

INFORMATION HANDOUT

**For Contract No. 07-4T5904
At 07-LA-187-4.3**

**Identified by
Project ID 0712000132**

MATERIALS INFORMATION

BBS Power Connection Diagram

Battery Backup System Foundation Details

As-Built

| Dist | COUNTY | LOCATION CODE | POST MILES TOTAL PROJECT | SHEET TOTAL No. SHEETS |
|------|--------|---------------|--------------------------|------------------------|
| | | | | |

Theresa Gabriel
 REGISTERED CIVIL ENGINEER DATE 12-20-07
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

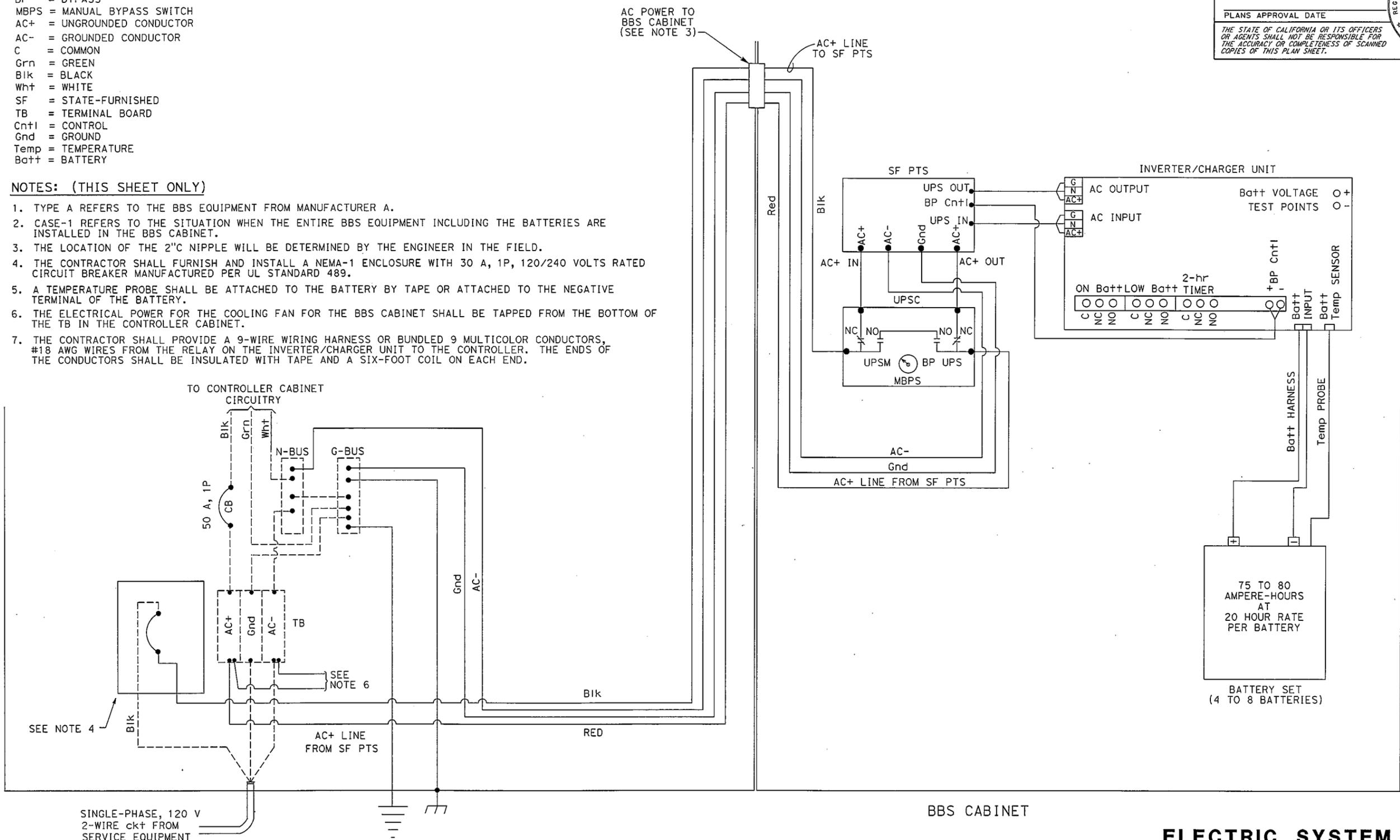
REGISTERED PROFESSIONAL ENGINEER
 Theresa A. Gabriel
 No. E15129
 Exp. 6-30-14
 ELECT
 STATE OF CALIFORNIA

ABBREVIATIONS: (THIS SHEET ONLY)

