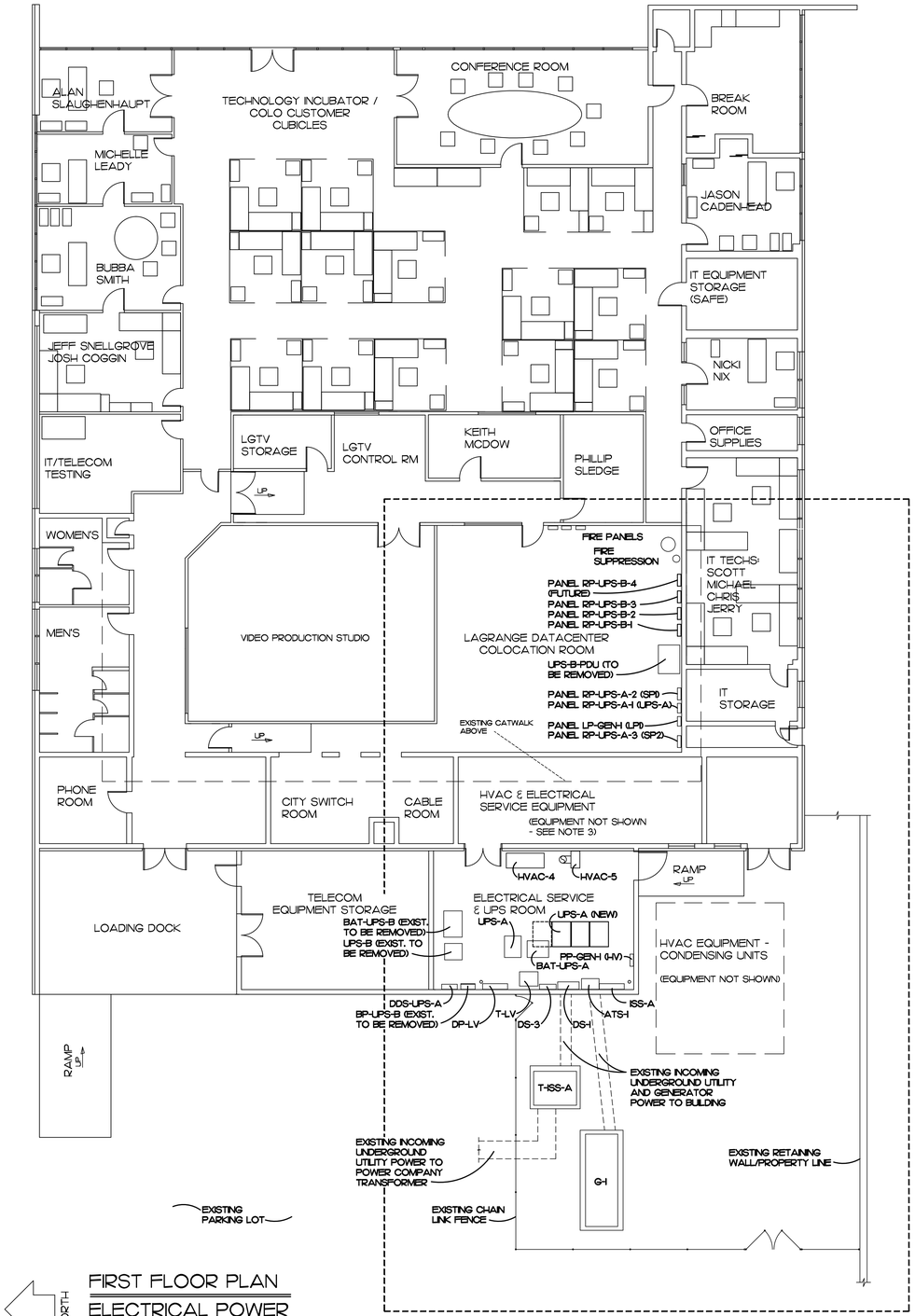
DRAWING INDEX

DRAWING NO.	TITLE	ISSUE DATE	REV. NO.	REV. DATE
COVER	BUILDING DATA AND SITE LOCATION PLAN	6/10/15	1	6/24/15
E-1.1	FIRST FLOOR PLAN - ELECTRICAL EQUIPMENT LAYOUT	6/10/15	1	6/24/15
E-1.5	FIRST FLOOR PART PLAN - ELECTRICAL POWER UPS B	6/10/15	1	6/24/15
E-10.1	PARTIAL ELEC. RISER DIAGRAMS - EMERG. PWR SYSTEMS	5/18/15	1	6/24/15
E-20.1	PANELBOARD SCHEDULES - ELECTRICAL POWER UPS-B	6/10/15	1	6/24/15
THE FOLLOWING ORIGINAL BUILDING DRAWINGS ARE ISSUED FOR REFERENCE TO PREVIOUS CONSTRUCTION				



LOCATION MAP - GENERAL

LOCATION MAP - LOCAL



REFERENCE DRAWING E-1.5 FOR ENLARGED PLAN OF NEW UPS-B

FIRST FLOOR PLAN
ELECTRICAL POWER

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

NOTES:

1. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDUIT, WIRING, EQUIPMENT, ETC. SERVING THE EXISTING EQUIPMENT THAT IS TO BE REMOVED, REPLACED, OR REFURBISHED AND REMAIN IN PLACE PRIOR TO THE START OF THE WORK TO INSURE THAT THE WORK SHALL BE ACCOMPLISHED IN A MINIMUM OF TIME. ALL DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER IN WRITING.
2. THE CONTRACTOR SHALL PROTECT THE EXISTING BUILDING SYSTEMS AND THE EXISTING ELECTRICAL SYSTEMS THAT ARE TO REMAIN IN PLACE AND IN SERVICE AFTER THE COMPLETION OF THE WORK.
3. REFERENCE DRAWINGS E-10.1 AND E-20.1 FOR PANELBOARD DESCRIPTIONS, ARRANGEMENTS, AND UPS SCHEMATIC DIAGRAM OF THE EXISTING AND NEW ELECTRICAL POWER SYSTEMS.
4. THE EXISTING UNINTERRUPTIBLE POWER SYSTEM UNIT UPS-B (POWERWARE), THE ASSOCIATED BATTERY CABINET BAT-UPS-B, THE UPS B BYPASS PANEL BP-UPS-B (SQUARE D), THE UPS B POWER DISTRIBUTION UNIT PDU-UPS-B (LIEBERT), AND ALL ASSOCIATED CONDUIT AND WIRING ARE TO BE REMOVED AFTER THE COMPLETION OF THE NEW UPS INSTALLATION AND THE TRANSFER OF THE EXISTING CIRCUITS SERVED FROM PDU-UPS-B TO THE NEW EQUIPMENT.
5. THE CONTRACTOR SHALL FURNISH AND INSTALL THE NEW POWER WIRING SERVING THE UPS SYSTEM AS DETAILED ON DRAWINGS E-1.5 AND E-10.1 IN THE UPS RISER DIAGRAM.
6. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL STATE, LOCAL, AND CITY OF LAGRANGE CODES.

