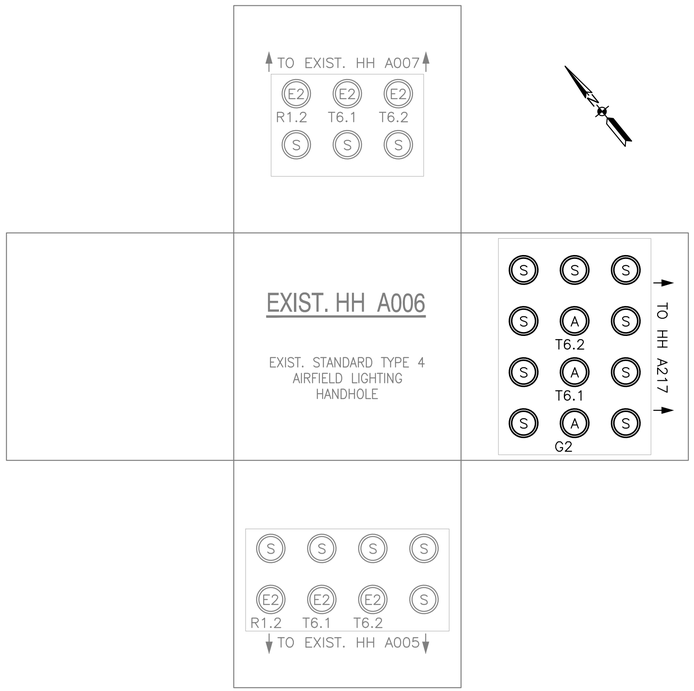
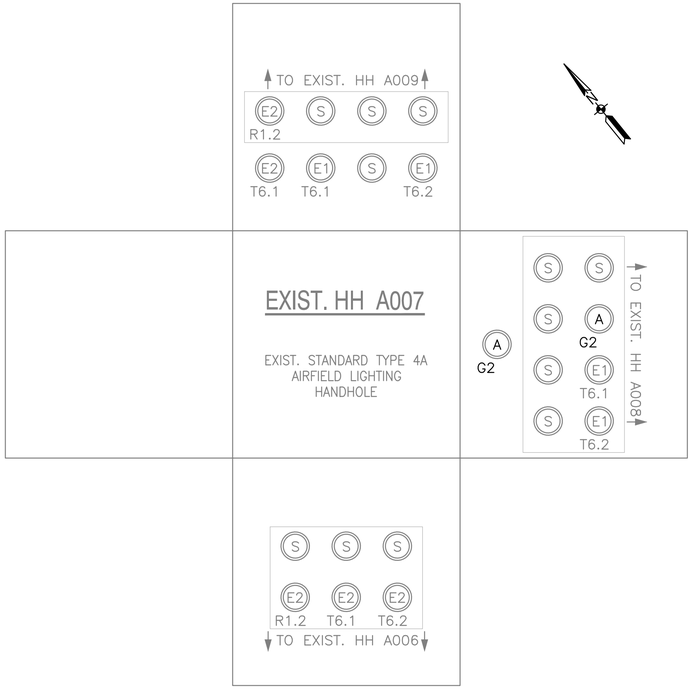
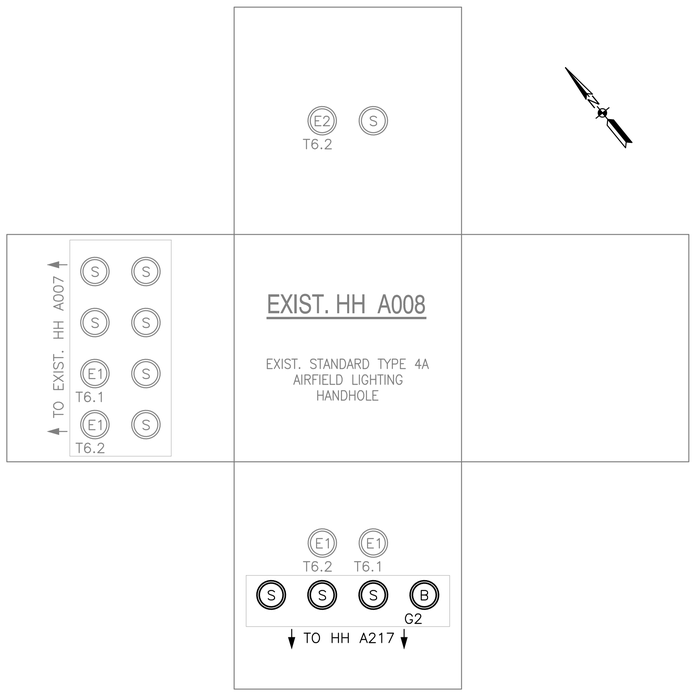
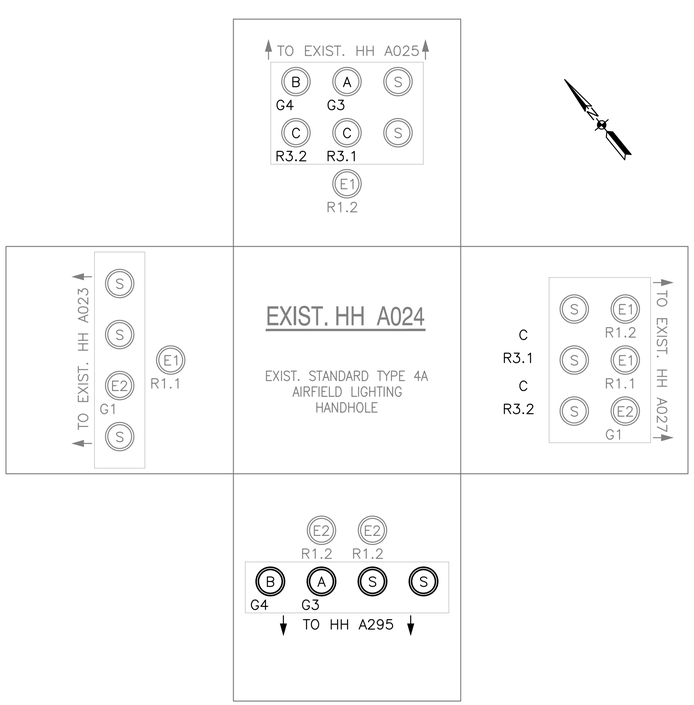








GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

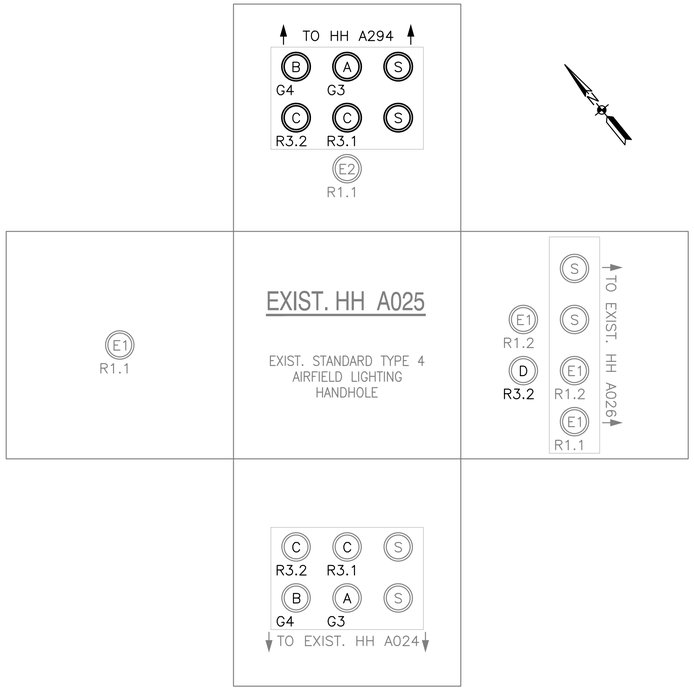
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – EXISTING AIRFIELD LTG.

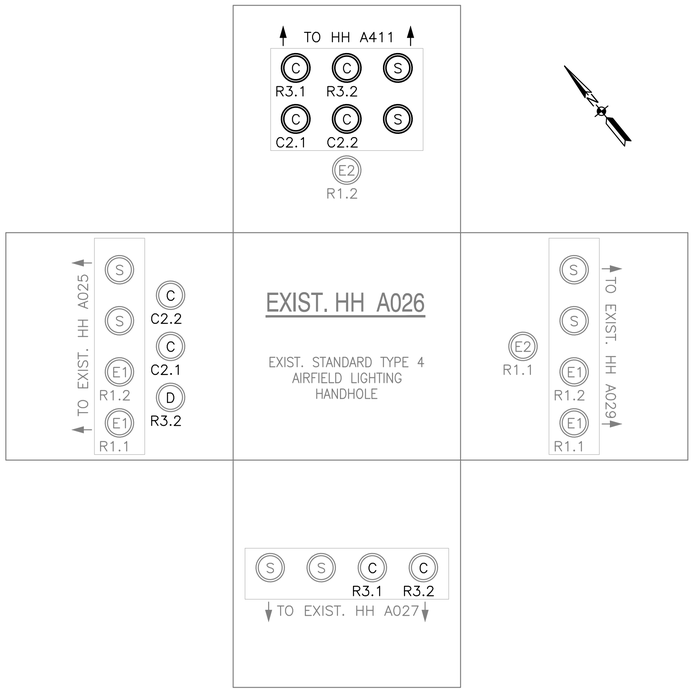
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691807
SHEET 274 OF 368

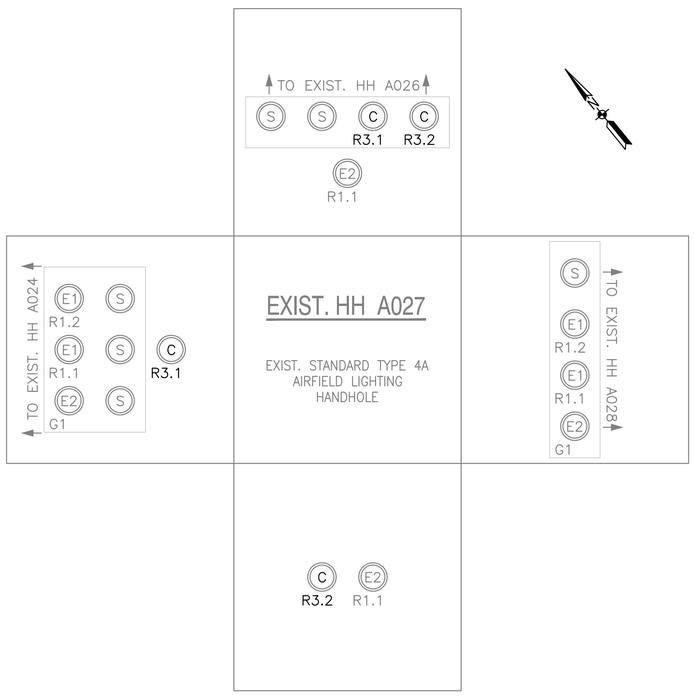
EA701

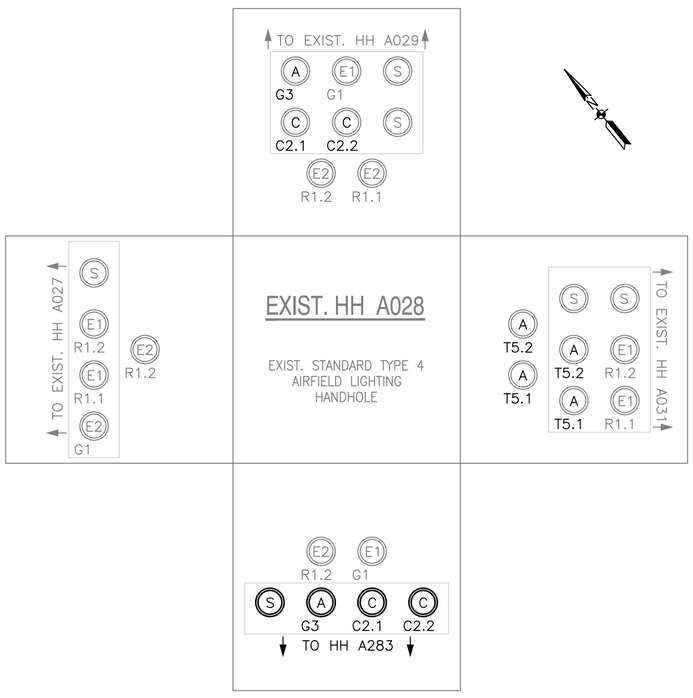
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109963_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0963-008-EA701.dwg LAYOUT NAME: EA701 PLOTTED: Tuesday, March 24, 2015 - 10:52am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRN	SL	CHK	DJP

PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

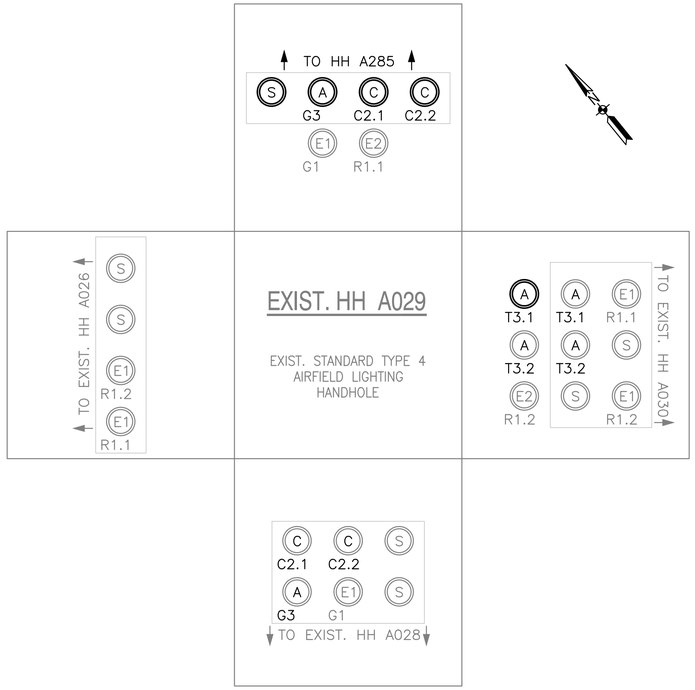
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – EXISTING AIRFIELD LTG.

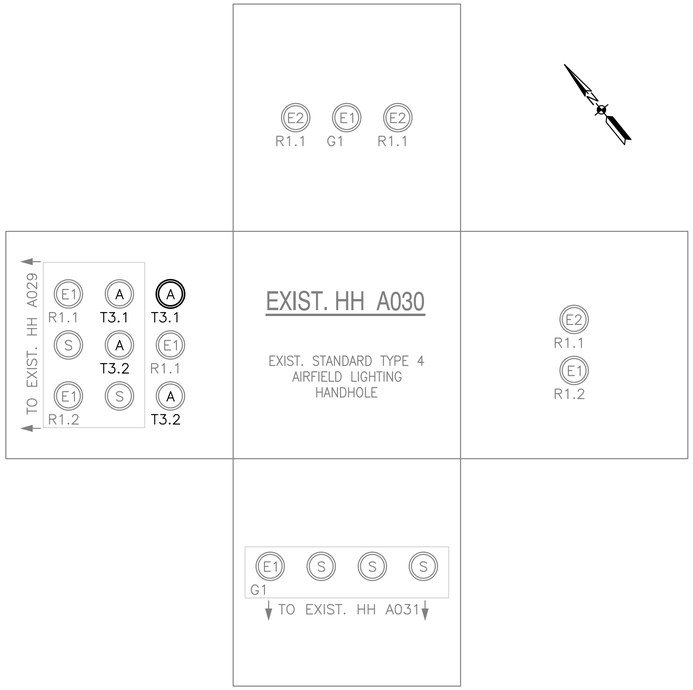
SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691808
SHEET	275 OF 368

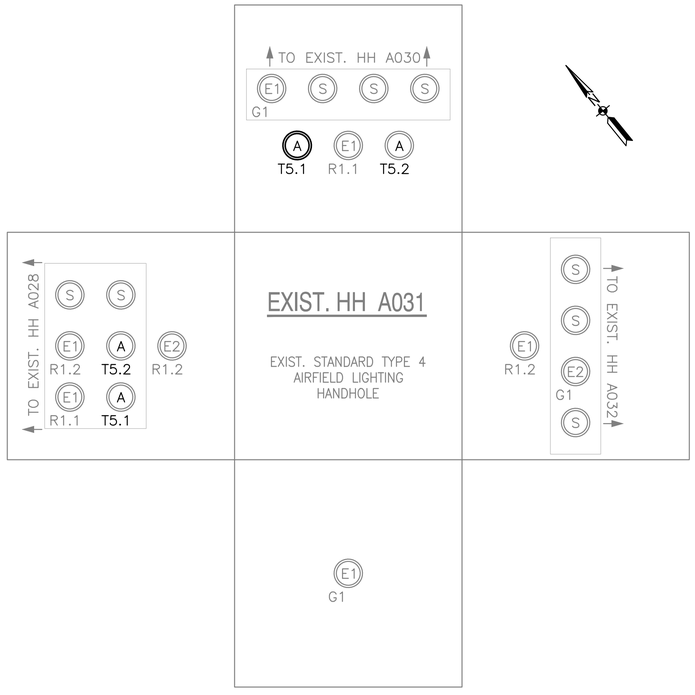
EA702

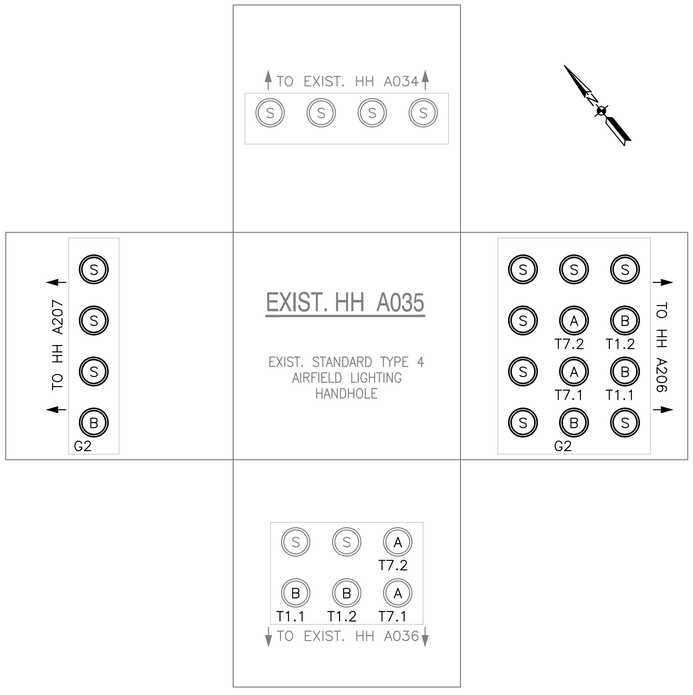
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\SMD\109863_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-EA702.dwg LAYOUT NAME: EA702 PLOTTED: Tuesday, March 24, 2015 – 10:52am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRN	SL	CHK	DJP

PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

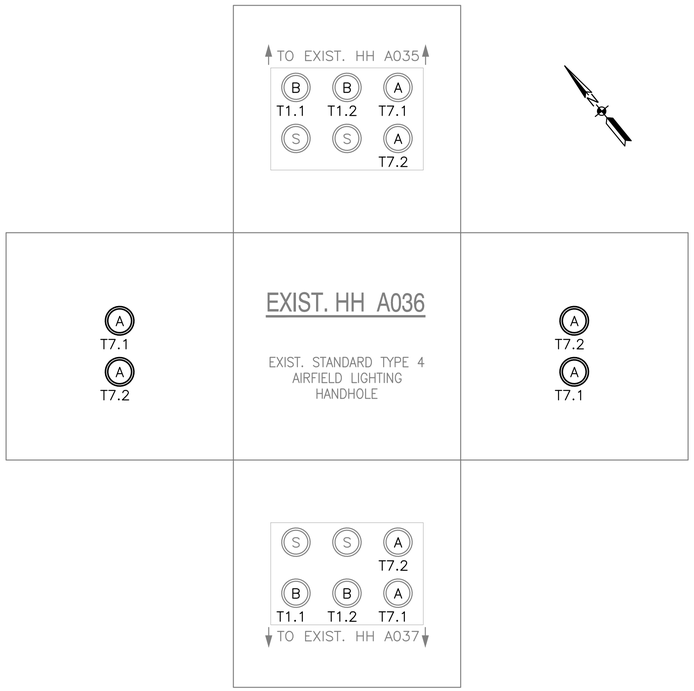
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC HR PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – EXISTING AIRFIELD LTG.

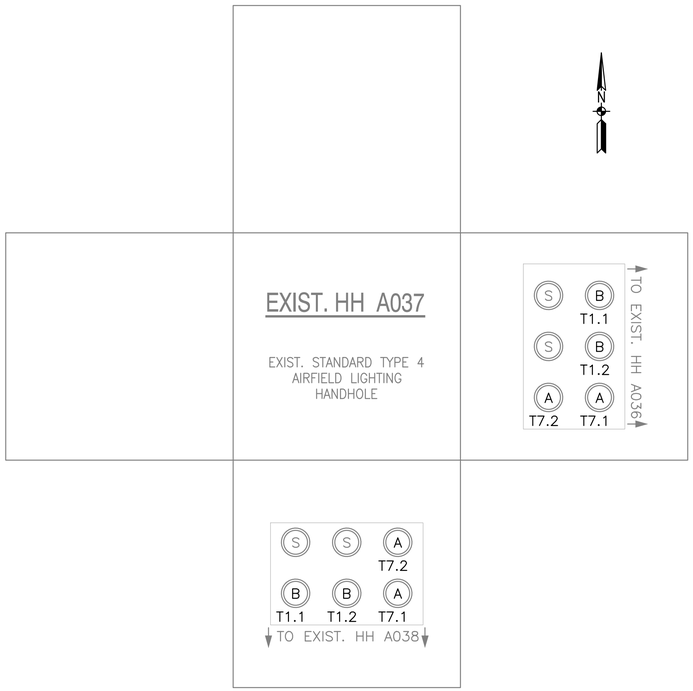
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691809
SHEET 276 OF 368

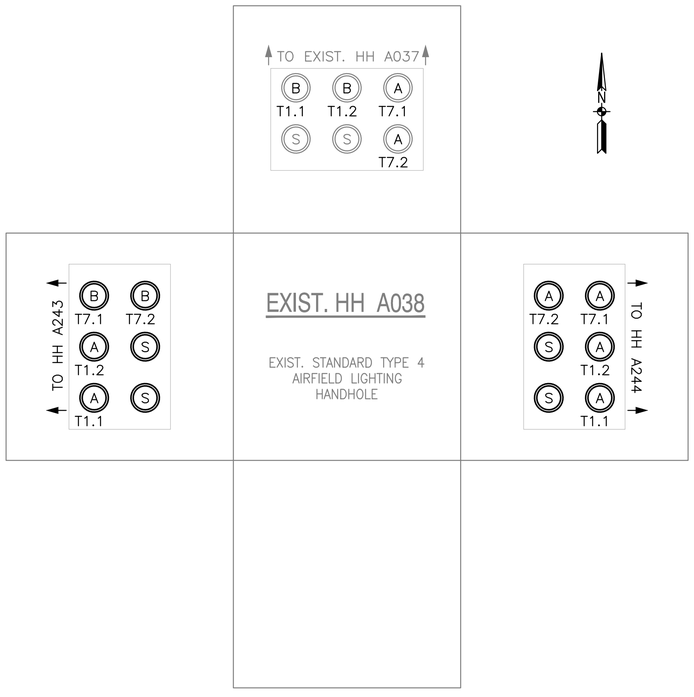
EA703

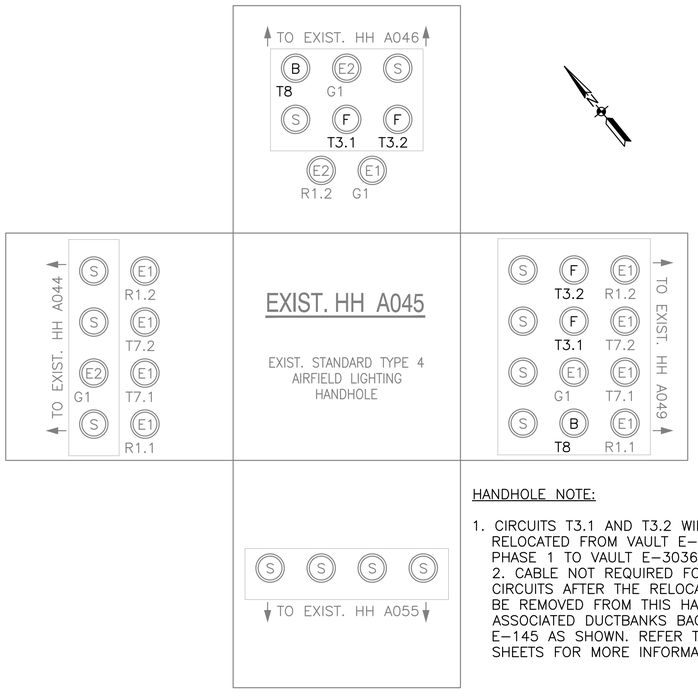
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-EA703.dwg LAYOUT NAME: EA703 PLOTTED: Tuesday, March 24, 2015 - 10:53am USER: Rhurst









HANDHOLE NOTE:

1. CIRCUITS T3.1 AND T3.2 WILL BE RELOCATED FROM VAULT E-145 IN PHASE 1 TO VAULT E-3036 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E-145 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.

GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

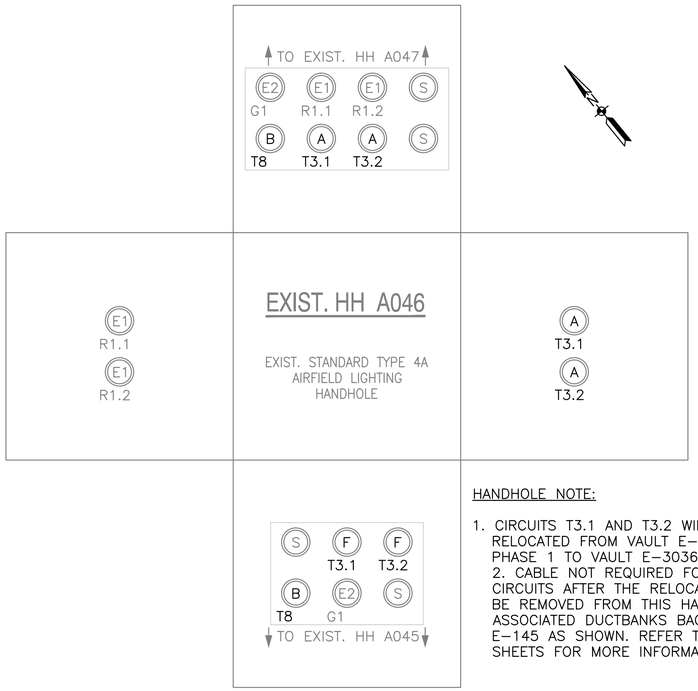
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – EXISTING AIRFIELD LTG.

SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691810
SHEET	277 OF 368

EA704

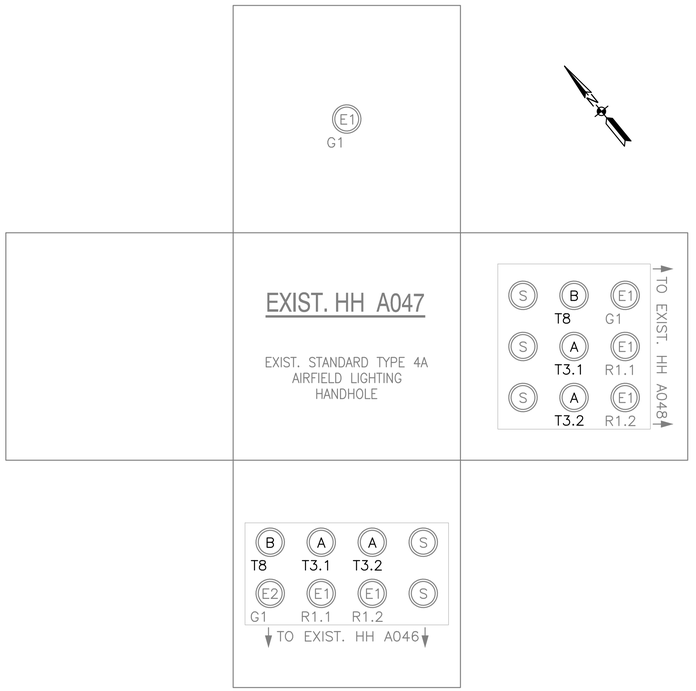
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_009_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-009-EA704.dwg LAYOUT NAME: EA704 PLOTTED: Tuesday, March 24, 2015 - 10:53am USER: Rhurst



HANDHOLE NOTE:

1. CIRCUITS T3.1 AND T3.2 WILL BE RELOCATED FROM VAULT E–145 IN PHASE 1 TO VAULT E–3036 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–145 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

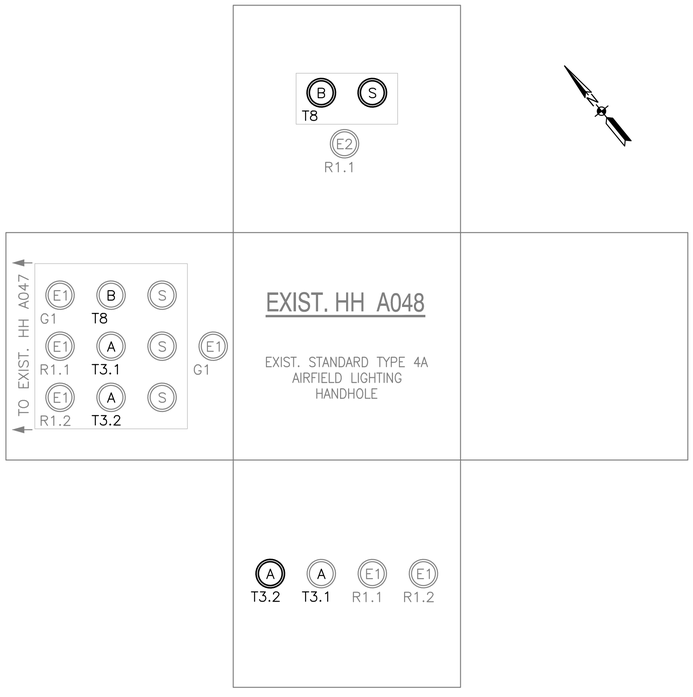
E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

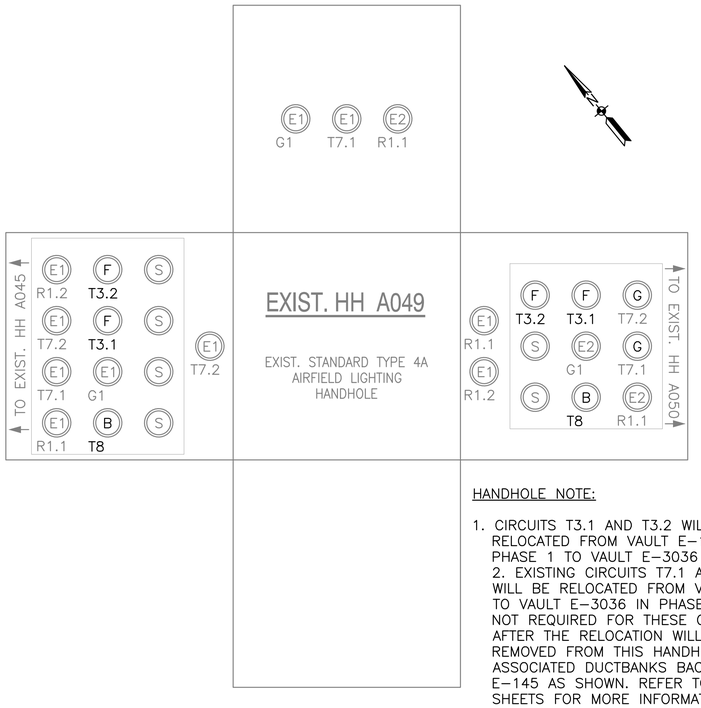
E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.





HANDHOLE NOTE:

1. CIRCUITS T3.1 AND T3.2 WILL BE RELOCATED FROM VAULT E–145 IN PHASE 1 TO VAULT E–3036 IN PHASE 2. EXISTING CIRCUITS T7.1 AND T7.2 WILL BE RELOCATED FROM VAULT E–145 TO VAULT E–3036 IN PHASE 1. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–145 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SL DRN SL CHK DJP

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

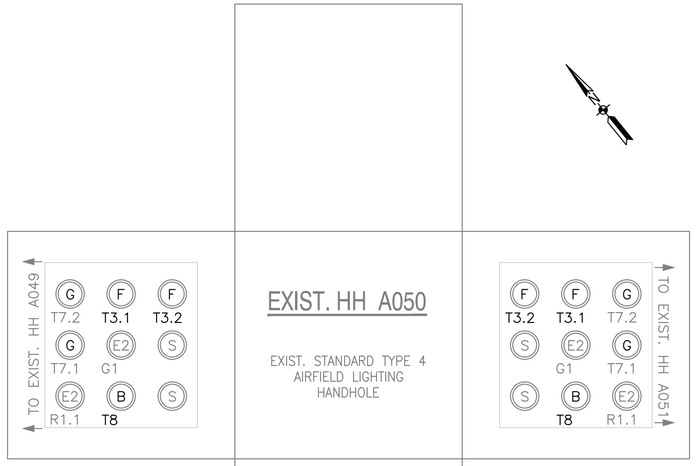
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
NR #PT
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – EXISTING AIRFIELD LTG.

SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691811
SHEET 278 OF 368

EA705

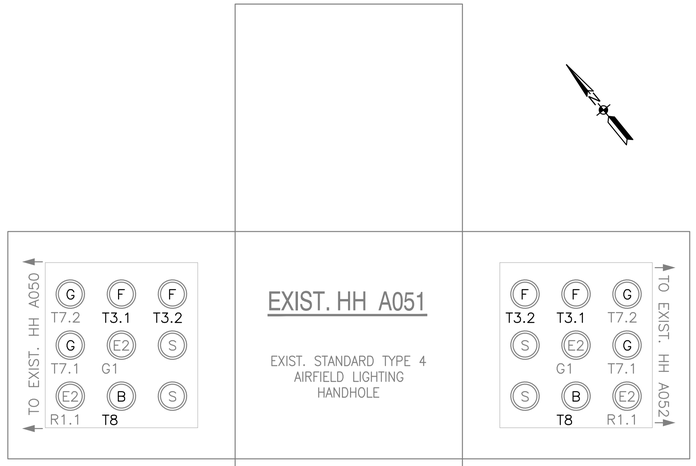
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SWD\109863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA705.dwg LAYOUT NAME: EA705 PLOTTED: Tuesday, March 24, 2015 – 10:53am USER: Rhurst



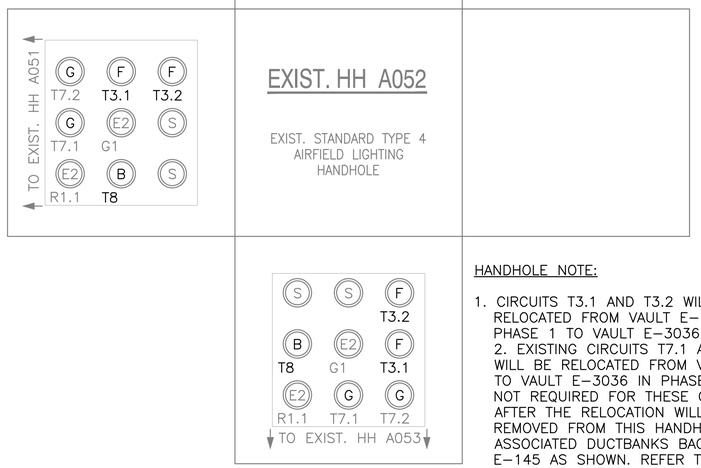
HANDHOLE NOTE:

1. CIRCUITS T3.1 AND T3.2 WILL BE RELOCATED FROM VAULT E–145 IN PHASE 1 TO VAULT E–3036 IN PHASE 2. EXISTING CIRCUITS T7.1 AND T7.2 WILL BE RELOCATED FROM VAULT E–145 TO VAULT E–3036 IN PHASE 1. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–145 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



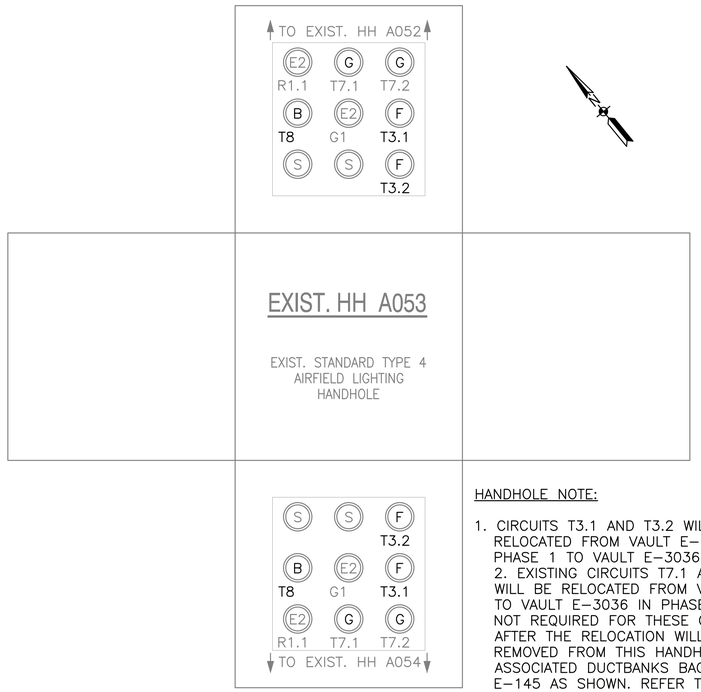
HANDHOLE NOTE:

1. CIRCUITS T3.1 AND T3.2 WILL BE RELOCATED FROM VAULT E–145 IN PHASE 1 TO VAULT E–3036 IN PHASE 2. EXISTING CIRCUITS T7.1 AND T7.2 WILL BE RELOCATED FROM VAULT E–145 TO VAULT E–3036 IN PHASE 1. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–145 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



HANDHOLE NOTE:

1. CIRCUITS T3.1 AND T3.2 WILL BE RELOCATED FROM VAULT E–145 IN PHASE 1 TO VAULT E–3036 IN PHASE 2. EXISTING CIRCUITS T7.1 AND T7.2 WILL BE RELOCATED FROM VAULT E–145 TO VAULT E–3036 IN PHASE 1. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–145 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



HANDHOLE NOTE:

1. CIRCUITS T3.1 AND T3.2 WILL BE RELOCATED FROM VAULT E–145 IN PHASE 1 TO VAULT E–3036 IN PHASE 2. EXISTING CIRCUITS T7.1 AND T7.2 WILL BE RELOCATED FROM VAULT E–145 TO VAULT E–3036 IN PHASE 1. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–145 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.

GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRN	SL	CHK	DJP

PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

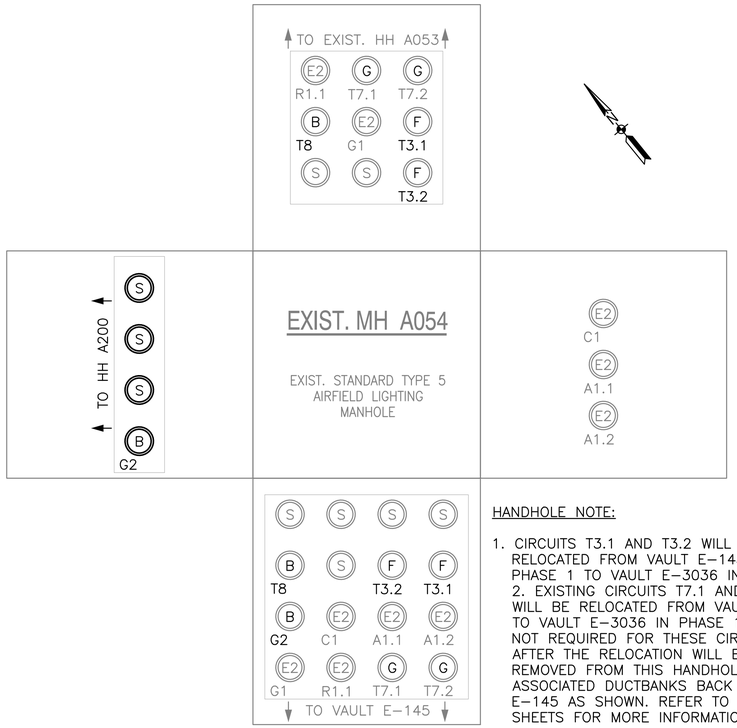
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – EXISTING AIRFIELD LTG.

SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691812
SHEET	279 OF 368

EA706

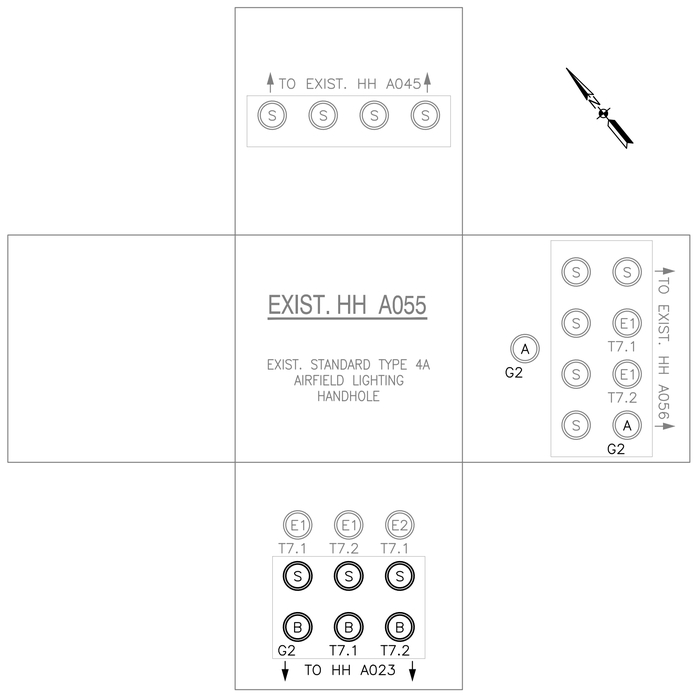
DRAWFORM REVISION: 10 MARCH 2009

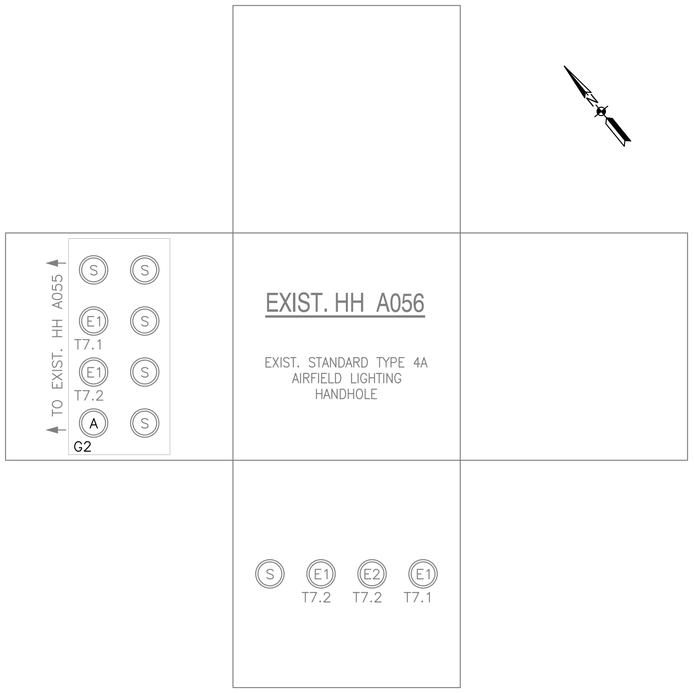
FILE NAME: G:\SMD\109863_009_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-009-EA706.dwg LAYOUT NAME: EA706 PLOTTED: Tuesday, March 24, 2015 – 10:54am USER: Rhunt



HANDHOLE NOTE:

1. CIRCUITS T3.1 AND T3.2 WILL BE RELOCATED FROM VAULT E-145 IN PHASE 1 TO VAULT E-3036 IN PHASE 2. EXISTING CIRCUITS T7.1 AND T7.2 WILL BE RELOCATED FROM VAULT E-145 TO VAULT E-3036 IN PHASE 1. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E-145 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.





GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

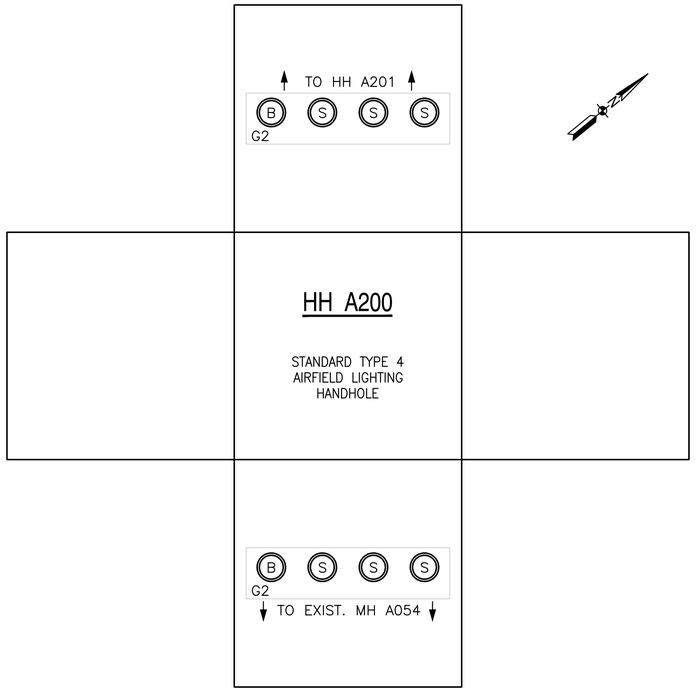
DES	SL	DRN	SL	CHK	DJP

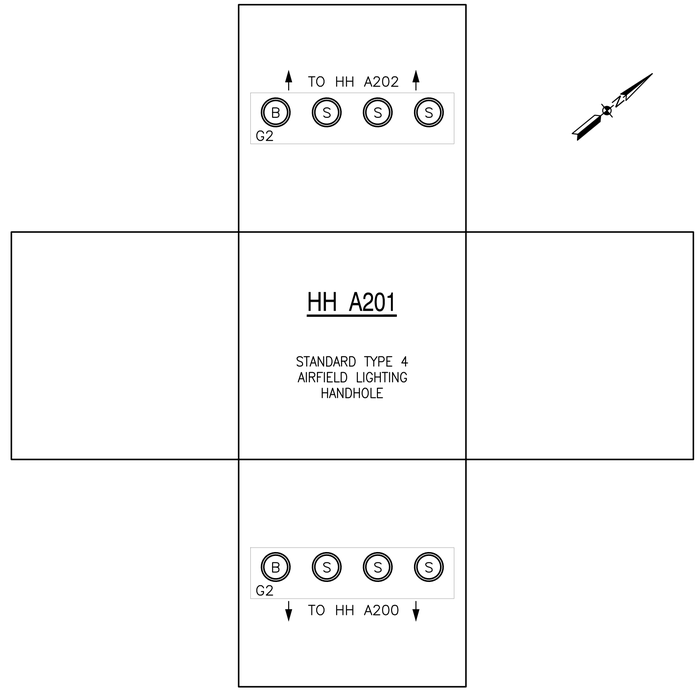
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

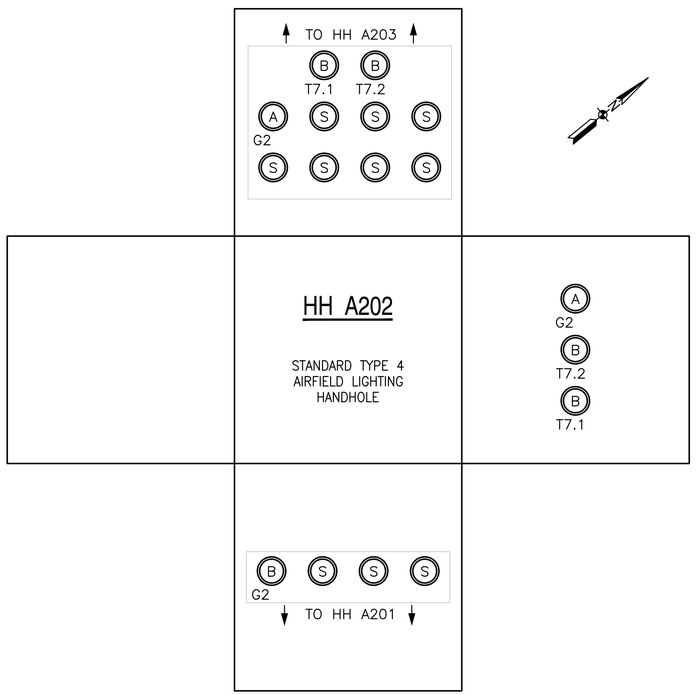
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – EXISTING AIRFIELD LTG.

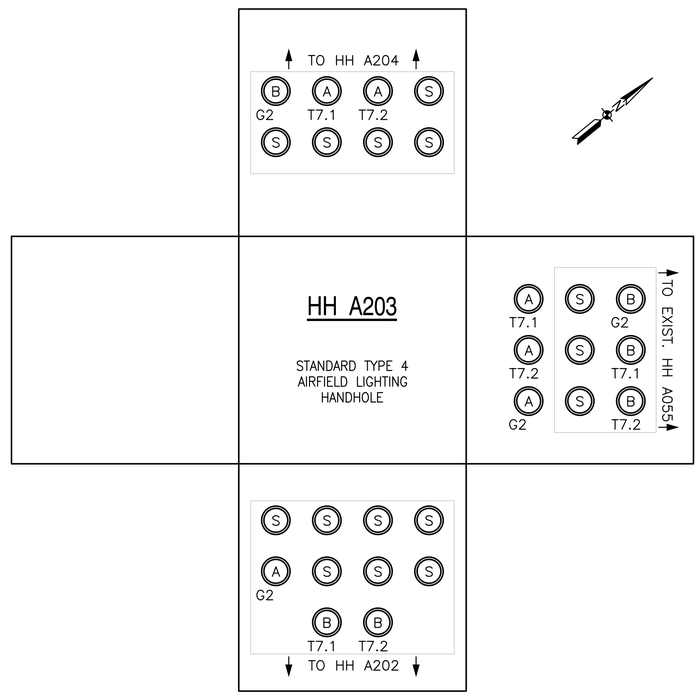
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691813
SHEET 280 OF 368
EA707
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\100963_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0963-008-EA707.dwg LAYOUT NAME: EA707 PLOTTED: Tuesday, March 24, 2015 - 10:54am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

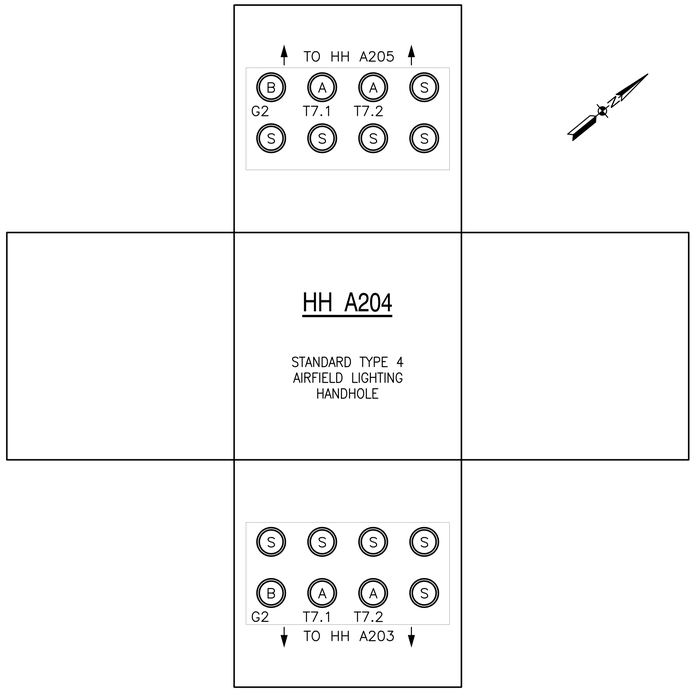
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.
HR #PT

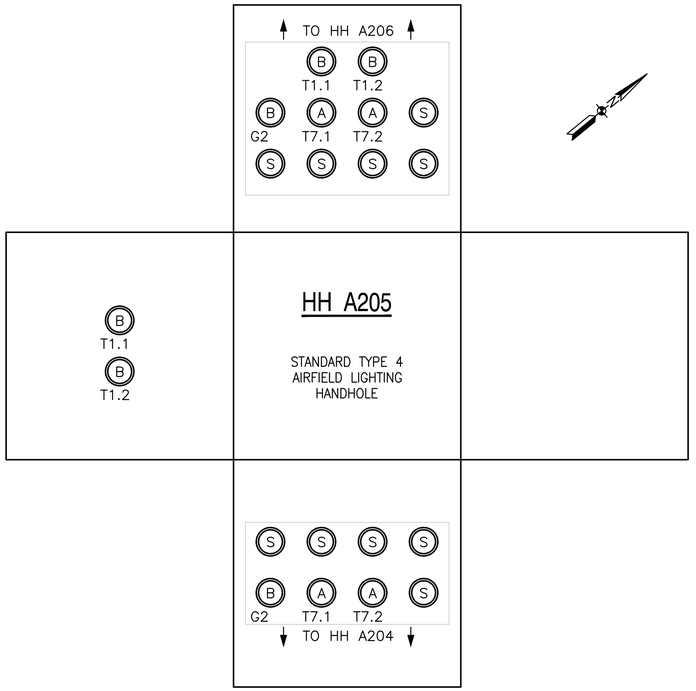
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691814
SHEET 281 OF 368

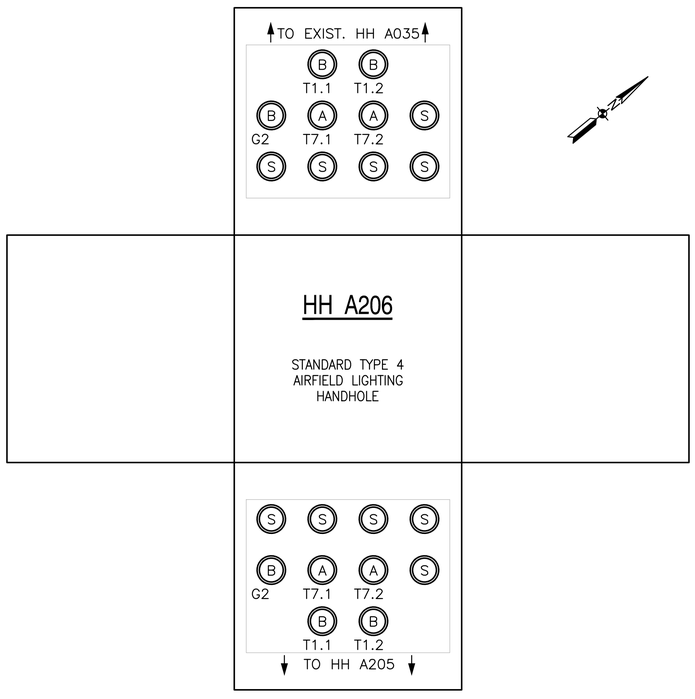
EA708

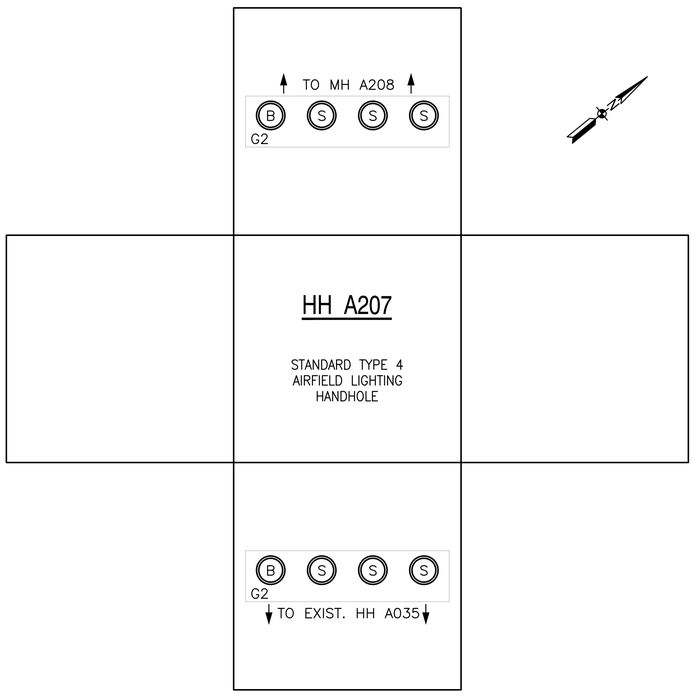
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109963_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA708.dwg LAYOUT NAME: EA708 PLOTTED: Tuesday, March 24, 2015 – 10:54am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
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DES SL DRN SL CHK DJP
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BRANCH MANAGER WED
CHIEF ENG/ARCH

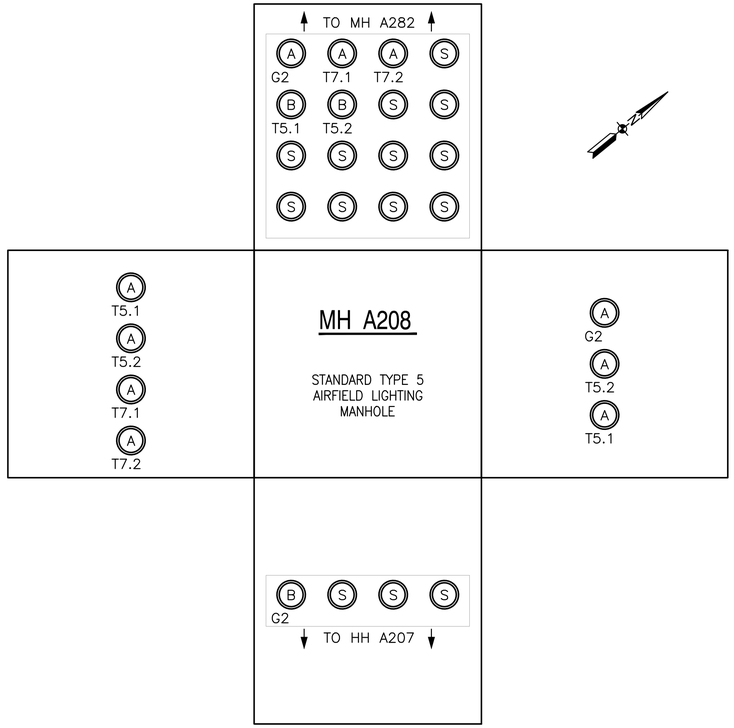
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

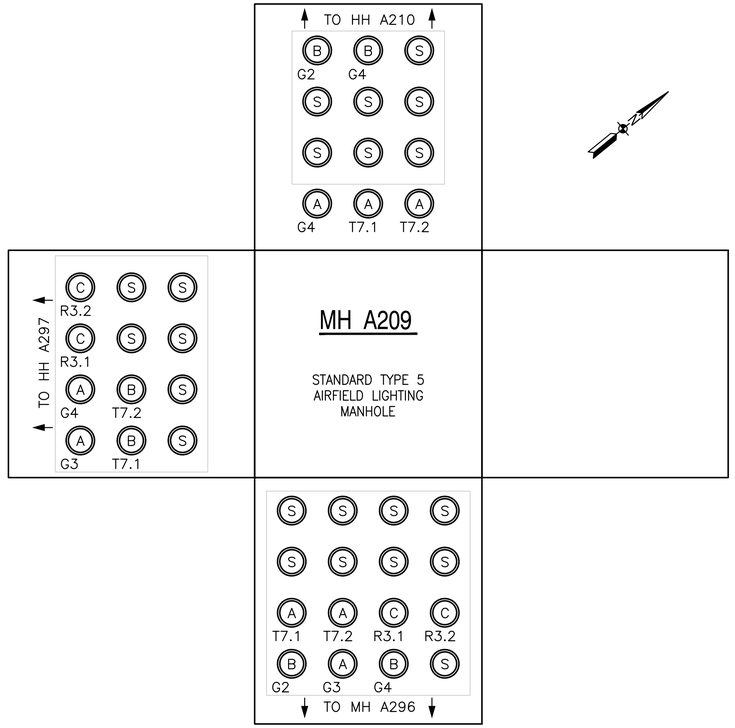
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691815
SHEET 282 OF 368

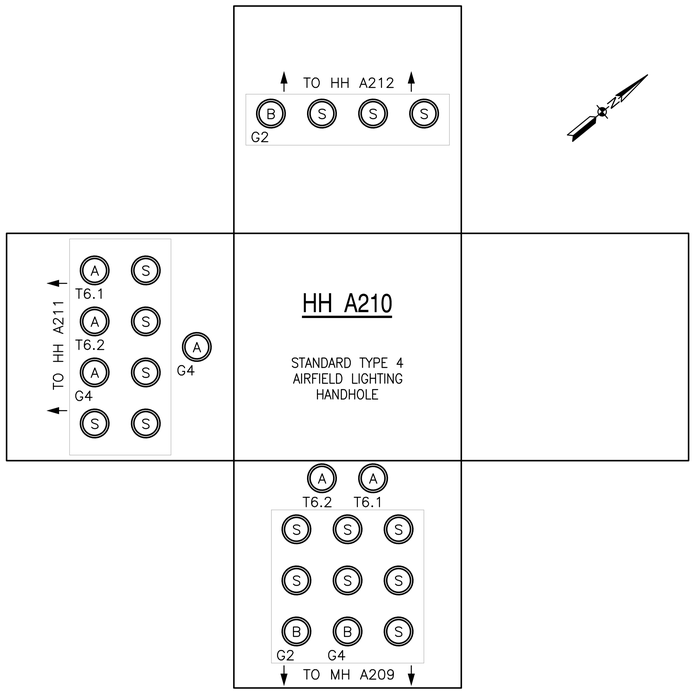
EA709

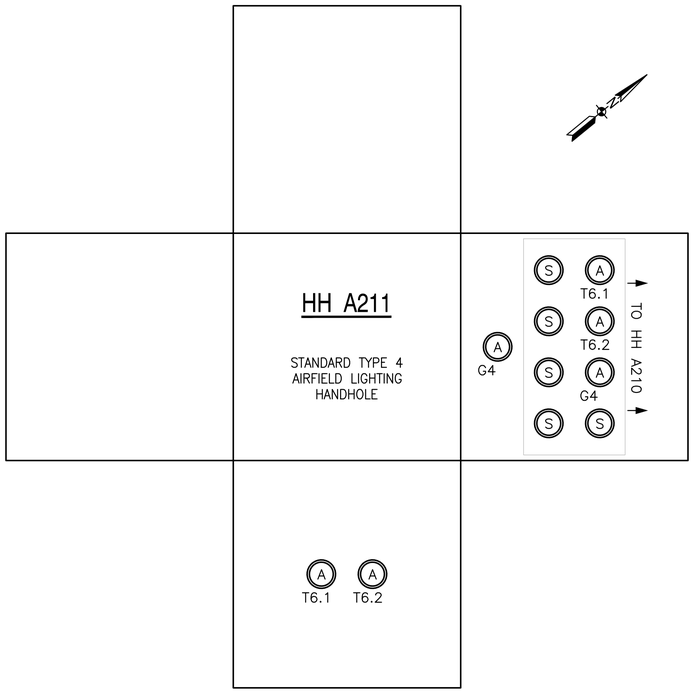
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA709.dwg LAYOUT NAME: EA709 PLOTTED: Tuesday, March 24, 2015 – 10:54am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES'D SL DRN SL CHK DJP

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BRANCH MANAGER WED

CHIEF ENG/ARCH

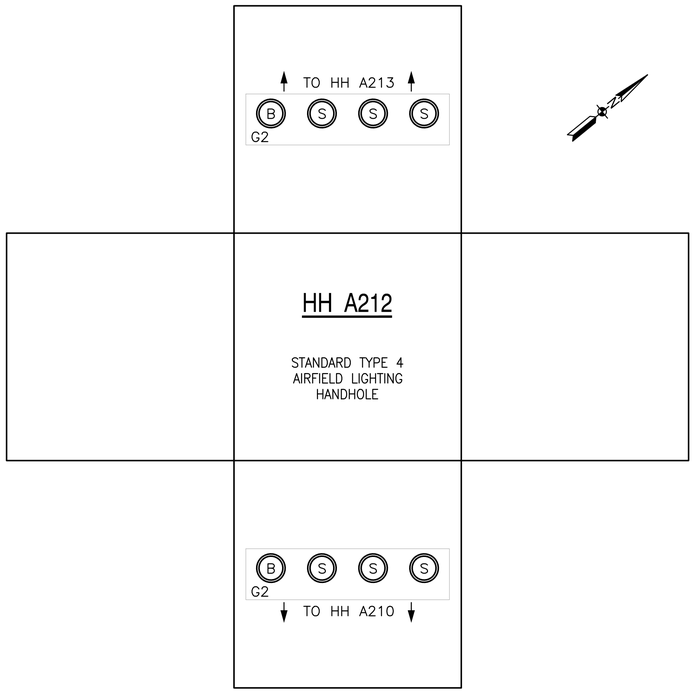
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.
HR #PT

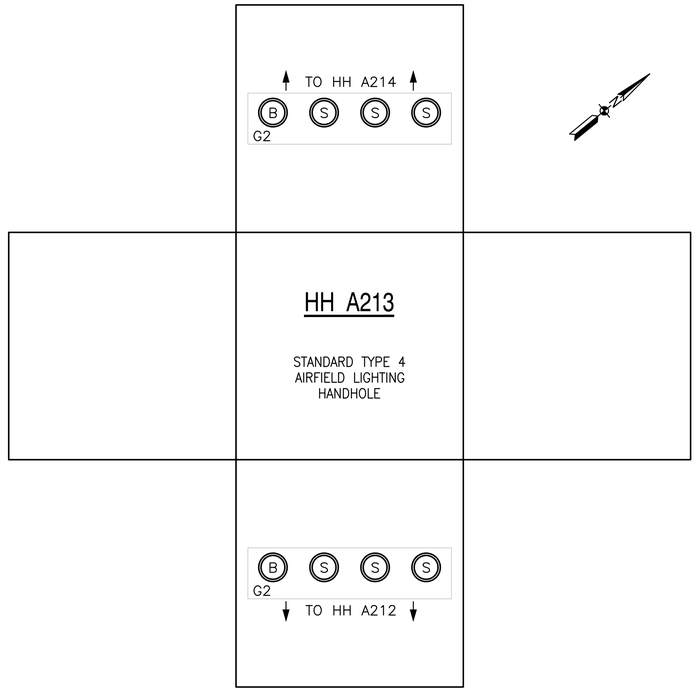
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691816
SHEET 283 OF 368

EA710

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA710.dwg LAYOUT NAME: EA710 PLOTTED: Tuesday, March 24, 2015 - 10:55am USER: Rhurst





GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

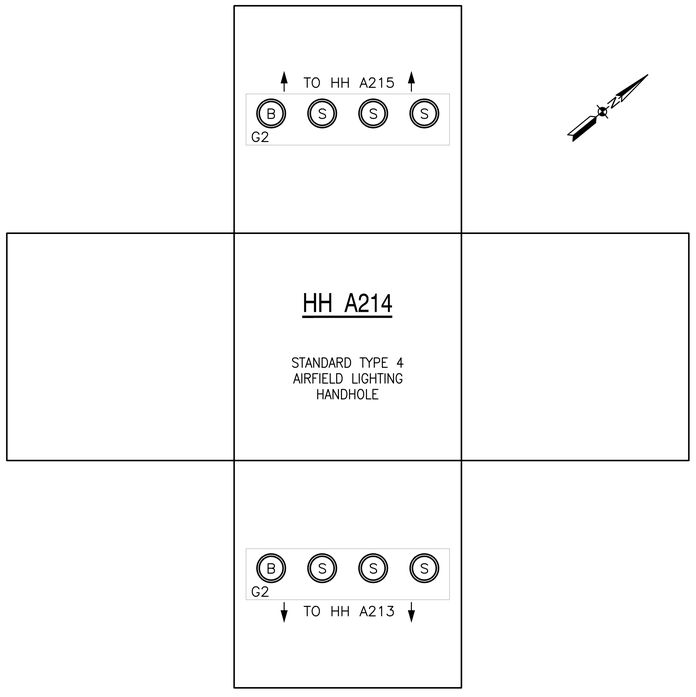
E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

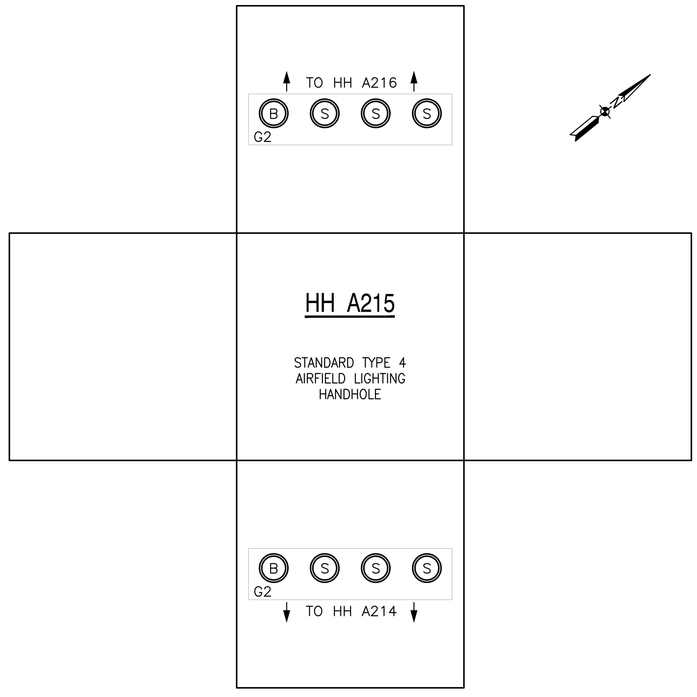
E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.





SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

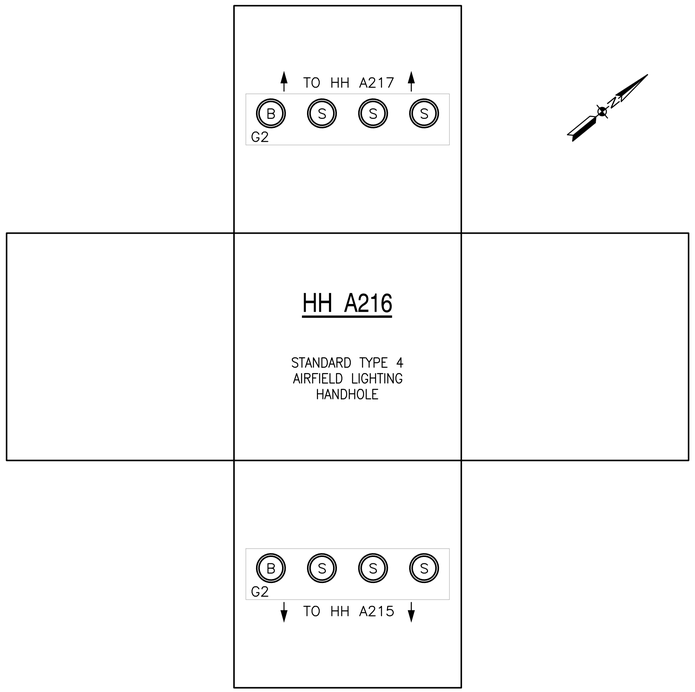
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

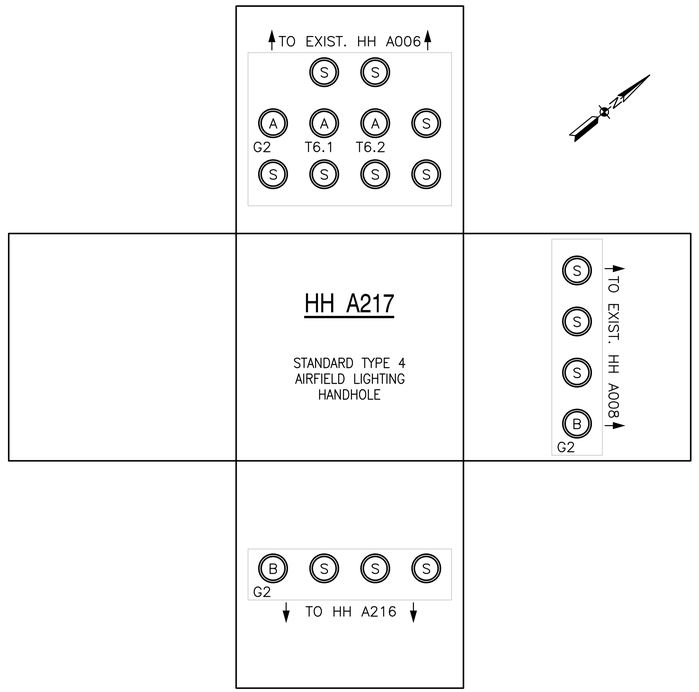
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691817
SHEET 284 OF 368

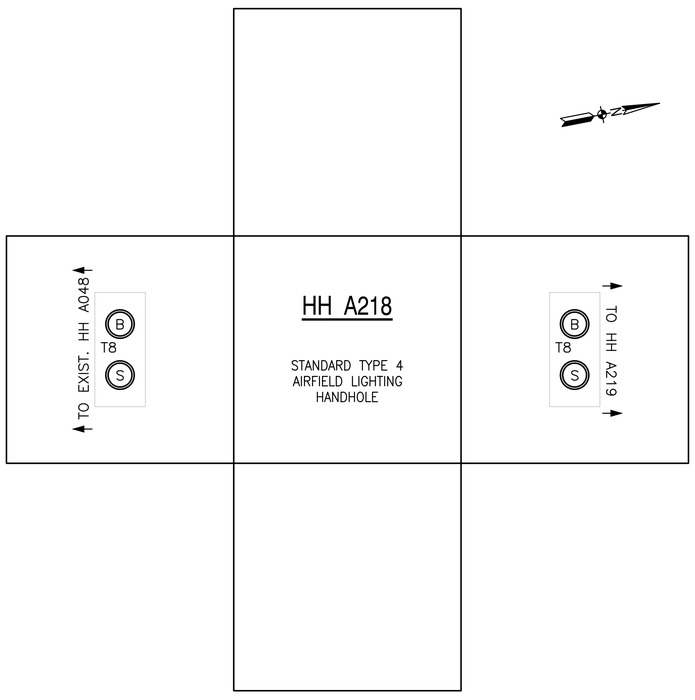
EA711

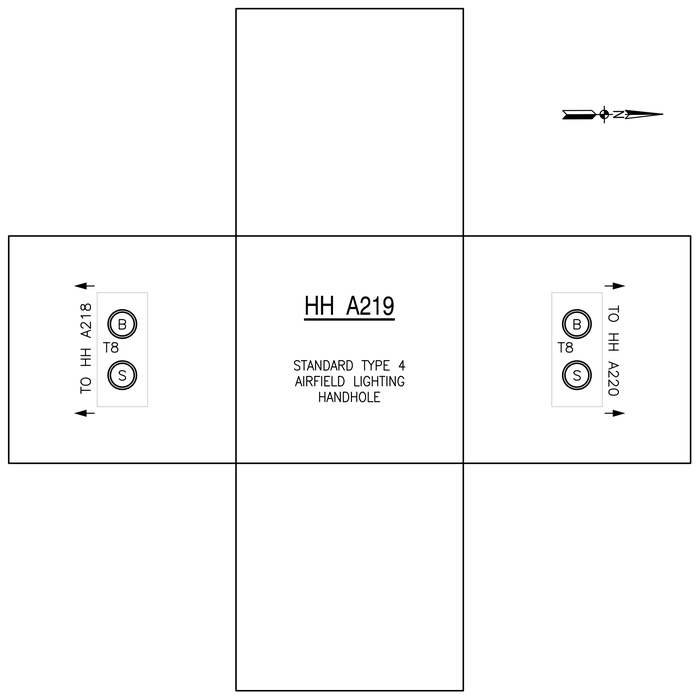
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_009_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-009-EA711.dwg LAYOUT NAME: EA711 PLOTTED: Tuesday, March 24, 2015 – 10:55am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

DES'D SL | DRN SL | CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

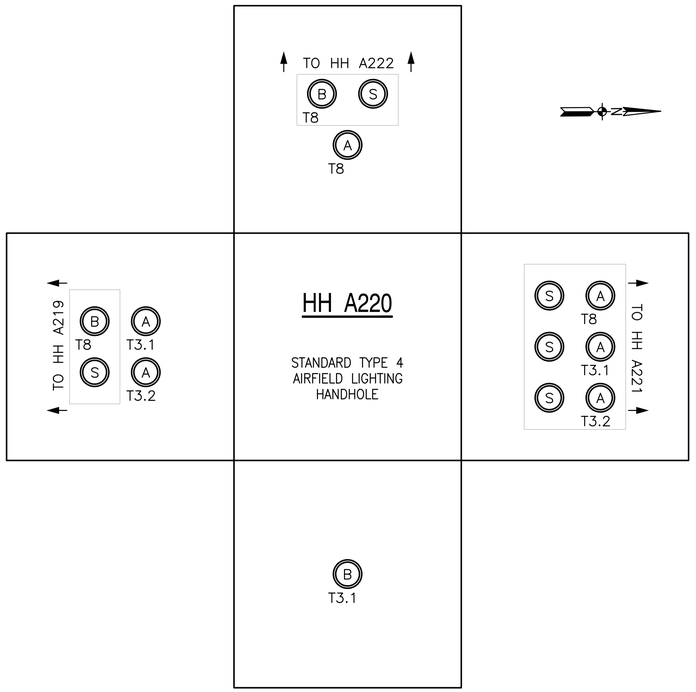
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.
HR #PT

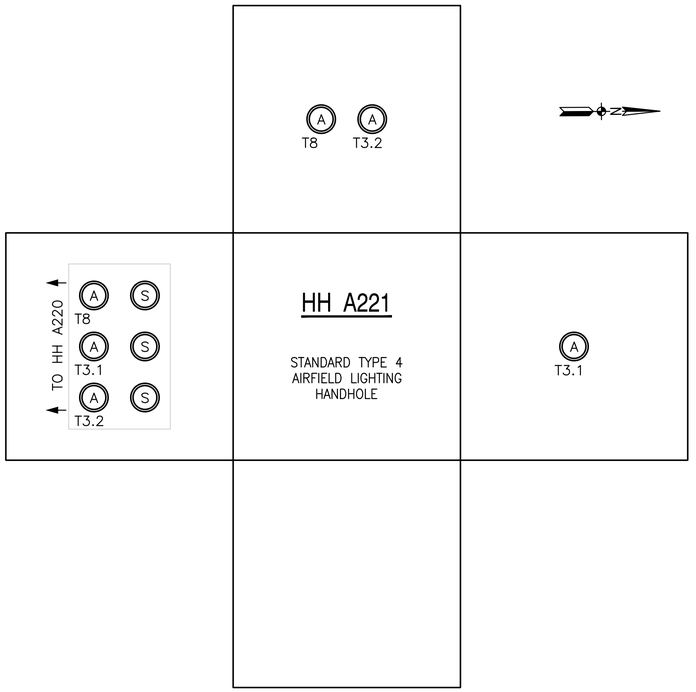
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691818
SHEET 285 OF 368

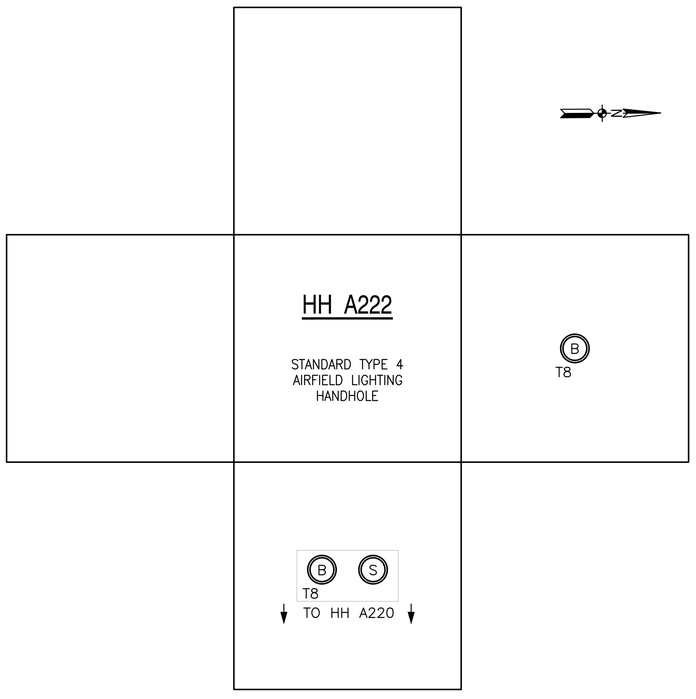
EA712

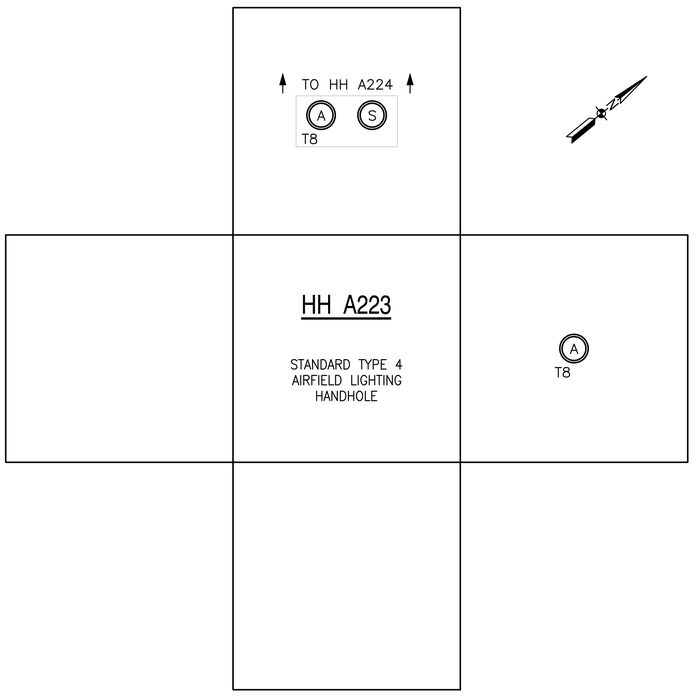
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-EA712.dwg LAYOUT NAME: EA712 PLOTTED: Tuesday, March 24, 2015 – 10:55am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

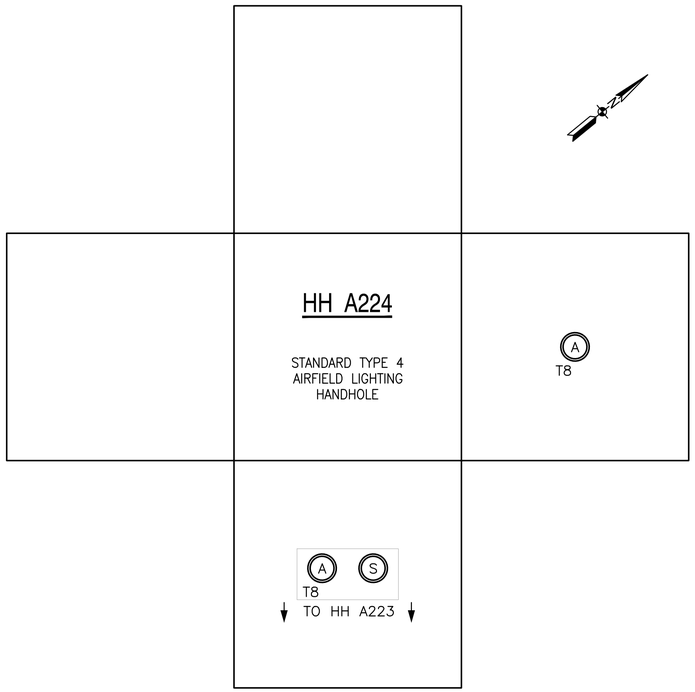
David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

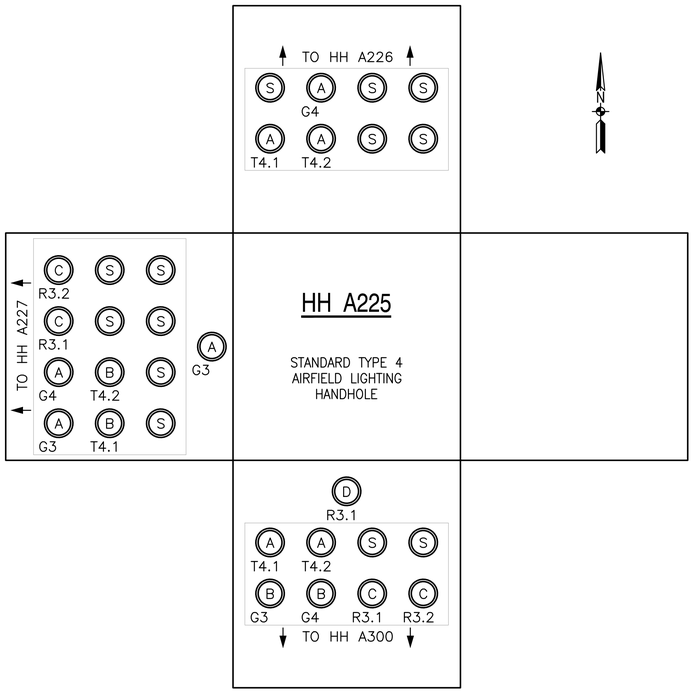
A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC HR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.
12691819
SHEET 286 OF 368
EA713
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_009_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-009-EA713.dwg LAYOUT NAME: EA713 PLOTTED: Tuesday, March 24, 2015 – 10:55am USER: Rhunt





GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

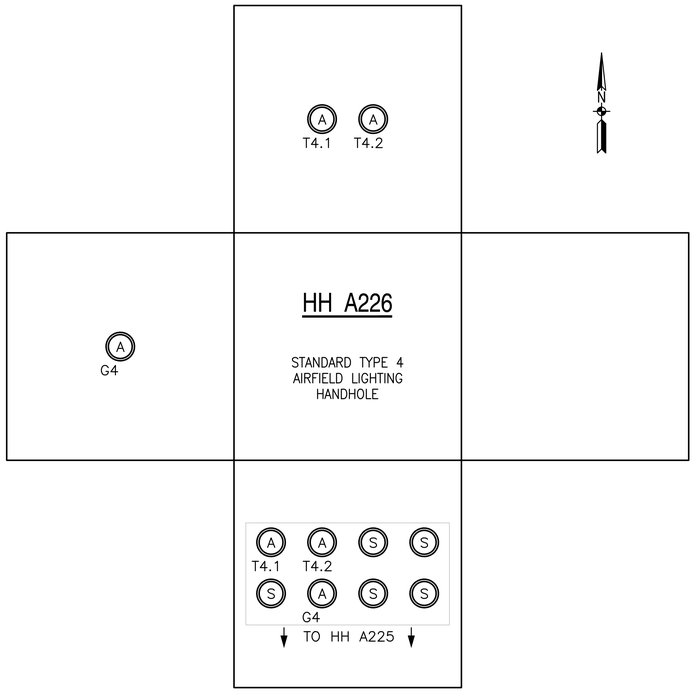
E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

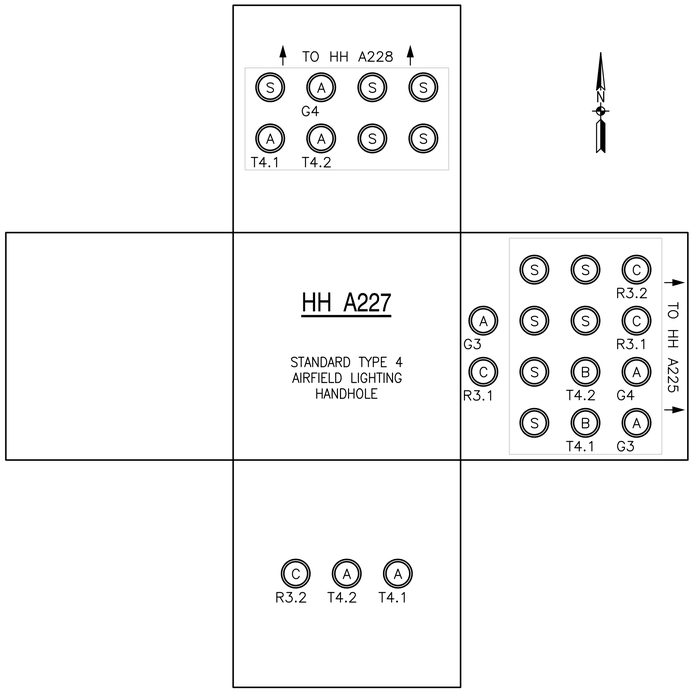
E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.





