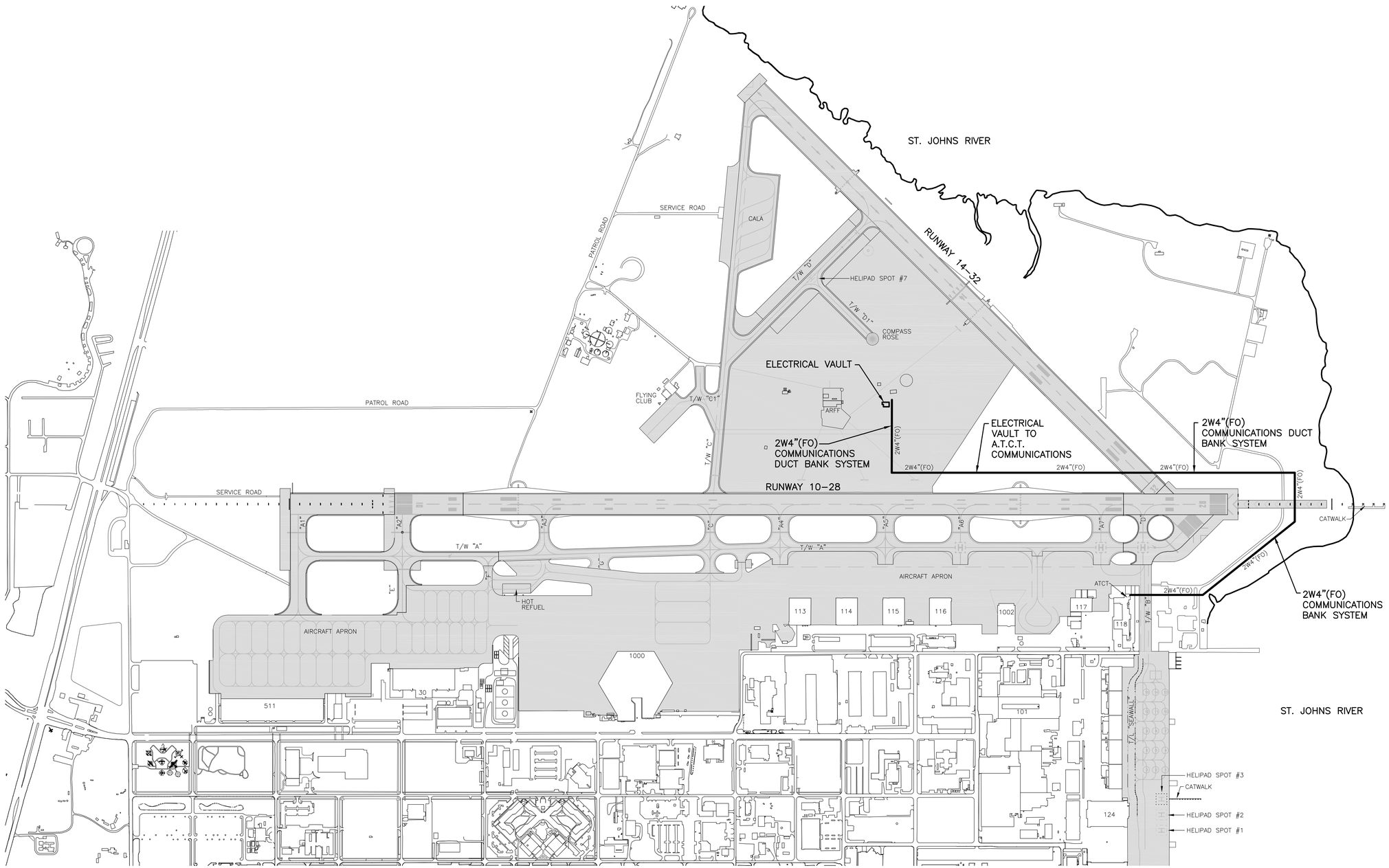

ELECTRICAL VAULT TO A.T.C.T. FIBER OPTICS COMMUNICATIONS HOMERUN PLAN

SCALE: 1" = 500'

NORTH

GRAPHIC SCALE

SCALE: 1"= 500'

0 500 1000

REDUCED DRAWING
VERIFY SCALE REPRESENTATIONS

SYM	DESCRIPTION	DATE	APPR

NAVFAC

DENNIS G. COMBS LICENSE NO. 54609 STATE OF FLORIDA PROFESSIONAL ENGINEER

DENNIS G. COMBS LICENSE NO. 54609

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ACCEPTED:

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES NJP DRW NJP CHK EJP

PROJECT MANAGER AMY HOFFER

IPT TECH. BRANCH HEAD

CHIEF ENG/ARCH (CORE)

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVAL AIR STATION JACKSONVILLE, FLORIDA

P-8A AIRFIELD AND LIGHTING REPAIRS

ELECTRICAL VAULT TO A.T.C.T. COMMUNICATIONS HOMERUN PLAN

SCALE: AS SHOWN

EPROJECT NO.: 1174318

CONSTR. CONTR. NO.