KEY PLAN

L. LEIGH MORGAN
CIVIL ENGINEERS
PO BOX 4 • SENOIA, GEORGIA 30276
770-599-3440 (O) / 770-599-0801 (F)

GEORGIA REGISTERED PROFESSIONAL ENGINEER L. LEIGH MORGAN

CITY OF LAGRANGE
200 RIDLEY AVENUE
LAGRANGE, GEORGIA 30240

LAGRANGE TECHNOLOGY CENTER
UPS UPGRADE - UPS B

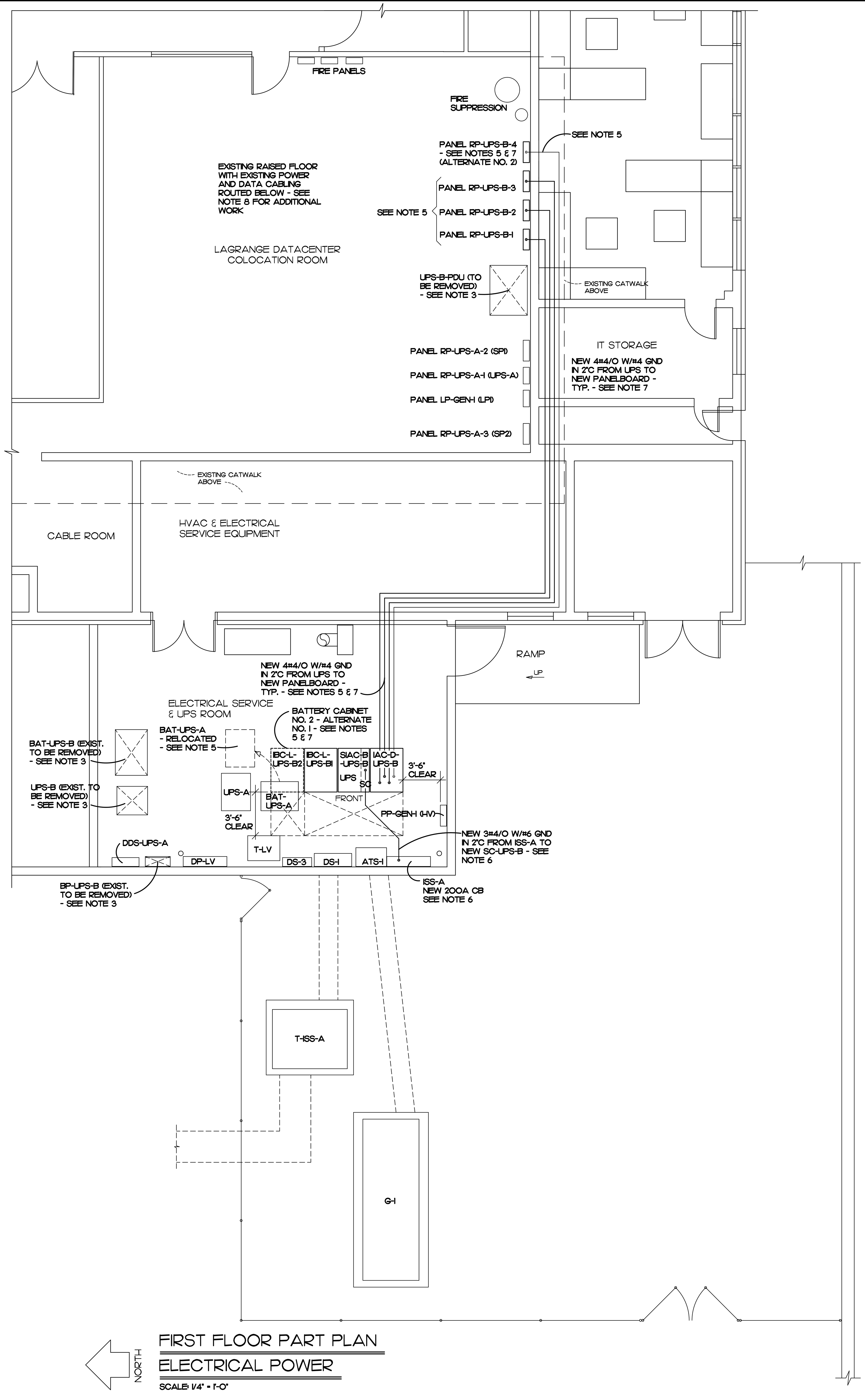
FIRST FLOOR PLAN
ELECTRICAL EQUIPMENT LAYOUT

NO.	DATE	PROJECT	REVISION
1	6/24/15	15003	ISSUED FOR BID
A	6/10/15	15003	ISSUE FOR OWNER'S REVIEW AND COMMENTS

DATE 06-10-15
PROJECT 15003

COL
E-1.1

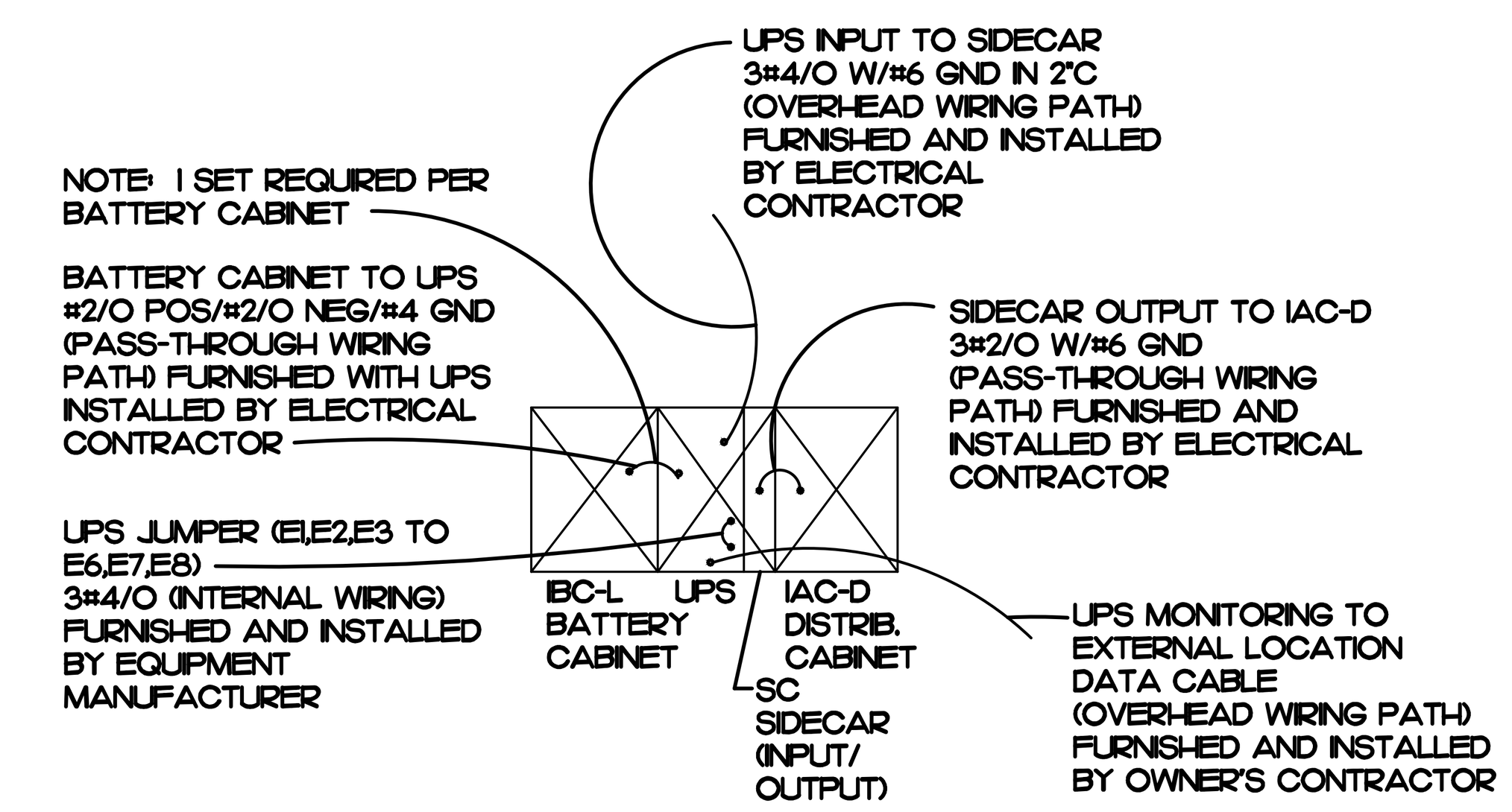
NOT RELEASED FOR CONSTRUCTION 06/10/15



FIRST FLOOR PART PLAN

ELECTRICAL POWER

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



UPS EQUIPMENT CONNECTIONS

ELECTRICAL POWER & DMS

SCALE: NONE

NOTES:

1. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDUIT, WIRING, EQUIPMENT, ETC. SERVING THE EXISTING EQUIPMENT THAT IS TO BE REMOVED, REPLACED, OR REFURBISHED AND REMAIN IN PLACE PRIOR TO THE START OF THE WORK TO INSURE THAT THE WORK SHALL BE ACCOMPLISHED IN A MINIMUM OF TIME. ALL DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER IN WRITING.
2. REFERENCE DRAWING E-10.1 AND E-20.1 FOR PANELBOARD DESCRIPTIONS, ARRANGEMENTS, AND UPS SCHEMATIC DIAGRAM OF THE EXISTING AND NEW ELECTRICAL POWER SYSTEMS.