SYM	DESCRIPTION	DATE	APPR

NAVFAC

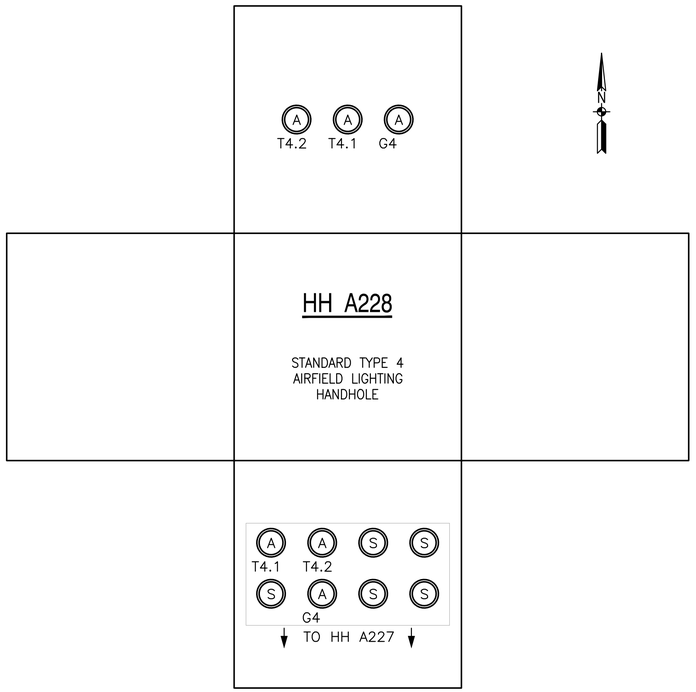
David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

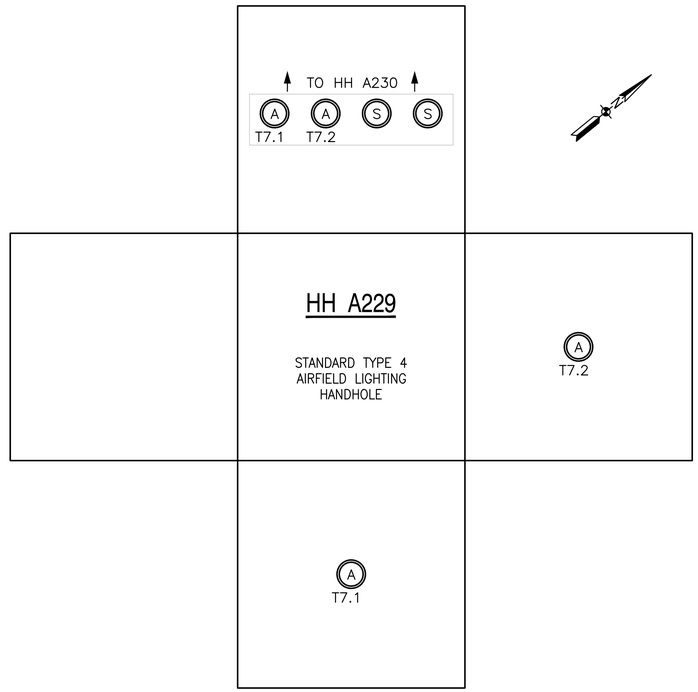
A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

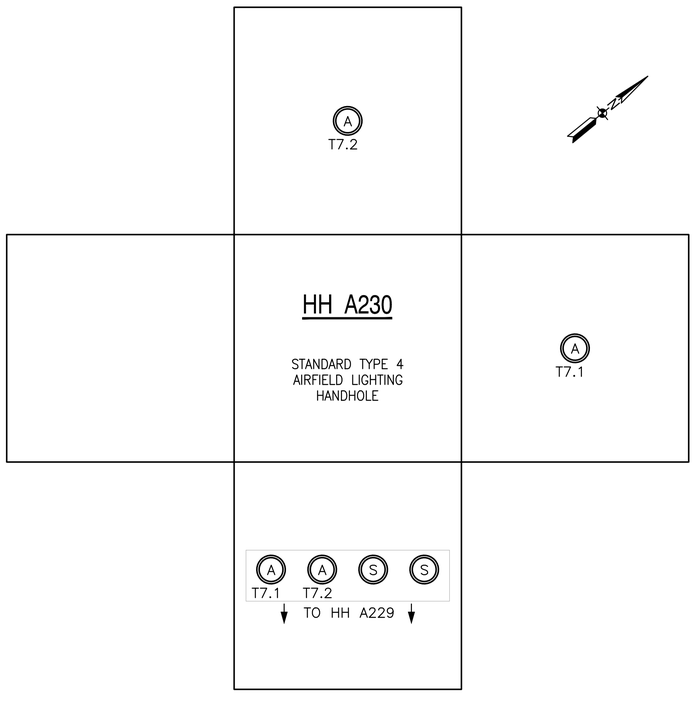
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
VIRGINIA BEACH, VIRGINIA
HR IPT
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

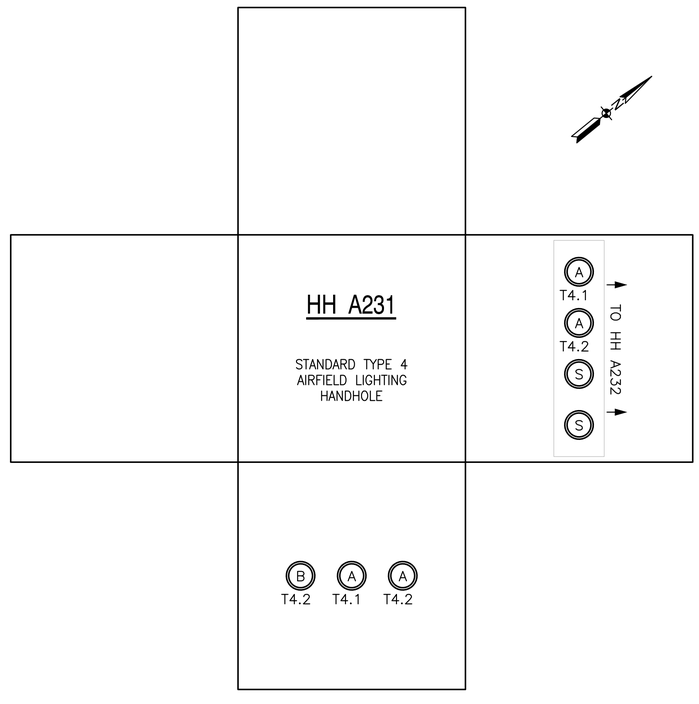
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691820
SHEET 287 OF 368
EA714
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109963_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-EA714.dwg LAYOUT NAME: EA714 PLOTTED: Tuesday, March 24, 2015 – 10:56am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRN	SL	CHK	DJP

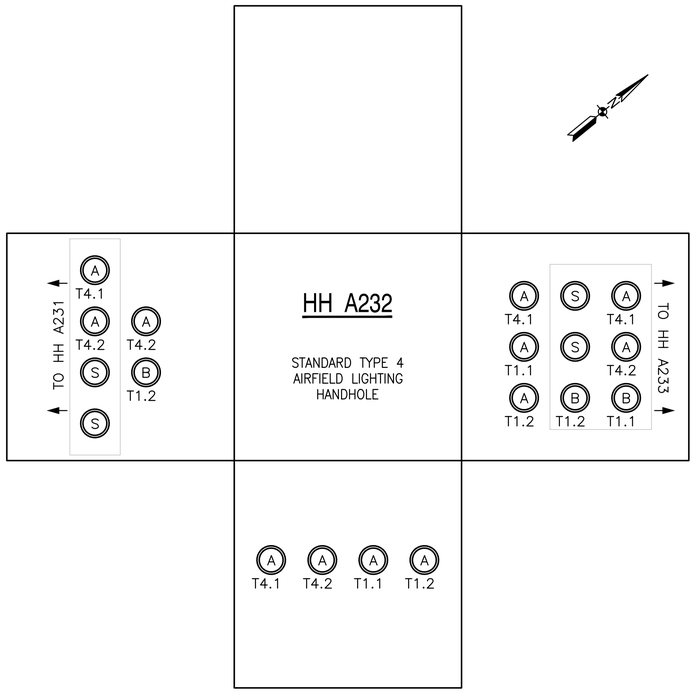
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

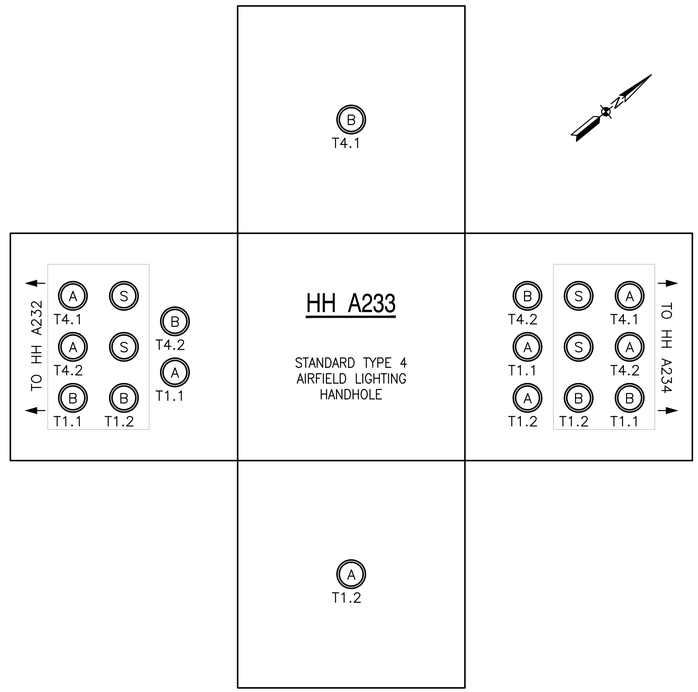
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.
HR #PT

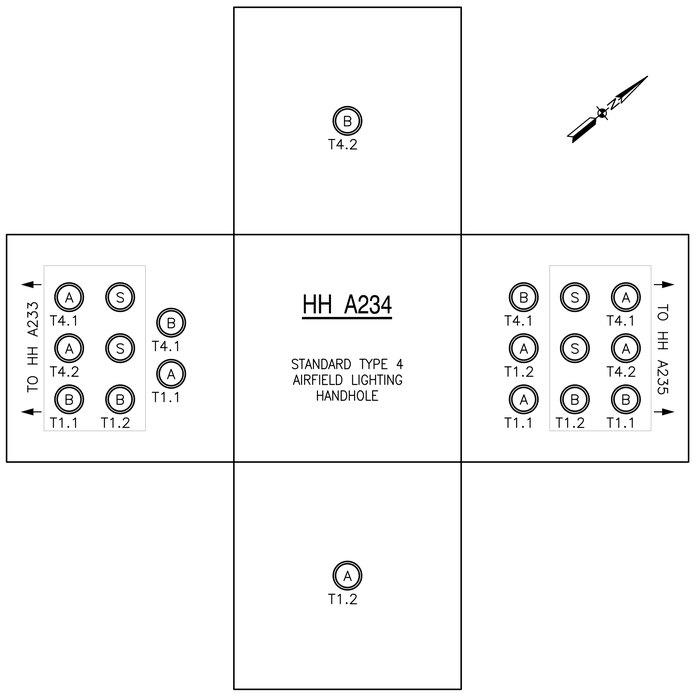
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691821
SHEET 288 OF 368
EA715

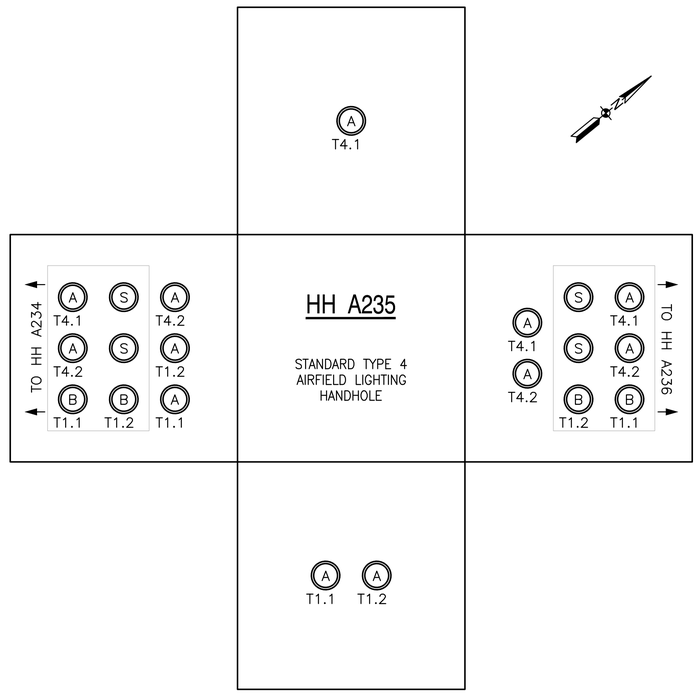
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-EA715.dwg LAYOUT NAME: EA715 PLOTTED: Tuesday, March 24, 2015 – 10:56am USER: Rhunt









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRN	SL	CHK	DJP

PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

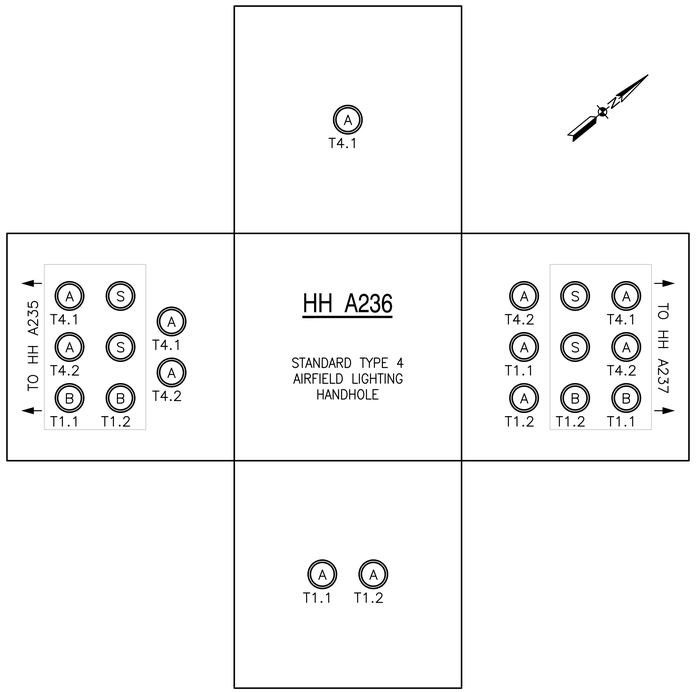
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

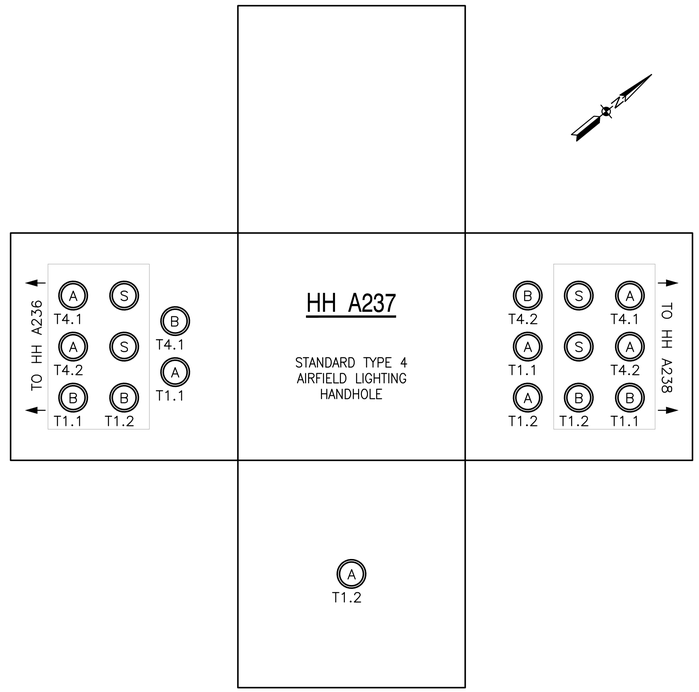
SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691822
SHEET	289 OF 368

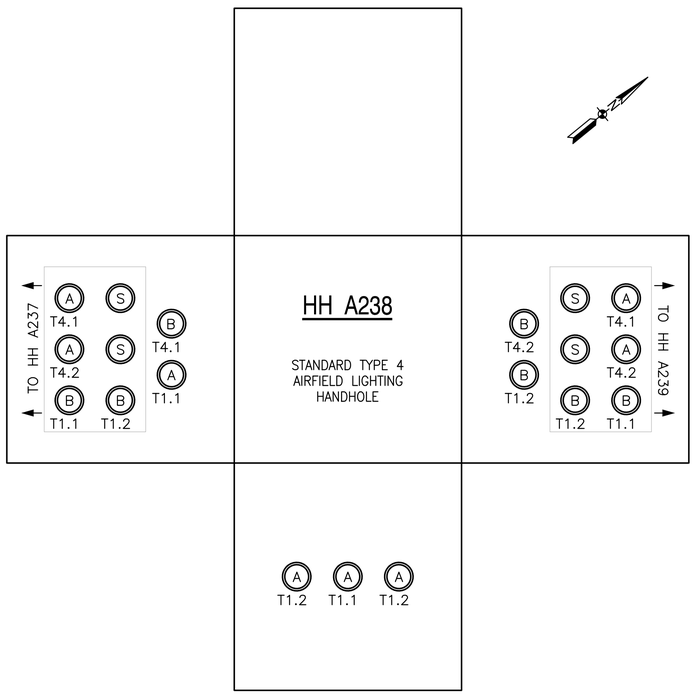
EA716

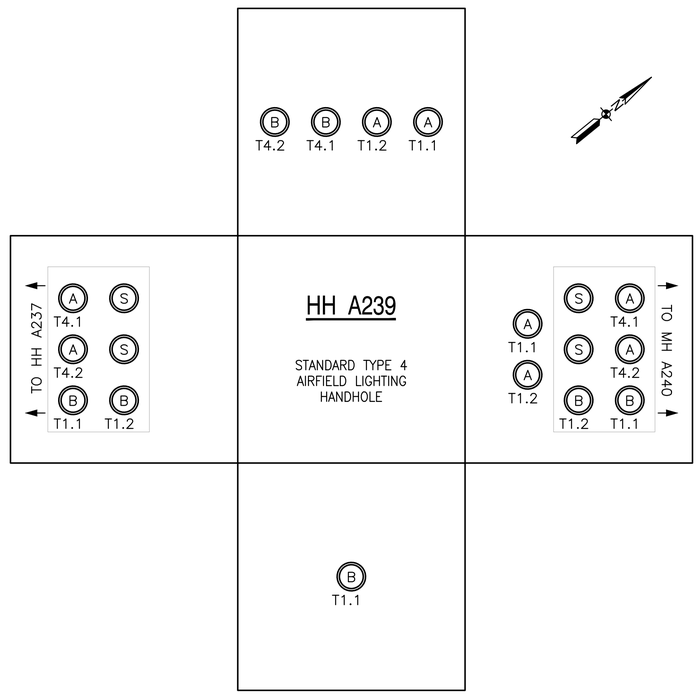
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA716.dwg LAYOUT NAME: EA716 PLOTTED: Tuesday, March 24, 2015 - 10:56am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

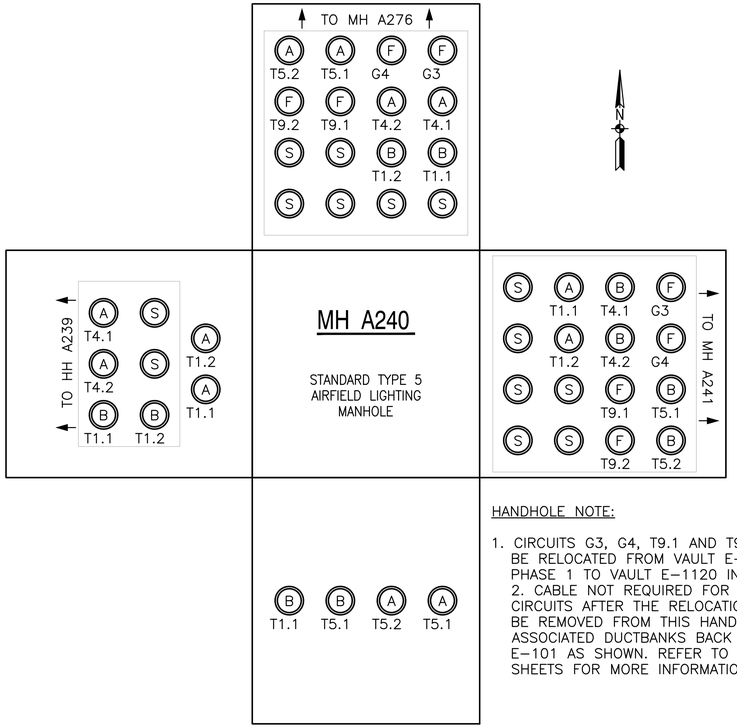
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691823
SHEET 290 OF 368

EA717

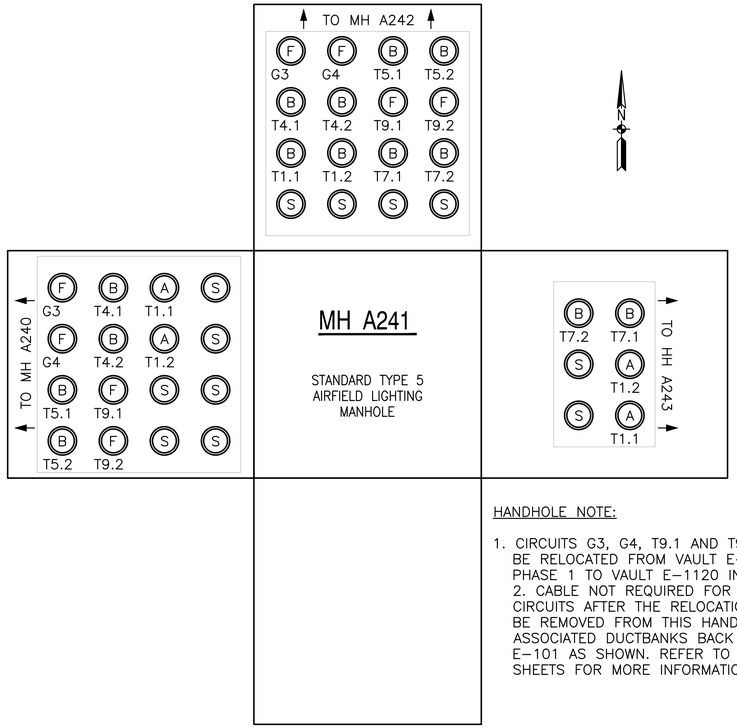
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_009_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-009-EA717.dwg LAYOUT NAME: EA717 PLOTTED: Tuesday, March 24, 2015 - 10:56am USER: Rhurst



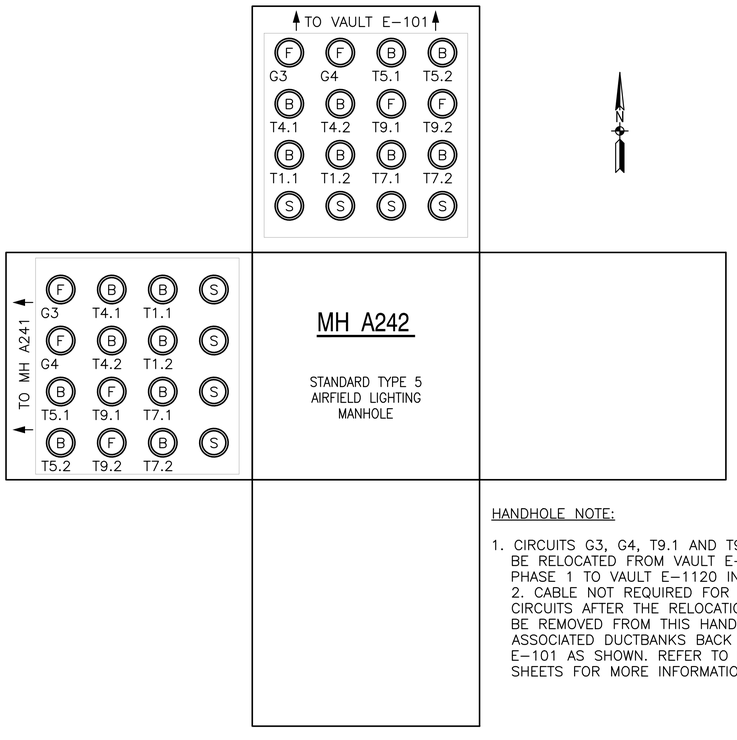
HANDHOLE NOTE:

1. CIRCUITS G3, G4, T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



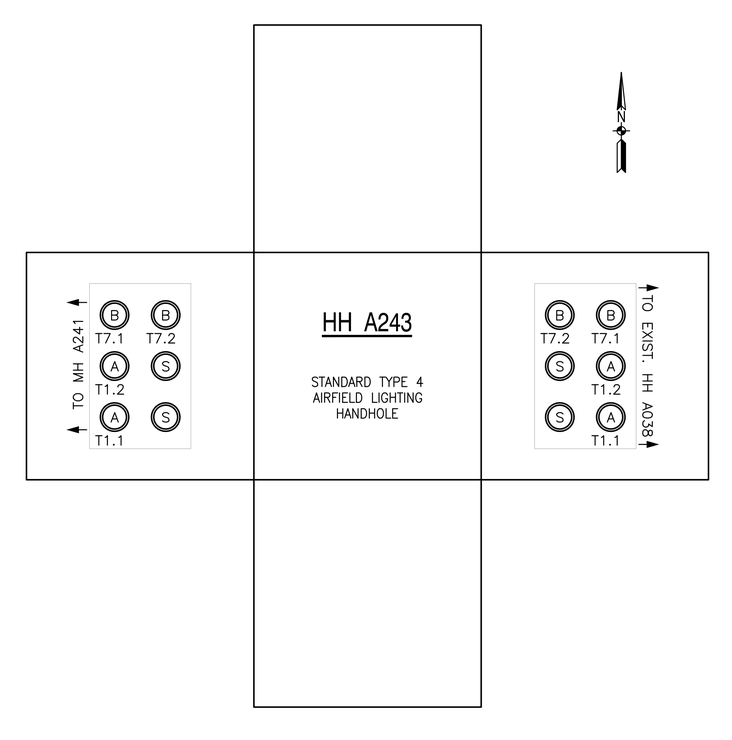
HANDHOLE NOTE:

1. CIRCUITS G3, G4, T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



HANDHOLE NOTE:

1. CIRCUITS G3, G4, T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRN	SL	CHK	DJP

PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

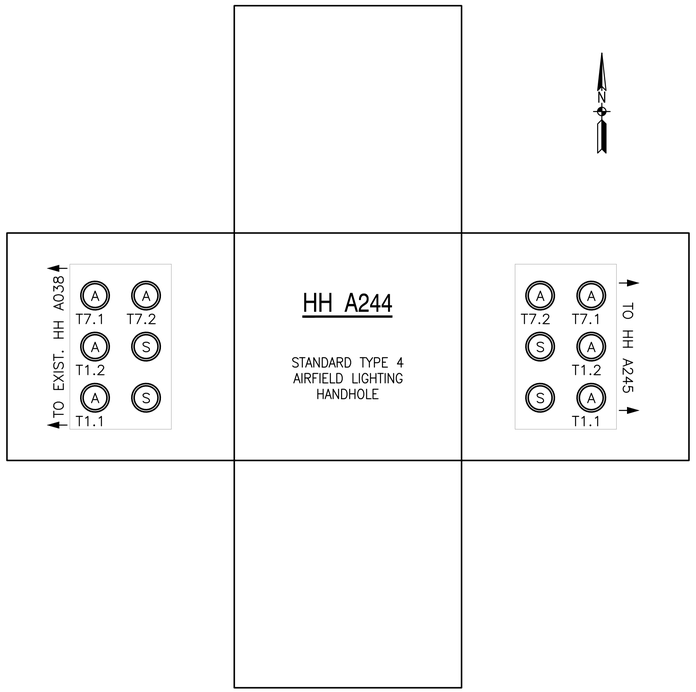
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

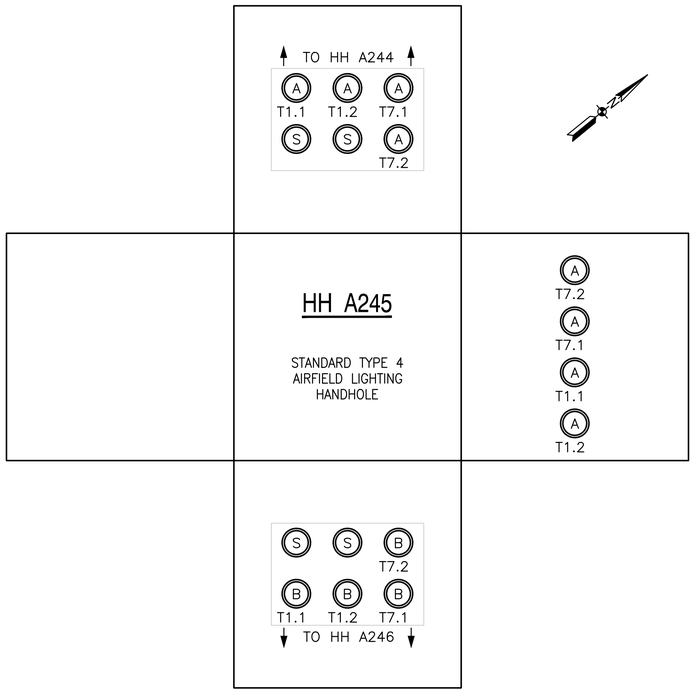
SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691824
SHEET	291 OF 368

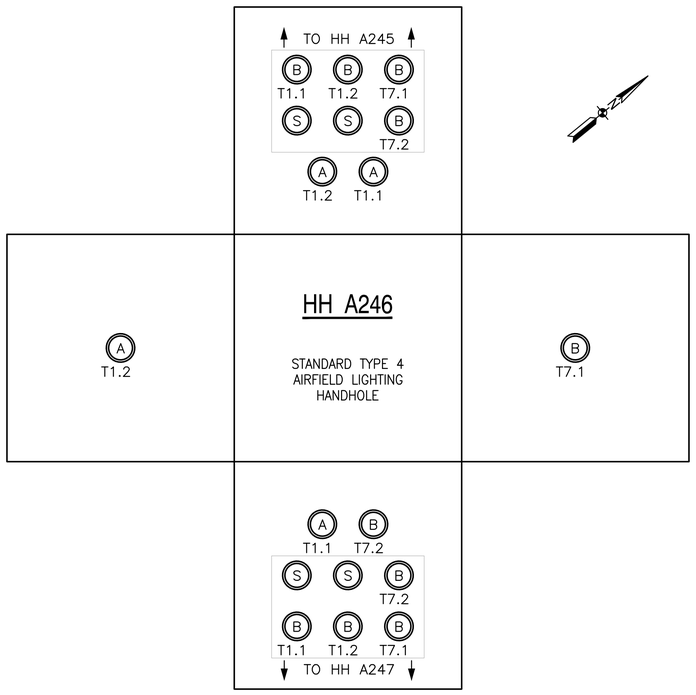
EA718

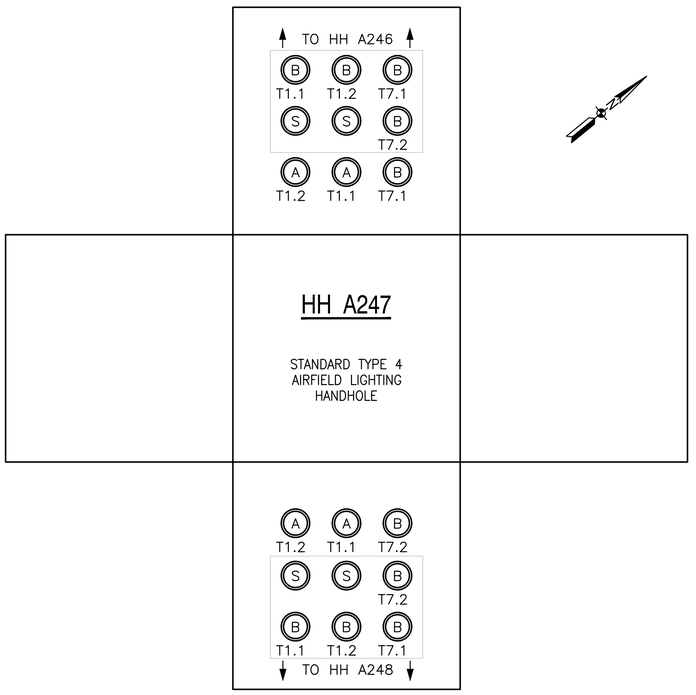
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA718.dwg LAYOUT NAME: EA718 PLOTTED: Tuesday, March 24, 2015 – 10:57am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
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DES SL DRN SL CHK DJP
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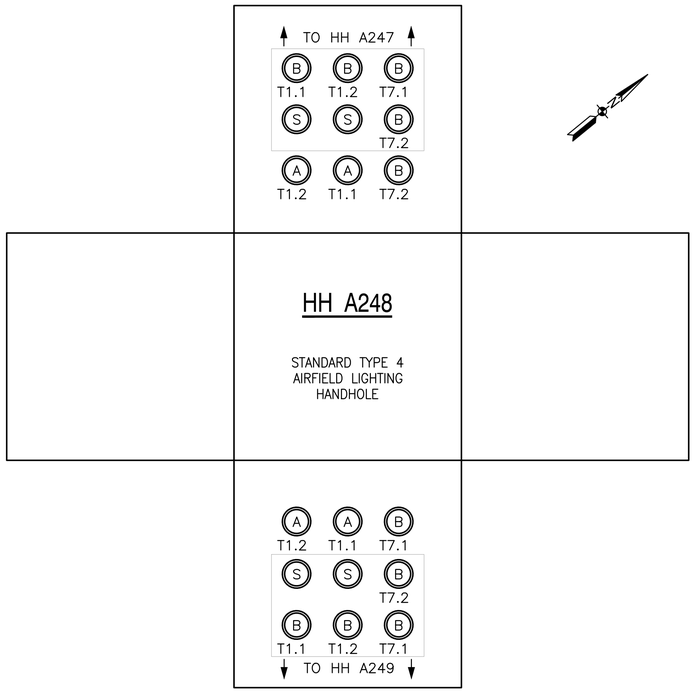
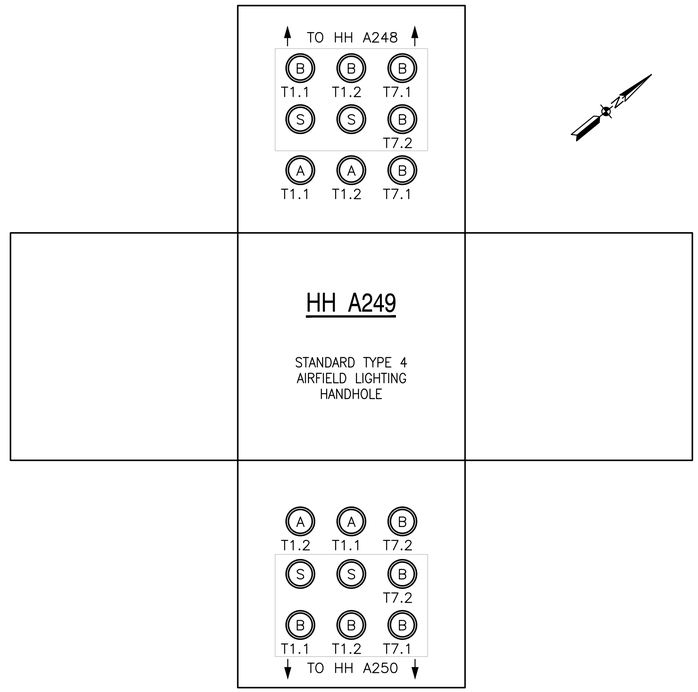
CHIEF ENG/ARCH

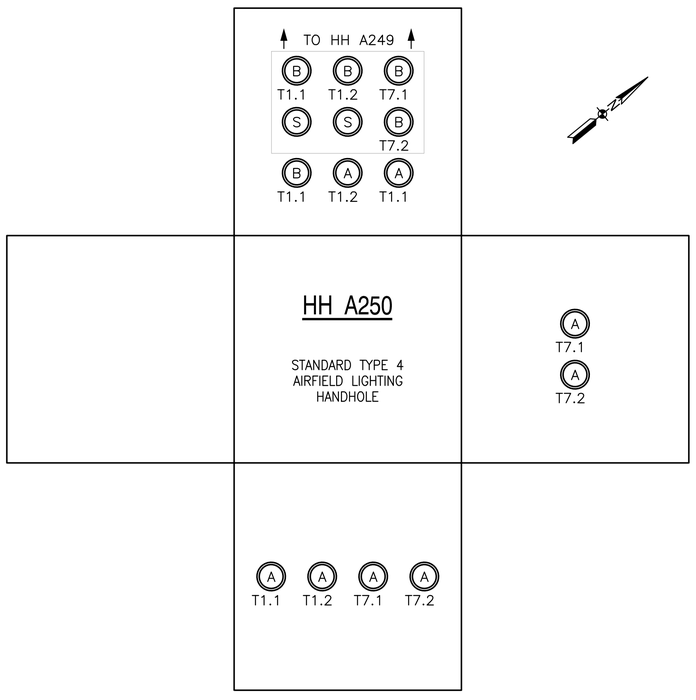
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

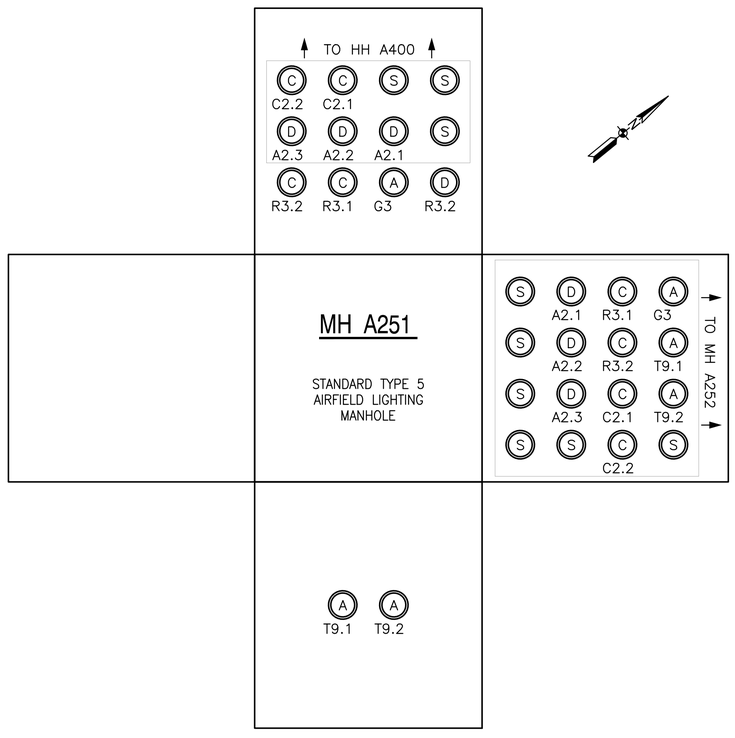
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691825
SHEET 292 OF 368
EA719
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_009_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-009-EA719.dwg LAYOUT NAME: EA719 PLOTTED: Tuesday, March 24, 2015 – 10:57am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SL DRN SL CHK DJP

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

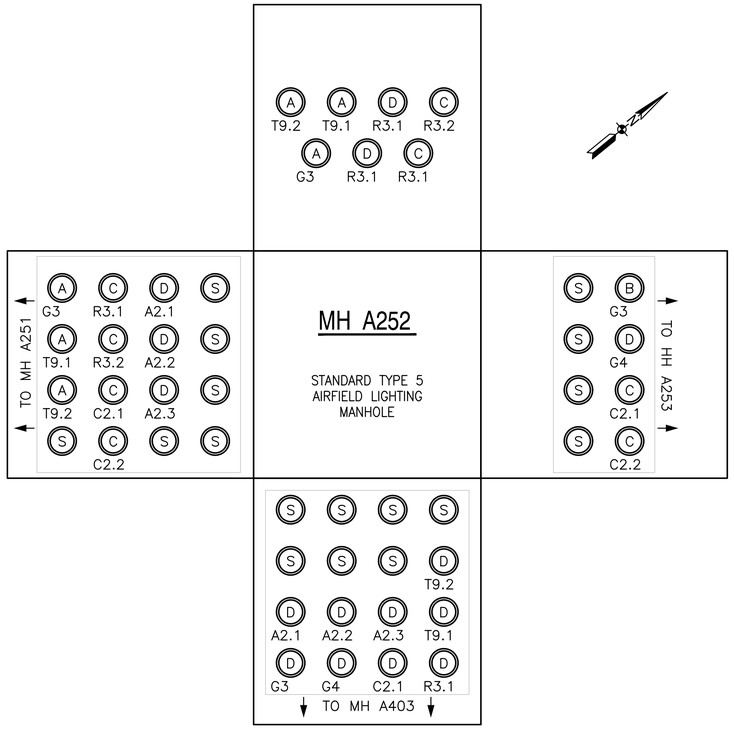
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC HR PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

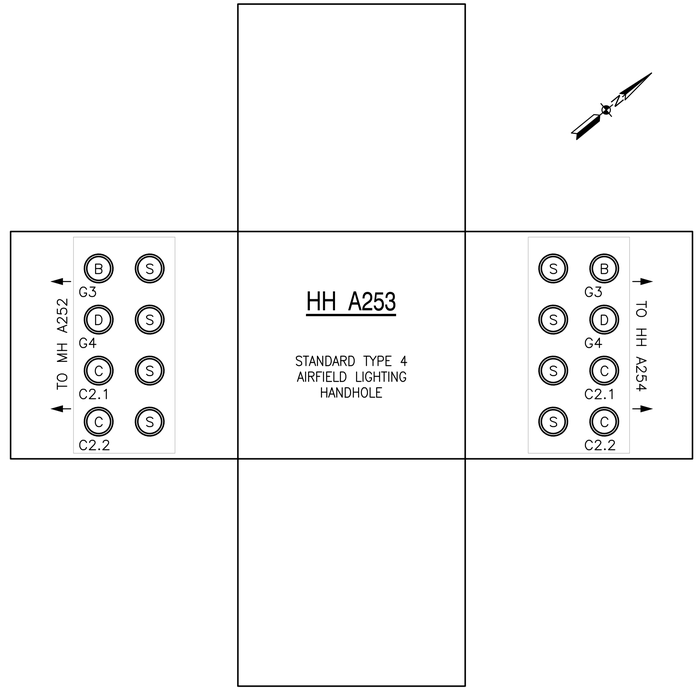
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691826
SHEET 293 OF 368

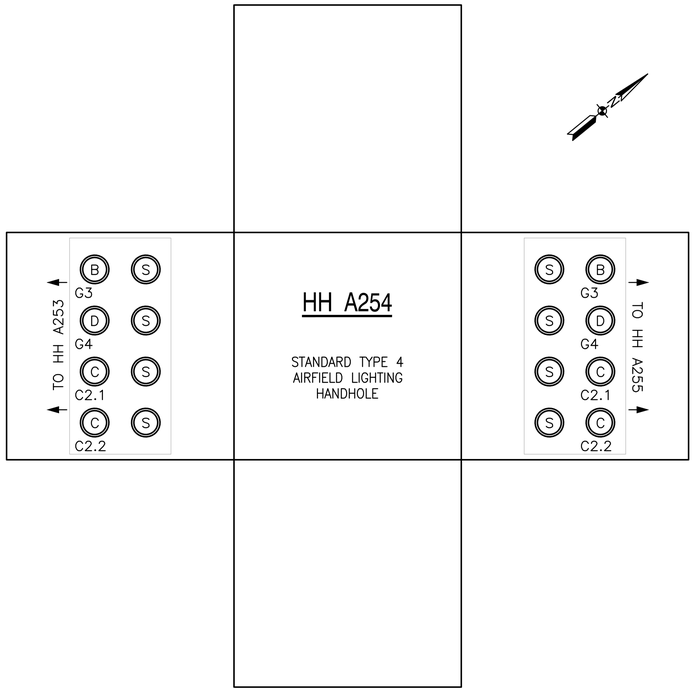
EA720

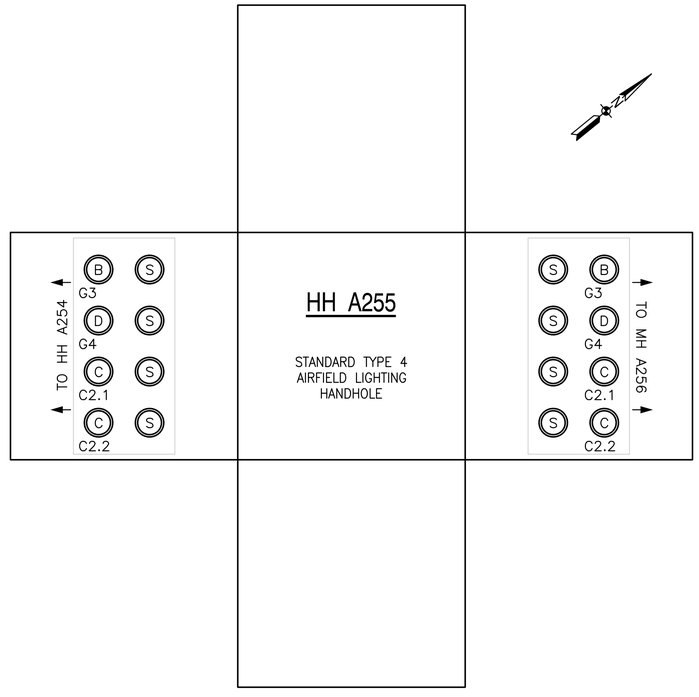
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA720.dwg LAYOUT NAME: EA720 PLOTTED: Tuesday, March 24, 2015 – 10:57am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