NAVFAC DRAWING NO. 15072567

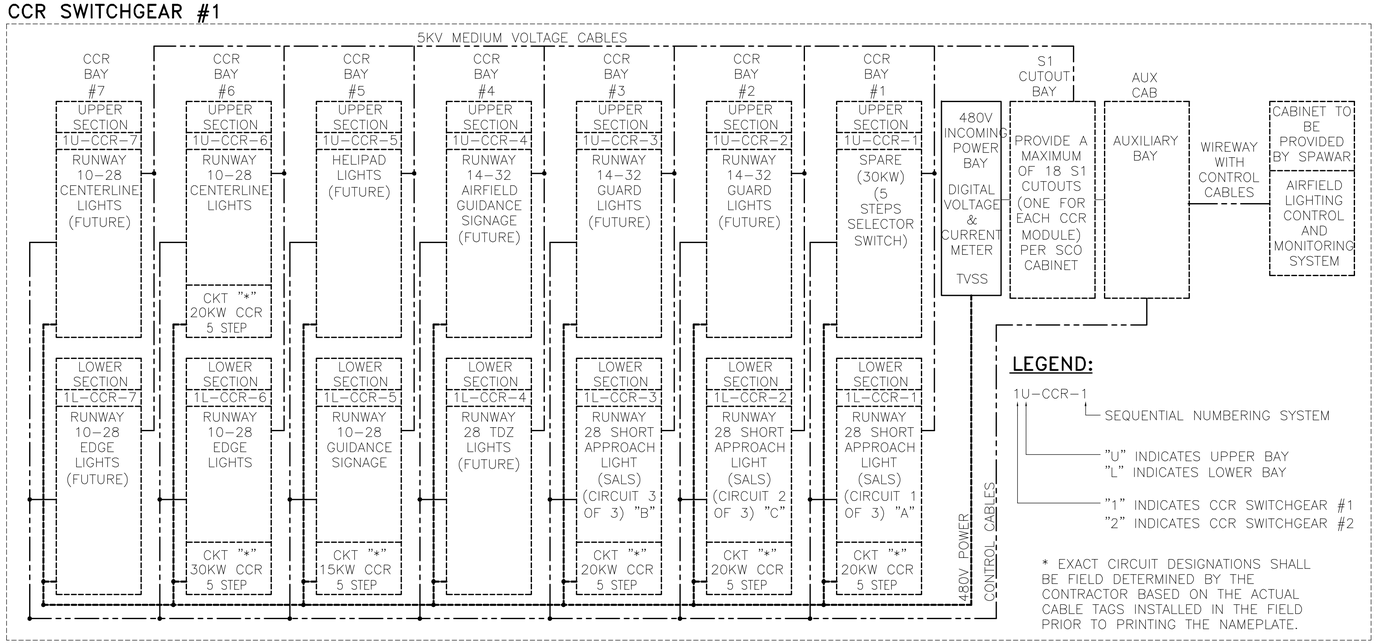
SHEET 171 OF 247

EA435

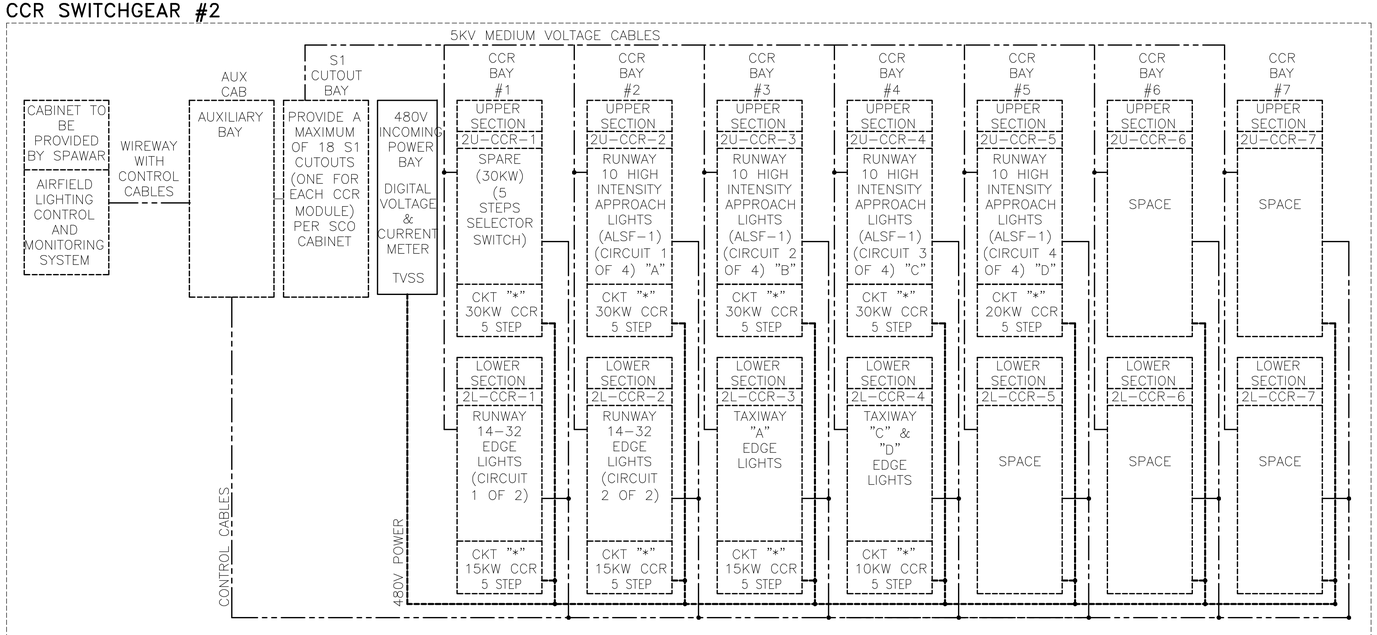
DRAWFORM REVISION: 1 AUGUST 2009

FILE NAME: N:\NAVY\JACKSONVILLE\AIRFIELD LIGHTING\Project Drawings\AFLD Lighting\EA435.dwg LAYOUT NAME: EA435 PLOTTED: Friday, February 28, 2014 - 2:46pm USER: norma_pressley

CCR SWITCHGEAR #1



CCR SWITCHGEAR #2



CCR SWITCHGEAR SYSTEMS BLOCK DIAGRAM

SCALE: NTS

GENERAL NOTES:

1. THE CCR SWITCHGEARS SHALL BE DEADFRONT SWITCHBOARD, UL 891, NEMA TYPE 1 SEISMIC ZONE 4 ENCLOSURE, CONSISTS OF FERRORESONANT REGULATOR TYPE, 600 AMP COPPER BUS, 300 AMP COPPER GROUND BUS, COPPER BUS STABS, COPPER CONDUCTOR LEADS, 65KAIC RATING, 480V, 3ø, 60 HERTZ INPUT VOLTAGE, INCOMING POWER BAY, POWERPACK, S1 SERIES CIRCUIT CUTOUT BAY, AUXILIARY BAY, SPARE PARTS, TRAINING, TESTING AND ALL NECESSARY COMPONENTS