3. THE EXISTING DATACENTER/COLOCATION ROOM IS PRESENTLY SERVED BY TWO (2) EXISTING UPS SYSTEMS, UPS-A (LIEBERT) AND UPS-B (POWERWARE). THE EXISTING UPS-B, BAT-UPS-B, BP-UPS-B, AND UPS-B-PDU (EXISTING LIEBERT PDU WITH THREE (3) POWER PANELBOARDS) ARE TO BE REMOVED AFTER THE COMPLETION OF THE NEW UPS INSTALLATION. EQUIPMENT REMOVAL SHALL INCLUDE ALL CONDUITS AND CONDUCTORS SERVING THE EQUIPMENT. ALL EQUIPMENT AND MATERIALS REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR PER THE OWNER'S INSTRUCTIONS. THE CONTRACTOR SHALL PROVIDE A "CERTIFICATE OF PROPER BATTERY DISPOSAL" TO THE OWNER AS A PART OF THE PROJECT DOCUMENTATION. ALL EXISTING CIRCUITS SERVED BY THE EXISTING UPS-B SYSTEM SHALL BE RECONNECTED TO THE NEW PANELBOARDS AS A PORTION OF THIS WORK PRIOR TO THE REMOVAL OF THE NOTED EQUIPMENT. SEE NOTE 8 BELOW FOR RELOCATION OF EXISTING CIRCUITS.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL THE NEW DATACENTER/COLOCATION ROOM ELECTRICAL SERVICE EQUIPMENT AT THE LOCATIONS INDICATED ON THE DRAWING. THE EQUIPMENT SHALL CONSIST OF A UPS POWER INPUT CABINET WITH A THREE BREAKER BYPASS ARRANGEMENT (SC-UPS-B), AN UNINTERRUPTIBLE POWER SYSTEM UNIT (UPS-B), A BATTERY BACKUP UNIT (IBC-L-UPS-B), A DISTRIBUTION CABINET (IAC-D-UPS-B), AND THREE (3) PANELBOARDS (RP-UPS-B-1, -2, AND -3). ALL EQUIPMENT SHALL BE PROVIDED AS DESCRIBED BELOW:
   - RP-UPS-B-1, -2, & -3 - THREE (3) 208/120V, 3 PH, 4 W, POWER PANELBOARDS EACH RATED AT 225A, FURNISHED WITH A MAIN CIRCUIT BREAKER, 42 BRANCH CIRCUIT BREAKERS (24 EACH 1 POLE 20 AMP, 2 EACH 1 POLE 30 AMP, 2 EACH 2 POLE 15 AMP, AND 6 EACH 2 POLE 30 AMP), AND FULLY RATED FOR A MINIMUM 10 KAIC. (SEE ALTERNATE NO. 2 REGARDING PANELBOARD RP-UPS-B-4)