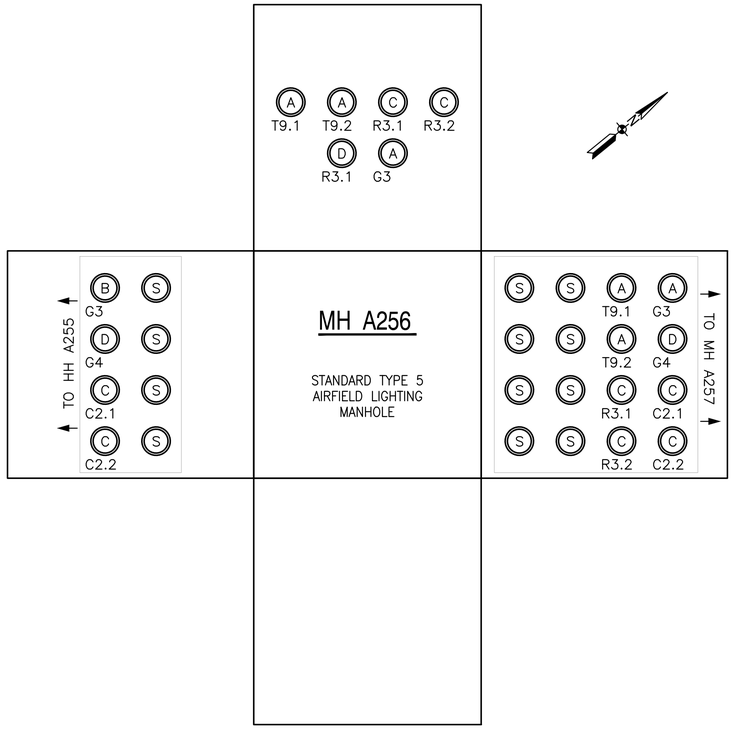
David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

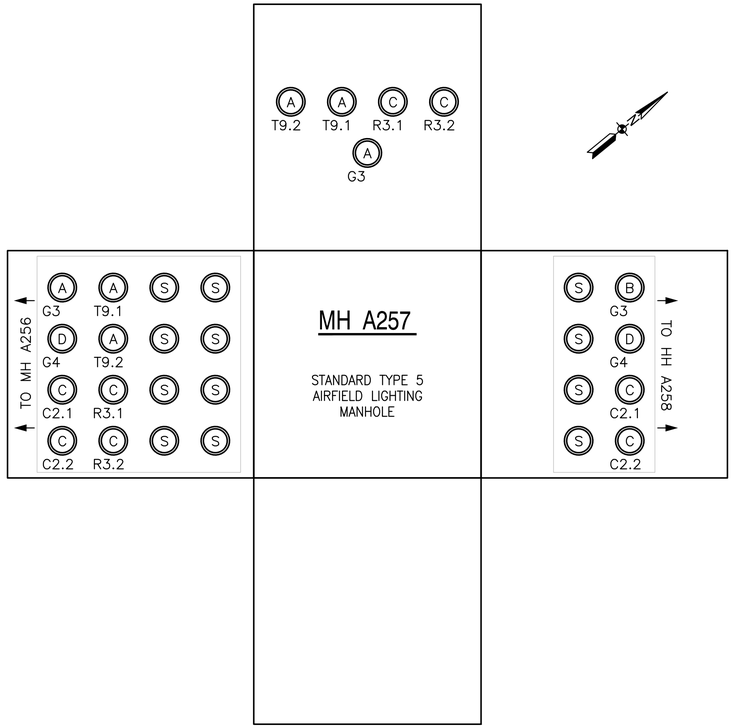
A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES'D SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

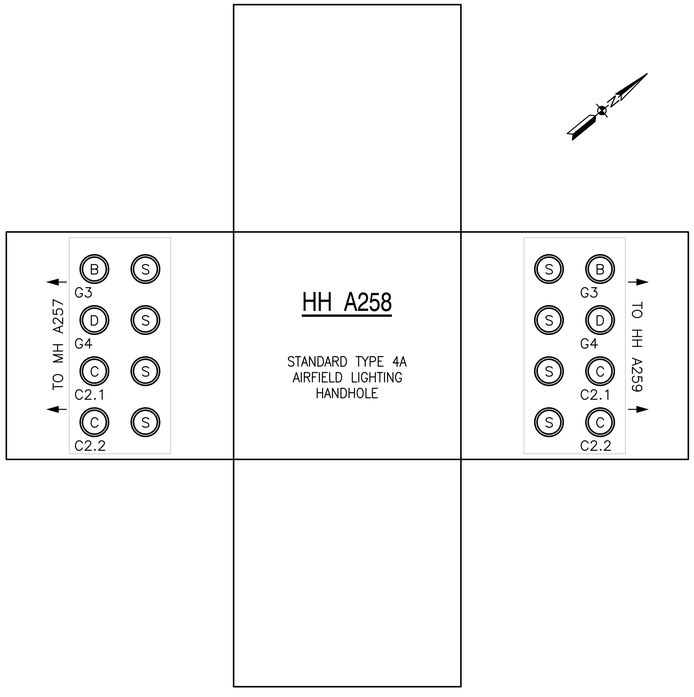
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.
HR #PT

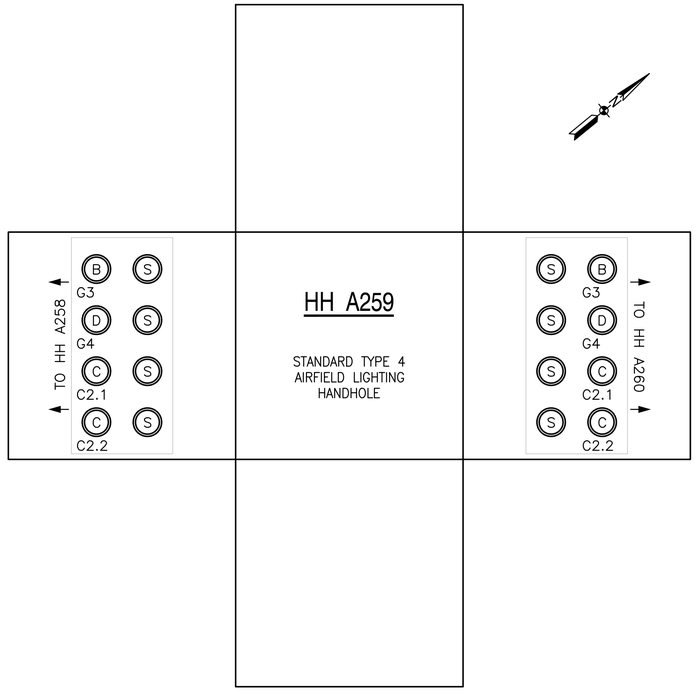
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691827
SHEET 294 OF 368
EA721
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA721.dwg LAYOUT NAME: EA721 PLOTTED: Tuesday, March 24, 2015 - 10:57am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

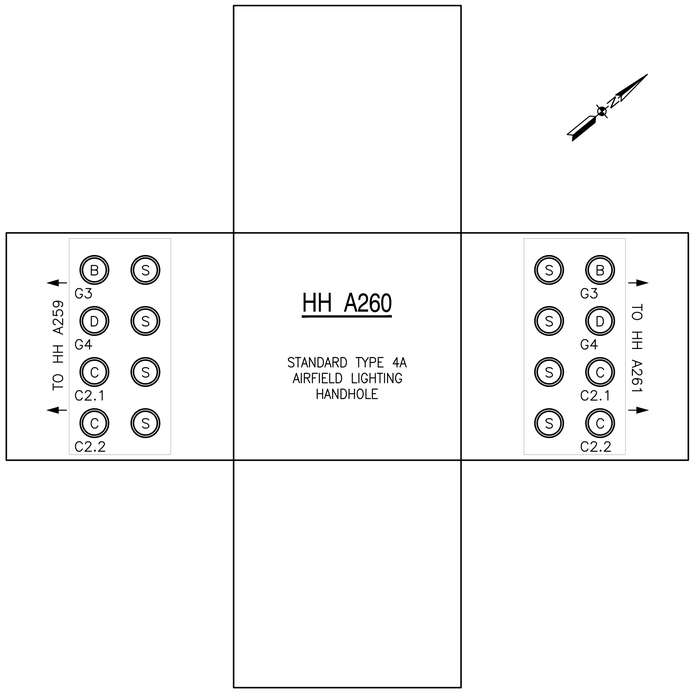
David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

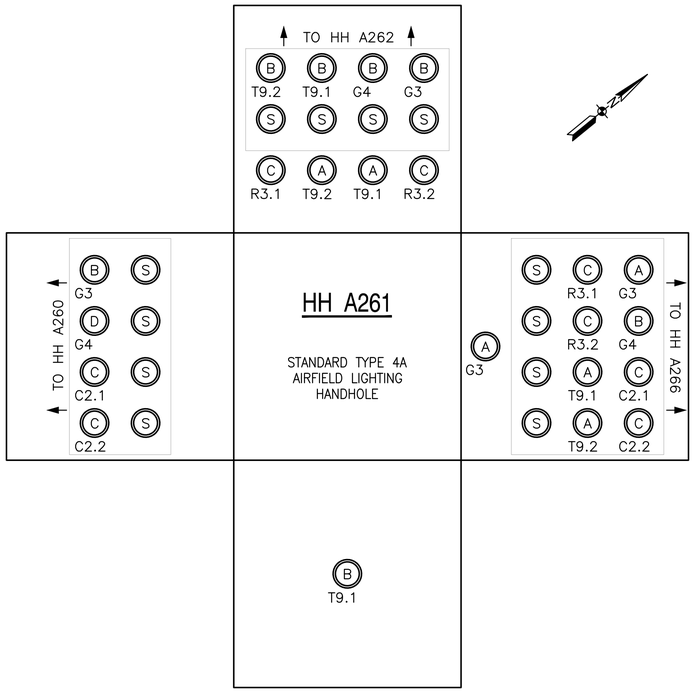
A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

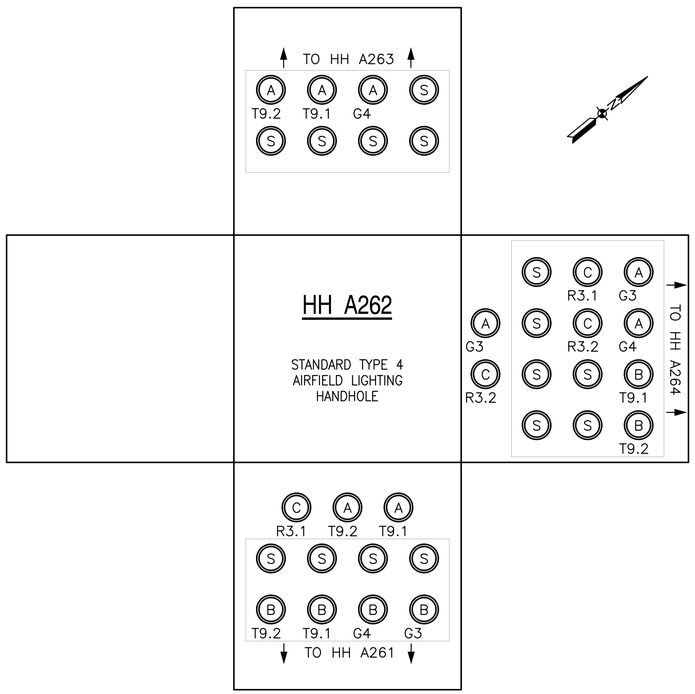
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.
HR #PT

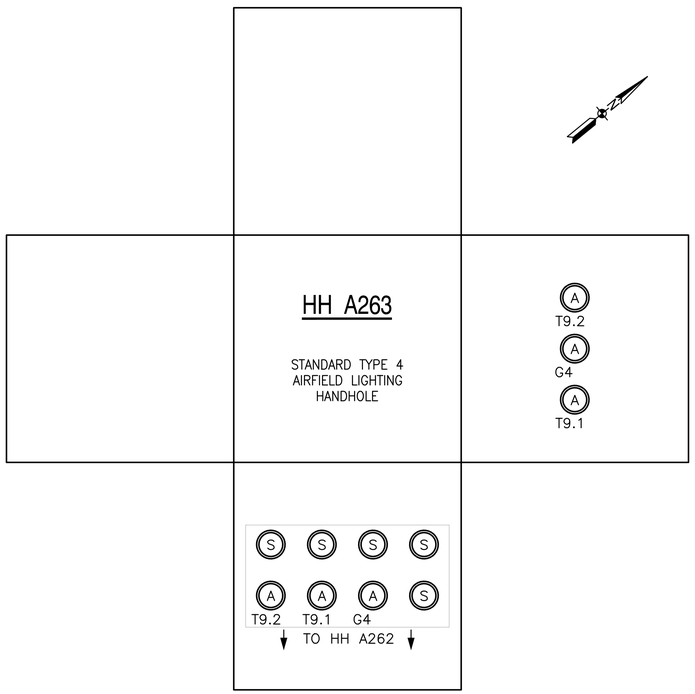
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691828
SHEET 295 OF 368
EA722
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109963_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA722.dwg LAYOUT NAME: EA722 PLOTTED: Tuesday, March 24, 2015 – 10:58am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRN	SL	CHK	DJP

PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

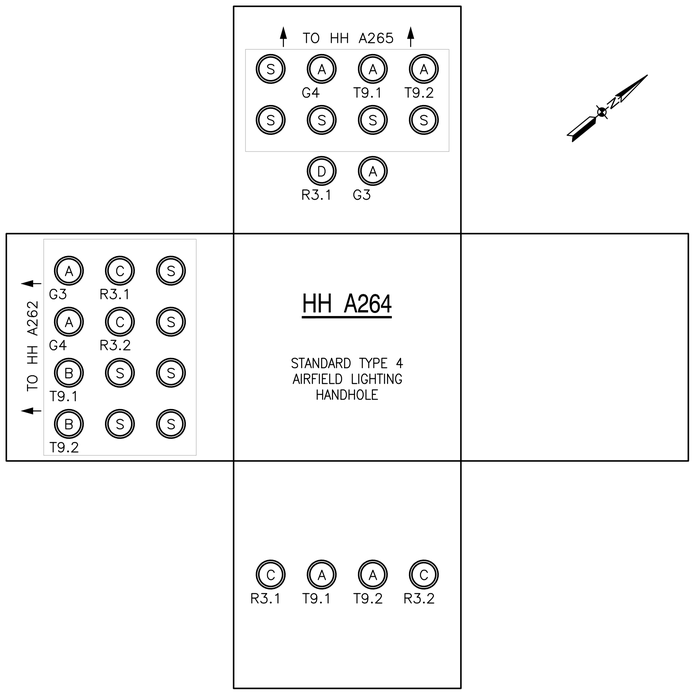
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

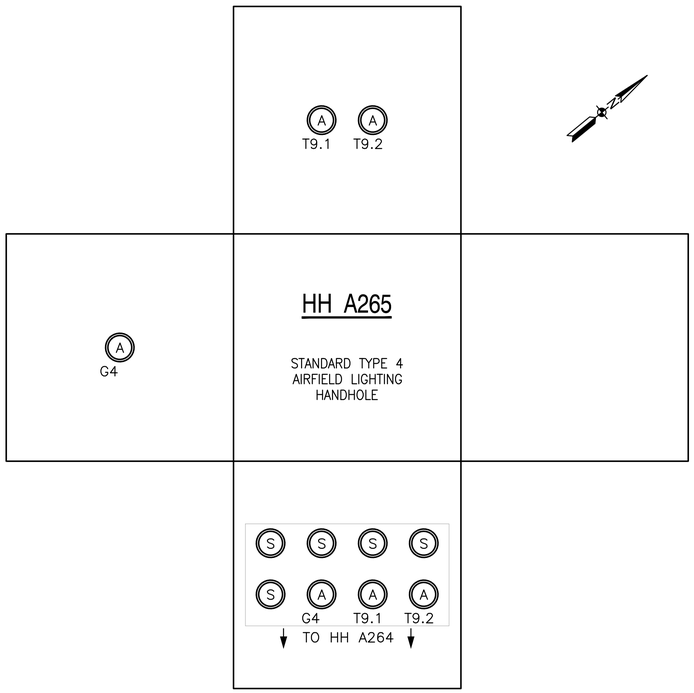
SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691829
SHEET	296 OF 368

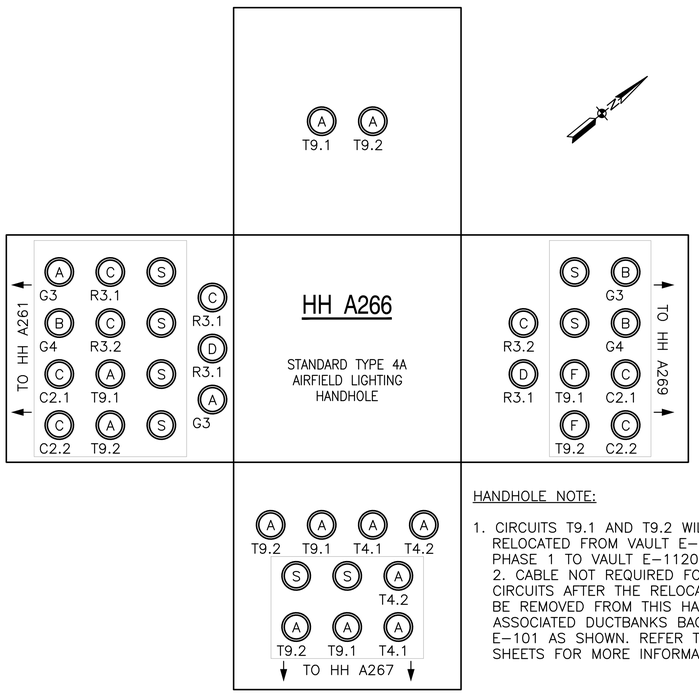
EA723

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\100963_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-EA723.dwg LAYOUT NAME: EA723 PLOTTED: Tuesday, March 24, 2015 – 10:58am USER: Rhurst

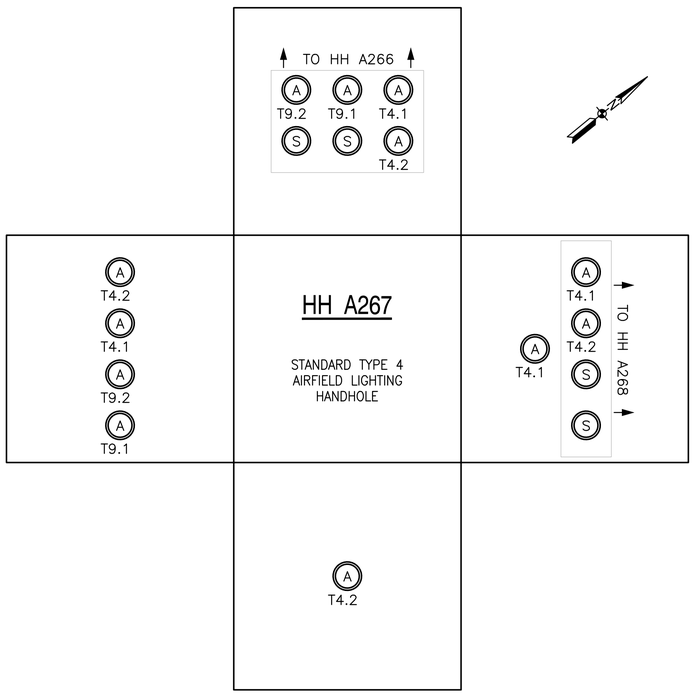






HANDHOLE NOTE:

1. CIRCUITS T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

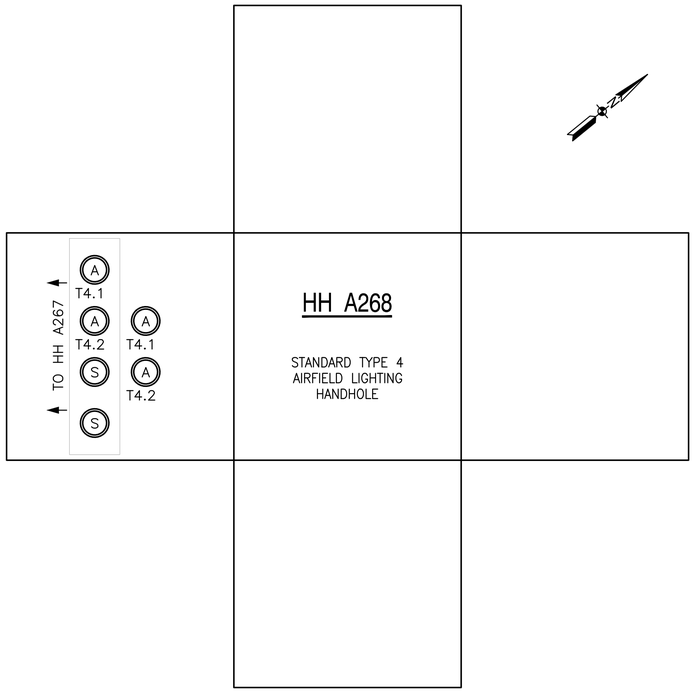
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

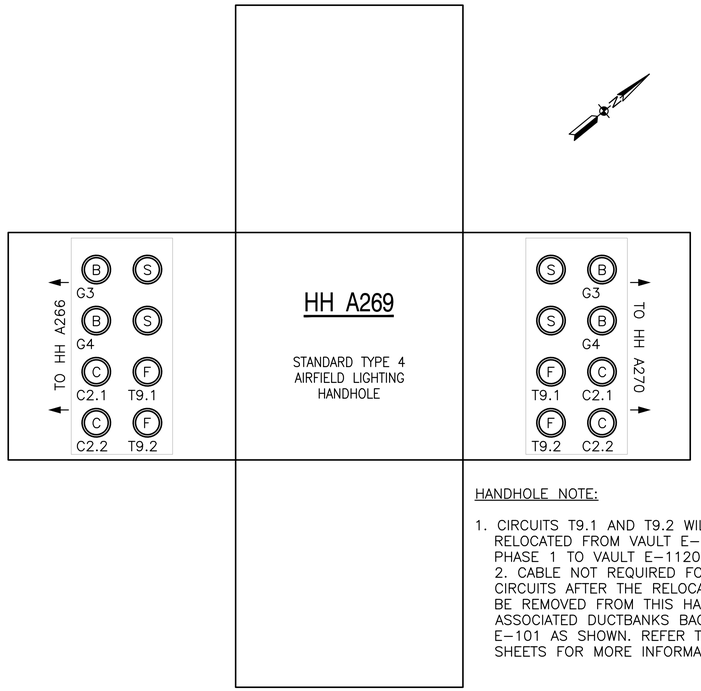
DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
HR #PT
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691830
SHEET 297 OF 368
EA724
DRAWFORM REVISION: 10 MARCH 2009

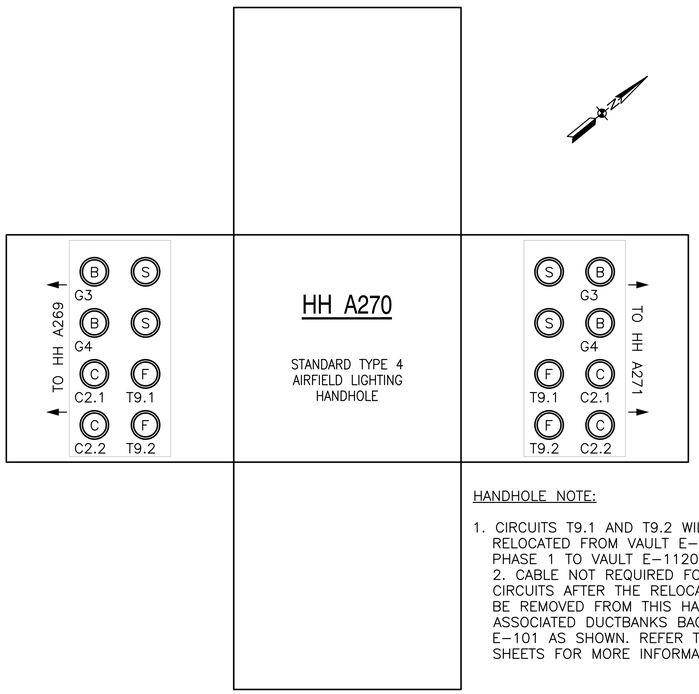
FILE NAME: G:\SMD\109963_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-EA724.dwg LAYOUT NAME: EA724 PLOTTED: Tuesday, March 24, 2015 – 10:58am USER: Rhurst





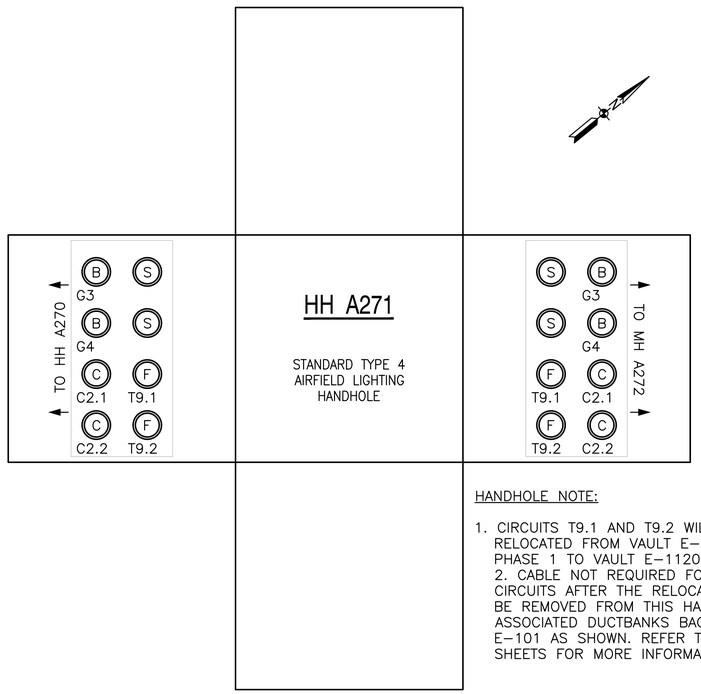
HANDHOLE NOTE:

1. CIRCUITS T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



HANDHOLE NOTE:

1. CIRCUITS T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



HANDHOLE NOTE:

1. CIRCUITS T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.

GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRN	SL	CHK	DJP

PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

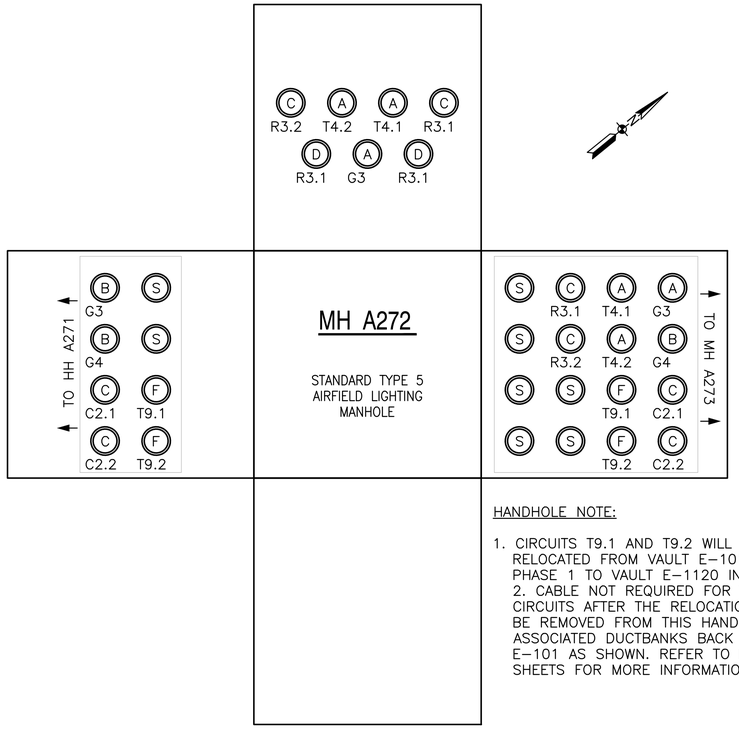
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691831
SHEET	298 OF 368

EA725

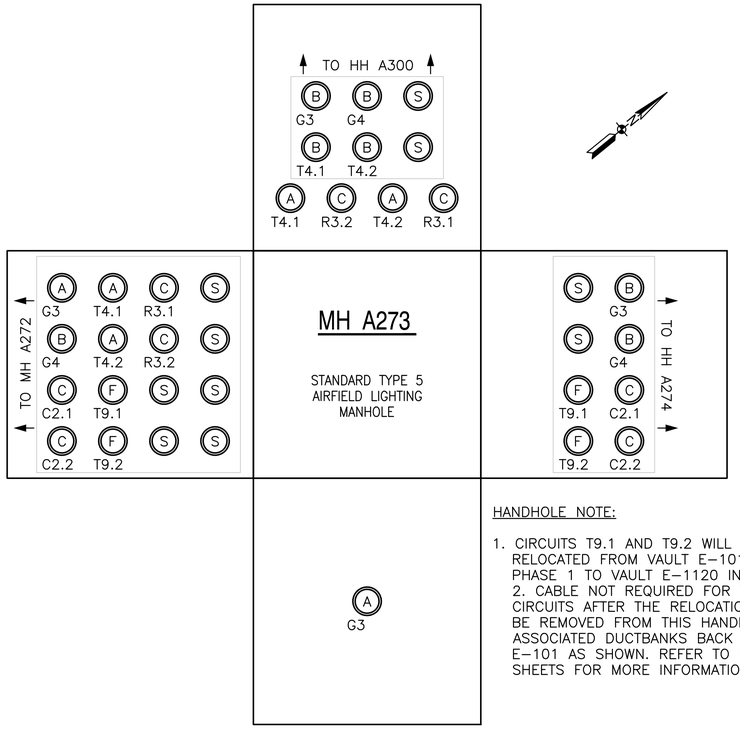
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA725.dwg LAYOUT NAME: EA725 PLOTTED: Tuesday, March 24, 2015 – 10:58am USER: Rhurst



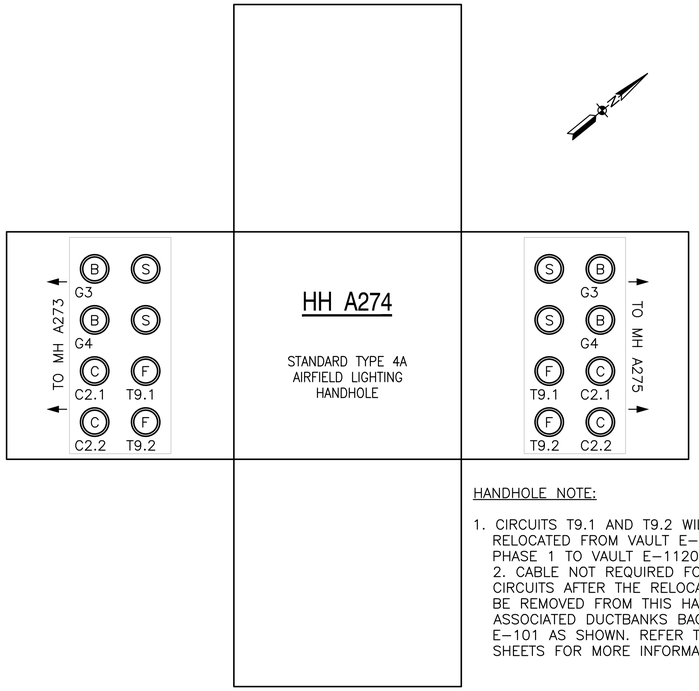
HANDHOLE NOTE:

1. CIRCUITS T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



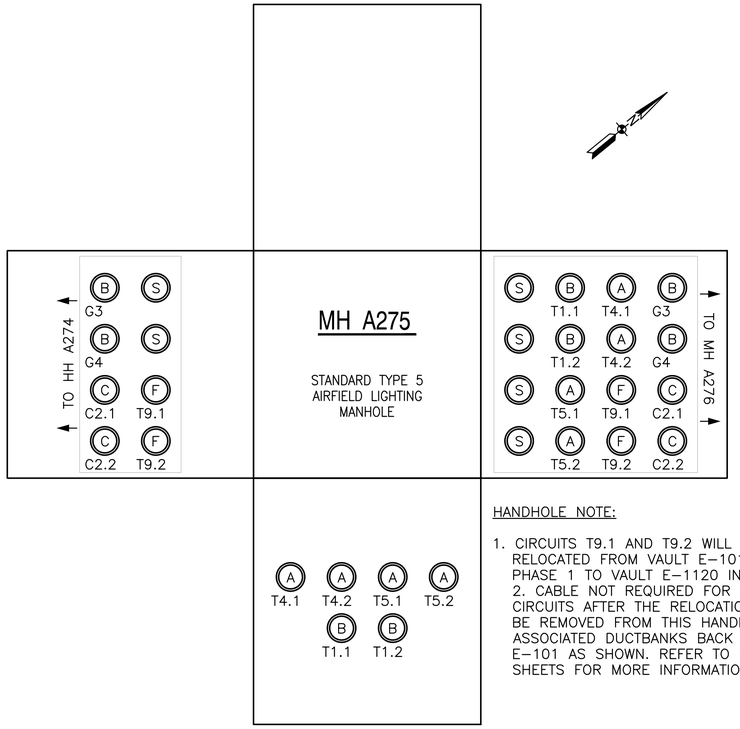
HANDHOLE NOTE:

1. CIRCUITS T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



HANDHOLE NOTE:

1. CIRCUITS T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.



HANDHOLE NOTE:

1. CIRCUITS T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E–101 IN PHASE 1 TO VAULT E–1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E–101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.

GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRN	SL	CHK	DJP

PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

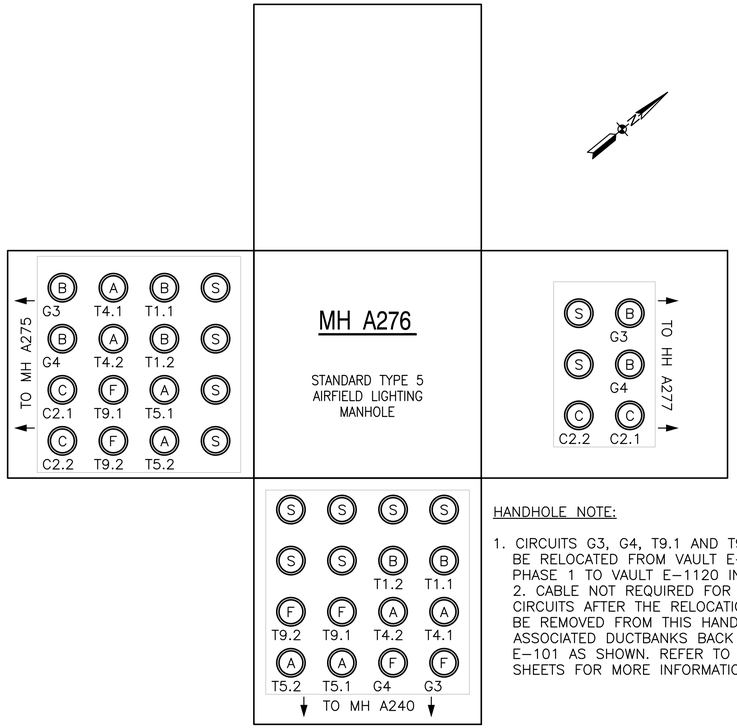
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.
HR PT

SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691832
SHEET	299 OF 368

EA726

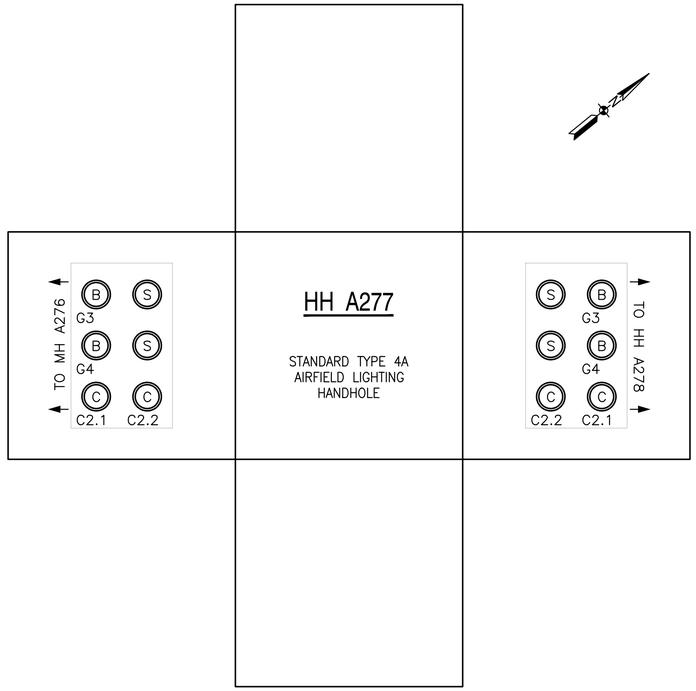
DRAWFORM REVISION: 10 MARCH 2009

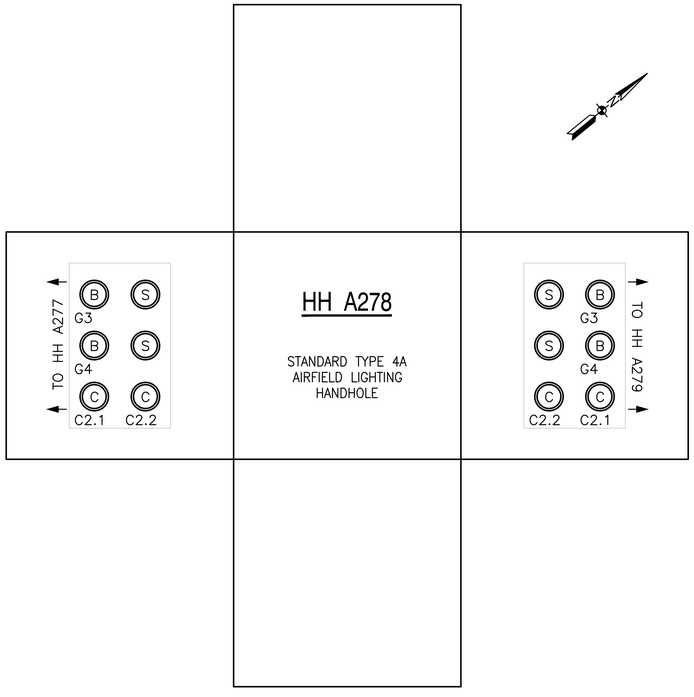
FILE NAME: G:\SMD\109863_009_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-009-EA726.dwg LAYOUT NAME: EA726 PLOTTED: Tuesday, March 24, 2015 – 10:58am USER: Rhurst

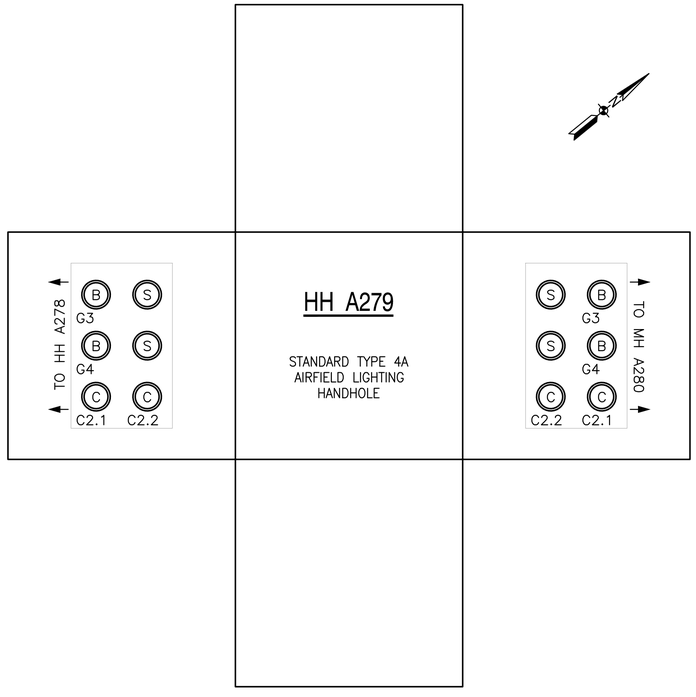


HANDHOLE NOTE:

1. CIRCUITS G3, G4, T9.1 AND T9.2 WILL BE RELOCATED FROM VAULT E-101 IN PHASE 1 TO VAULT E-1120 IN PHASE 2. CABLE NOT REQUIRED FOR THESE CIRCUITS AFTER THE RELOCATION WILL BE REMOVED FROM THIS HANDHOLE AND ASSOCIATED DUCTBANKS BACK TO VAULT E-101 AS SHOWN. REFER TO EA SERIES SHEETS FOR MORE INFORMATION.







GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

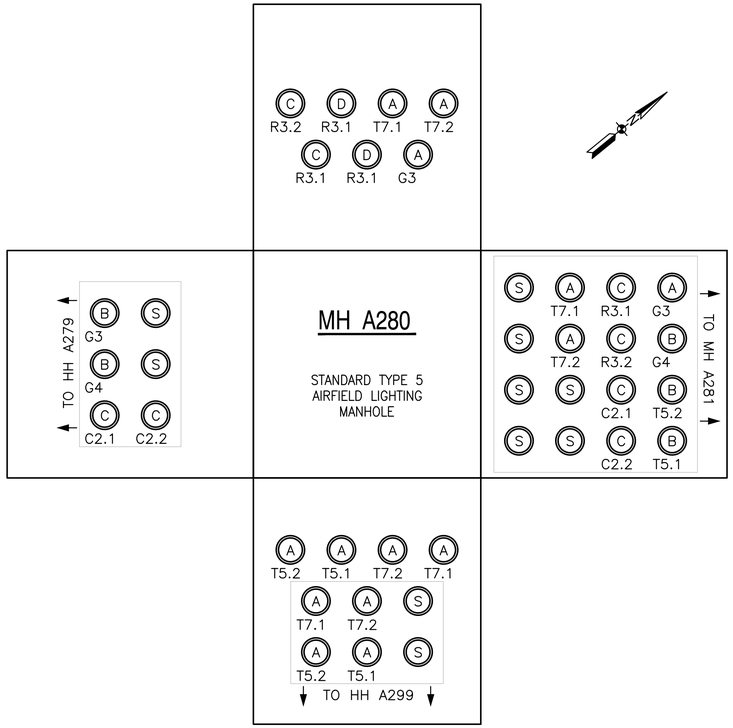
David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

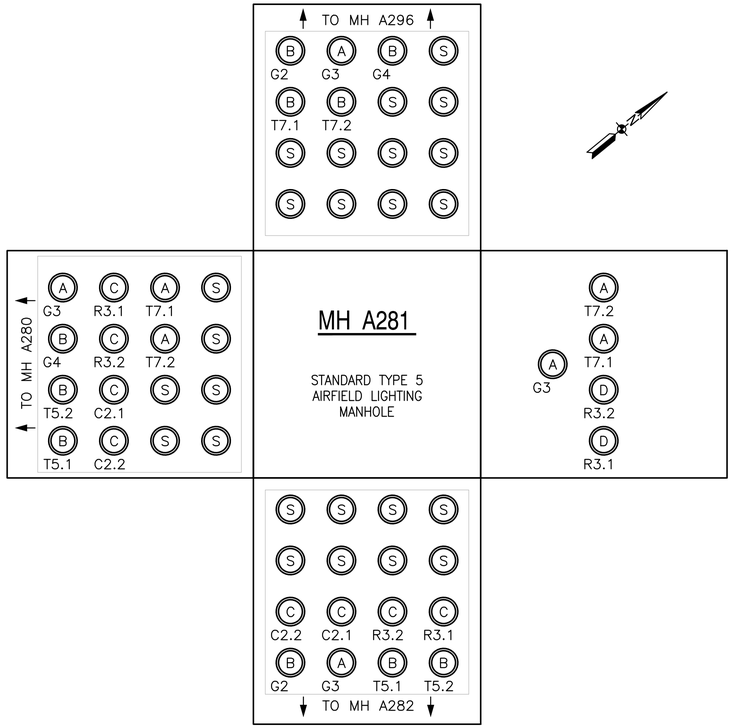
A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES'D SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

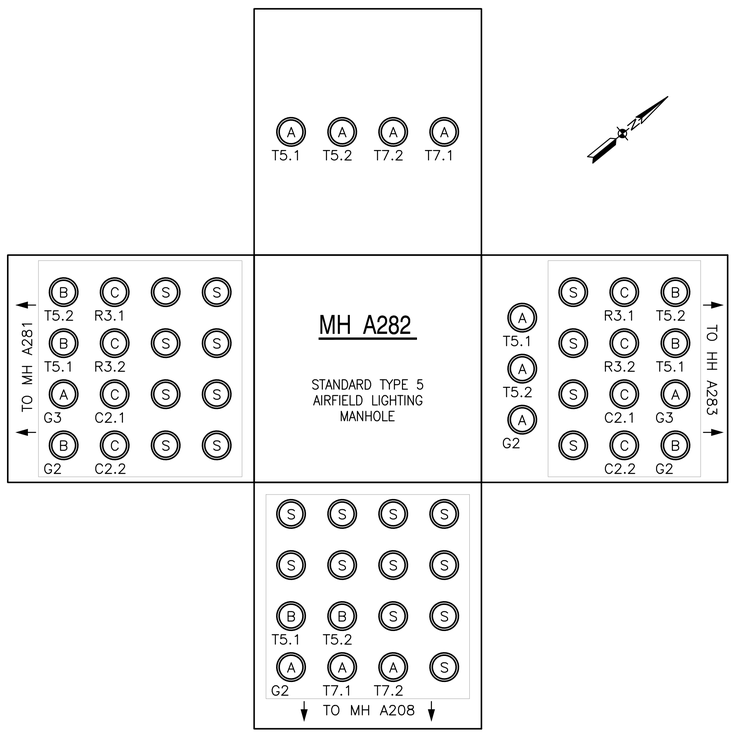
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

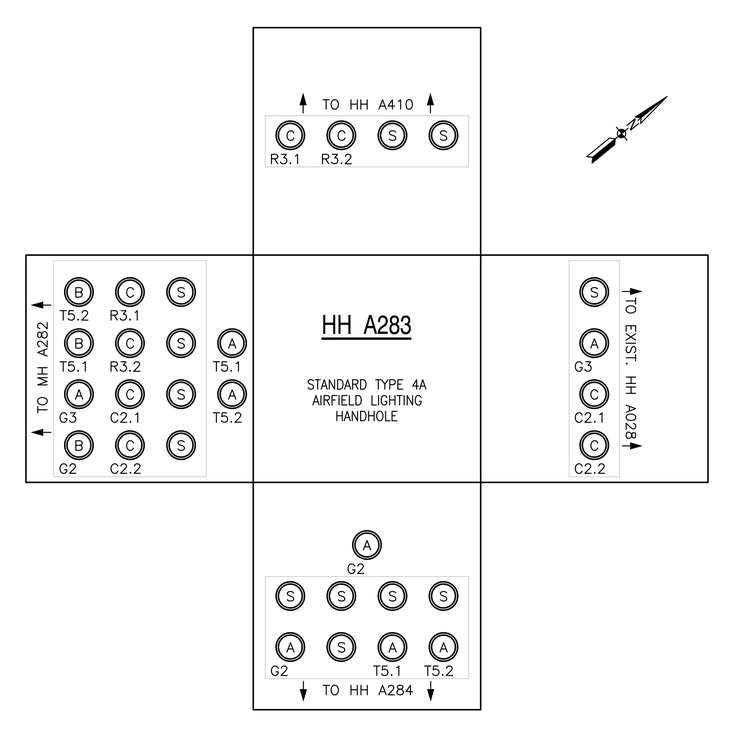
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.
12691833
SHEET 300 OF 368
EA727
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109963_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA727.dwg LAYOUT NAME: EA727 PLOTTED: Tuesday, March 24, 2015 - 10:59am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

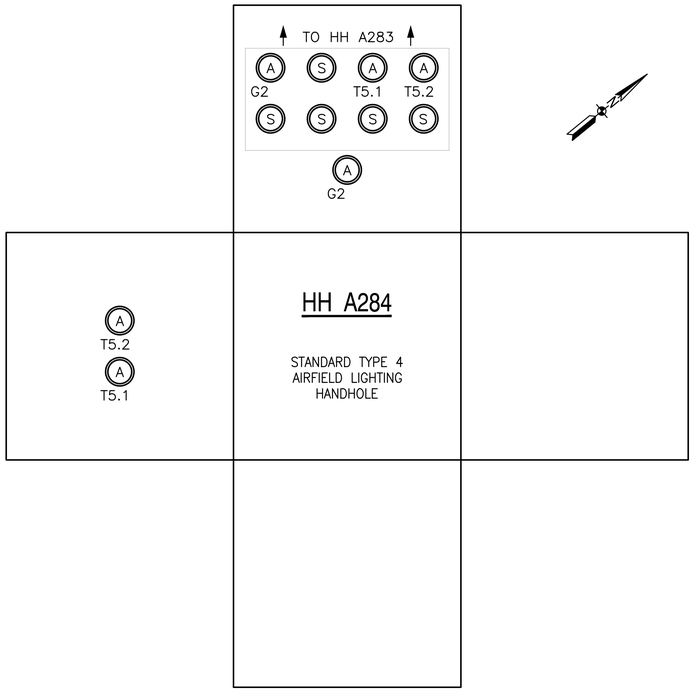
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

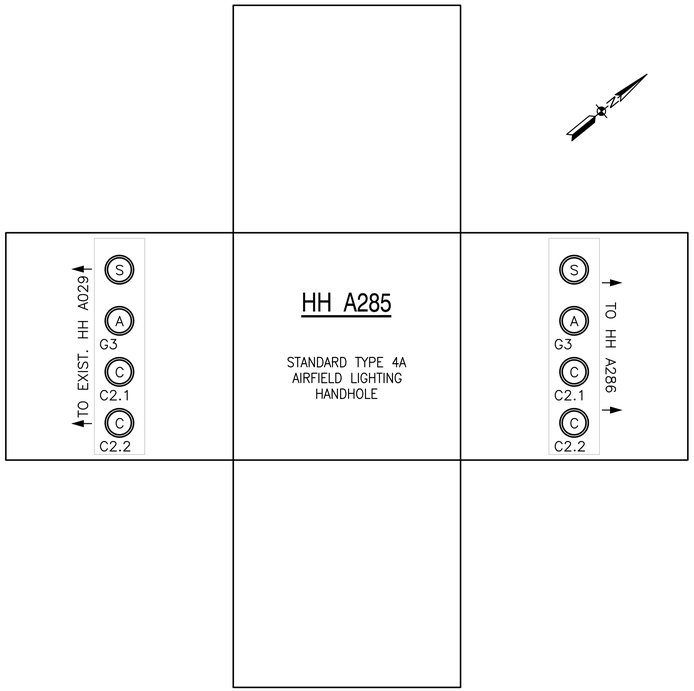
DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

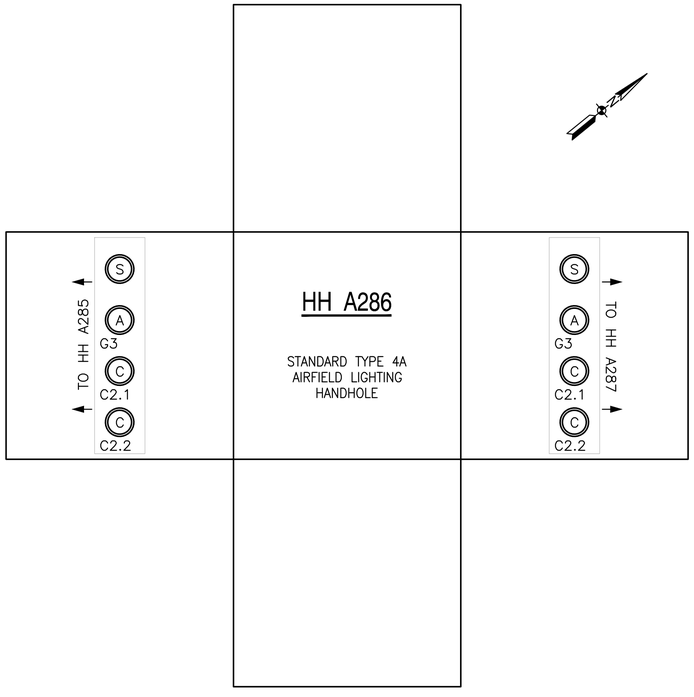
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA VIRGINIA BEACH, VIRGINIA
HR #PT
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

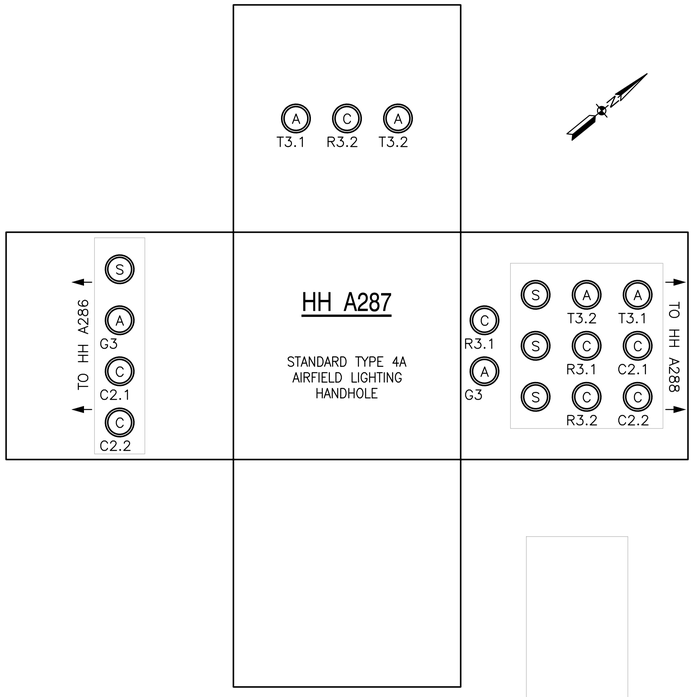
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691834
SHEET 301 OF 368
EA728
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109963_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-EA728.dwg LAYOUT NAME: EA728 PLOTTED: Tuesday, March 24, 2015 – 10:59am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

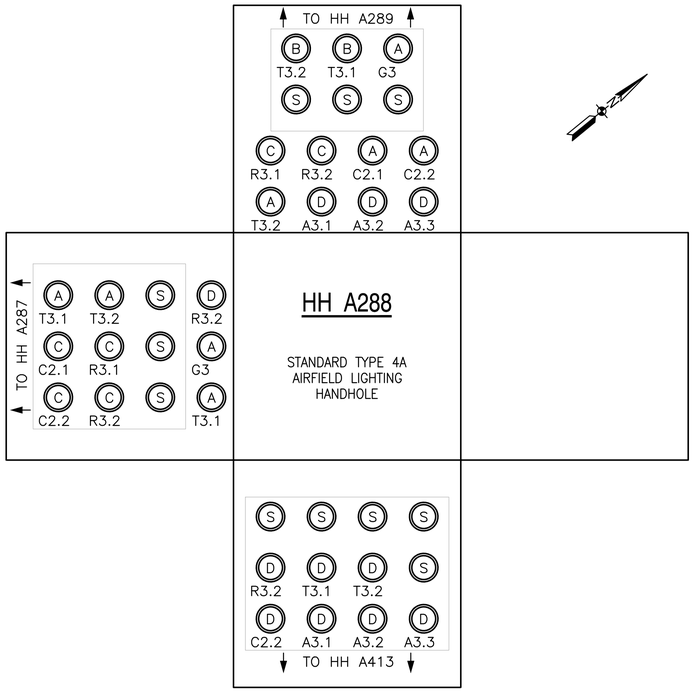
DES SL | DRN SL | CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

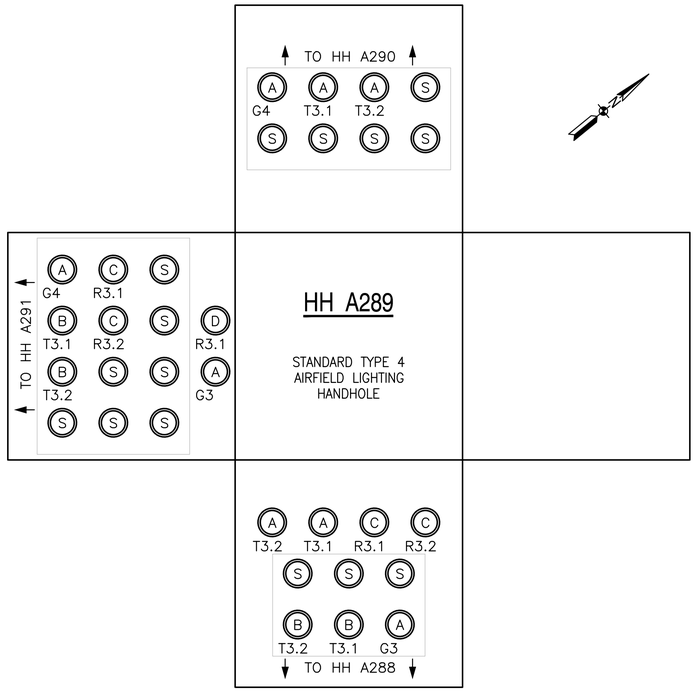
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

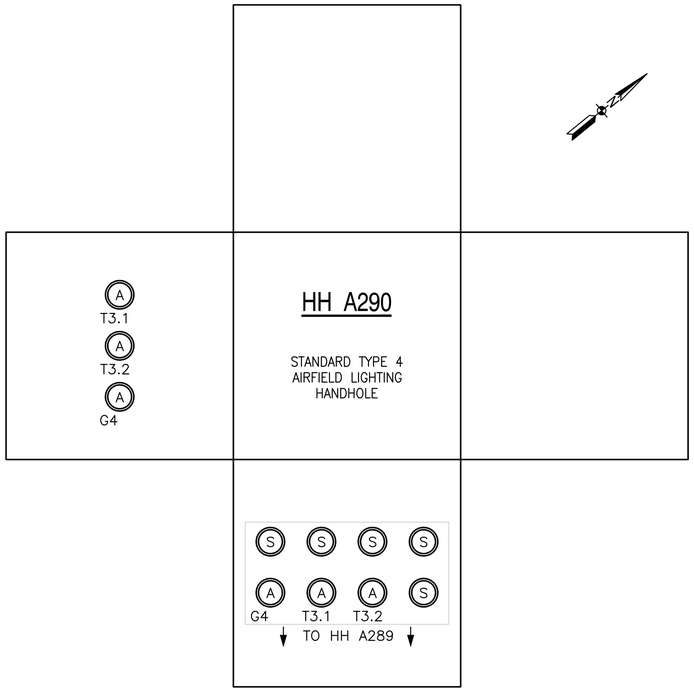
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.
12691835
SHEET 302 OF 368
EA729

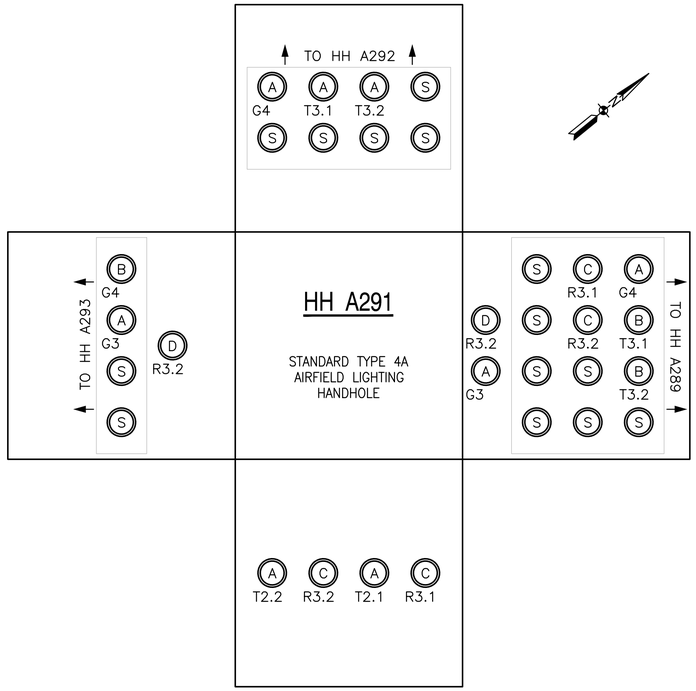
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109963_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA729.dwg LAYOUT NAME: EA729 PLOTTED: Tuesday, March 24, 2015 - 10:59am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES'D SL | DRN SL | CHK DJP

PM/DM

BRANCH MANAGER WED

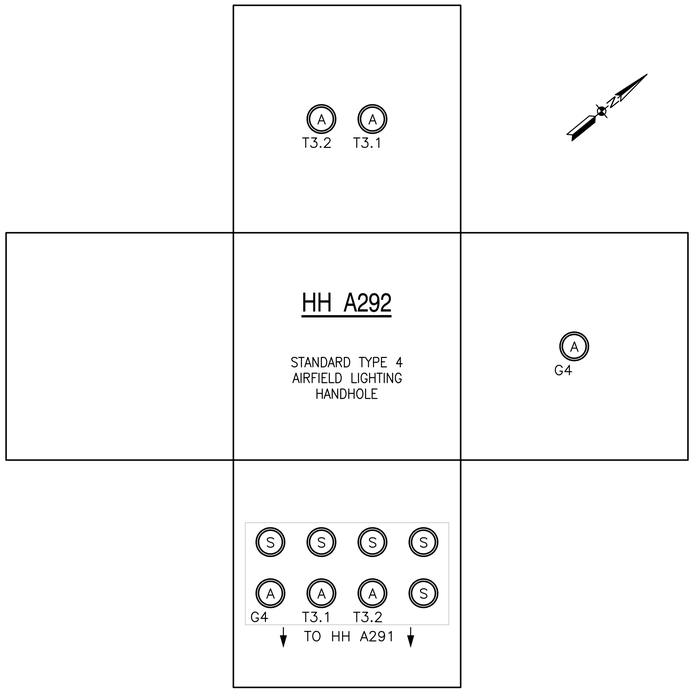
CHIEF ENG/ARCH

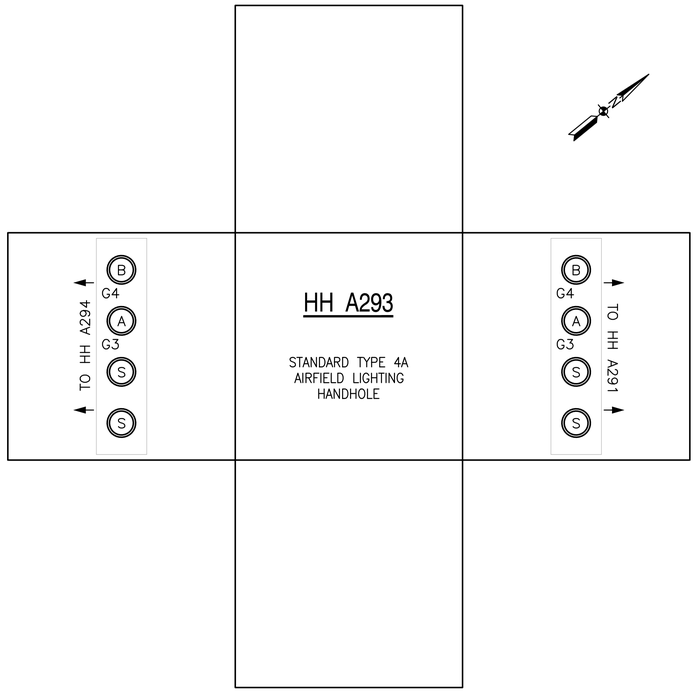
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
HR #PT
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691836
SHEET 303 OF 368
EA730

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_009_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-009-EA730.dwg LAYOUT NAME: EA730 PLOTTED: Tuesday, March 24, 2015 – 10:59am USER: Rhurst





GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

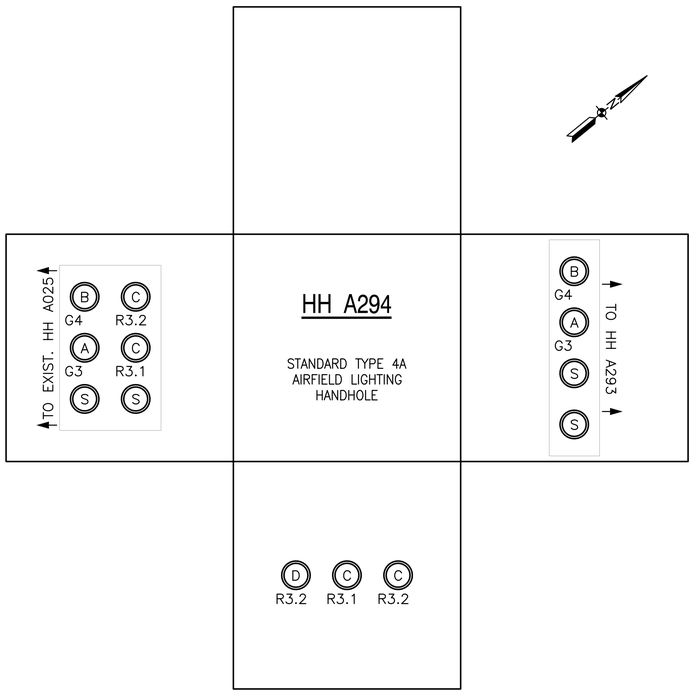
E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

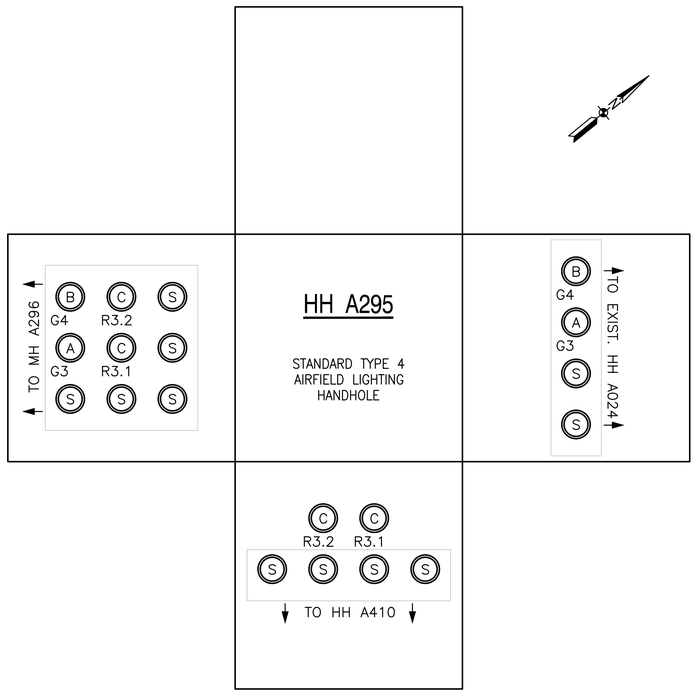
E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.





APPR	
DATE	
DESCRIPTION	
SYM	

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES'D SL DRN SL CHK DJP

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

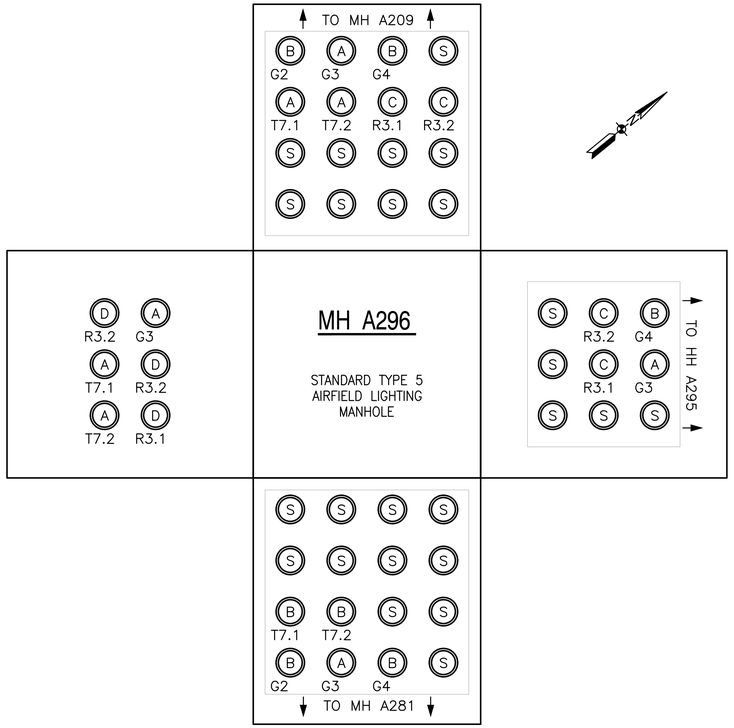
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

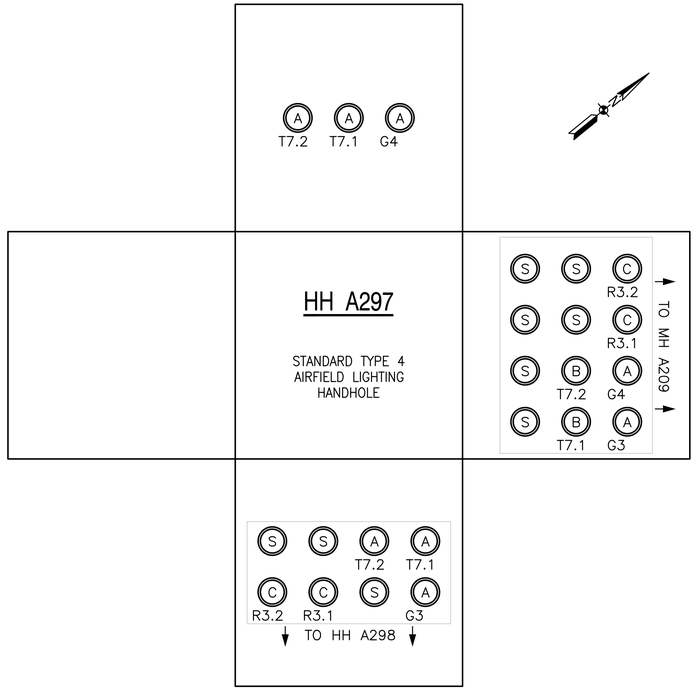
SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	.12691837
SHEET	304 OF 368

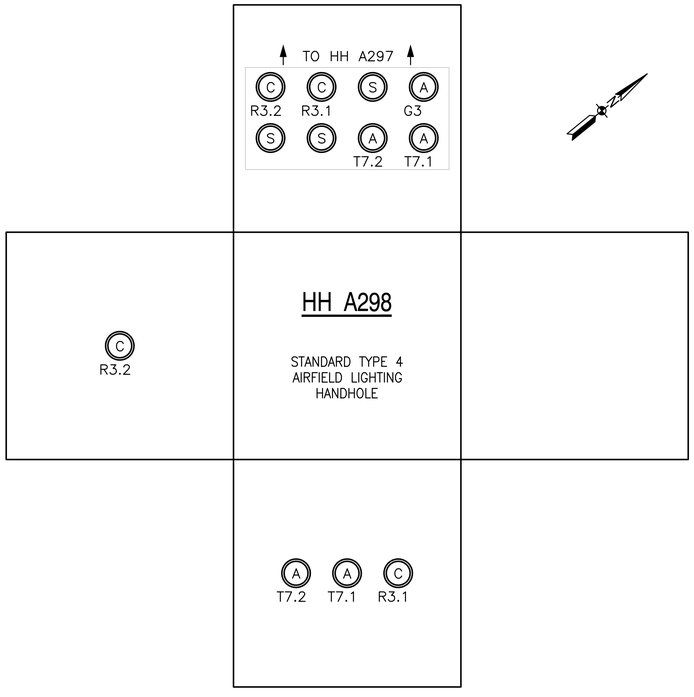
EA731

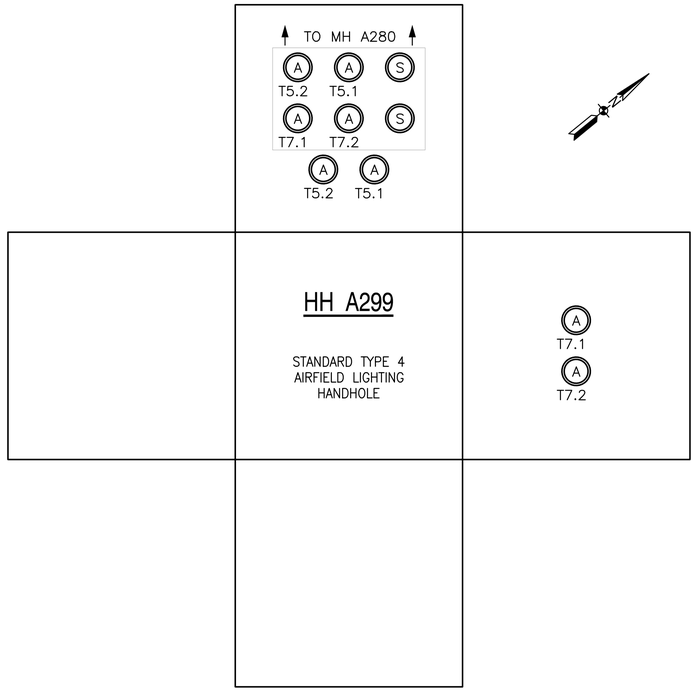
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-EA731.dwg LAYOUT NAME: EA731 PLOTTED: Tuesday, March 24, 2015 - 11:00am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRN	SL	CHK	DJP

PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

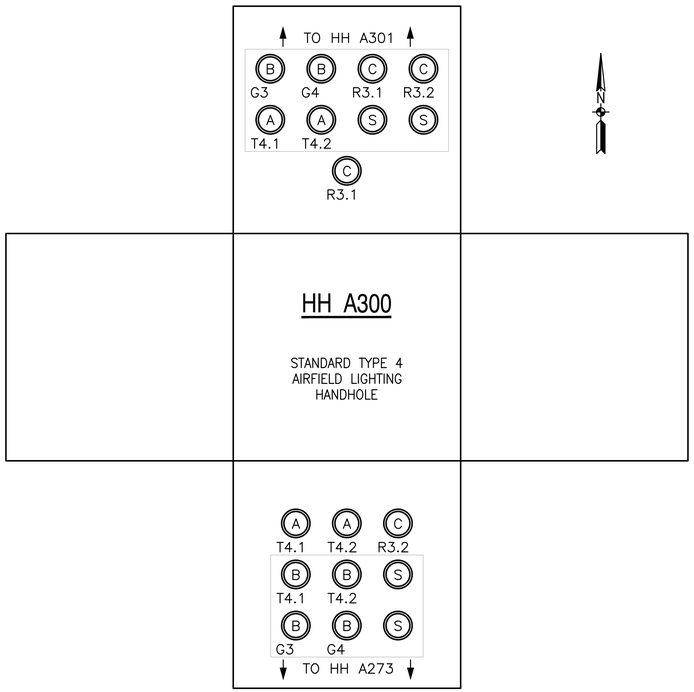
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691838
SHEET	305 OF 368

EA732

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA732.dwg LAYOUT NAME: EA732 PLOTTED: Tuesday, March 24, 2015 – 11:00am USER: Rhurst



GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

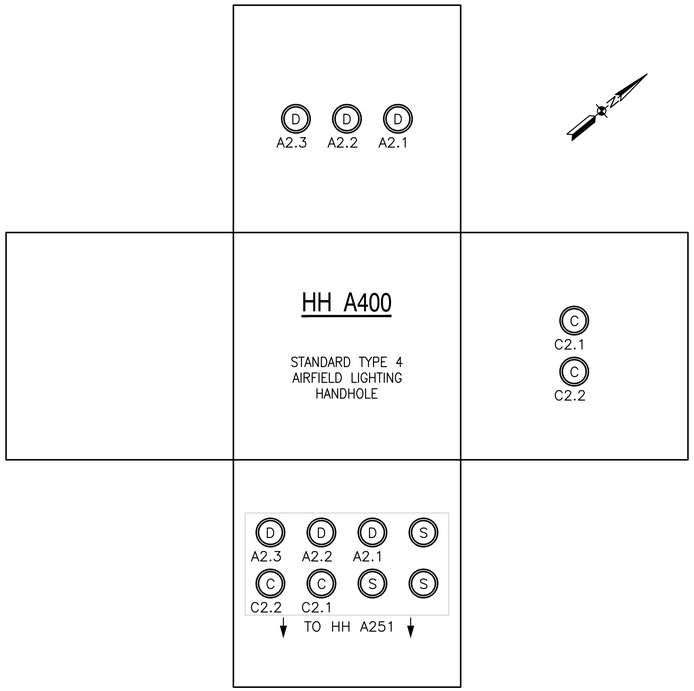
DES SL | DRN SL | CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

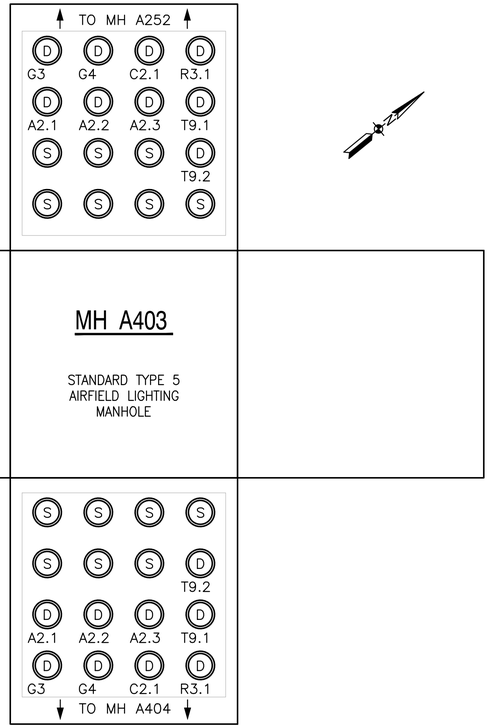
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
HR #PT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 AIRFIELD LTG.

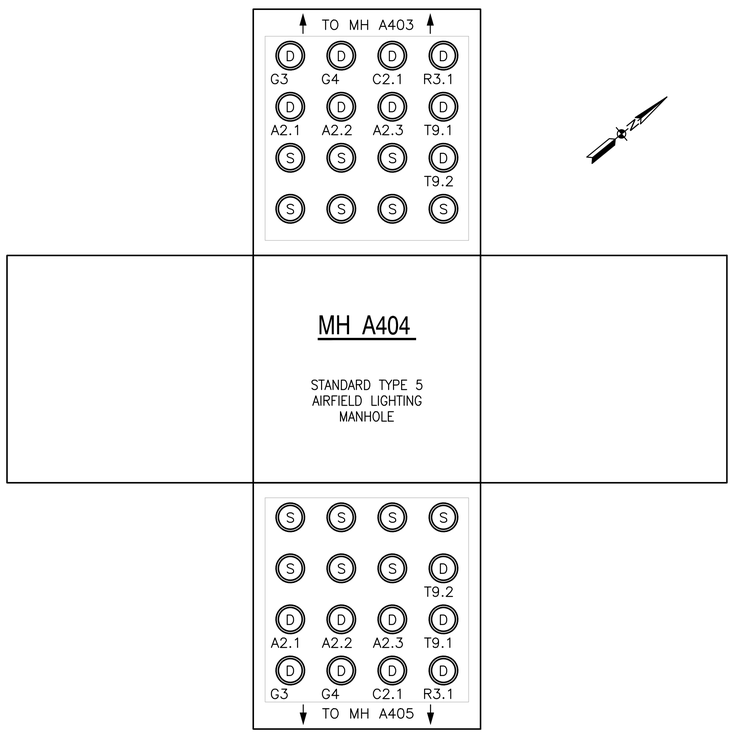
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691839
SHEET 306 OF 368
EA733

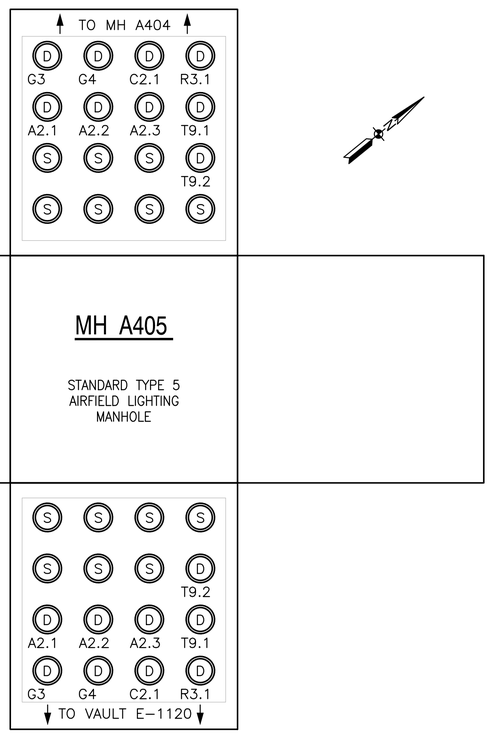
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\100963_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA733.dwg LAYOUT NAME: EA733 PLOTTED: Tuesday, March 24, 2015 – 11:00am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

DES'D SL | DRN SL | CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

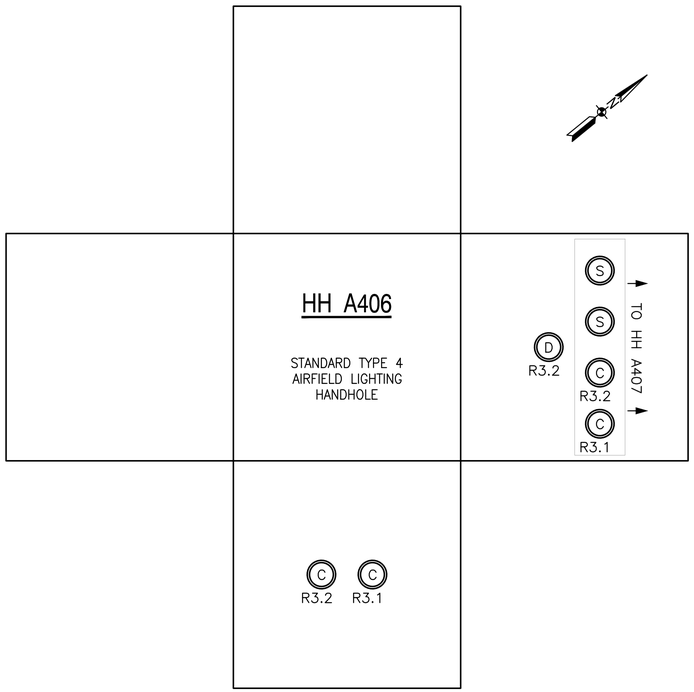
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 2 AIRFIELD LTG.

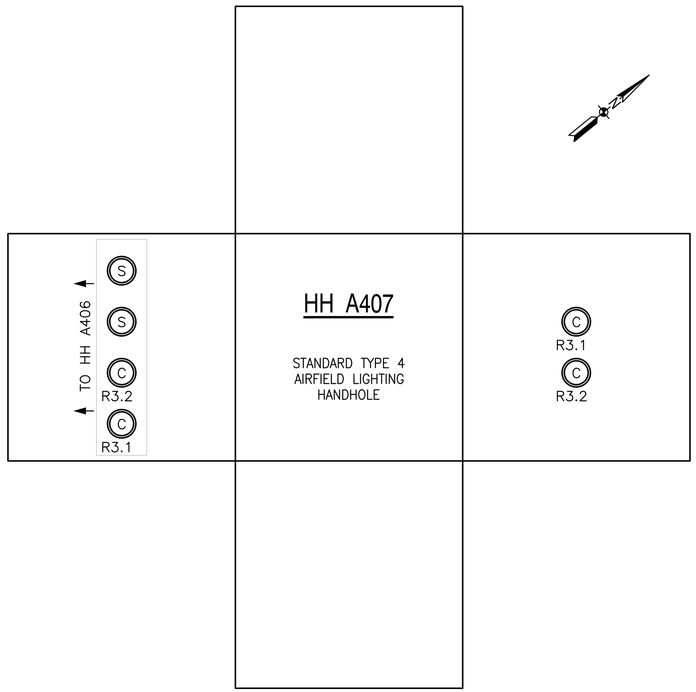
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691840
SHEET 307 OF 368

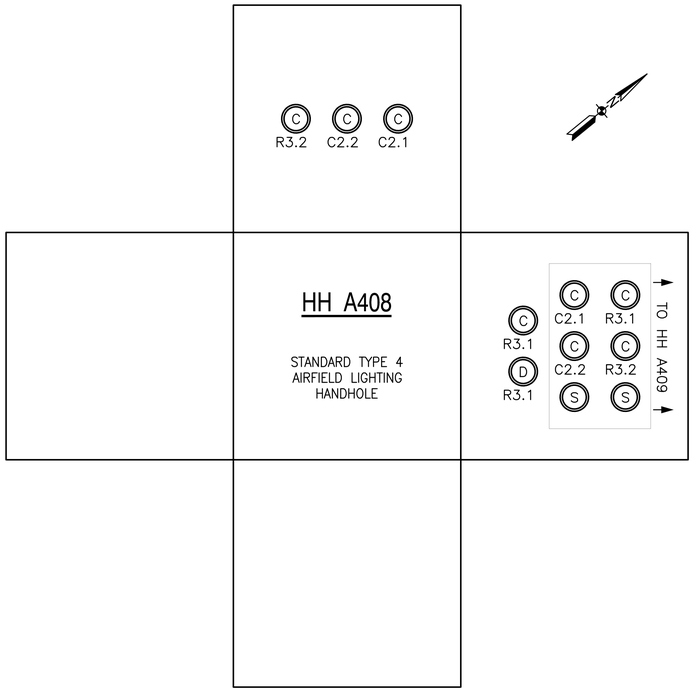
EA734

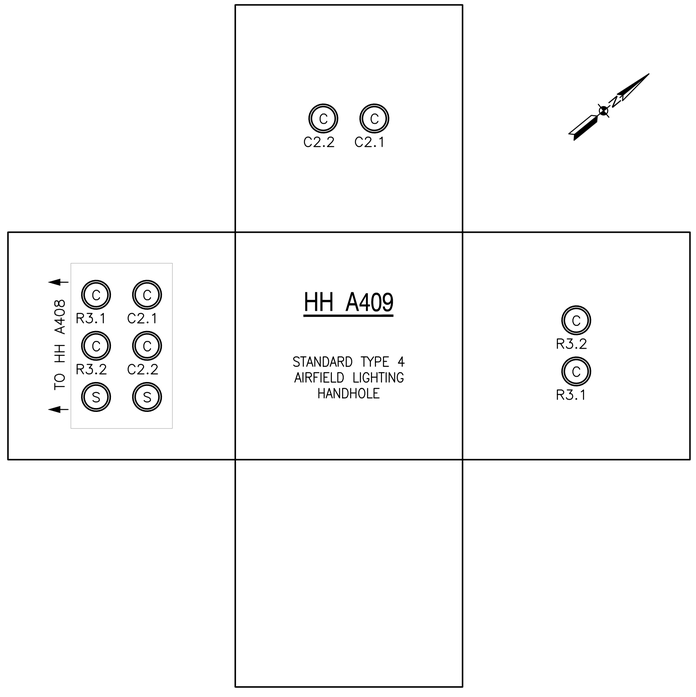
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109963_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA734.dwg LAYOUT NAME: EA734 PLOTTED: Tuesday, March 24, 2015 – 11:00am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

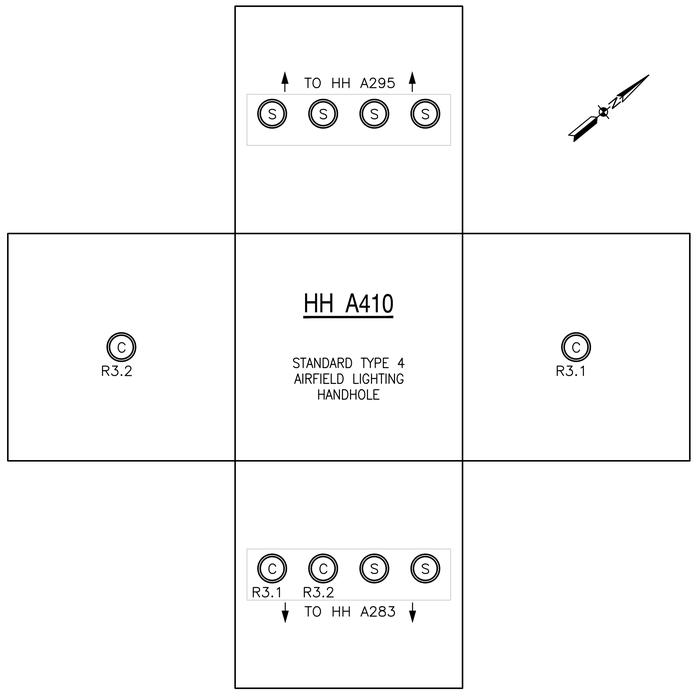
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC HR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 2 AIRFIELD LTG.