- PTS = POWER TRANSFER SWITCH
- UPS = UNINTERRUPTIBLE POWER SUPPLY
- UPSC = UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
- UPSM = UPS MODE
- BP = BYPASS
- MBPS = MANUAL BYPASS SWITCH
- AC+ = UNGROUNDED CONDUCTOR
- AC- = GROUNDED CONDUCTOR
- C = COMMON
- Grn = GREEN
- Blk = BLACK
- Wht = WHITE
- SF = STATE-FURNISHED
- TB = TERMINAL BOARD
- Cntl = CONTROL
- Gnd = GROUND
- Temp = TEMPERATURE
- Batt = BATTERY

NOTES: (THIS SHEET ONLY)

1. TYPE A REFERS TO THE BBS EQUIPMENT FROM MANUFACTURER A.
2. CASE-1 REFERS TO THE SITUATION WHEN THE ENTIRE BBS EQUIPMENT INCLUDING THE BATTERIES ARE INSTALLED IN THE BBS CABINET.
3. THE LOCATION OF THE 2" C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL A NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 VOLTS RATED CIRCUIT BREAKER MANUFACTURED PER UL STANDARD 489.
5. A TEMPERATURE PROBE SHALL BE ATTACHED TO THE BATTERY BY TAPE OR ATTACHED TO THE NEGATIVE TERMINAL OF THE BATTERY.
6. THE ELECTRICAL POWER FOR THE COOLING FAN FOR THE BBS CABINET SHALL BE TAPPED FROM THE BOTTOM OF THE TB IN THE CONTROLLER CABINET.
7. THE CONTRACTOR SHALL PROVIDE A 9-WIRE WIRING HARNESS OR BUNDLED 9 MULTICOLOR CONDUCTORS, #18 AWG WIRES FROM THE RELAY ON THE INVERTER/CHARGER UNIT TO THE CONTROLLER. THE ENDS OF THE CONDUCTORS SHALL BE INSULATED WITH TAPE AND A SIX-FOOT COIL ON EACH END.