     NOTE: THE FOLLOWING DESCRIPTIONS ARE BASED ON AN EATON MODEL 93PM UPS SYSTEM CONFIGURED AS A MATCHING LINEUP. SEE NOTE BELOW REGARDING ADDITIONAL SERVICE CONTRACT REQUIREMENTS.
   - SC-UPS-B - ONE (1) EATON MODEL 93PM SIDECAR SUITABLE FOR 100KW UPS CONNECTION AND CONFIGURED WITH A THREE-BREAKER BYPASS ARRANGEMENT TO ALLOW FOR A FULL BYPASS OF THE UPS MODULE AND BATTERIES AND A CONTINUOUS FEED TO THE UPS DISTRIBUTION CABINET (IAC-D-UPS-B). INPUT AND BYPASS BREAKERS SHALL BE 80% LOAD RATED AT 480V. SIDECAR SHALL BE RIGHT MOUNTED TO UPS MODULE
   - UPS-B - ONE (1) EATON MODEL 93PM-100-3 (N+1) UPS RATED AT 100KW, SUITABLE FOR 480V, 3 PH, 3 W, INPUT AND 480V, 3 PH, 3 W OUTPUT, RATED AT MINIMUM 14 KAIC. UNIT SHALL BE CONFIGURED FOR 100KW CAPACITY (2 EACH 50KW MODULES) WITH ONE (1) REDUNDANT MODULE (1 EACH 50KW MODULE) TO PROVIDE AN N+1 CONFIGURATION. UNIT SHALL BE PROVIDED WITH POWER XPERT GATEWAY UPS CARD,
   - IBC-L-UPS-B1 - ONE (1) EATON MODEL 93PM INTEGRATED BATTERY CABINET FURNISHED WITH 1 STRING OF VLRA BATTERIES AND BATTERY DISCONNECT SWITCH. SUITABLE TO PROVIDE A MINIMUM 17 MINUTES @100KW BATTERY BACKUP DURING LOSS OF POWER. POSITIVE, NEGATIVE, AND GROUND BATTERY CONNECTION TO UPS CABLES SHALL BE PROVIDED BY THE UPS MANUFACTURER. BATTERY CABINET SHALL BE LEFT MOUNTED TO UPS MODULE (SEE ALTERNATE NO. 1 REGARDING A SECOND BATTERY CABINET)
   - IAC-D-UPS-B - ONE (1) EATON DISTRIBUTION CABINET SUITABLE FOR 100KW 480V, 3 PH, 3 W, INPUT, FITTED WITH A 208/120V, 3 PH, 4 W OUTPUT TRANSFORMER WITH A MINIMUM K=13 RATING TO PROVIDE POWER TO FIVE (5) 250A, 208 VOLT, 3 PHASE, DISTRIBUTION CIRCUIT BREAKERS. THE 250 AMP, 3 POLE CIRCUIT BREAKERS SHALL BE RATED FOR A MINIMUM 10 KAIC AND FURNISHED WITH ADJUSTABLE (100A-250A) TRIPS. TRIPS SHALL BE SET AT 225A UNLESS NOTED OTHERWISE. THE DISTRIBUTION CABINET SHALL BE RIGHT MOUNTED TO THE UPS SIDECAR (SC-UPS-B).

4. (CONTINUED)

   UPS INSTALLATION REQUIREMENTS:

   THE UPS EQUIPMENT (UPS, SIDECAR, BATTERY CABINET, AND DISTRIBUTION CABINET) MANUFACTURER SHALL INCLUDE IN HIS PROPOSAL STARTUP OF ALL FURNISHED EQUIPMENT AND A FOUR (4) HOUR LOAD BANK TEST (MINIMUM 1 HOUR AT 100% LOAD) WITH A FULL BATTERY DISCHARGE TEST.

   UPS SERVICE CONTRACT REQUIREMENTS:

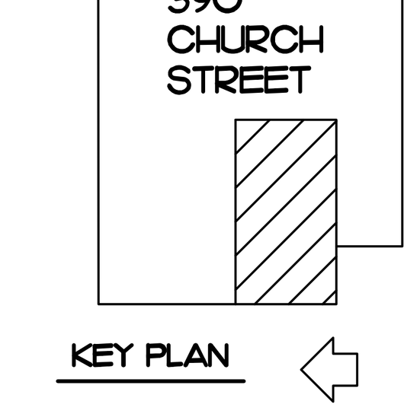
   SERVICE CONTRACT FOR EMERGENCY MAINTENANCE SHALL BE BASED ON 24X7X365 AVAILABILITY AND RESPONSE BY THE MANUFACTURER. THE UPS EQUIPMENT (UPS, SIDECAR, BATTERY CABINET, AND DISTRIBUTION CABINET) MANUFACTURER SHALL INCLUDE IN HIS PROPOSAL A ONE YEAR WARRANTY AND A SERVICE CONTRACT COST FOR A 4 YEAR PERIOD (YEARS 2-5). THE SERVICE CONTRACT SHALL BE BASED ON THE STANDARD SERVICE AGREEMENT (ATTACH SCOPE OF MANUFACTURER'S SERVICES INCLUDED TO BID FORM) PROVIDED BY THE MANUFACTURER WITH A MINIMUM OF TWO (2) SITE INSPECTION/PREVENTIVE MAINTENANCE VISITS PER YEAR. ALL PARTS, PARTS INSTALLATION MANHOURS, AND EMERGENCY SERVICE CALLS SHALL BE CONSIDERED AS EXTRA COST OUTSIDE THE SERVICE AGREEMENT AFTER THE INITIAL ONE (1) YEAR WARRANTY. HOURLY MANHOUR RATES (BOTH NORMAL AND AFTERHOURS) SHALL BE STATED IN THE PROPOSAL AND SHALL BE FIXED FOR THE FOUR YEAR (YEARS 2-5) PERIOD OF THE SERVICE CONTRACT.
5. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING ALTERNATE COSTS ON THE BID FORM AS A PART OF HIS BID PROPOSAL FOR THE PROJECT:

   ALTERNATE NO. 1

   IBC-L-UPS-B2 - THE CONTRACTOR SHALL FURNISH AND INSTALL A SECOND EATON INTEGRATED BATTERY CABINET EQUAL TO AND MATCHING THE BATTERY CABINET CABINET SPECIFIED ABOVE, INCLUDING THE REQUIRED CABLES FOR CONNECTION TO THE UPS UNIT. THE CONTRACTOR SHALL INCLUDE IN THE COST THE RELOCATION OF THE EXISTING BATTERY CABINET BAT-UPS-A TO INSURE ADEQUATE CLEARANCE FOR THE NEW BATTERY CABINET.