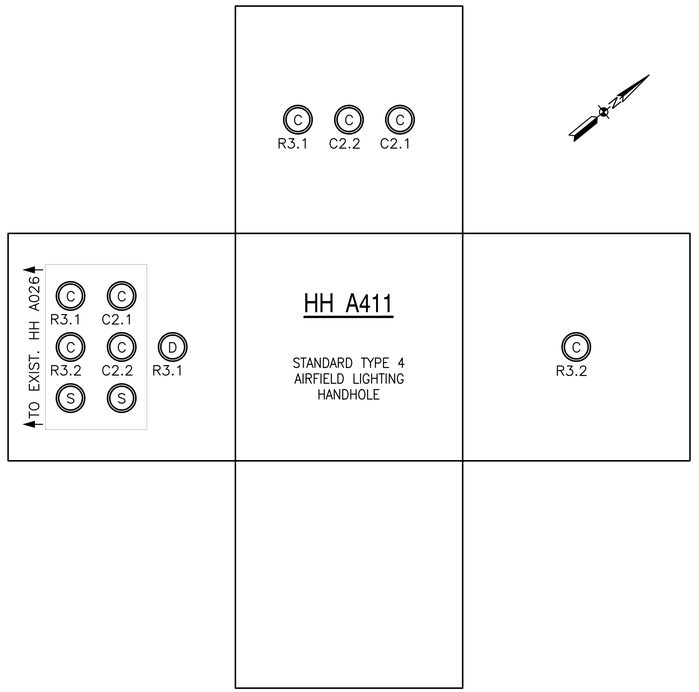
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691841
SHEET 308 OF 368

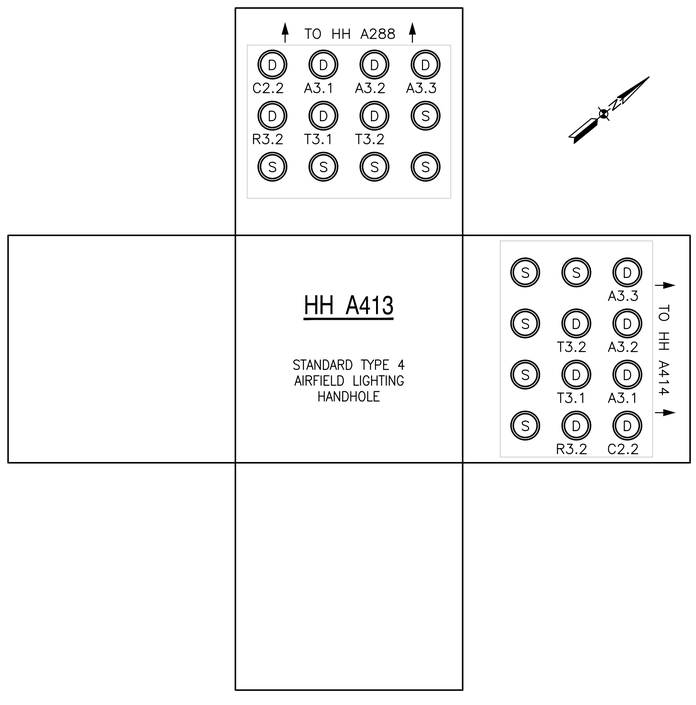
EA735

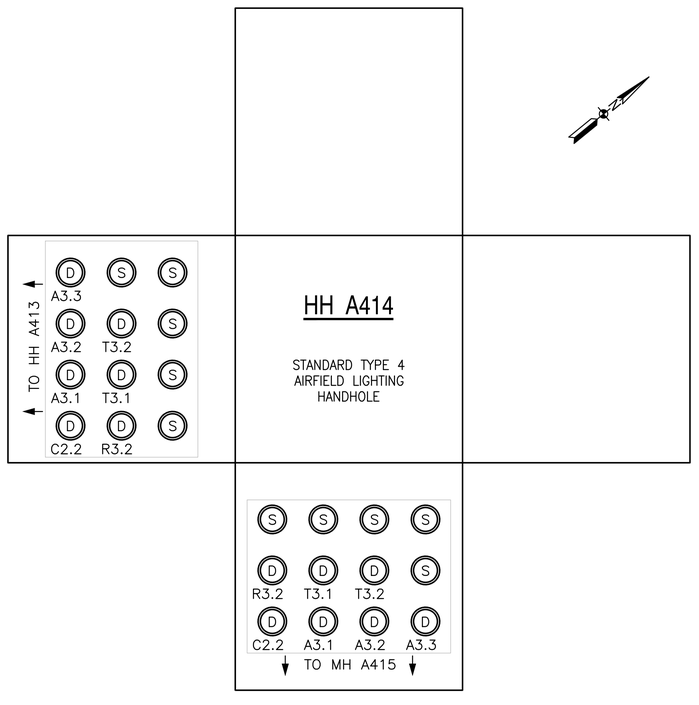
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109963_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA735.dwg LAYOUT NAME: EA735 PLOTTED: Tuesday, March 24, 2015 – 11:00am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L–824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

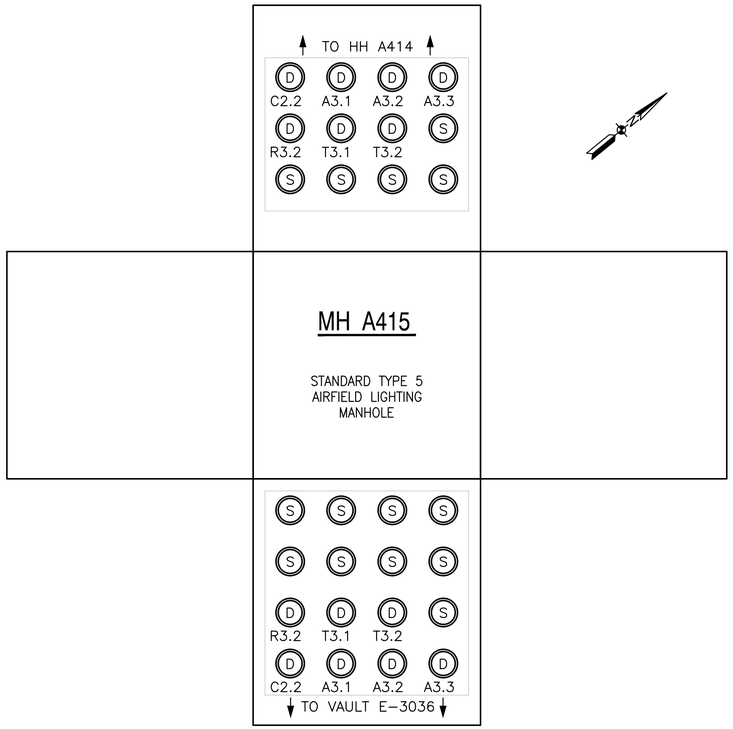
David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 2 AIRFIELD LTG.

SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691842
SHEET 309 OF 368
EA736
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\109863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA736.dwg LAYOUT NAME: EA736 PLOTTED: Tuesday, March 24, 2015 – 11:01am USER: Rhurst



GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.
3. SEE CCR SCHEDULES FOR COMPLETE CIRCUIT DESCRIPTIONS.

DUCTBANK CONDUIT LEGEND

A – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

B – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1. CIRCUIT DESIGNATION AS INDICATED.

C – 2" PVC SCHEDULE 40 CONDUIT WITH 1 – #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

D – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 2. CIRCUIT DESIGNATION AS INDICATED.

E1 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 1 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLE INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

E2 – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT. CIRCUIT DESIGNATION AS INDICATED.

F – 2" PVC SCHEDULE 40 CONDUIT WITH 2 – #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PHASE 1 AND REMOVED IN PHASE 2 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

G – EXISTING 2" PVC SCHEDULE 40 CONDUIT WITH 2 EXISTING #6 AWG, 5KV, L-824 TYPE B CABLES INSTALLED IN PREVIOUS CONTRACT AND REMOVED IN PHASE 1 AFTER CIRCUIT IS RELOCATED TO AN ALTERNATE VAULT. SEE HANDHOLE NOTE ON APPLICABLE DIAGRAMS.

S – SPARE 2" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

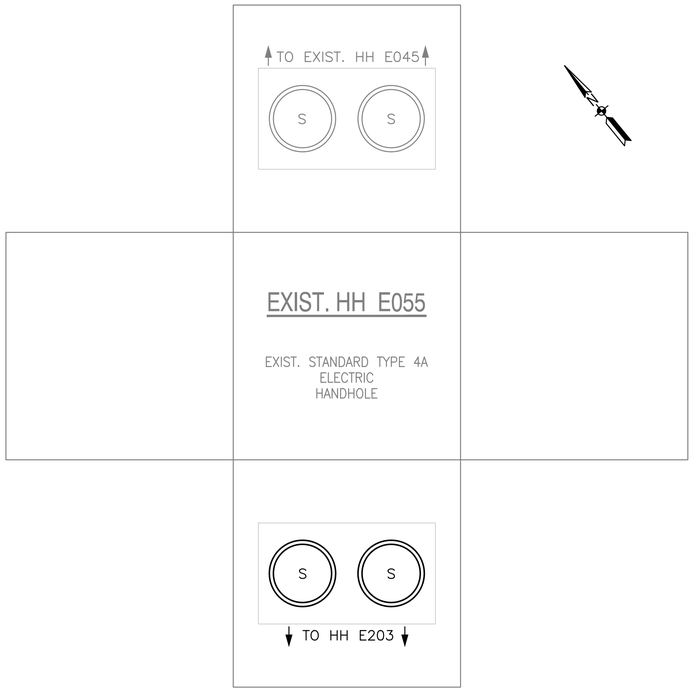
DES SL DRN SL CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
HR #PT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 2 AIRFIELD LTG.

SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691843
SHEET 310 OF 368
EA737

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\100963_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA737.dwg LAYOUT NAME: EA737 PLOTTED: Tuesday, March 24, 2015 - 11:01am USER: Rhurst



GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

C – 5" PVC SCHEDULE 40 CONDUIT WITH 2 #8 AWG & #8G MEDIUM VOLTAGE FEEDER FROM ELECTRICAL/LIGHTING VAULT TO OPTICAL LANDING SYSTEM MEDIUM VOLTAGE TRANSFORMER AS SHOWN ON CONSTRUCTION PLANS.

S – SPARE 5" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

DES	SL	DRW	SL	CHK	DJP

M/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

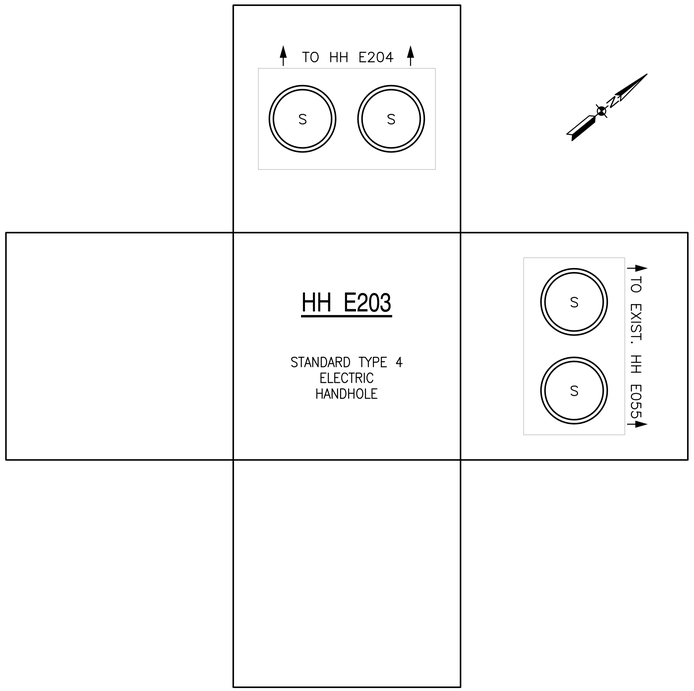
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – EXISTING POWER

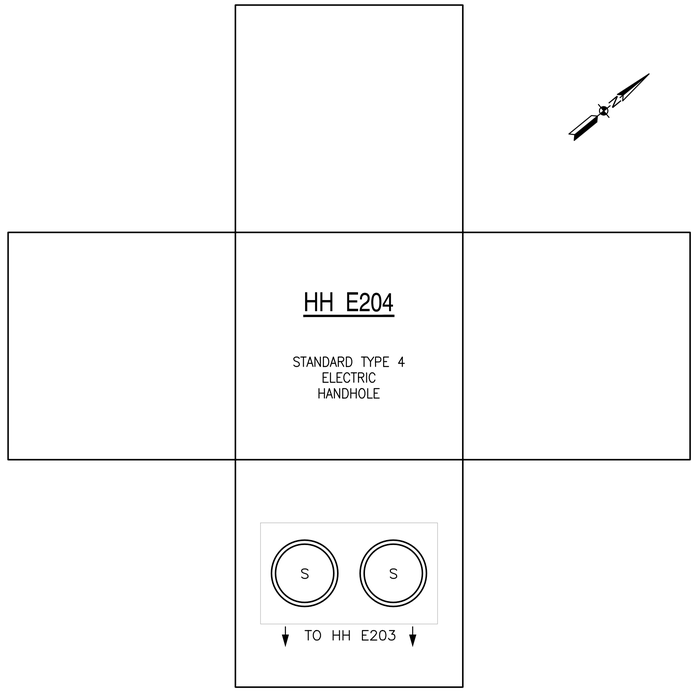
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691844
SHEET 311 OF 368

EA738

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA738.dwg LAYOUT NAME: EA738 PLOTTED: Tuesday, March 24, 2015 - 11:01am USER: Rhurst





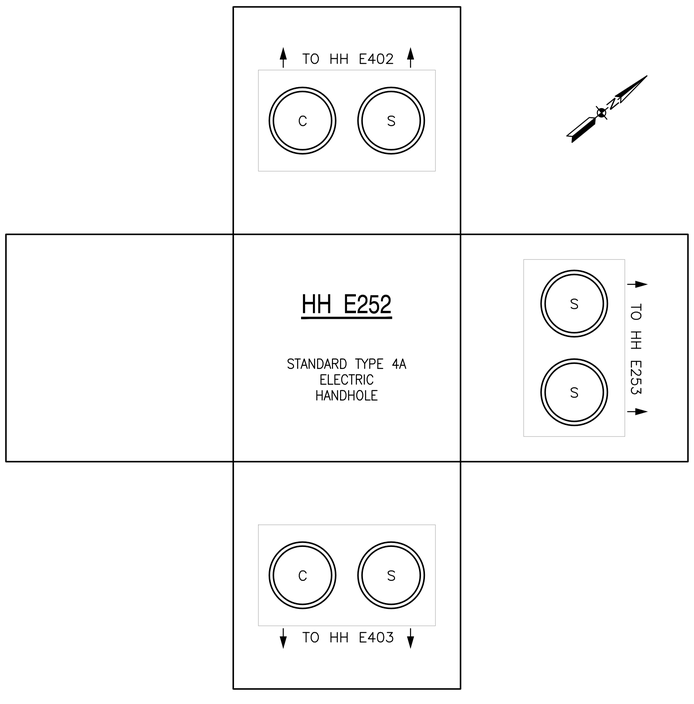
GENERAL NOTES

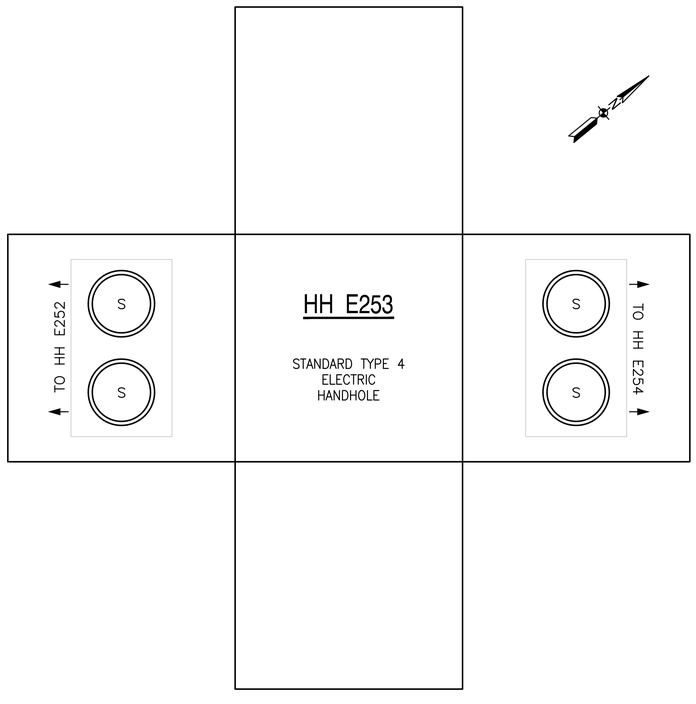
1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

C – 5" PVC SCHEDULE 40 CONDUIT WITH 2 #8 AWG & #8G MEDIUM VOLTAGE FEEDER FROM ELECTRICAL/LIGHTING VAULT TO OPTICAL LANDING SYSTEM MEDIUM VOLTAGE TRANSFORMER AS SHOWN ON CONSTRUCTION PLANS.

S – SPARE 5" PVC SCHEDULE 40 CONDUIT.





SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES	DRWN	CHK
SL	SL	DJP

M/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

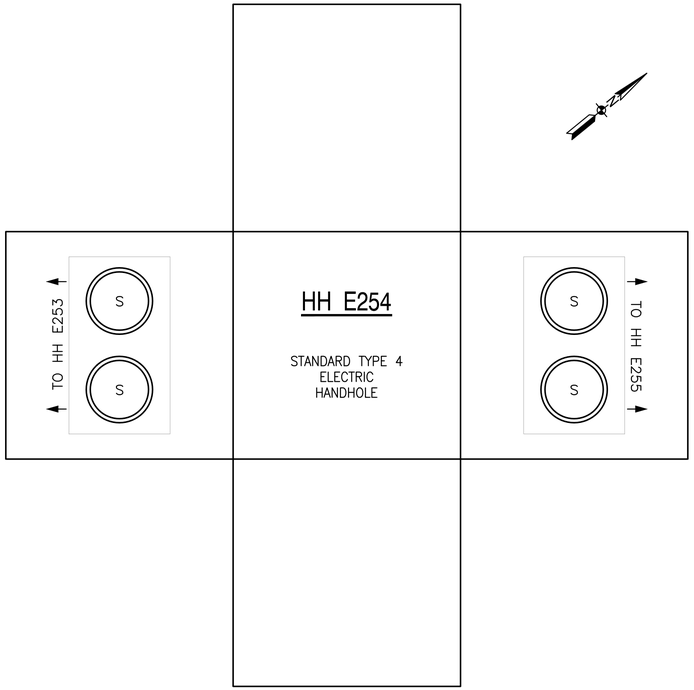
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 POWER

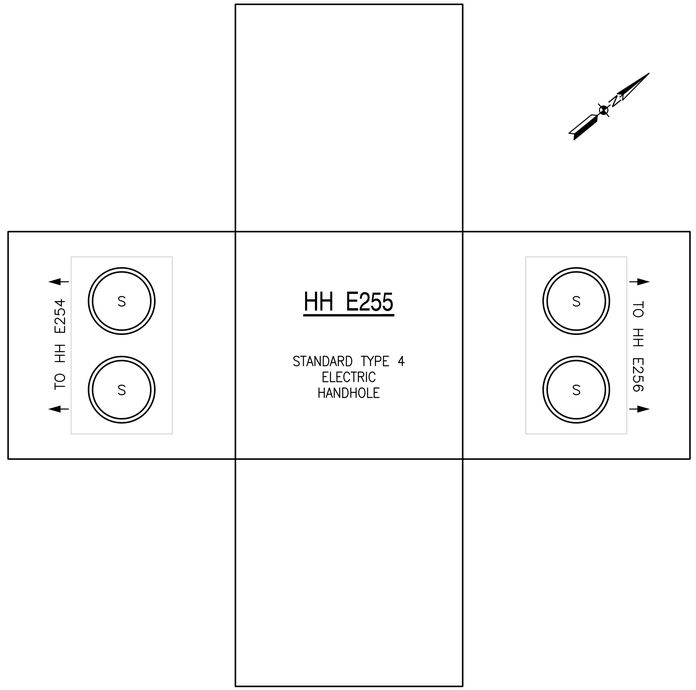
SCALE	NOT TO SCALE
A/E PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691845
SHEET	312 OF 368

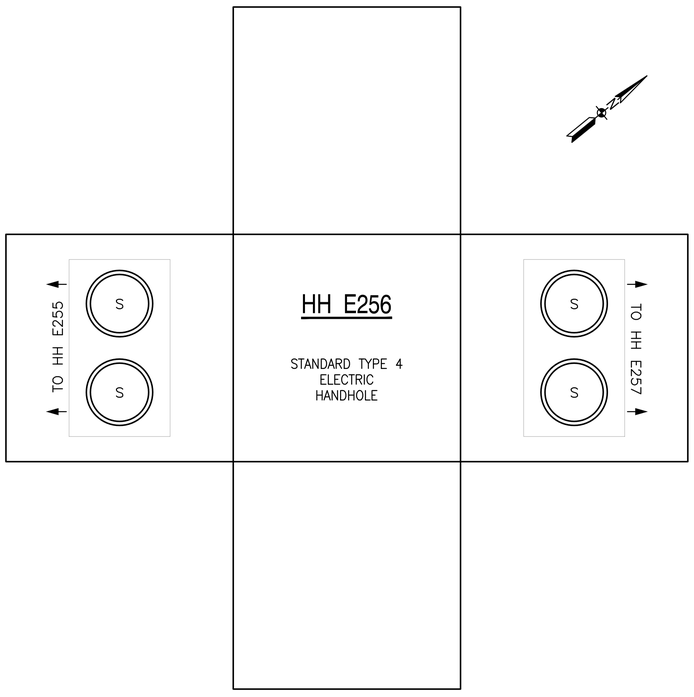
EA739

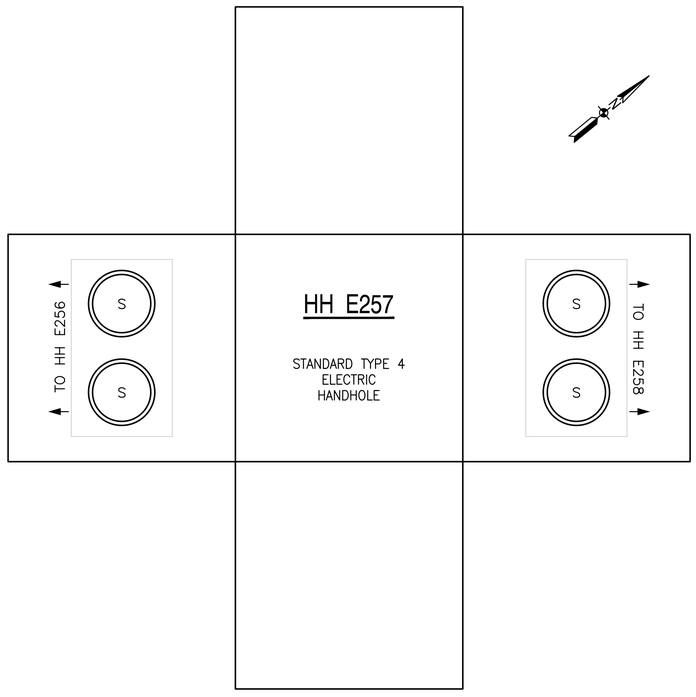
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA739.dwg LAYOUT NAME: EA739 PLOTTED: Tuesday, March 24, 2015 - 11:01am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

C – 5" PVC SCHEDULE 40 CONDUIT WITH 2 #8 AWG & #8G MEDIUM VOLTAGE FEEDER FROM ELECTRICAL/LIGHTING VAULT TO OPTICAL LANDING SYSTEM MEDIUM VOLTAGE TRANSFORMER AS SHOWN ON CONSTRUCTION PLANS.

S – SPARE 5" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

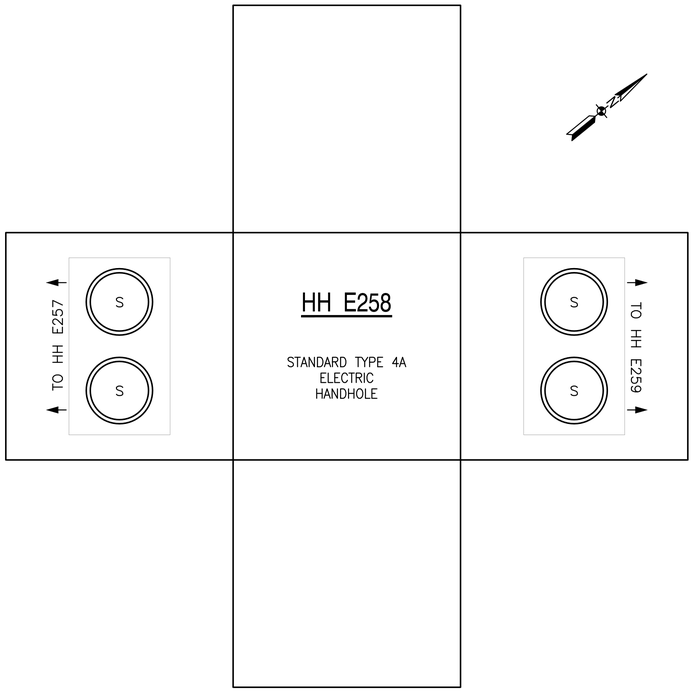
A/E INFO

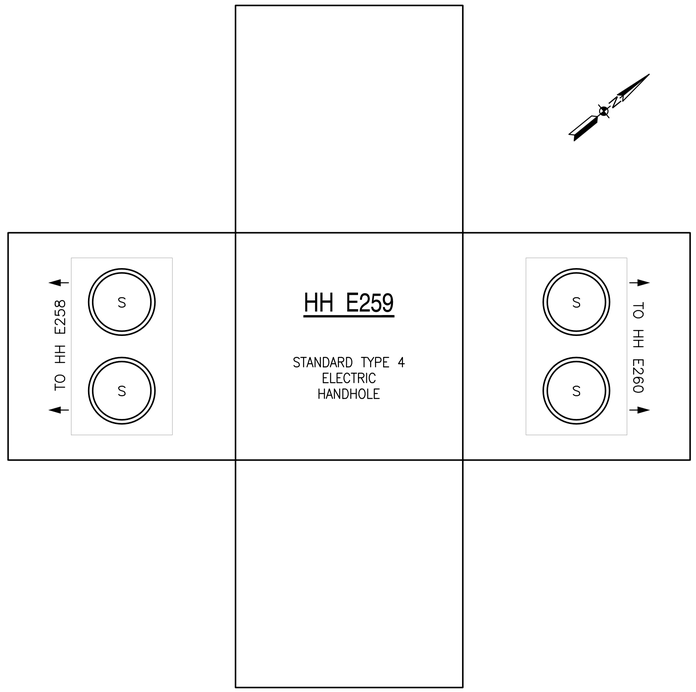
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SL DRW SL CHK DJP
M/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

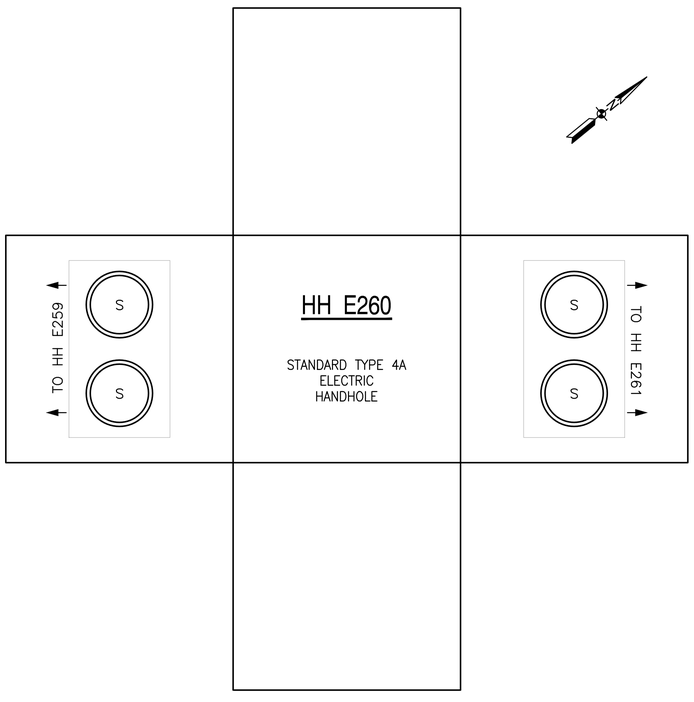
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 POWER

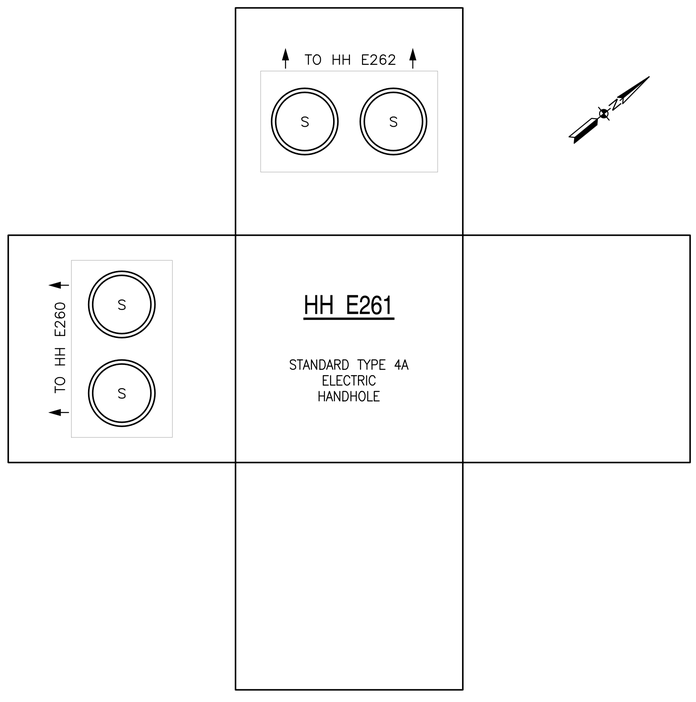
SCALE NOT TO SCALE
A/PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691846
SHEET 313 OF 368
EA740
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA740.dwg LAYOUT NAME: EA740 PLOTTED: Tuesday, March 24, 2015 - 11:01am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

C – 5" PVC SCHEDULE 40 CONDUIT WITH 2 #8 AWG & #8G MEDIUM VOLTAGE FEEDER FROM ELECTRICAL/LIGHTING VAULT TO OPTICAL LANDING SYSTEM MEDIUM VOLTAGE TRANSFORMER AS SHOWN ON CONSTRUCTION PLANS.

S – SPARE 5" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SL DRW SL CHK DJP
M/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

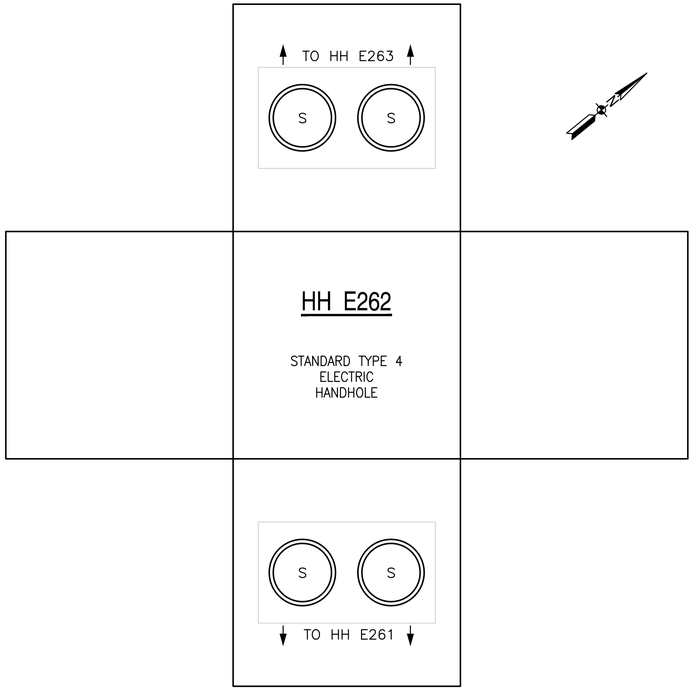
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 POWER

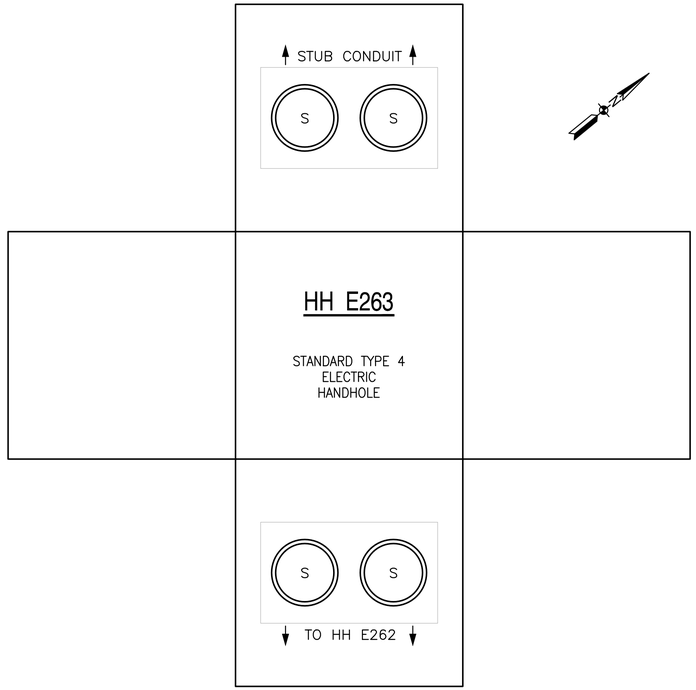
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691847
SHEET 314 OF 368

EA741

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA741.dwg LAYOUT NAME: EA741 PLOTTED: Tuesday, March 24, 2015 - 11:02am USER: Rhurst





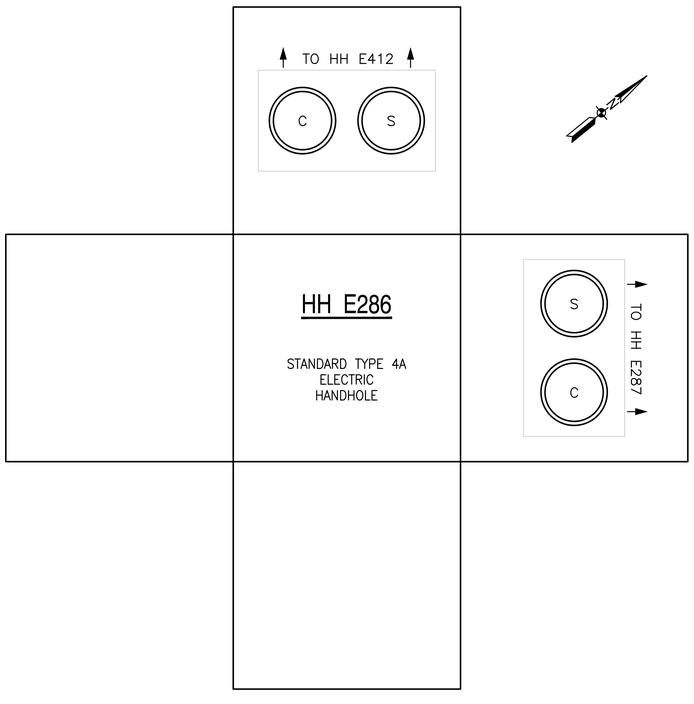
GENERAL NOTES

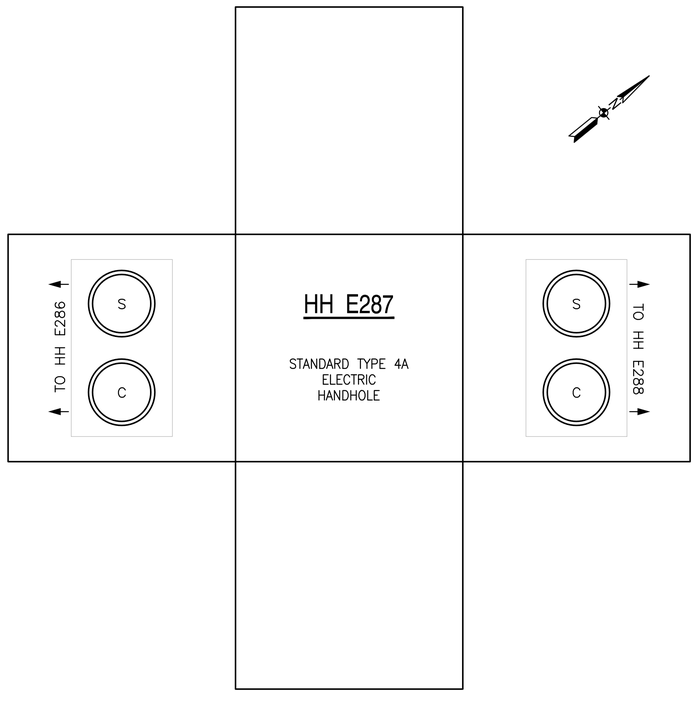
1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

C – 5" PVC SCHEDULE 40 CONDUIT WITH 2 #8 AWG & #8G MEDIUM VOLTAGE FEEDER FROM ELECTRICAL/LIGHTING VAULT TO OPTICAL LANDING SYSTEM MEDIUM VOLTAGE TRANSFORMER AS SHOWN ON CONSTRUCTION PLANS.

S – SPARE 5" PVC SCHEDULE 40 CONDUIT.





SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

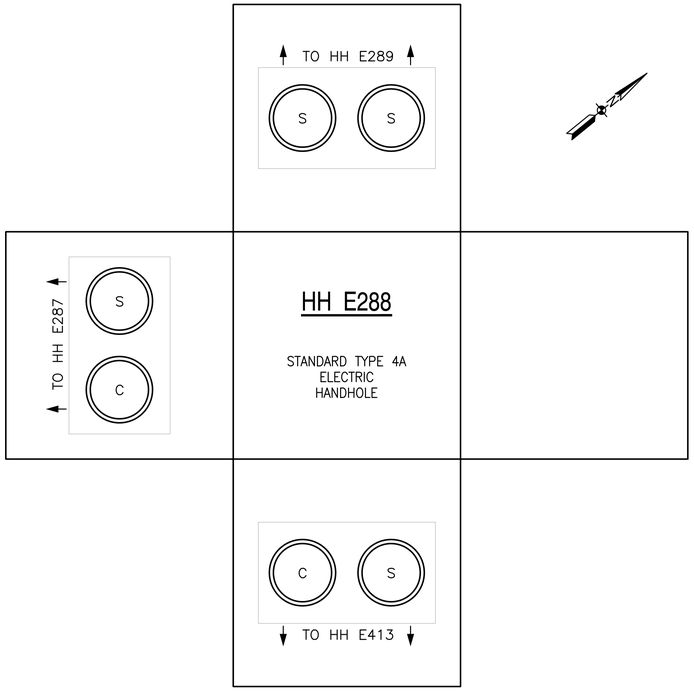
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SL DRWN SL CHK DJP
M/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

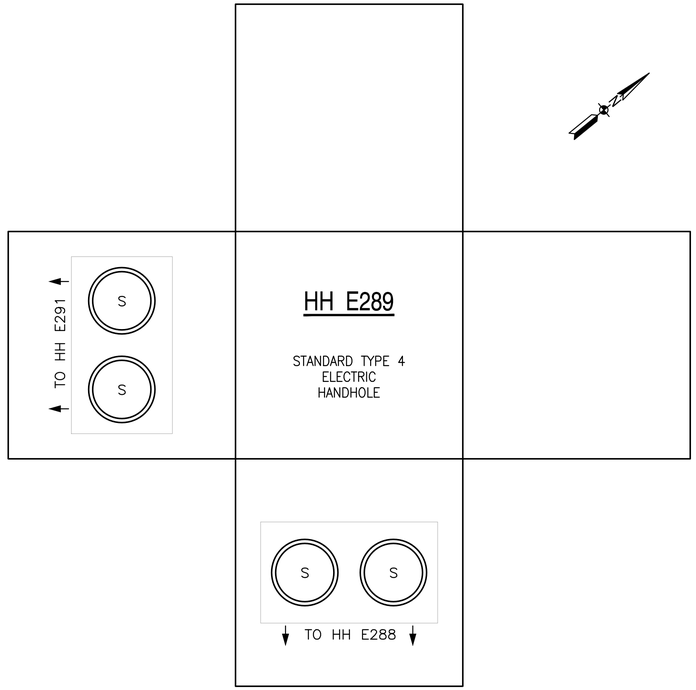
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NR #PT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 POWER

SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691848
SHEET 315 OF 368
EA742

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA742.dwg LAYOUT NAME: EA742 PLOTTED: Tuesday, March 24, 2015 - 11:02am USER: Rhurst





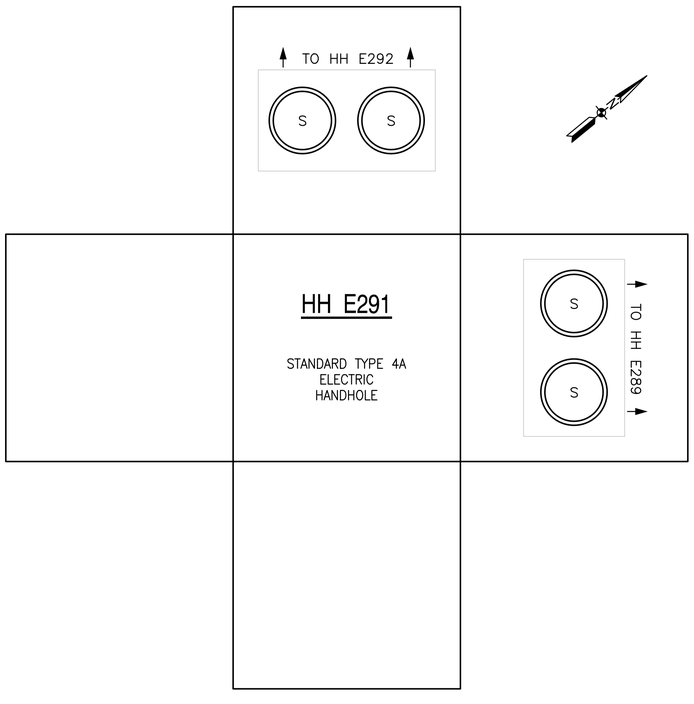
GENERAL NOTES

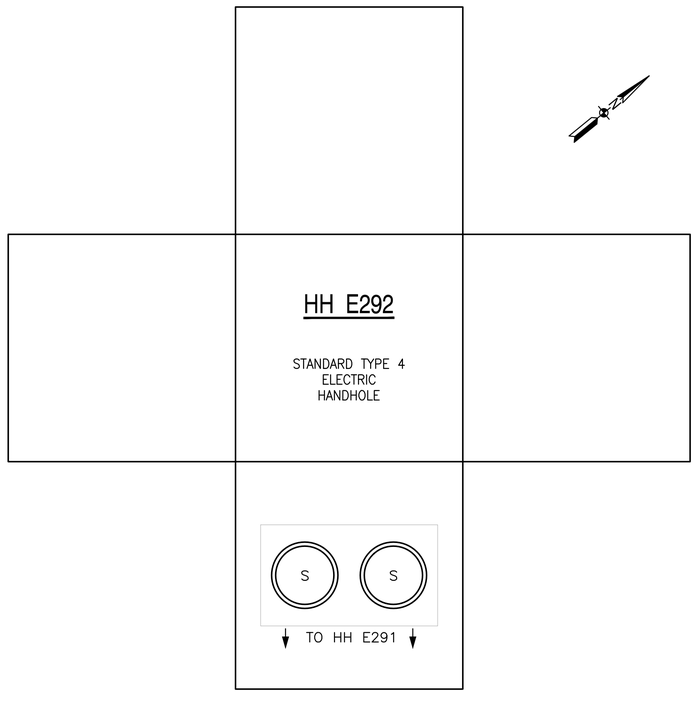
1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

C – 5" PVC SCHEDULE 40 CONDUIT WITH 2 #8 AWG & #8G MEDIUM VOLTAGE FEEDER FROM ELECTRICAL/LIGHTING VAULT TO OPTICAL LANDING SYSTEM MEDIUM VOLTAGE TRANSFORMER AS SHOWN ON CONSTRUCTION PLANS.

S – SPARE 5" PVC SCHEDULE 40 CONDUIT.





SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	DRWN	CHK
SL	SL	DJP

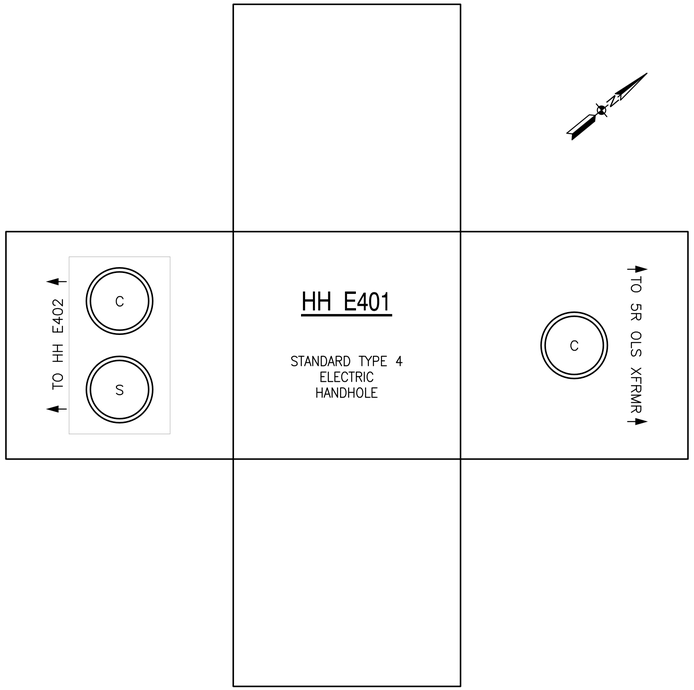
M/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

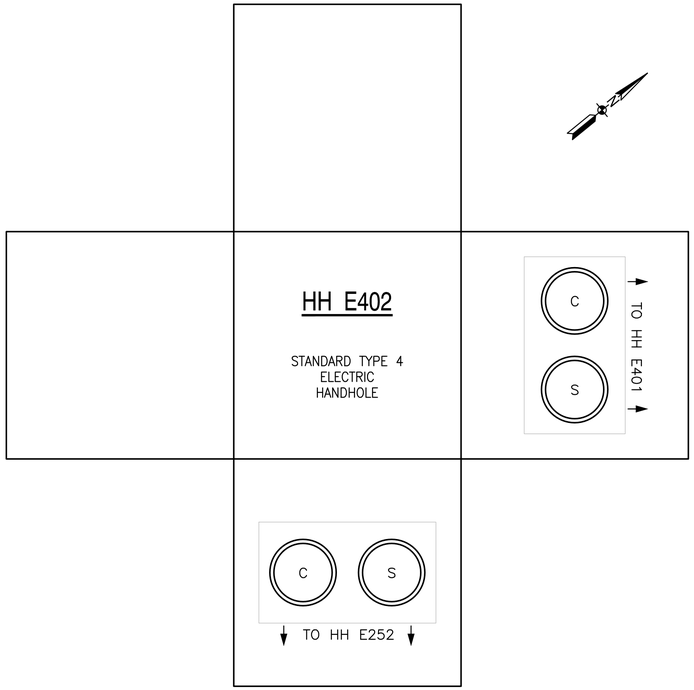
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
HR #PT
NAVAL AIR STATION OCEANA VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 POWER

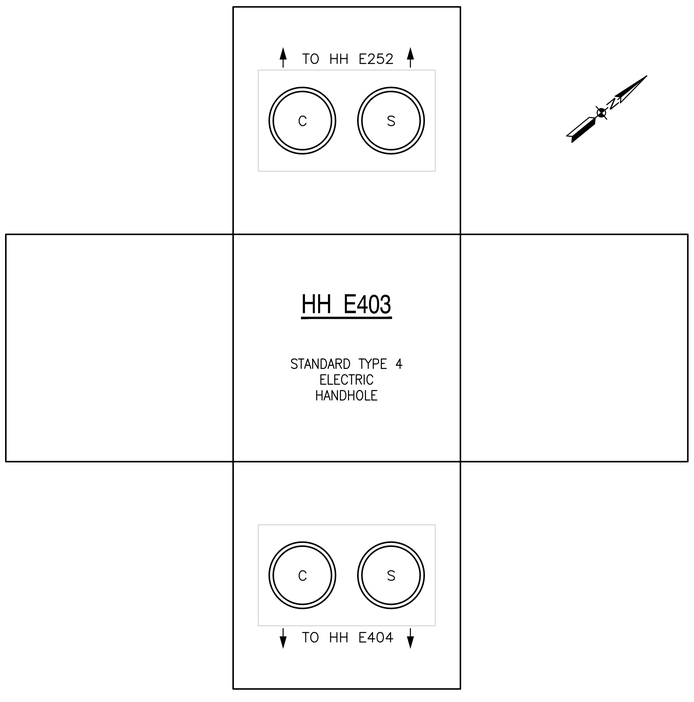
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691849
SHEET 316 OF 368
EA743

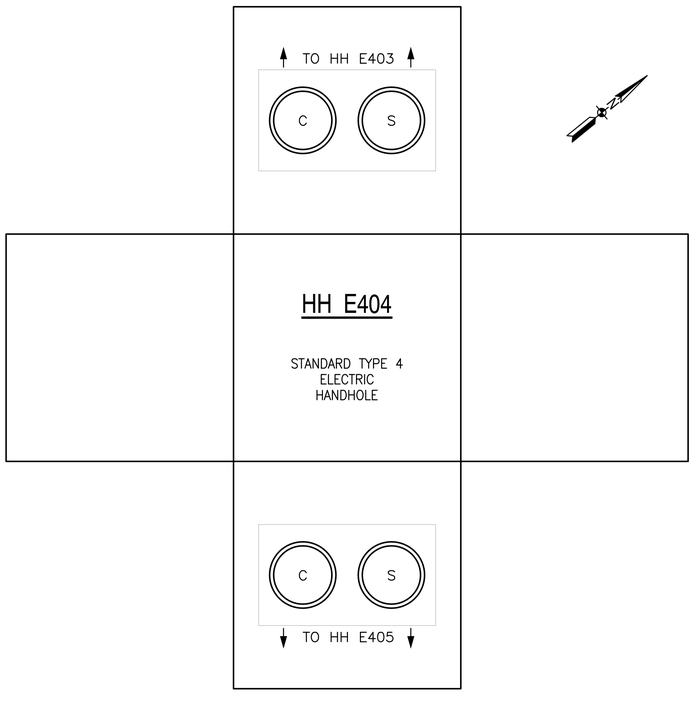
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA743.dwg LAYOUT NAME: EA743 PLOTTED: Tuesday, March 24, 2015 - 11:02am USER: Rhuret









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

C – 5" PVC SCHEDULE 40 CONDUIT WITH 2 #8 AWG & #8G MEDIUM VOLTAGE FEEDER FROM ELECTRICAL/LIGHTING VAULT TO OPTICAL LANDING SYSTEM MEDIUM VOLTAGE TRANSFORMER AS SHOWN ON CONSTRUCTION PLANS.

S – SPARE 5" PVC SCHEDULE 40 CONDUIT.

APPR	DATE	DESCRIPTION	SYM

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER, NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SL | DRWN SL | CHK DJP

M/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

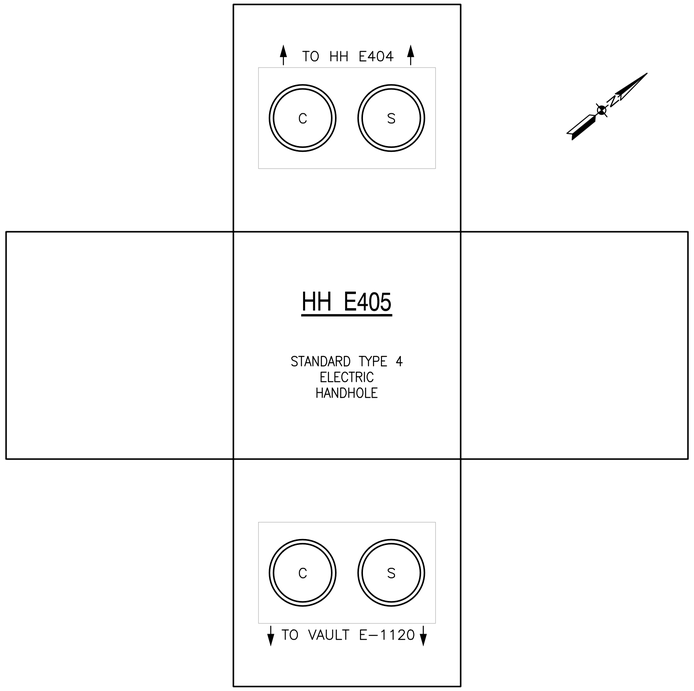
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NR #PT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 2 POWER

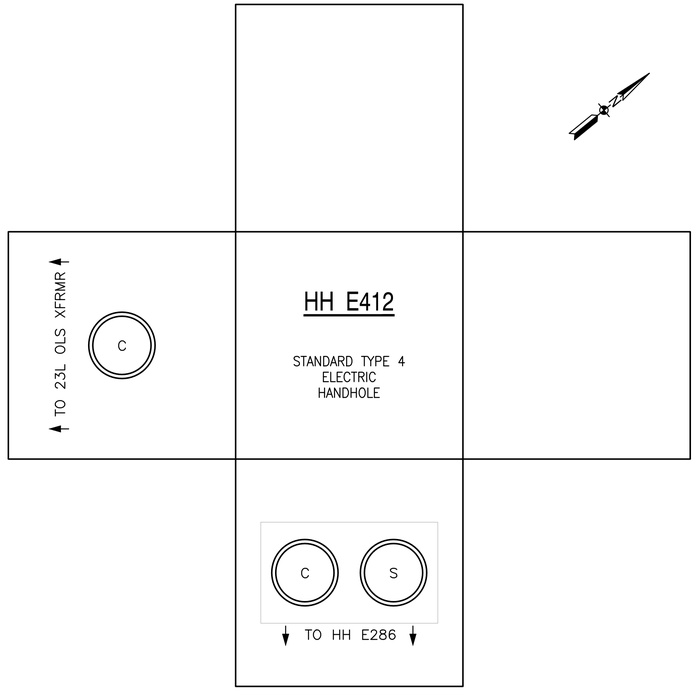
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691850
SHEET 317 OF 368

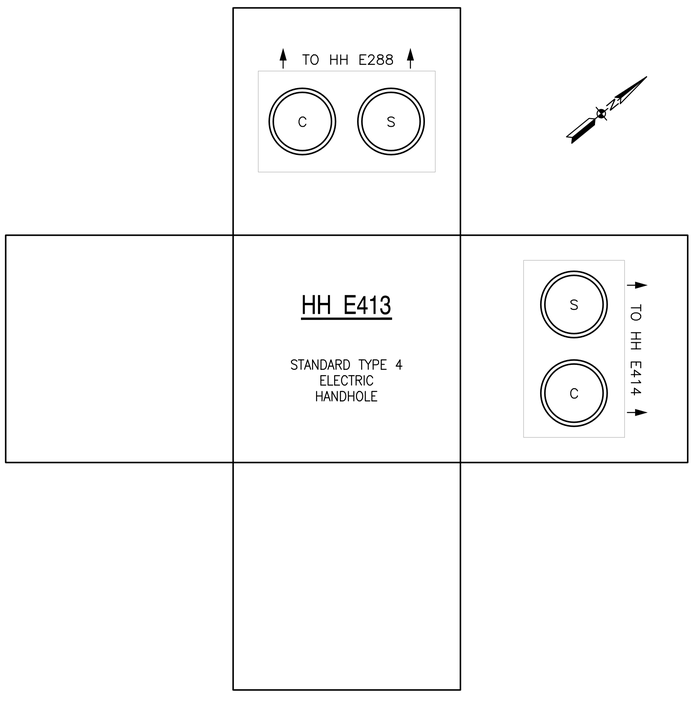
EA744

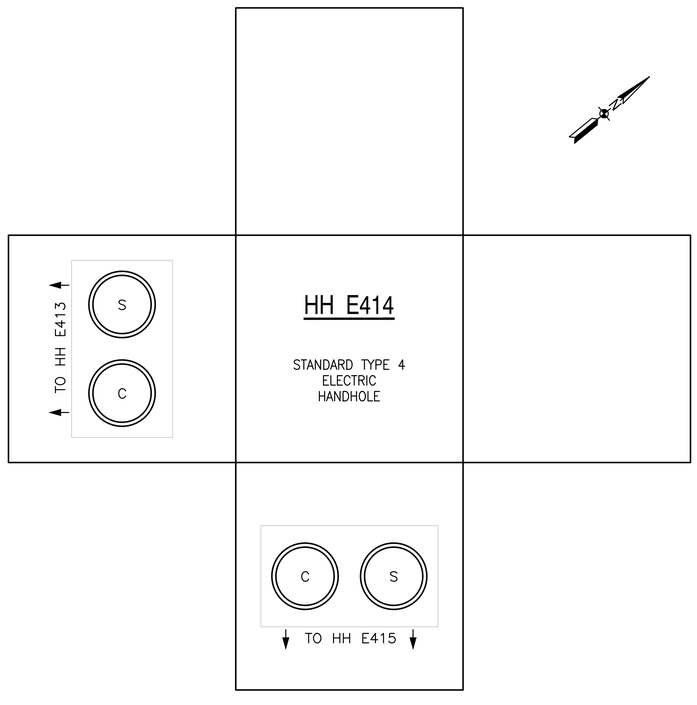
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA744.dwg LAYOUT NAME: EA744 PLOTTED: Tuesday, March 24, 2015 - 11:02am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

C – 5" PVC SCHEDULE 40 CONDUIT WITH 2 #8 AWG & #8G MEDIUM VOLTAGE FEEDER FROM ELECTRICAL/LIGHTING VAULT TO OPTICAL LANDING SYSTEM MEDIUM VOLTAGE TRANSFORMER AS SHOWN ON CONSTRUCTION PLANS.

S – SPARE 5" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	DRWN	CHK
SL	SL	DJP

M/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

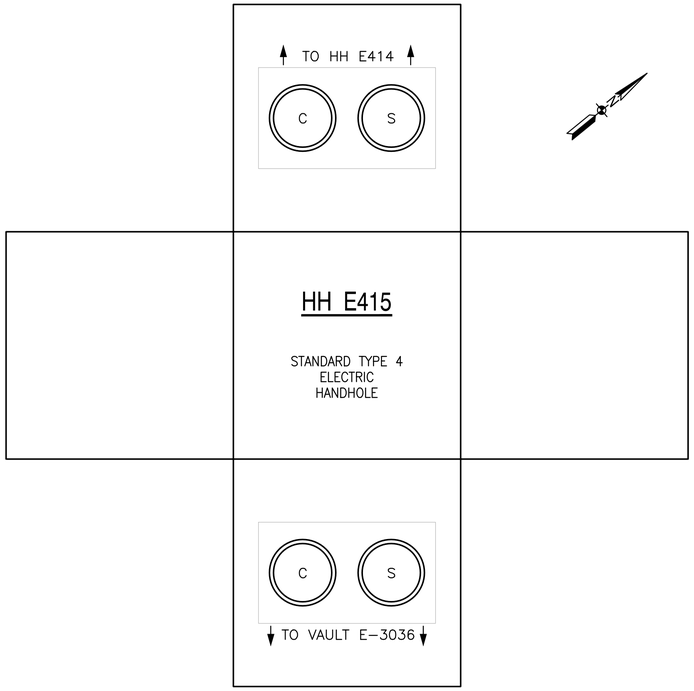
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NR #PT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 2 POWER

SCALE	NOT TO SCALE
PROJECT NO.	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691851
SHEET	318 OF 368

EA745

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA745.dwg LAYOUT NAME: EA745 PLOTTED: Tuesday, March 24, 2015 - 11:03am USER: Rhurst



GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

C – 5" PVC SCHEDULE 40 CONDUIT WITH 2 #8 AWG & #8G MEDIUM VOLTAGE FEEDER FROM ELECTRICAL/LIGHTING VAULT TO OPTICAL LANDING SYSTEM MEDIUM VOLTAGE TRANSFORMER AS SHOWN ON CONSTRUCTION PLANS.

S – SPARE 5" PVC SCHEDULE 40 CONDUIT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES	DRWN	CHK
SL	SL	DJP

M/CM
BRANCH MANAGER WED
CHIEF ENG/ARCH

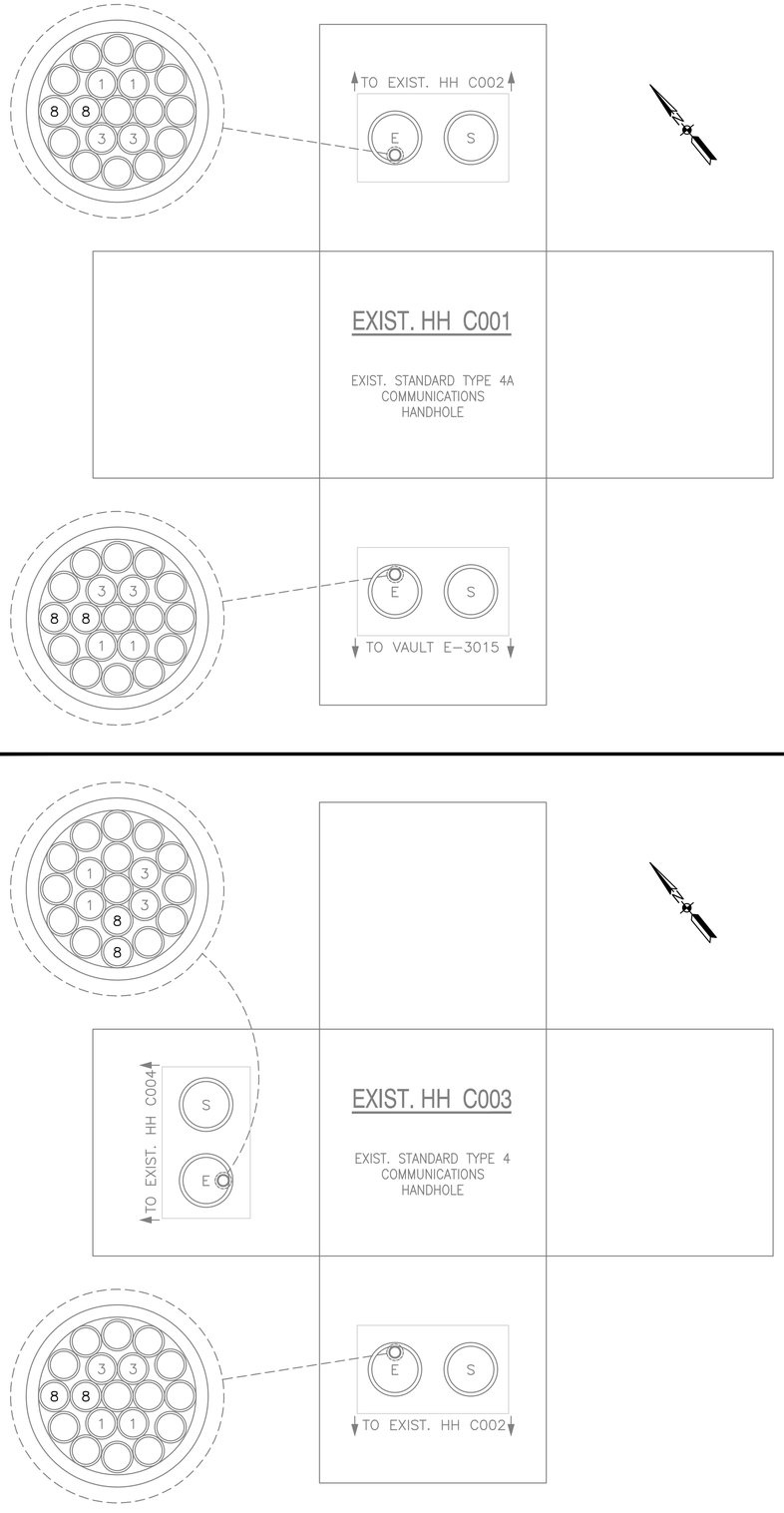
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 2 POWER

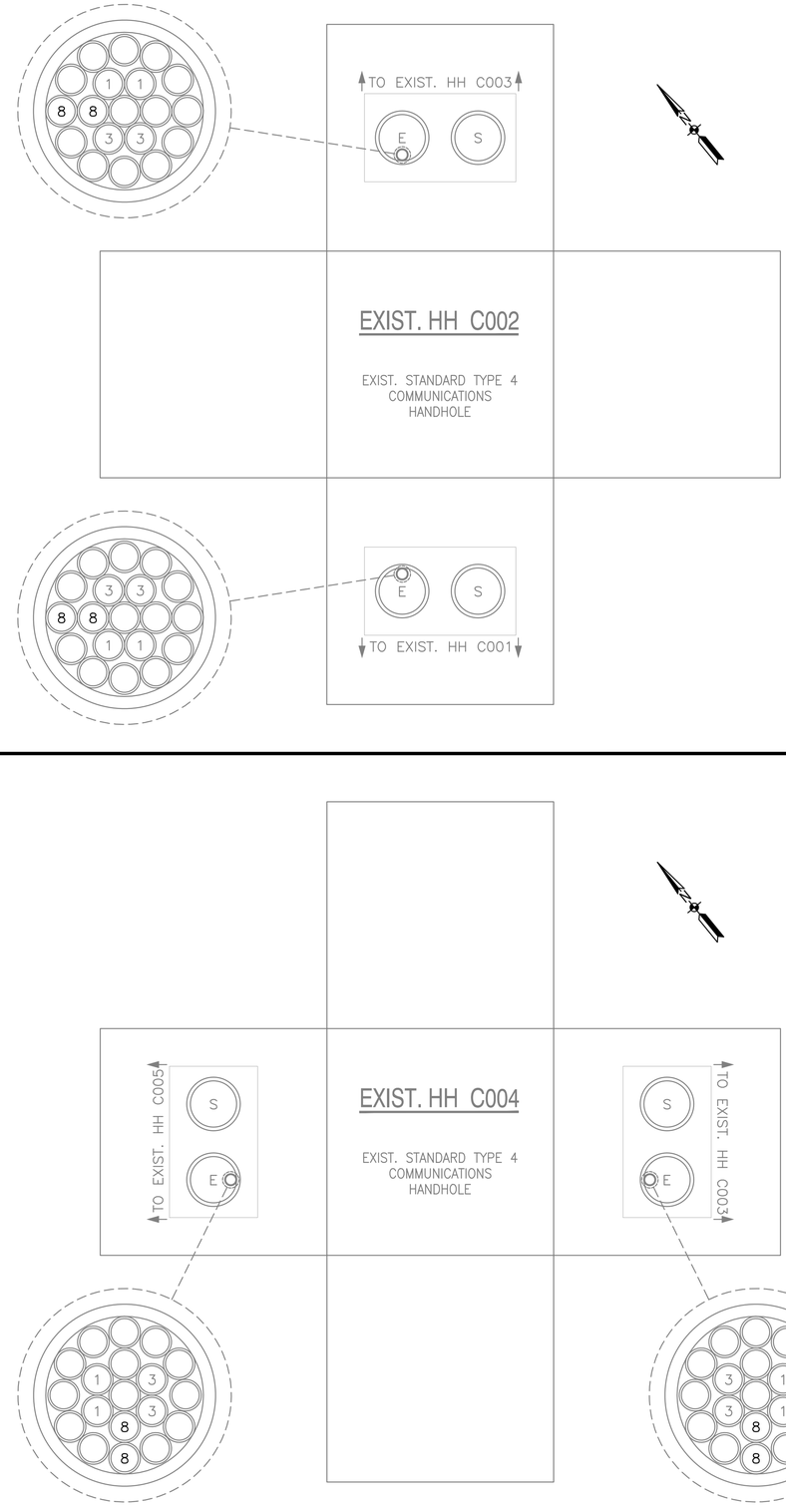
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691852
SHEET 319 OF 368

EA746

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-EA746.dwg LAYOUT NAME: EA746 PLOTTED: Tuesday, March 24, 2015 - 11:03am USER: Rhurst





GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

(1) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.

(2) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.

(3) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.

(4) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.

(5) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.

(6) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.

(7) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.

(8) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.

(9) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.

(10) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

( ) EMPTY/SPARE TUBE.

SHEET KEYNOTES

[1] PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.

[2] PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

ACTIVITY

DISPATCH TO: MAIL

DES: SL | DRN: SL | CHK: DJP

PM/DM

BRANCH MANAGER: WED

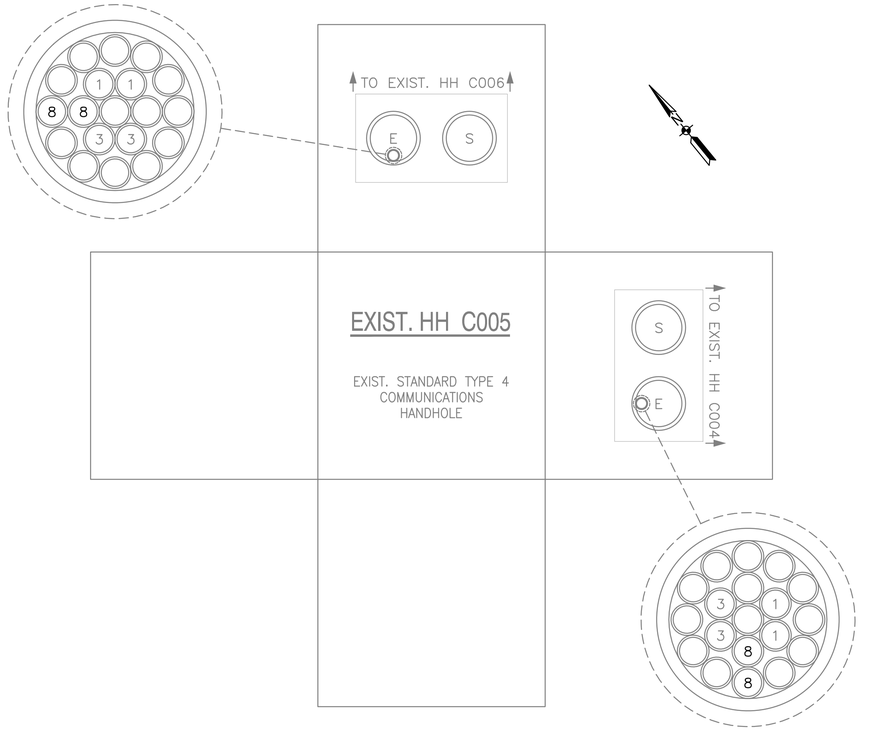
CHIEF ENG/ARCH

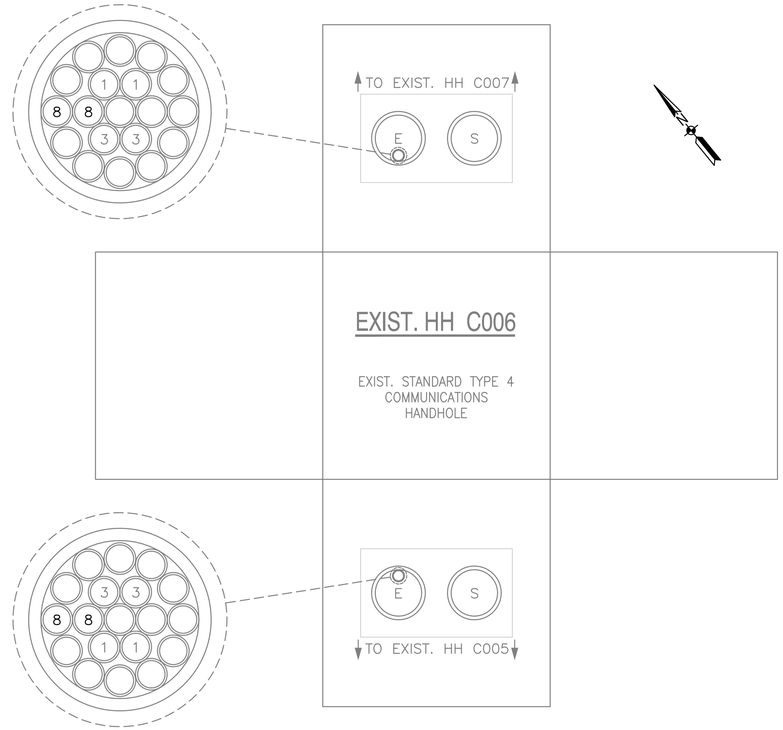
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – EXISTING COMM.

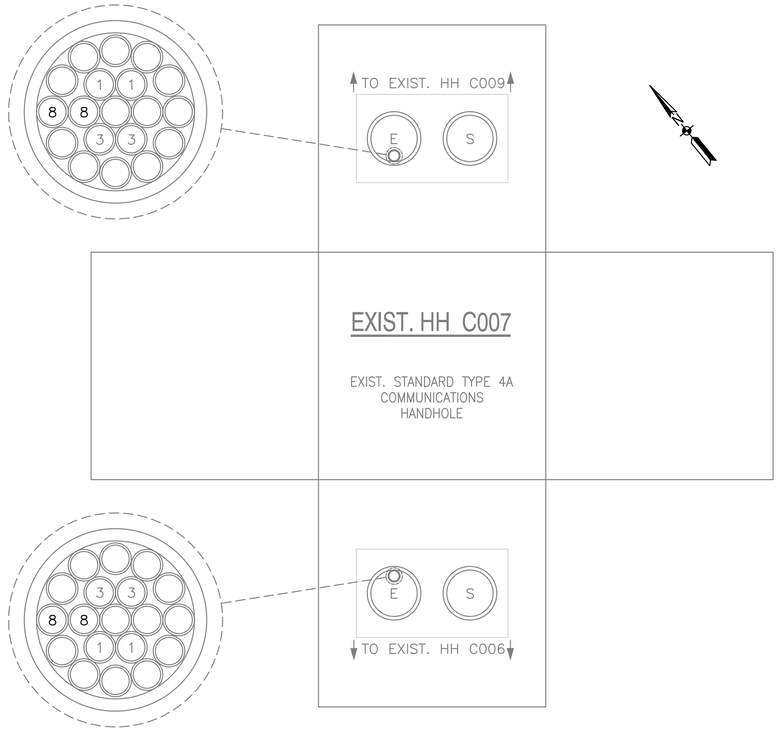
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.: 12691853
SHEET 320 OF 368
EA747

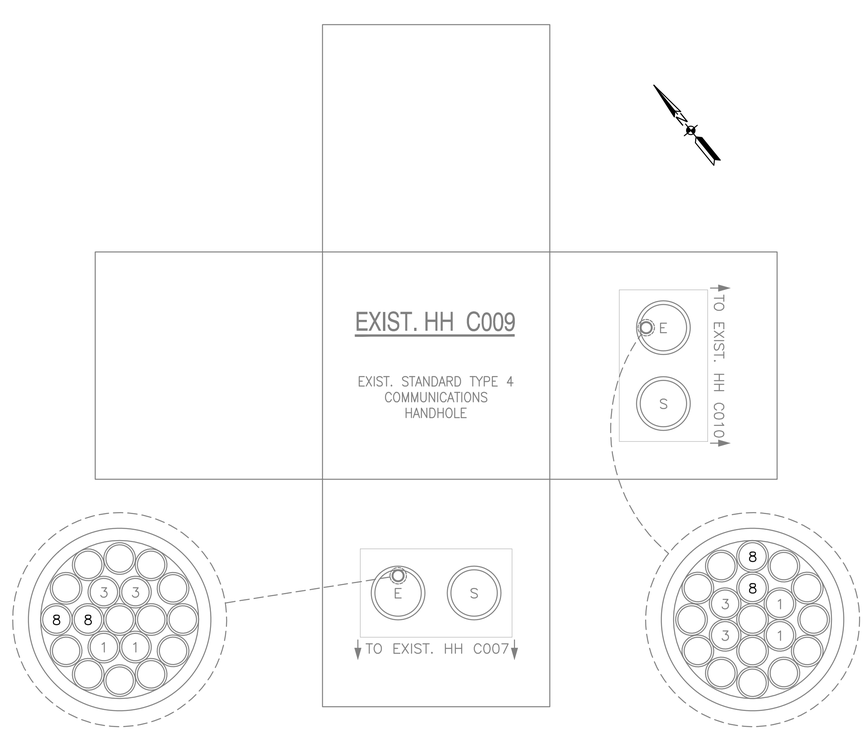
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: d:\SMO\109861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA747.dwg LAYOUT NAME: EA747 PLOTTED: Tuesday, March 24, 2015 - 11:03am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

ACTIVITY

DISPATCH TO: MAIL

DES: SL | DRN: SL | CHK: DJP

PM/DM

BRANCH MANAGER: WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
HR IPT
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY

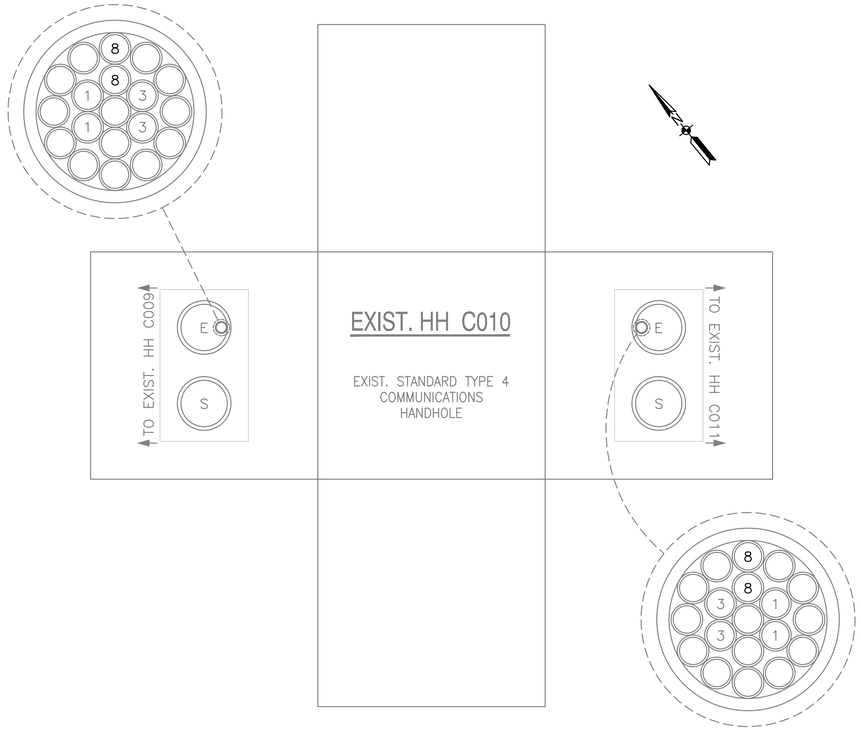
HANDHOLE & MANHOLE DIAGRAMS – EXISTING COMM.

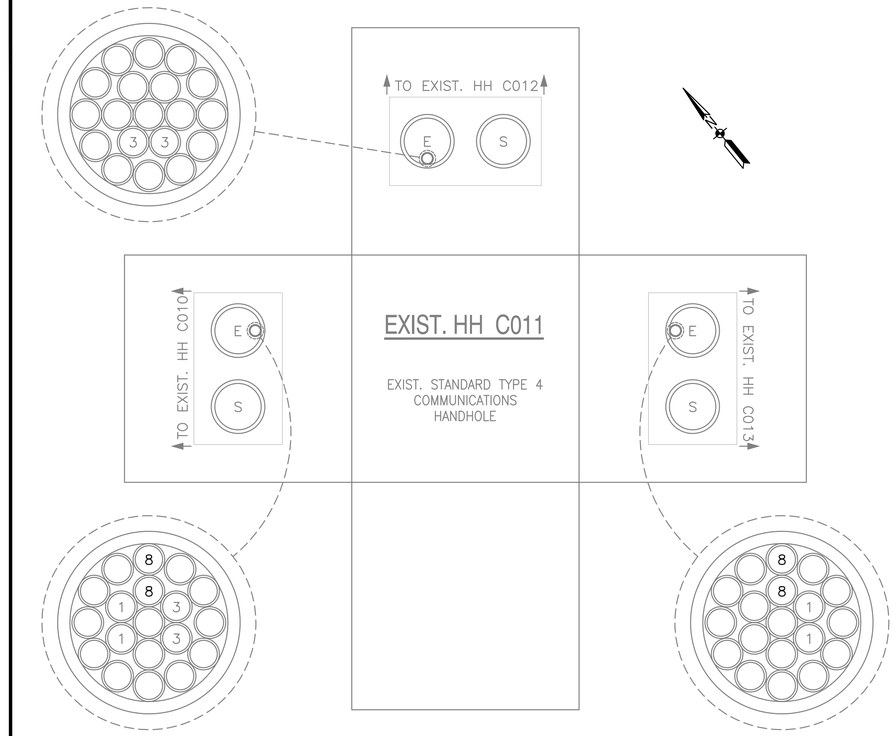
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.: 12691854
SHEET 321 OF 368

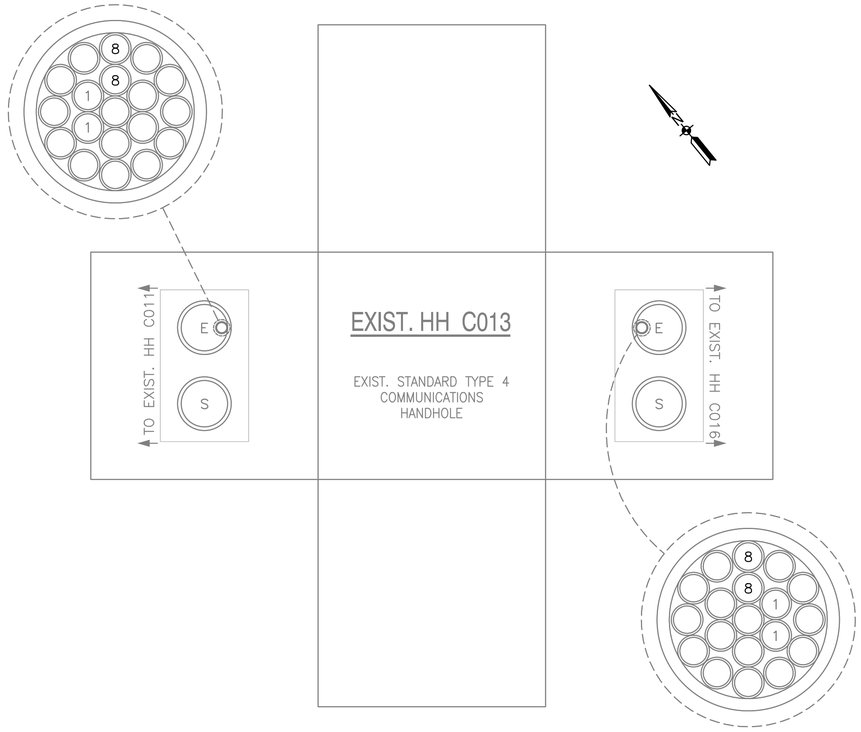
EA748

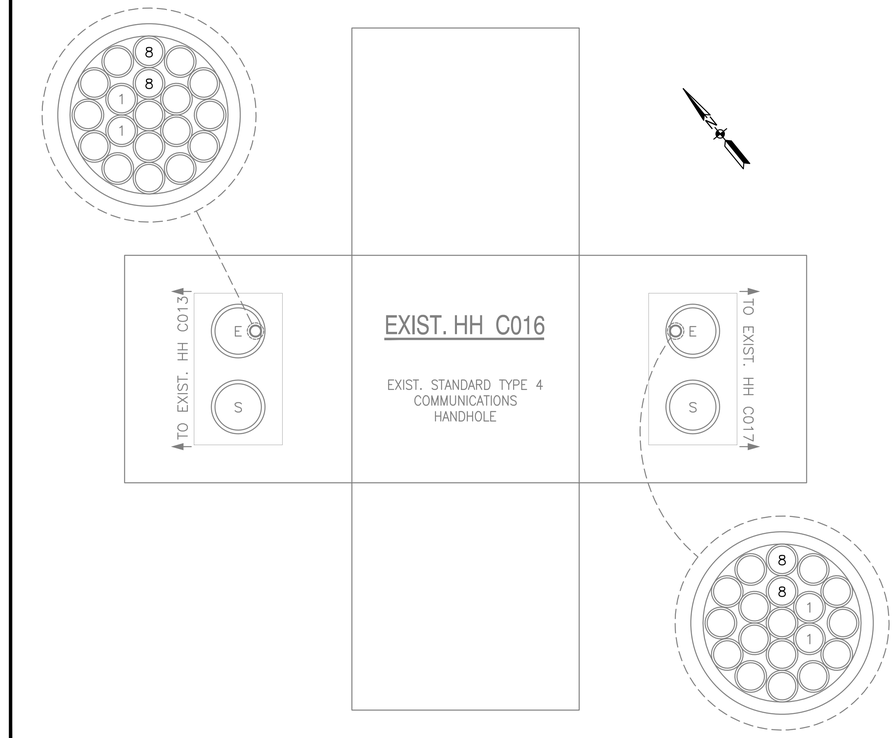
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: d:\SMO\109861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA748.dwg LAYOUT NAME: EA748 PLOTTED: Tuesday, March 24, 2015 - 11:03am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

ACTIVITY

RESPONSIBLE TO NAVFAC

DES: SL	DRN: SL	CHK: DJP

PM/TM

BRANCH MANAGER WED

CHIEF ENG/ARCH

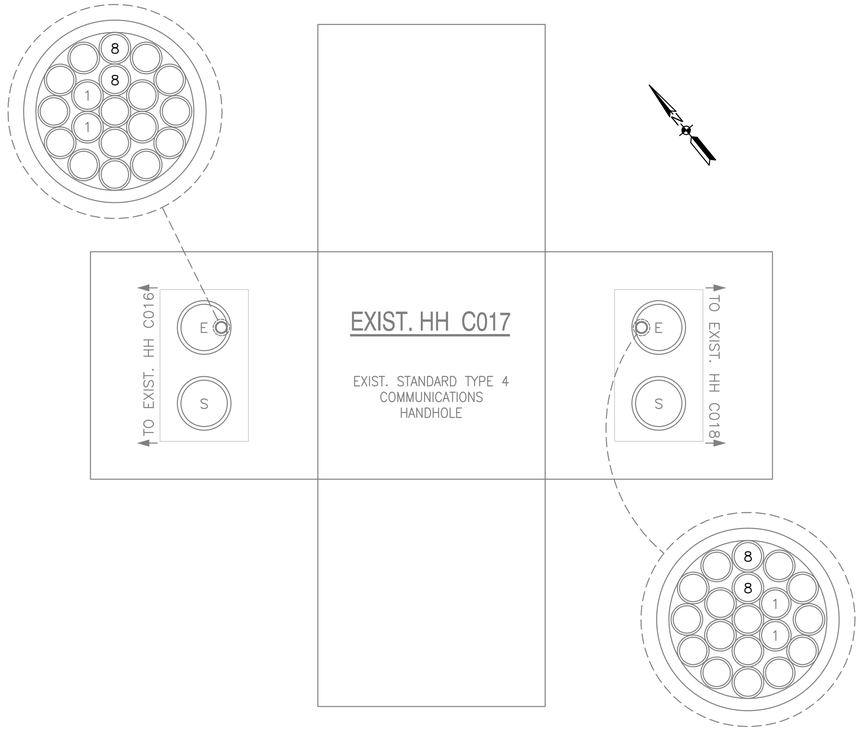
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – EXISTING COMM.