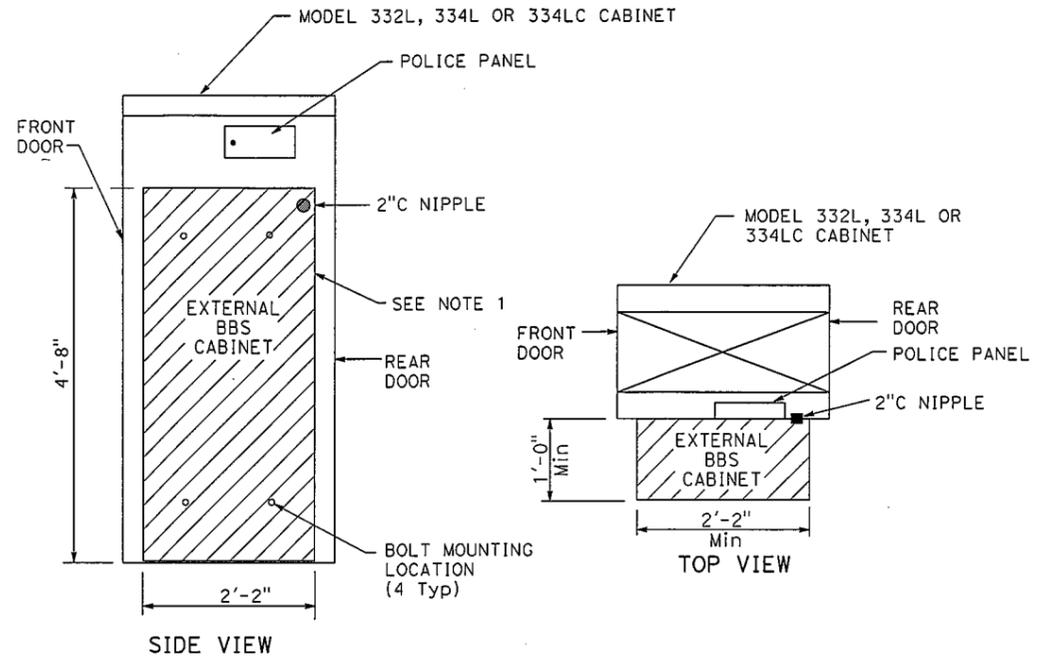
**ELECTRIC SYSTEM
(BBS POWER CONNECTION DIAGRAM, TYPE A, CASE-1)**

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 Et Caltrans

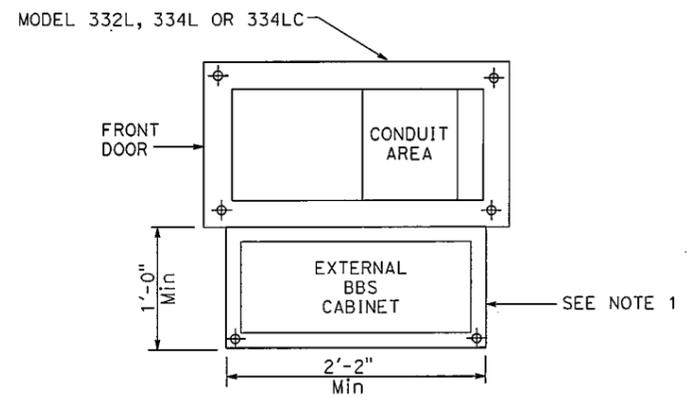
REVISIONS:
 REVISOR: _____ DATE: _____
 CHECKED BY: _____
 DESIGNED BY: _____

DATE PLOTTED => 28-AUG-2013
 TIME PLOTTED => 13:41

| DIST | COUNTY | LOCATION CODE | POST MILES TOTAL PROJECT | SHEET TOTAL No. SHEETS |
|---|--------|----------------------------------|--------------------------------|------------------------|
| | | | | |
| Theresa Gabriel | | 12-20-07 | REGISTERED CIVIL ENGINEER DATE | |
| PLANS APPROVAL DATE | | REGISTERED PROFESSIONAL ENGINEER | | |
| | | Theresa A. Gabriel | | |
| | | No. E15129 | | |
| | | Exp. 6-30-14 | | |
| | | ELECT STATE OF CALIFORNIA | | |
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EXTERNAL BBS CABINET MOUNTED TO THE MODEL 332L, 334L OR 334LC CABINET