   ALTERNATE NO. 2

   RP-UPS-B-4 - THE CONTRACTOR SHALL FURNISH AND INSTALL A FOURTH POWER PANELBOARD (EQUAL TO AND MATCHING THE POWER PANELBOARDS SPECIFIED ABOVE) AND THE ASSOCIATED CONDUIT AND CONDUCTORS PARALLELING THE FEEDERS DESCRIBED IN NOTE 7 BELOW..
6. THE CONTRACTOR SHALL FURNISH AND INSTALL THE NEW POWER FEEDERS TO THE UPS-B INPUT FROM A NEW 200A/3P CIRCUIT BREAKER INSTALLED IN THE INCOMING SERVICE SWITCHBOARD ISS-A.
7. THE CONTRACTOR SHALL FURNISH AND INSTALL THE NEW POWER FEEDERS FROM THE DISTRIBUTION CABINET OUTPUT CIRCUIT BREAKERS TO THE NEW PANELBOARDS LOCATED IN THE DATACENTER/COLOCATION ROOM. THE NEW CONDUITS AND CONDUCTORS SHALL BE ROUTED AS HIGH AS POSSIBLE THROUGH THE ELECTRICAL SERVICE & UPS ROOM, THE MECHANICAL & ELECTRICAL EQUIPMENT ROOM, AND ABOVE THE EXISTING CATWALK LOCATED ON THE SOUTH SIDE OF THE DATACENTER/COLOCATION ROOM. PROVISIONS SHALL BE MADE FOR THE INSTALLATION OF FOUR (4) CONDUIT RUNS WITH THREE (3) INSTALLED AS PART OF THIS PROJECT AND THE FOURTH AS EITHER AN ADD TO THE PROJECT (SEE ALTERNATE NO. 2) OR AS A FUTURE ADDITION.
8. THE CONTRACTOR SHALL RELOCATE THE EXISTING CIRCUITS (CURRENTLY 40 EACH 1 POLE AND 14 EACH 2 POLE) CONNECTED TO PDU-UPS-B FROM THE EXISTING PDU PANELBOARDS TO THE NEW PANELBOARDS INSTALLED AS A PORTION OF THIS PROJECT, THIS WORK SHALL BE PERFORMED AFTER THE INSTALLATION, TESTING, AND ACCEPTANCE OF THE NEW EQUIPMENT. THE OWNER SHALL FURNISH A "MAP" OF THE EXISTING CIRCUITS AND THE PROPOSED NEW PANELBOARD BREAKER LOCATIONS FOR COORDINATION OF THE WORK WITH THE CONTRACTOR.
9. ALL CONDUCTORS SHALL BE COPPER WITH 600 VOLT INSULATION, TYPE THHN. MINIMUM CONDUCTOR SIZE SHALL BE #12 EXCEPT AS NOTED ON THE PLAN. INSTALL A GREEN GROUND WIRE IN ALL BRANCH CIRCUITS.
10. THE CONTRACTOR SHALL SEAL THE EXISTING WALL WHERE NEW HOLES ARE REQUIRED FOR THE INSTALLATION OF THE NEW CONDUIT AND WHERE HOLES REMAIN AFTER THE REMOVAL OF THE EXISTING CONDUITS. SEALING MATERIAL SHALL PROVIDE A FIRE STOP EQUAL TO THE EXISTING WALL RATING AND SHALL BE AIR TIGHT.
11. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL STATE, LOCAL, AND CITY OF LAGRANGE CODES.



KEY PLAN

L. LEIGH MORGAN
CONSULTING ENGINEER

CITY OF LAGRANGE
200 RIDLEY AVENUE
LAGRANGE, GEORGIA 30240

LAGRANGE TECHNOLOGY CENTER
UPS UPGRADE - UPS B

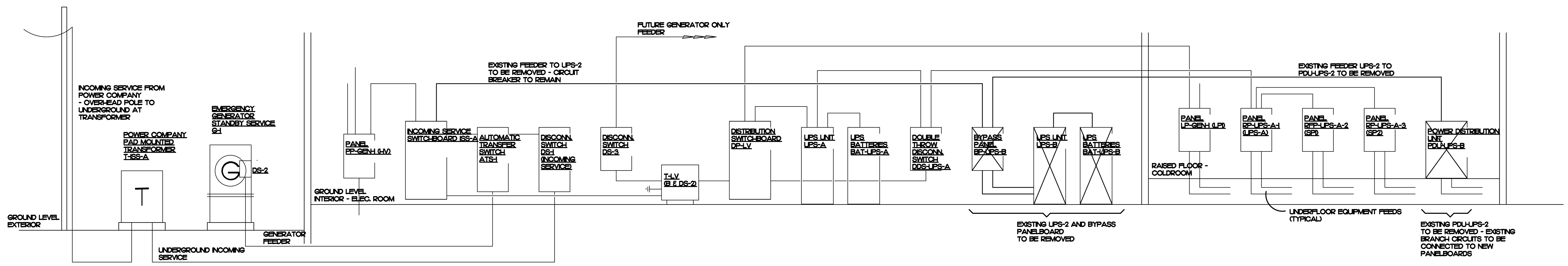
PART FIRST FLOOR PLAN
ELECTRICAL POWER UPS B

NO.	DATE	PROJECT	REVISION
1	6/24/15	15003	ISSUED FOR BID
B	6/19/15	15003	REVISED PER OWNER'S COMMENTS
A	6/10/15	15003	ISSUE FOR OWNER'S REVIEW AND COMMENTS

DATE 06-10-15
PROJECT 15003

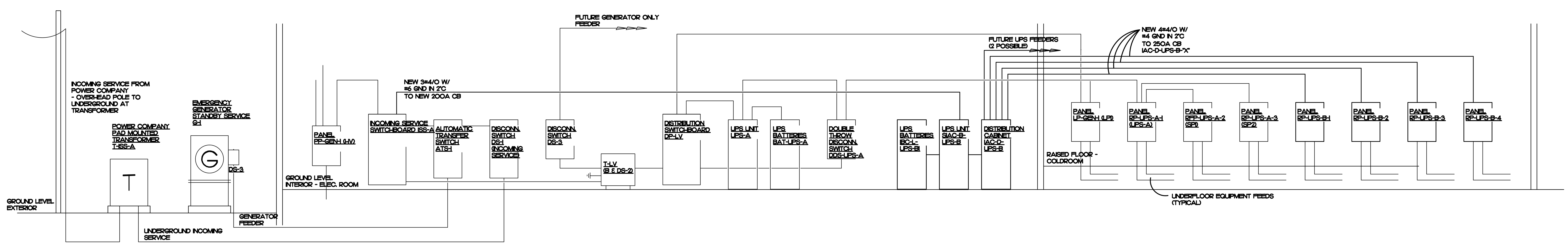
COL
E-1.5

NOT RELEASED FOR CONSTRUCTION 06/10/15



EMERGENCY POWER AND UPS RISER DIAGRAM - EXISTING SYSTEMS

NOT TO SCALE



EMERGENCY POWER AND UPS RISER DIAGRAM - UPS-B REPLACEMENT

NOT TO SCALE

L. LEIGH MORGAN
CONSULTING ENGINEER

CITY OF LAGRANGE

200 RIDLEY AVENUE
LAGRANGE, GEORGIA 30240

LAGRANGE TECHNOLOGY CENTER
UPS UPGRADE - UPS B

PARTIAL ELEC. RISER DIAGRAMS
EMERGENCY POWER SYSTEMS

NO.	DATE	PROJECT	REVISION
1	6/24/15	15003	ISSUED FOR BID
B	6/10/15	15003	ISSUE FOR OWNER'S REVIEW AND COMMENTS
A	5/18/15	15003	PRELIMINARY ISSUE