FOR COMPLETE INSTALLATIONS. CCR SWITCHGEARS SHALL BE FROM MANUFACTURES OF FAA QUALIFIED PRODUCTS. BASIS OF DESIGN: ADB SOLUTIONS AND CROUSE-HINDS AIRFIELD.
2. THE INCOMING POWER BAYS SHALL CONSISTS OF A MAIN CIRCUIT BREAKER (600 AMP, 3 POLE, 600VAC, 65KAIC RATING), TRANSIENT VOLTAGE SURGE PROTECTION, 3 PHASE METER WITH CT'S AND ALARM CONTACTS, AND DOUBLE BUSS (FOR UPPER/LOWER BAYS).
3. THE POWER PACKS SHALL CONSISTS OF A CIRCUIT BREAKER, 3 OR 5 STEPS BRIGHTNESS CONTROL, CURRENT/VOLTAGE INPUT MONITORING, CURRENT SENSING RELAYS OUTPUT MONITORING, IRMS MONITORING, S1 SERIES CIRCUIT CUTOUT INTEGRATED IN POWERPACK, DOOR INDICATOR STATUS POINTS, DIGITAL POWER METER, OPERATIONS COUNTER, ELAPSE TIME METER, AND DOOR INTERLOCK SWITCH. THE MANUFACTURE SHALL PROVIDE TERMINAL BLOCKS IN EACH POWER PACK FOR CONTROL INTERFACE. CIRCUIT BREAKERS SHALL BE SIZED AS FOLLOWS:

KW	CIRCUIT BREAKER SIZES
4	20A, 2P, 600VAC
7.5	30A, 2P, 600VAC
10	40A, 2P, 600VAC
15	60A, 2P, 600VAC
20	70A, 2P, 600VAC
30	100A, 2P, 600VAC

4. THE S1 CUTOUT BAYS SHALL CONSISTS OF S1 SERIES CIRCUIT CUTOUT WITH INTERLOCK TO PREVENT A DE-ENERGIZED CIRCUIT FROM BEING ENERGIZED WHILE BEING SERVICED BY MAINTENANCE PERSONNEL. PROVIDE A CURRENT TRANSDUCER (CT), 4-20mA, FOR EACH SERIES CIRCUIT EXITING THE SWITCHGEAR WITH SHIELDED TWISTED PAIR. PROVIDE EACH CT WITH #18 AWG SHIELDED TWISTED PAIR COPPER CABLE AND TERMINATE CABLE AT TERMINAL BLOCKS LOCATED IN THE AUXILIARY BAY.
5. THE AUXILIARY BAYS SHALL CONSISTS OF TERMINAL BLOCKS AND CT/PT.
6. PROVIDE THE FOLLOWING SPARE PARTS:

QTY	DESCRIPTION
6	EACH TYPES OF CCR CONTROL BOARDS
2	3 STEP SELECTOR SWITCHES
2	5 STEP SELECTOR SWITCHES
6	EACH TYPES OF CONTROL FUSES
2	EACH TYPES OF POWER FUSES
2	L829 MONITORING MODULES
4	CT/PT CCR OUTPUT MODULES

7. PROVIDE REDUCED PROFILE CCR COUNTERBALANCE LIFT (ONLY 7 FEET CLEARANCE IS REQUIRED).
8. ALL HIGH VOLTAGE WIRING SHALL BE PRE-WIRED AT FACTORY AND SHALL BE LOCATED IN THE REAR OF EACH POWERPACK BAY INCLUDING SPACES (EMPTY POWERPACK BAY) AND SPARES.
9. CONTRACTOR SHALL PROVIDE CONTROL INTERFACE CABLES (6C/#18 JACKETED CABLES) FROM EACH POWER PACK TERMINAL BLOCK TO EACH TERMINAL BLOCK LOCATED IN THE AUXILIARY BAY INCLUDING SPACES (EMPTY POWERPACK BAY) AND SPARES.
10. IN CONTROL WIRING, THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.
11. THE CONTRACTOR SHALL ENSURE THAT THE SWITCHGEAR CCRs CAN BE CONTROLLED EXTERNALLY USING CONVENTIONAL CCR CONTROLS AS FOLLOWS:

CCR TERMINAL:	DESCRIPTION
CCI:	120VAC CONTROL VOLTAGE SOURCED BY THE CCR FOR USE BY THE CONTROL SYSTEM
CC:	CCR ON/OFF CONTROL
B1 (OR B10):	STEP 1 (OR LOW) BRIGHTNESS CONTROL
B2 (OR B30):	STEP 2 (OR MED) BRIGHTNESS CONTROL
B3 (OR B100):	STEP 3 (OR HIGH) BRIGHTNESS CONTROL
B4:	STEP 4 BRIGHTNESS CONTROL
B5:	STEP 5 BRIGHTNESS CONTROL
N:	CONTROL NEUTRAL, USED WHEN AN EXTERNAL 120VAC CONTROL SOURCE IS USED INSTEAD OF CCI

REDUCED DRAWING
VERIFY SCALE REPRESENTATIONS

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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ACCEPTED

FOR COMMANDER NAVFAC / BLT.L

ACTIVITY

SATISFACTORY TO DATE

DES KWG | DRW JH | CHK KWG

PROJECT MANAGER AMY HOFFER

IPT TECH. BRANCH HEAD

CHIEF ENG/ARCH (CORE)

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVAL AIR STATION JACKSONVILLE, JACKSONVILLE, FLORIDA

P-8A AIRFIELD AND LIGHTING REPAIRS

CCR SWITCHGEAR SYSTEMS BLOCK DIAGRAM

SCALE: AS SHOWN

EPROJECT NO.: 1174318

CONSTR. CONTR. NO.

NAVFAC DRAWING NO. 15072642

SHEET 246 OF 247

E-602

DRAWFORM REVISION: 1 AUGUST 2009

FILE NAME: N:\NAVY\JACKSONVILLE\AIRFIELD LIGHTING\Project Drawings\Electrical\E-602.dwg LAYOUT NAME: E-602 PLOTTED: Thursday, February 27, 2014 - 6:41pm USER: ira_zichlin