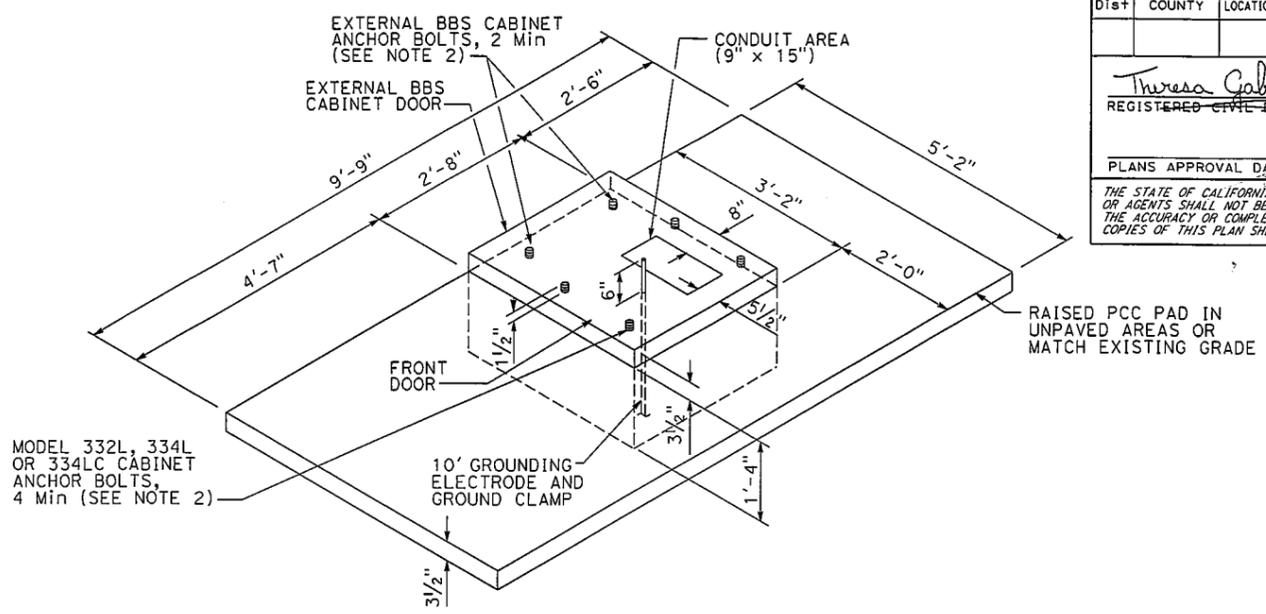


BASE PLAN FOR BBS MOUNTED TO THE MODEL 332L, 334L OR 334LC CABINET

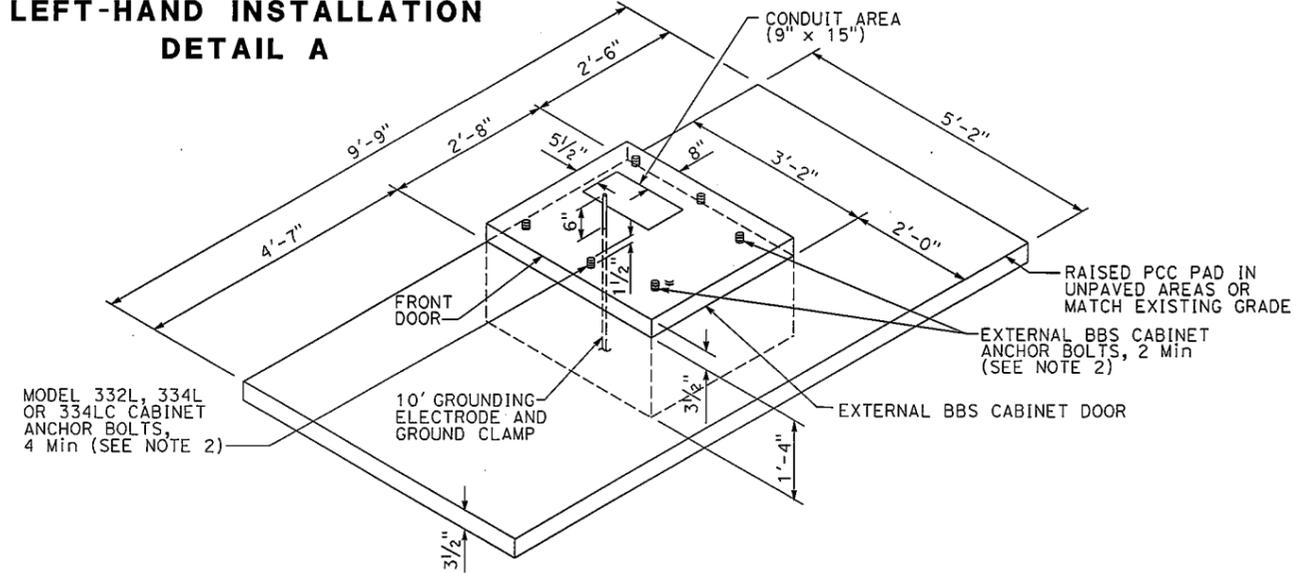
(FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE SHEET A6-1 TO A6-4, CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))

NOTES: (THIS SHEET ONLY)

1. THE EXTERNAL BBS CABINET SHALL BE MOUNTED TO THE MODEL 332L, 334L OR 334LC CABINET WITH FOUR 18-8 STAINLESS STEEL Hex HEAD, FULLY-THREADED, 3/8"-16 x 1" BOLTS; TWO WASHERS PER BOLT, DESIGNED FOR 3/8" BOLTS AND ARE 18-8 STAINLESS STEEL, 1" OUTSIDE DIAMETER, ROUND, AND FLAT; AND ONE K-LOCK NUT PER BOLT THAT IS 18-8 STAINLESS STEEL AND A Hex-NUT. THE ENGINEER WILL HAVE TO APPROVE THE BOLT MOUNTING LOCATION PRIOR TO INSTALLATION.
2. THE ANCHOR BOLTS SHALL BE 3/4" Dia x 15" WITH A 2"-90° BEND. THE CABINET MANUFACTURER'S SPECIFICATION SHALL DETERMINE THE LOCATION OF THE ANCHOR BOLTS IN THE FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE THE ANCHOR BOLTS AND ITS LOCATION IN THE FOUNDATION PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE BBS CABINET PRIOR TO CONSTRUCTING THE FOUNDATION OF THE Std MODEL 332L, 334L OR 334LC CABINET FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE ANY NECESSARY DEVIATIONS PRIOR TO CONSTRUCTION.
4. ALL DIMENSIONS ARE NOMINAL.



LEFT-HAND INSTALLATION DETAIL A



RIGHT-HAND INSTALLATION DETAIL B

MODIFIED MODEL 332L, 334L OR 334LC CABINET FOUNDATION DETAIL FOR BATTERY BACKUP SYSTEM (BBS)
(FOR ADDITIONAL NOTES, SEE SHEET ES-3C OF THE STANDARD PLANS FOR MODEL 332L, 334L OR 334LC CABINETS)

ELECTRICAL SYSTEMS (BATTERY BACKUP SYSTEM FOUNDATION DETAILS)

NO SCALE

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REVISED BY DATE

CALCULATED-DESIGNED BY CHECKED BY

FUNCTIONAL SUPERVISOR