DATE 05-18-15
PROJECT 15003

COL
E-10.1

NOT RELEASED FOR CONSTRUCTION 06/10/15

DISTRIBUTION PANEL - IAC-D-UPS-B (LOAD - TBD)

SYSTEM - 208Y/120 VOLT, 3 PHASE, 4 WIRE
MAINS - DEFINED BY UPS MANUFACTURER
BRANCHES - 5 EACH 3 POLE
AIC RATING - 14,000 RMS SYM MINIMUM (FIELD VERIFY)
MOUNTING TYPE - CABINET - FREE STANDING
FEEDER SIZE - 3#2/0 W/#6 GND INTERNAL IN UPS CABINET TO TRANSFORMER INPUT
SUPPLIED FROM - UPS-B AND UPS-B TRANSFORMER

NOTES:
1. * INDICATES LOCKED 'ON'
2. PROVIDE FILLER PLATE AT ALL 'SPACE ONLY' LOCATIONS
3. SPARE (FUTURE) ARE EXTRA CIRCUIT BREAKERS INSTALLED IN DISTRIBUTION CABINET.

CKT. NO.	NO. OF POLES	SWITCH RATING	DEVICE TYPE	BREAKER TYPE - MODEL	TRIP SETTING	CIRCUIT BREAKER - MANUFACTURER	WIRE SIZE	CONDUIT SIZE	CONNECTED LOAD-KVA A	B	C	SERVICE TO	REF. NOTE
1	3	250A	CIRCUIT BREAKER	XXX-	225A	LPS-RK - BUSSMANN	4/0	2"	0.00	0.00	0.00	RP-UPS-B-1	-
									0.00	0.00	0.00		
									0.00	0.00	0.00		
2	3	250A	CIRCUIT BREAKER	XXX-	225A	LPS-RK - BUSSMANN	4/0	2"	0.00	0.00	0.00	RP-UPS-B-2	-
									0.00	0.00	0.00		
									0.00	0.00	0.00		
3	3	250A	CIRCUIT BREAKER	XXX-	225A	LPS-RK - BUSSMANN	4/0	2"	0.00	0.00	0.00	RP-UPS-B-3	-
									0.00	0.00	0.00		
									0.00	0.00	0.00		
4	3	250A	CIRCUIT BREAKER	XXX-	225A	LPS-RK - BUSSMANN	4/0	2"	0.00	0.00	0.00	RP-UPS-B-4	-
									0.00	0.00	0.00		
									0.00	0.00	0.00		
5	3	250A	CIRCUIT BREAKER	XXX-	225A	LPS-RK - BUSSMANN	4/0	2"	0.00	0.00	0.00	RP-UPS-B-5 (FUTURE)	-
									0.00	0.00	0.00		
									0.00	0.00	0.00		
TOTAL CONNECTED PER PHASE - KVA									0.00	0.00	0.00		

PANEL - RP-UPS-B-1 (FUTURE LOAD - TBD)

SYSTEM - 208Y/120 VOLT, 3 PHASE, 4 WIRE
MAINS - 225 AMP MAIN CIRCUIT BREAKER
BRANCHES - 42 EACH 1 POLE
AIC RATING - 10,000 RMS SYM
MOUNTING TYPE - SURFACE MOUNTED
FEEDER SIZE - 4#4/0 W/#4 GND IN 2" CONDUIT
SUPPLIED FROM - 225A CB IN DISTRIBUTION CABINET 'IAC-D-UPS-B'

NOTES:
1. * INDICATES LOCKED 'ON' WITH HANDLE CLIP
2. PROVIDE FILLER PLATE AT ALL 'SPACE ONLY' LOCATIONS
3. SPARE (FUTURE) ARE EXTRA BREAKERS INSTALLED IN PANELBOARD.

CKT. NO.	NO. OF POLES	BREAKER AMPS	WIRE SIZE	CONDUIT SIZE	CONNECTED LOAD-KVA A	B	C	SERVICE TO	CKT. NO.	NO. OF POLES	BREAKER AMPS	WIRE SIZE	CONDUIT SIZE	CONNECTED LOAD-KVA A	B	C	SERVICE TO
1	1	20	-	-	-	-	-	SPARE	2	1	20	-	-	-	-	-	SPARE
3	1	20	-	-	-	-	-	SPARE	4	1	20	-	-	-	-	-	SPARE
5	1	20	-	-	-	-	-	SPARE	6	1	20	-	-	-	-	-	SPARE
7	1	20	-	-	-	-	-	SPARE	8	1	20	-	-	-	-	-	SPARE
9	1	20	-	-	-	-	-	SPARE	10	1	20	-	-	-	-	-	SPARE
11	1	20	-	-	-	-	-	SPARE	12	1	20	-	-	-	-	-	SPARE
13	1	20	-	-	-	-	-	SPARE	14	1	20	-	-	-	-	-	SPARE
15	1	20	-	-	-	-	-	SPARE	16	1	20	-	-	-	-	-	SPARE
17	1	20	-	-	-	-	-	SPARE	18	1	20	-	-	-	-	-	SPARE
19	1	20	-	-	-	-	-	SPARE	20	1	20	-	-	-	-	-	SPARE
21	1	20	-	-	-	-	-	SPARE	22	1	20	-	-	-	-	-	SPARE
23	1	20	-	-	-	-	-	SPARE	24	1	20	-	-	-	-	-	SPARE
25	1	30	-	-	-	-	-	SPARE	26	1	30	-	-	-	-	-	SPARE
27	2	15	-	-	-	-	-	SPARE	28	2	15	-	-	-	-	-	SPARE
29					-	-	-	SPARE	30					-	-	-	SPARE
31	2	30	-	-	-	-	-	SPARE	32	2	30	-	-	-	-	-	SPARE
33					-	-	-	SPARE	34					-	-	-	SPARE
35	2	30	-	-	-	-	-	SPARE	36	2	30	-	-	-	-	-	SPARE
37					-	-	-	SPARE	38					-	-	-	SPARE
39	2	30	-	-	-	-	-	SPARE	40	2	30	-	-	-	-	-	SPARE
41				-	-	-	-	SPARE	42					-	-	-	SPARE
SUB-TOTAL CONNECTED PER PHASE					0.00	0.00	0.00		SUB-TOTAL CONNECTED PER PHASE					0.00	0.00	0.00	
									TOTAL CONNECTED PER PHASE - KVA					0.00	0.00	0.00	

PANEL - RP-UPS-B-3 (FUTURE LOAD - TBD)

SYSTEM - 208Y/120 VOLT, 3 PHASE, 4 WIRE
MAINS - 225 AMP MAIN CIRCUIT BREAKER
BRANCHES - 42 EACH 1 POLE
AIC RATING - 10,000 RMS SYM
MOUNTING TYPE - SURFACE MOUNTED
FEEDER SIZE - 4#4/0 W/#4 GND IN 2" CONDUIT
SUPPLIED FROM - 225A CB IN DISTRIBUTION CABINET 'IAC-D-UPS-B'

NOTES:
1. * INDICATES LOCKED 'ON' WITH HANDLE CLIP
2. PROVIDE FILLER PLATE AT ALL 'SPACE ONLY' LOCATIONS
3. SPARE (FUTURE) ARE EXTRA BREAKERS INSTALLED IN PANELBOARD.

CKT. NO.	NO. OF POLES	BREAKER AMPS	WIRE SIZE	CONDUIT SIZE	CONNECTED LOAD-KVA A	B	C	SERVICE TO	CKT. NO.	NO. OF POLES	BREAKER AMPS	WIRE SIZE	CONDUIT SIZE	CONNECTED LOAD-KVA A	B	C	SERVICE TO
1	1	20	-	-	-	-	-	SPARE	2	1	20	-	-	-	-	-	SPARE
3	1	20	-	-	-	-	-	SPARE	4	1	20	-	-	-	-	-	SPARE
5	1	20	-	-	-	-	-	SPARE	6	1	20	-	-	-	-	-	SPARE
7	1	20	-	-	-	-	-	SPARE	8	1	20	-	-	-	-	-	SPARE
9	1	20	-	-	-	-	-	SPARE	10	1	20	-	-	-	-	-	SPARE
11	1	20	-	-	-	-	-	SPARE	12	1	20	-	-	-	-	-	SPARE
13	1	20	-	-	-	-	-	SPARE	14	1	20	-	-	-	-	-	SPARE
15	1	20	-	-	-	-	-	SPARE	16	1	20	-	-	-	-	-	SPARE
17	1	20	-	-	-	-	-	SPARE	18	1	20	-	-	-	-	-	SPARE
19	1	20	-	-	-	-	-	SPARE	20	1	20	-	-	-	-	-	SPARE
21	1	20	-	-	-	-	-	SPARE	22	1	20	-	-	-	-	-	SPARE
23	1	20	-	-	-	-	-	SPARE	24	1	20	-	-	-	-	-	SPARE
25	1	30	-	-	-	-	-	SPARE	26	1	30	-	-	-	-	-	SPARE
27	2	15	-	-	-	-	-	SPARE	28	2	15	-	-	-	-	-	SPARE
29					-	-	-	SPARE	30					-	-	-	SPARE
31	2	30	-	-	-	-	-	SPARE	32	2	30	-	-	-	-	-	SPARE
33					-	-	-	SPARE	34					-	-	-	SPARE
35	2	30	-	-	-	-	-	SPARE	36	2	30	-	-	-	-	-	SPARE
37					-	-	-	SPARE	38					-	-	-	SPARE
39	2	30	-	-	-	-	-	SPARE	40	2	30	-	-	-	-	-	SPARE
41				-	-	-	-	SPARE	42					-	-	-	SPARE
SUB-TOTAL CONNECTED PER PHASE					0.00	0.00	0.00		SUB-TOTAL CONNECTED PER PHASE					0.00	0.00	0.00	
									TOTAL CONNECTED PER PHASE - KVA					0.00	0.00	0.00	

PANEL - RP-UPS-B-2 (FUTURE LOAD - TBD)

SYSTEM - 208Y/120 VOLT, 3 PHASE, 4 WIRE
MAINS - 225 AMP MAIN CIRCUIT BREAKER
BRANCHES - 42 EACH 1 POLE
AIC RATING - 10,000 RMS SYM
MOUNTING TYPE - SURFACE MOUNTED
FEEDER SIZE - 4#4/0 W/#4 GND IN 2" CONDUIT
SUPPLIED FROM - 225A CB IN DISTRIBUTION CABINET 'IAC-D-UPS-B'

NOTES:
1. * INDICATES LOCKED 'ON' WITH HANDLE CLIP
2. PROVIDE FILLER PLATE AT ALL 'SPACE ONLY' LOCATIONS
3. SPARE (FUTURE) ARE EXTRA BREAKERS INSTALLED IN PANELBOARD.

CKT. NO.	NO. OF POLES	BREAKER AMPS	WIRE SIZE	CONDUIT SIZE	CONNECTED LOAD-KVA A	B	C	SERVICE TO	CKT. NO.	NO. OF POLES	BREAKER AMPS	WIRE SIZE	CONDUIT SIZE	CONNECTED LOAD-KVA A	B	C	SERVICE TO
1	1	20	-	-	-	-	-	SPARE	2	1	20	-	-	-	-	-	SPARE
3	1	20	-	-	-	-	-	SPARE	4	1	20	-	-	-	-	-	SPARE
5	1	20	-	-	-	-	-	SPARE	6	1	20	-	-	-	-	-	SPARE
7	1	20	-	-	-	-	-	SPARE	8	1	20	-	-	-	-	-	SPARE
9	1	20	-	-	-	-	-	SPARE	10	1	20	-	-	-	-	-	SPARE
11	1	20	-	-	-	-	-	SPARE	12	1	20	-	-	-	-	-	SPARE
13	1	20	-	-	-	-	-	SPARE	14	1	20	-	-	-	-	-	SPARE
15	1	20	-	-	-	-	-	SPARE	16	1	20	-	-	-	-	-	SPARE
17	1	20	-	-	-	-	-	SPARE	18	1	20	-	-	-	-	-	SPARE
19	1	20	-	-	-	-	-	SPARE	20	1	20	-	-	-	-	-	SPARE
21	1	20	-	-	-	-	-	SPARE	22	1	20	-	-	-	-	-	SPARE
23	1	20	-	-	-	-	-	SPARE	24	1	20	-	-	-	-	-	SPARE
25	1	30	-	-	-	-	-	SPARE	26	1	30	-	-	-	-	-	SPARE
27	2	15	-	-	-	-	-	SPARE	28	2	15	-	-	-	-	-	SPARE
29					-	-	-	SPARE	30					-	-	-	SPARE
31	2	30	-	-	-	-	-	SPARE	32	2	30	-	-	-	-	-	SPARE
33					-	-	-	SPARE	34					-	-	-	SPARE
35	2	30	-	-	-	-	-	SPARE	36	2	30	-	-	-	-	-	SPARE
37					-	-	-	SPARE	38					-	-	-	SPARE
39	2	30	-	-	-	-	-	SPARE	40	2	30	-	-	-	-	-	SPARE
41				-	-	-	-	SPARE	42					-	-	-	SPARE
SUB-TOTAL CONNECTED PER PHASE					0.00	0.00	0.00		SUB-TOTAL CONNECTED PER PHASE					0.00	0.00	0.00	
									TOTAL CONNECTED PER PHASE - KVA					0.00	0.00	0.00	

PANEL - RP-UPS-B-4 (FUTURE LOAD - TBD)

SYSTEM - 208Y/120 VOLT, 3 PHASE, 4 WIRE
MAINS - 225 AMP MAIN CIRCUIT BREAKER
BRANCHES - 42 EACH 1 POLE
AIC RATING - 10,000 RMS SYM
MOUNTING TYPE - SURFACE MOUNTED
FEEDER SIZE - 4#4/0 W/#4 GND IN 2" CONDUIT
SUPPLIED FROM - 225A CB IN DISTRIBUTION CABINET 'IAC-D-UPS-B'

NOTES:
1. * INDICATES LOCKED 'ON' WITH HANDLE CLIP
2. PROVIDE FILLER PLATE AT ALL 'SPACE ONLY' LOCATIONS
3. SPARE (FUTURE) ARE EXTRA BREAKERS INSTALLED IN PANELBOARD.

CKT. NO.	NO. OF POLES	BREAKER AMPS	WIRE SIZE	CONDUIT SIZE	CONNECTED LOAD-KVA A	B	C	SERVICE TO	CKT. NO.	NO. OF POLES	BREAKER AMPS	WIRE SIZE	CONDUIT SIZE	CONNECTED LOAD-KVA A	B	C	SERVICE TO
1	1	20	-	-	-	-	-	SPARE	2	1	20	-	-	-	-	-	SPARE
3	1	20	-	-	-	-	-	SPARE	4	1	20	-	-	-	-	-	SPARE
5	1	20	-	-	-	-	-	SPARE	6	1	20	-	-	-	-	-	SPARE
7	1	20	-	-	-	-	-	SPARE	8	1	20	-	-	-	-	-	SPARE
9	1	20	-	-	-	-	-	SPARE	10	1	20	-	-	-	-	-	SPARE
11	1	20	-	-	-	-	-	SPARE	12	1	20	-	-	-	-	-	SPARE
13	1	20	-	-	-	-	-	SPARE	14	1	20	-	-	-	-	-	SPARE
15	1	20	-	-	-	-	-	SPARE	16	1	20	-	-	-	-	-	SPARE
17	1	20	-	-	-	-	-	SPARE	18	1	20	-	-	-	-	-	SPARE
19	1	20	-	-	-	-	-	SPARE	20	1	20	-	-	-	-	-	SPARE
21	1	20	-	-	-	-	-	SPARE	22	1	20	-	-	-	-	-	SPARE
23	1	20	-	-	-	-	-	SPARE	24	1	20	-	-	-	-	-	SPARE
25	1	30	-	-	-	-	-	SPARE	26	1	30	-	-	-	-	-	SPARE
27	2	15	-	-	-	-	-	SPARE	28	2	15	-	-	-	-	-	SPARE
29					-	-	-	SPARE	30					-	-	-	SPARE
31	2	30	-	-	-	-	-	SPARE	32	2	30	-	-	-	-	-	SPARE
33					-	-	-	SPARE	34					-	-	-	SPARE
35	2	30	-	-	-	-	-	SPARE	36	2	30	-	-	-	-	-	SPARE
37					-	-	-	SPARE	38					-	-	-	SPARE
39	2	30	-	-	-	-	-	SPARE	40	2	30	-	-	-	-	-	SPARE
41				-	-	-	-	SPARE	42					-	-	-	SPARE
SUB-TOTAL CONNECTED PER PHASE					0.00	0.00	0.00		SUB-TOTAL CONNECTED PER PHASE					0.00	0.00	0.00	
									TOTAL CONNECTED PER PHASE - KVA					0.00	0.00	0.00	

NOTES:

1. THE NOTED PANELBOARDS ARE TO BE INSTALLED FOR THE OWNER'S USE IN UPS POWER FEEDS TO CRITICAL EQUIPMENT ONLY. ALL CIRCUITS CONNECTED TO THESE PANELBOARDS SHALL BE APPROVED BY THE OWNER'S TELECOMMUNICATIONS MANAGER PRIOR TO INSTALLATION. APPROVED CIRCUITS SHALL BE LIMITED TO THE FOLLOWING NOTED SYSTEMS - DATA SYSTEMS, COLOCATION SYSTEMS, BUILDING FIRE ALARM SYSTEM, BUILDING SECURITY SYSTEM, AND VOICE/DATA COMMUNICATION EQUIPMENT AND RACKS.
2. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL STATE, LOCAL AND CITY OF LAGRANGE CODES.

L. LEIGH MORGAN
CONSULTING ENGINEER
PO BOX 6 SENOIA, GEORGIA 30276
770-599-3840 (O) / 770-599-0801 (F)

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 021742 LUTHER LEIGH MORGAN, JR.

CITY OF LAGRANGE
200 RIDLEY AVENUE
LAGRANGE, GEORGIA 30240

LAGRANGE TECHNOLOGY CENTER
UPS UPGRADE - UPS B

PANELBOARD SCHEDULES
ELECTRICAL POWER - UPS B

NO.	DATE	PROJECT	REVISION
1	6/24/15	15003	ISSUED FOR BID
B	6/19/15	15003	REVISED PER OWNER'S COMMENTS
A	6/10/15	15003	ISSUE FOR OWNER'S REVIEW AND COMMENTS

DATE 06-10-15
PROJECT 15003

COL
E-20.1

NOT RELEASED FOR CONSTRUCTION 06/10/15