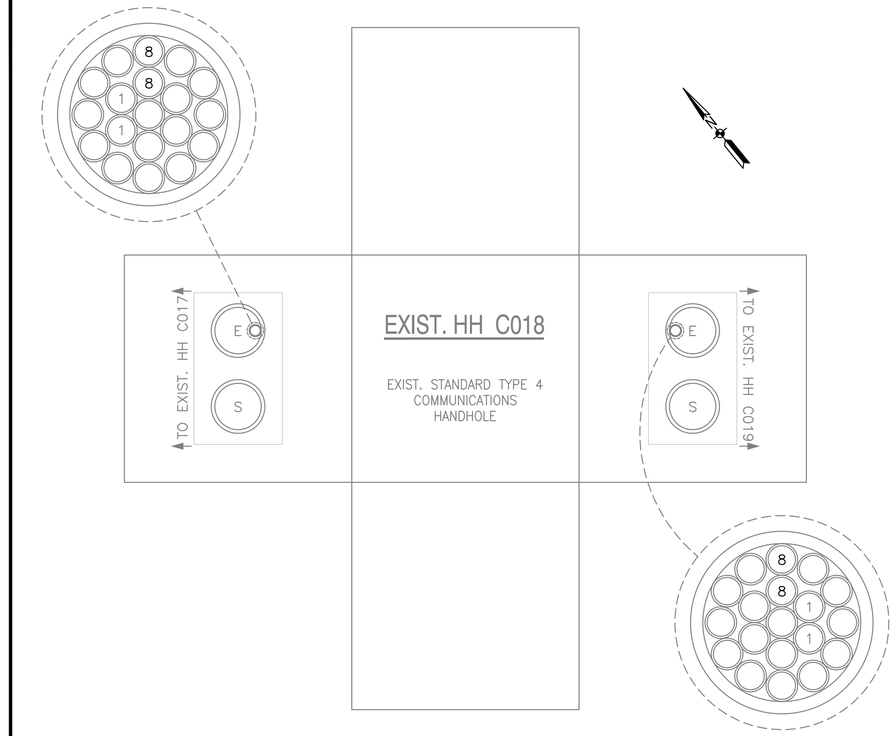
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.: 12691855
SHEET 322 OF 368

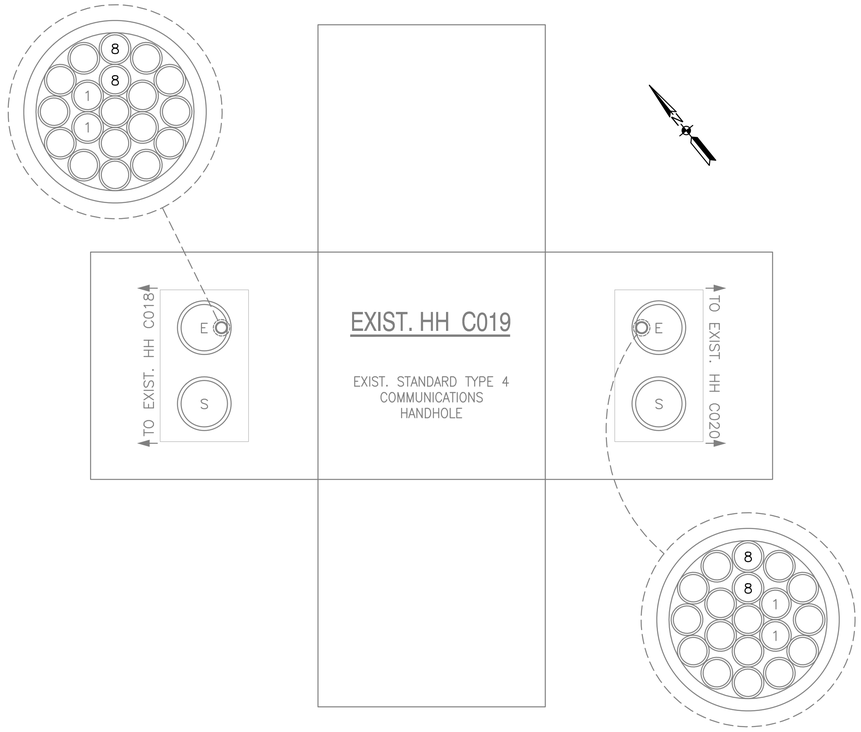
EA749

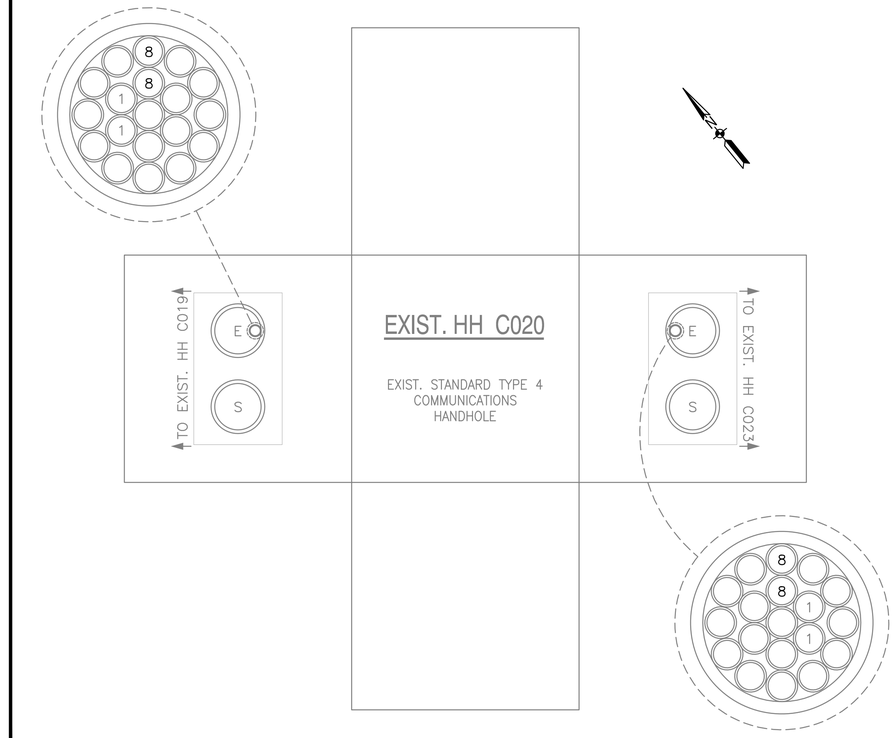
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: d:\SMO\10861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA749.dwg LAYOUT NAME: EA749 PLOTTED: Tuesday, March 24, 2015 - 11:03am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

ACTIVITY

DISPATCH TO: MAIL

DES: SL | DRN: SL | CHK: DJP

PM/TM:

BRANCH MANAGER: WED

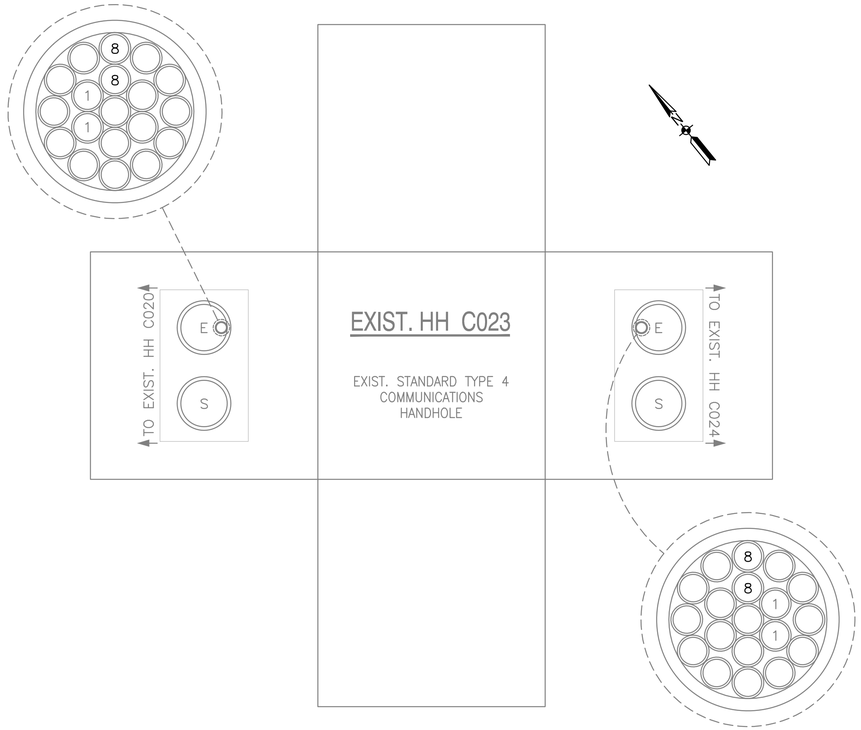
CHIEF ENG/ARCH:

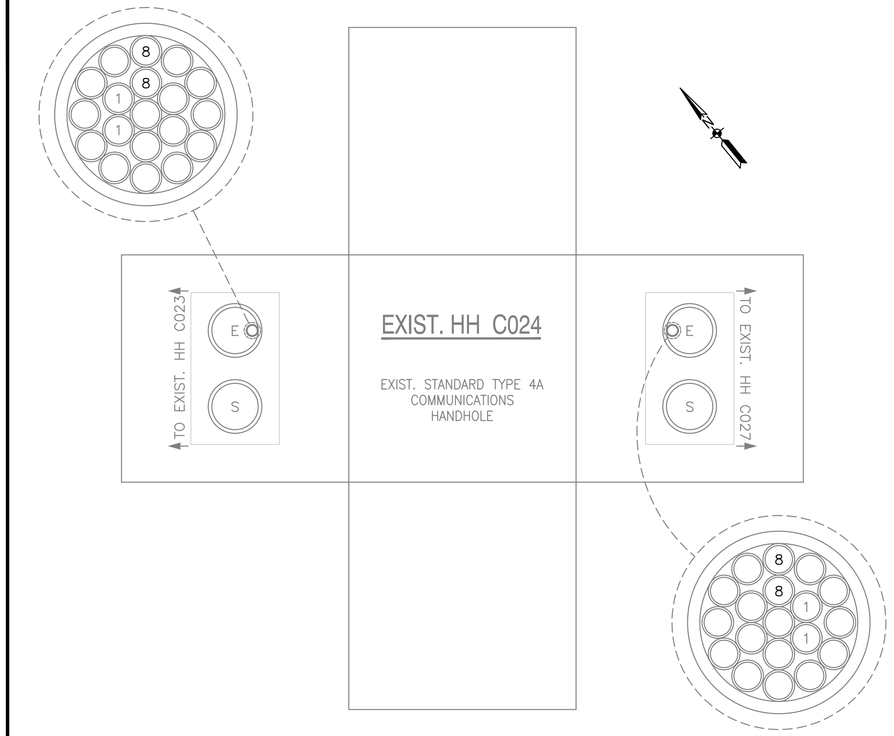
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – EXISTING COMM.

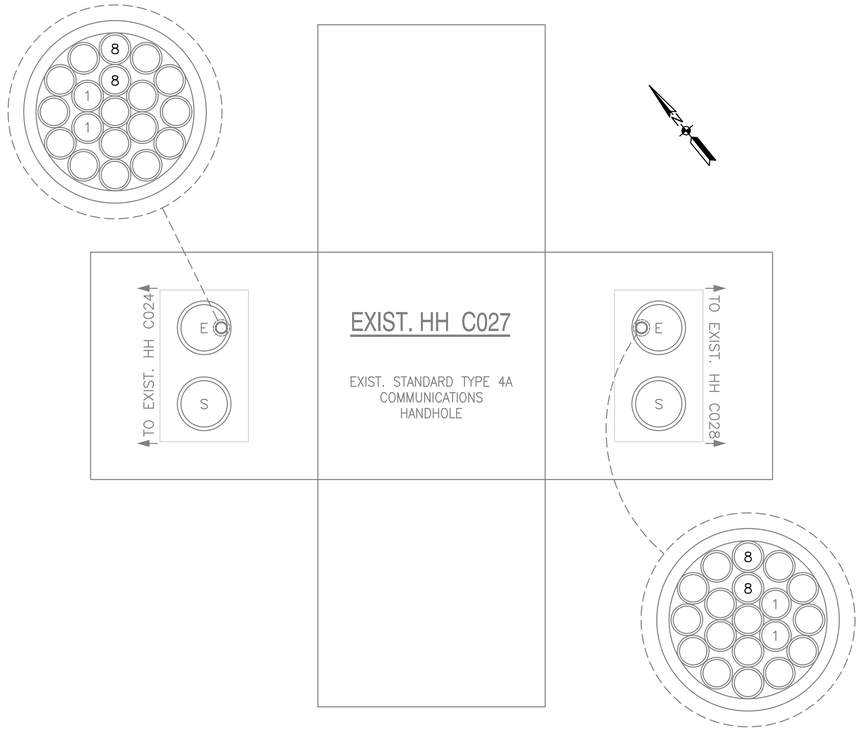
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691856
SHEET 323 OF 368
EA750

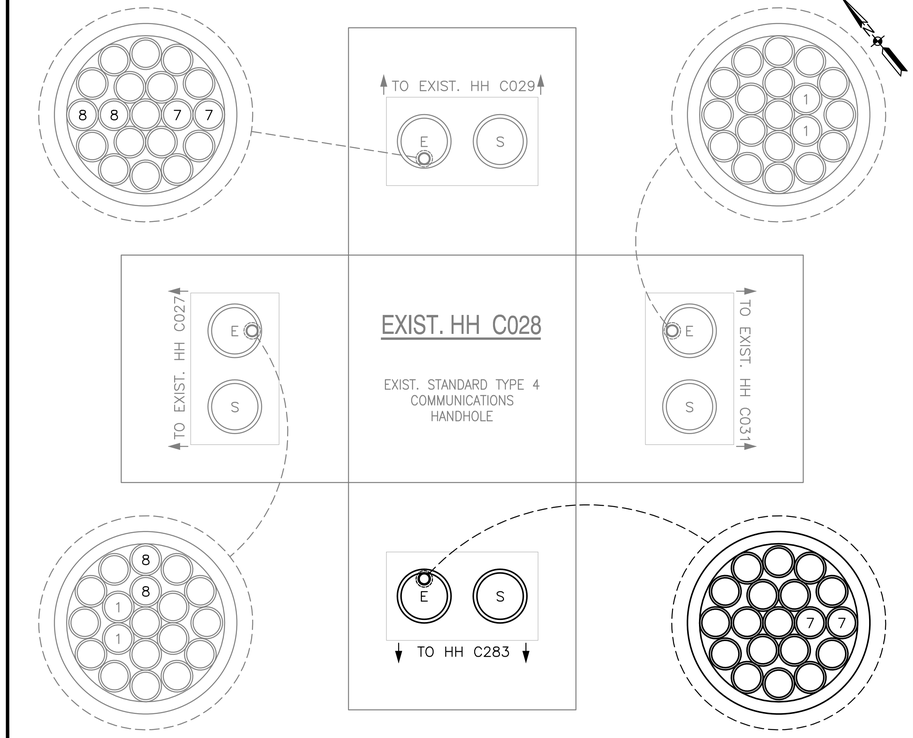
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: (G:\SMO\100861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA750.dwg LAYOUT NAME: EA750 PLOTTED: Tuesday, March 24, 2015 - 11:04am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

ACTIVITY

RESPONSIBLE TO NAVFAC

DES: SL | DRN: SL | CHK: DJP

PM/TM

BRANCH MANAGER: WED

CHIEF ENG/ARCH

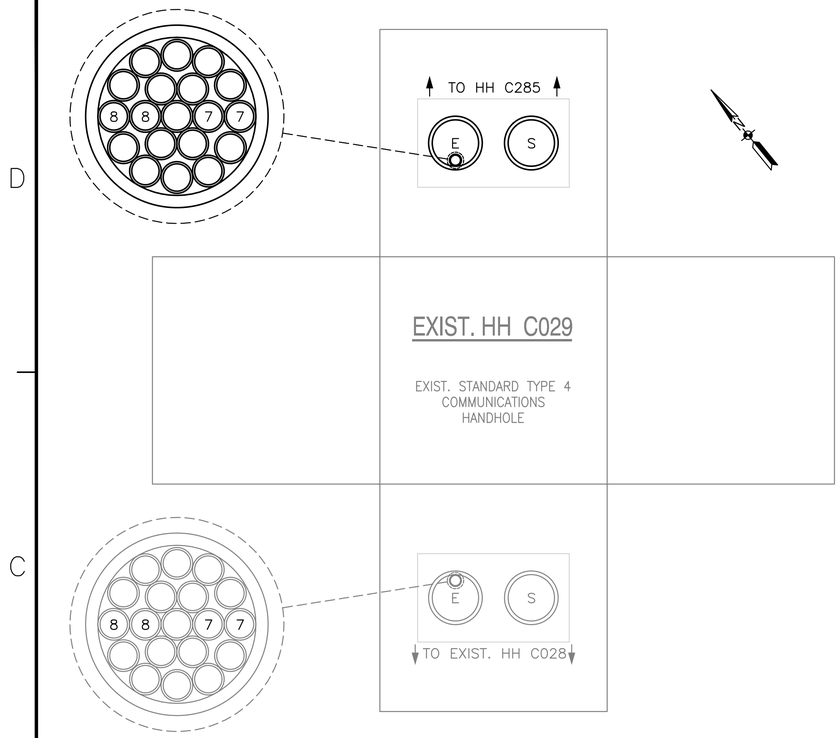
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – EXISTING COMM.

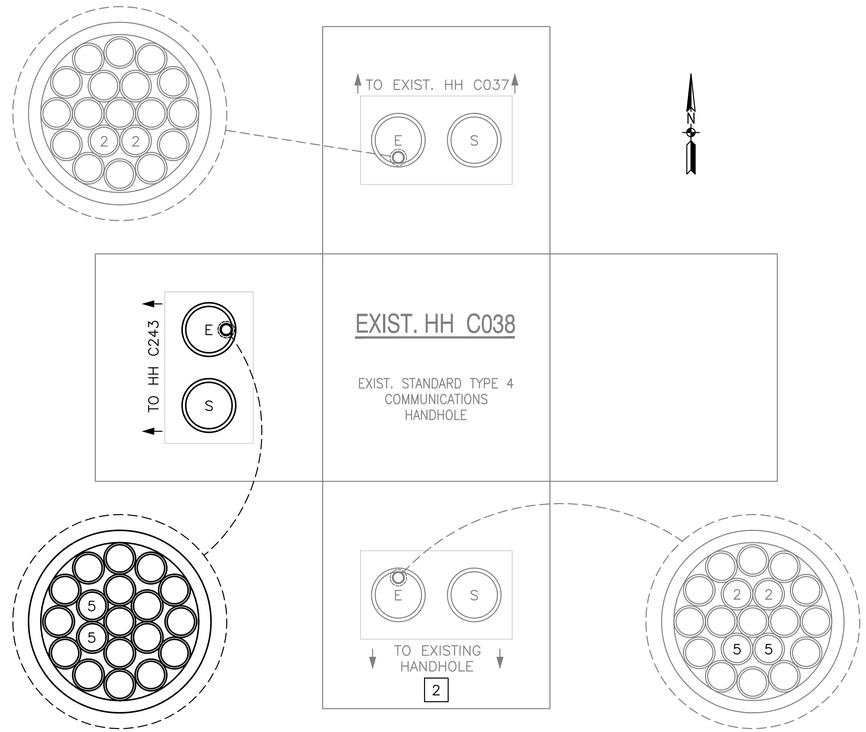
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.: 12691857
SHEET 324 OF 368

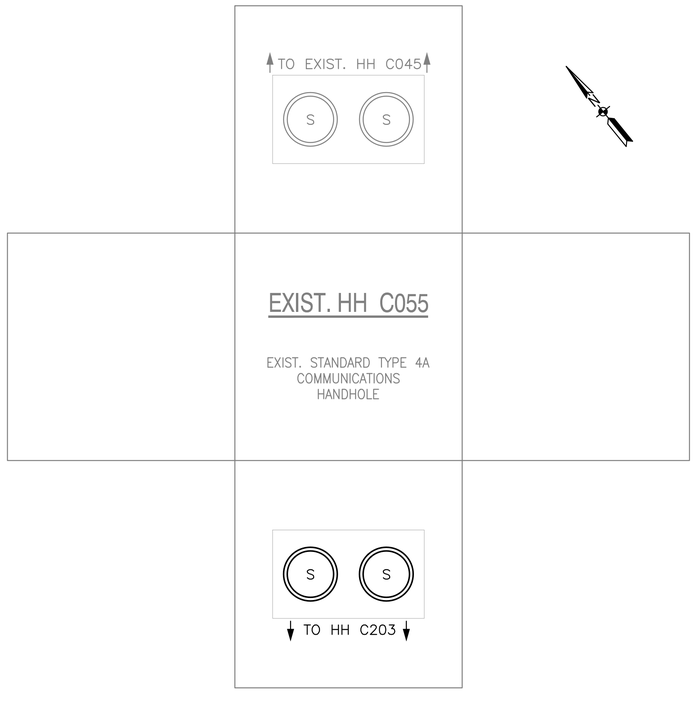
EA751

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: d:\SMO\10861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA751.dwg LAYOUT NAME: EA751 PLOTTED: Tuesday, March 24, 2015 - 11:04am USER: Rhurst







GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

OIC COMMANDER NAVFAC

ACTIVITY

DISPATCH TO MIL

DES SL | DRW SL | CHK DJP

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

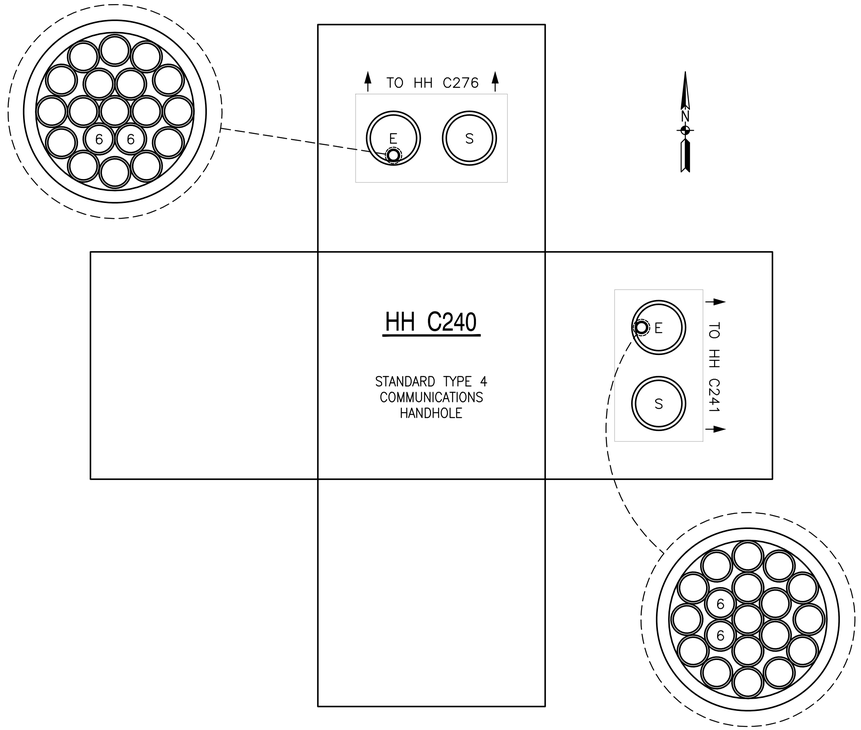
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – EXISTING COMM.

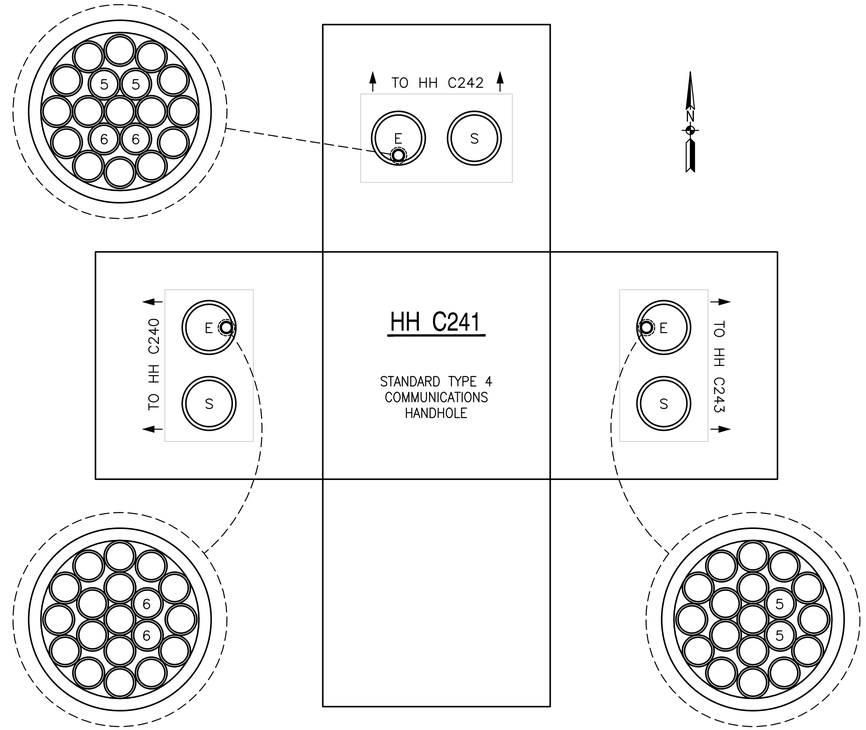
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.: 12691858
SHEET 325 OF 368

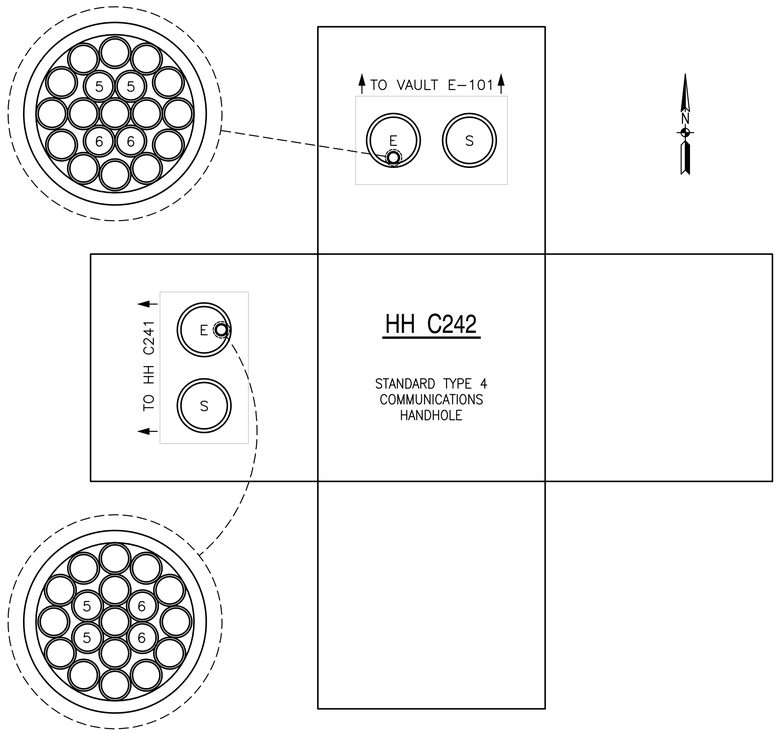
EA752

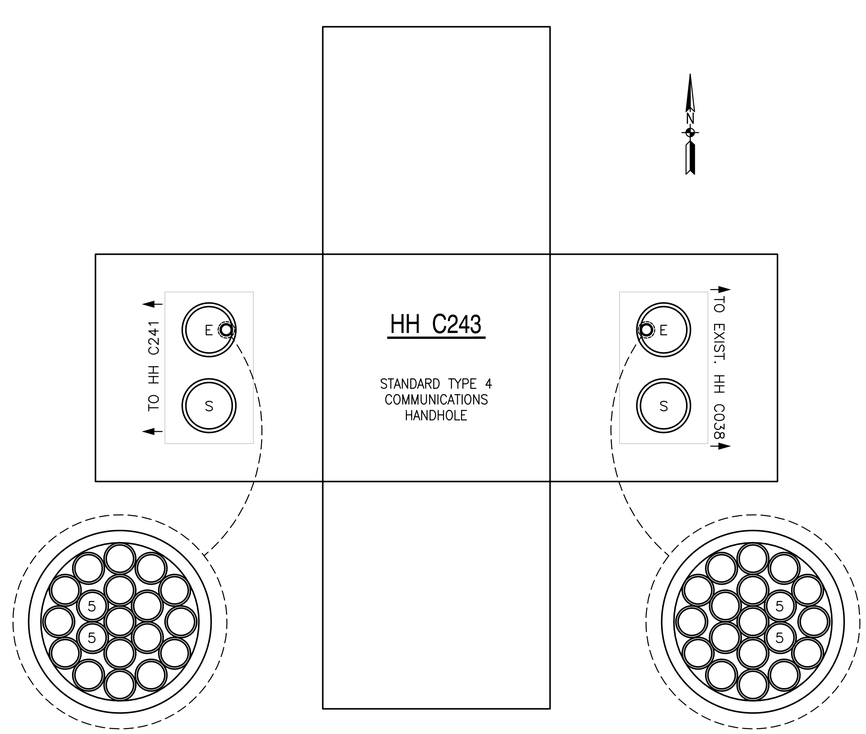
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: (G:\SMO\100861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA752.dwg LAYOUT NAME: EA752 PLOTTED: Tuesday, March 24, 2015 - 11:04am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

OIC COMMANDER NAVFAC

ACTIVITY

PREPARATION TO BIDS

DES SL | DRW SL | CHK DJP

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
HR IPT
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY

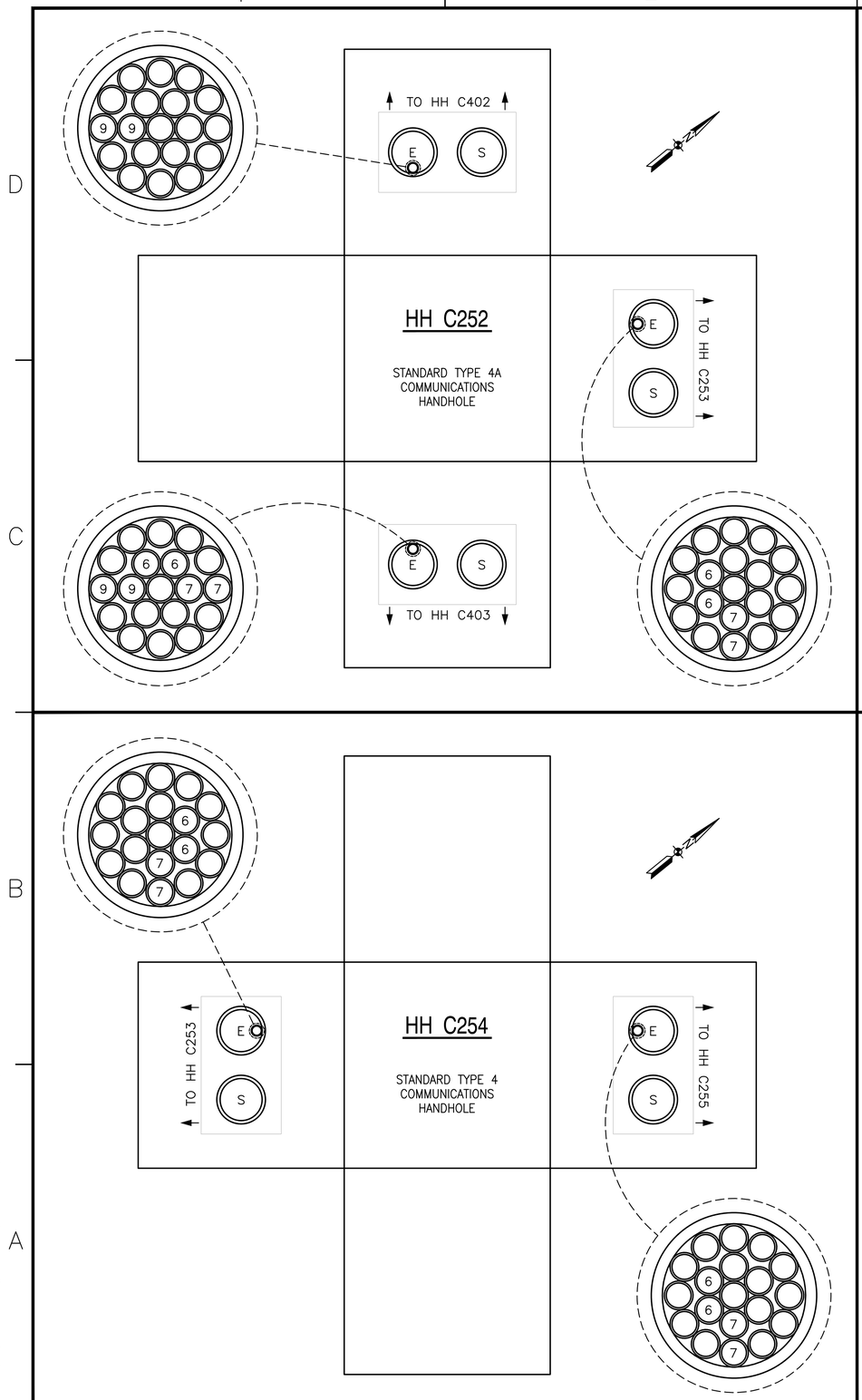
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 COMM.

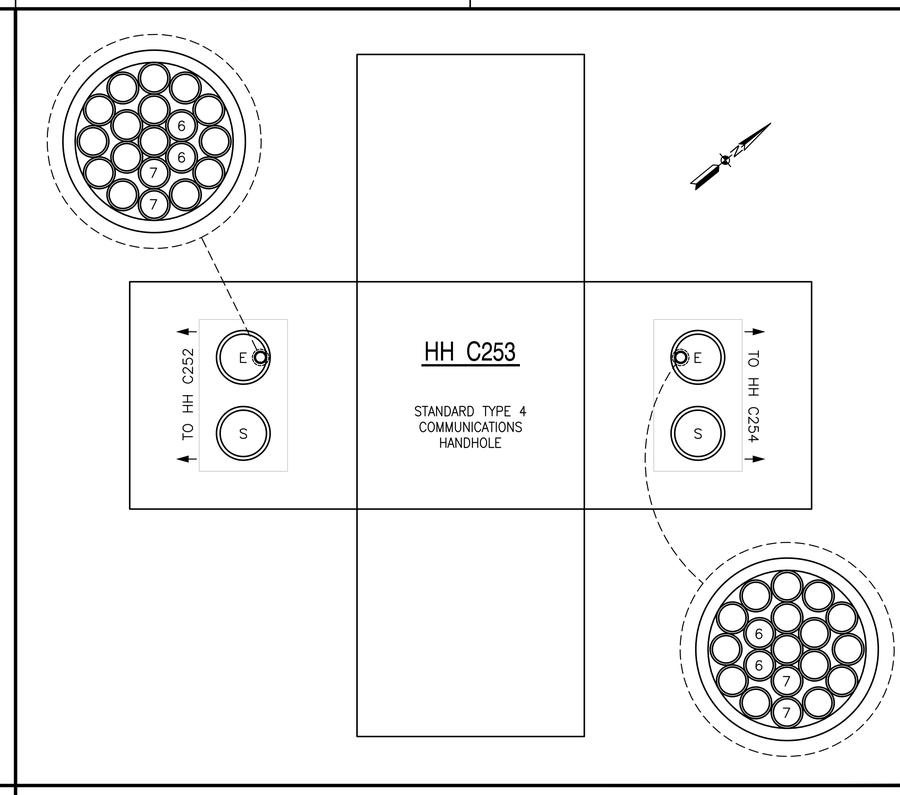
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691859
SHEET 326 OF 368

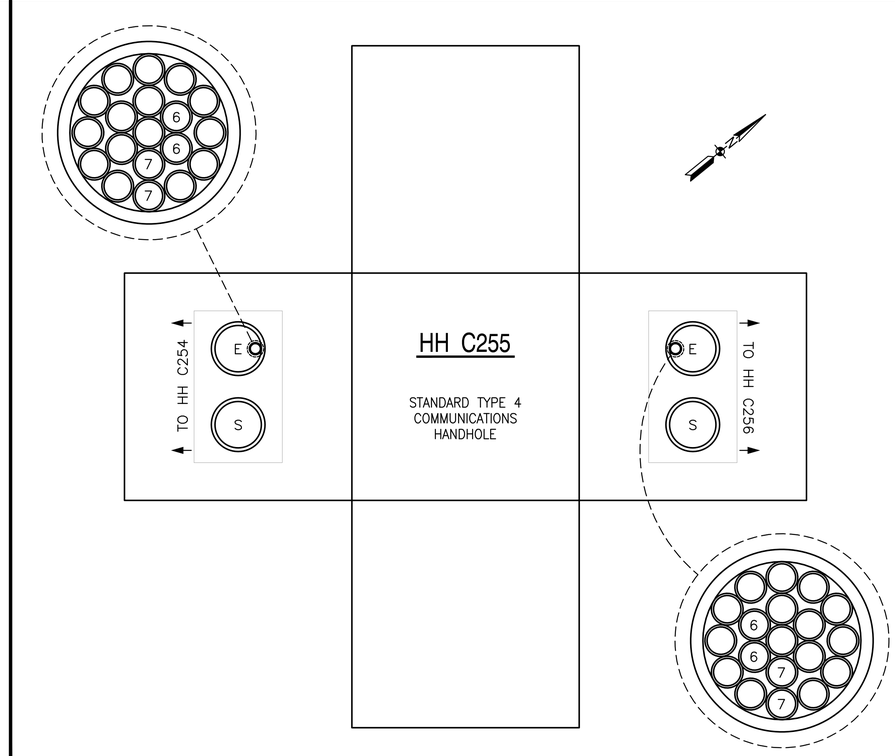
EA753

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: (Q:\SMO\109861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA753.dwg LAYOUT NAME: EA753 PLOTTED: Tuesday, March 24, 2015 - 11:04am USER: Rhurst







GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CMDR COMMANDER NAVFAC

AS NOTED

DISAPPROVED BY: DATE:

DES: SL DRN: SL CHK: DJP

PM/TM:

BRANCH MANAGER: WED

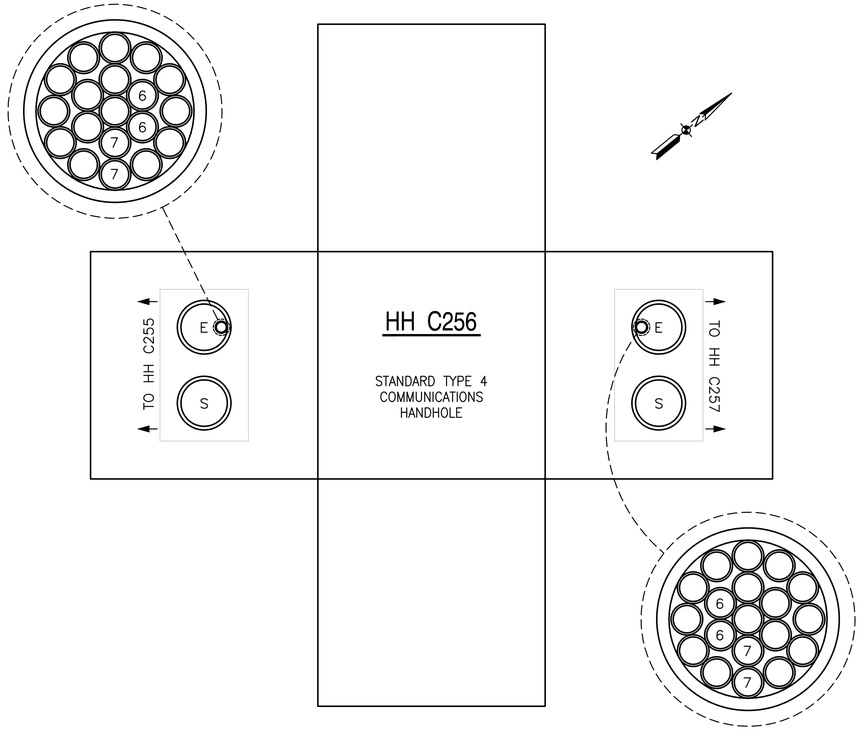
CHIEF ENG/ARCH:

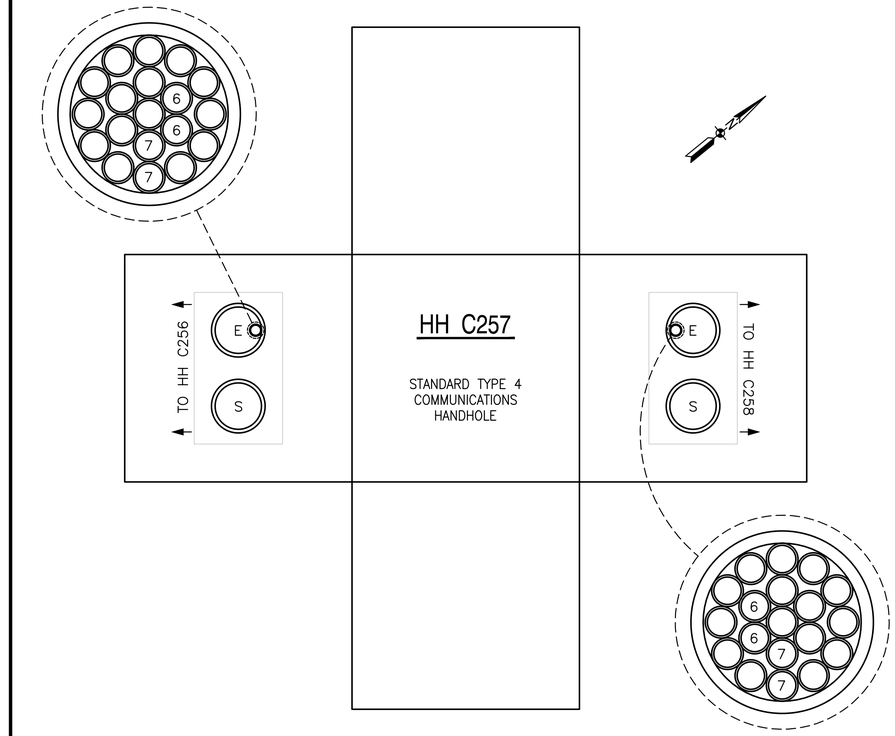
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 COMM.

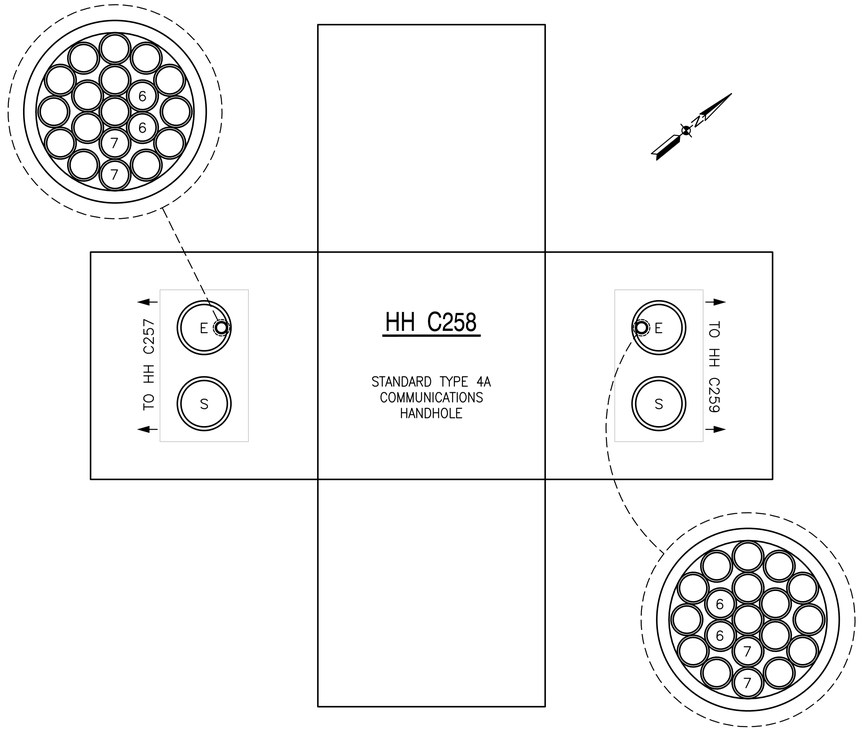
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691860
SHEET 327 OF 368
EA754

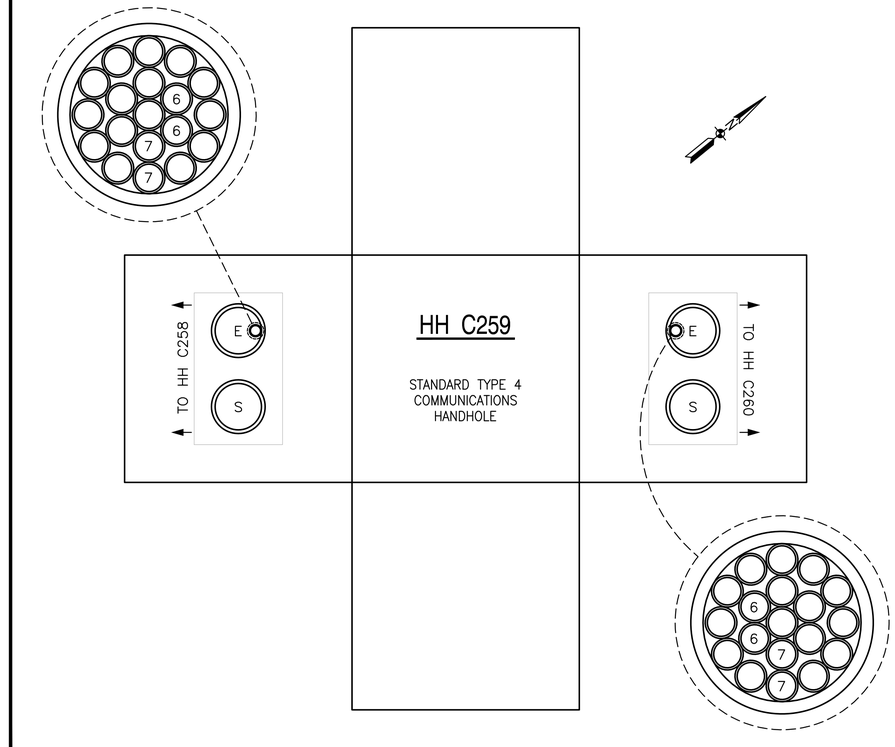
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: J:\SMO\100861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA754.dwg LAYOUT NAME: EA754 PLOTTED: Tuesday, March 24, 2015 - 11:05am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

OIC COMMANDER NAVFAC

AS NOTED

DISAPPROVED BY: DATE:

DES: SL | DRN: SL | CHK: DJP

PM/TM:

BRANCH MANAGER: WED

CHIEF ENG/ARCH:

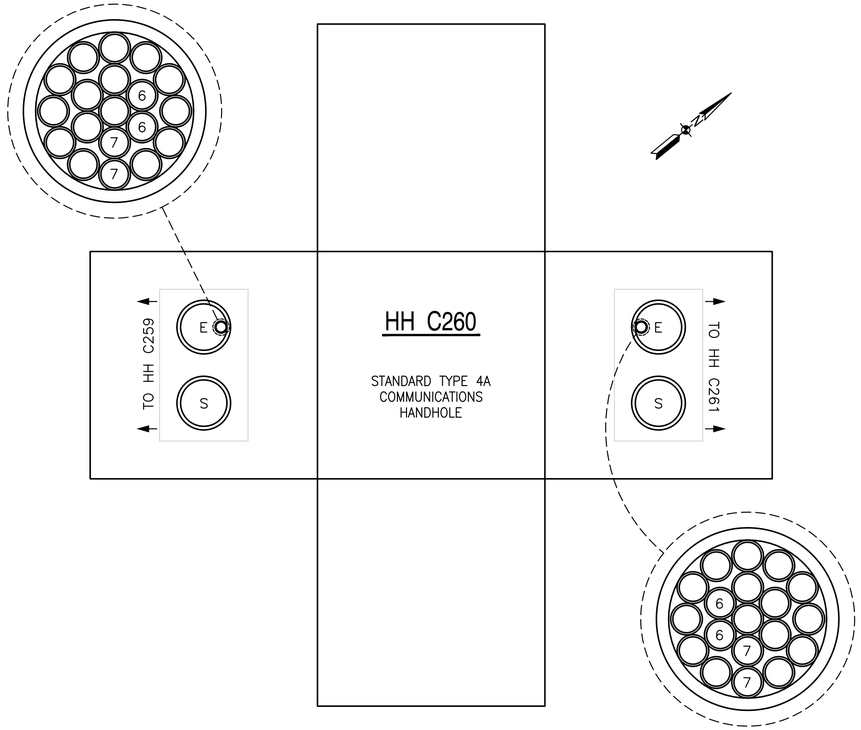
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
HR IPT
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 COMM.

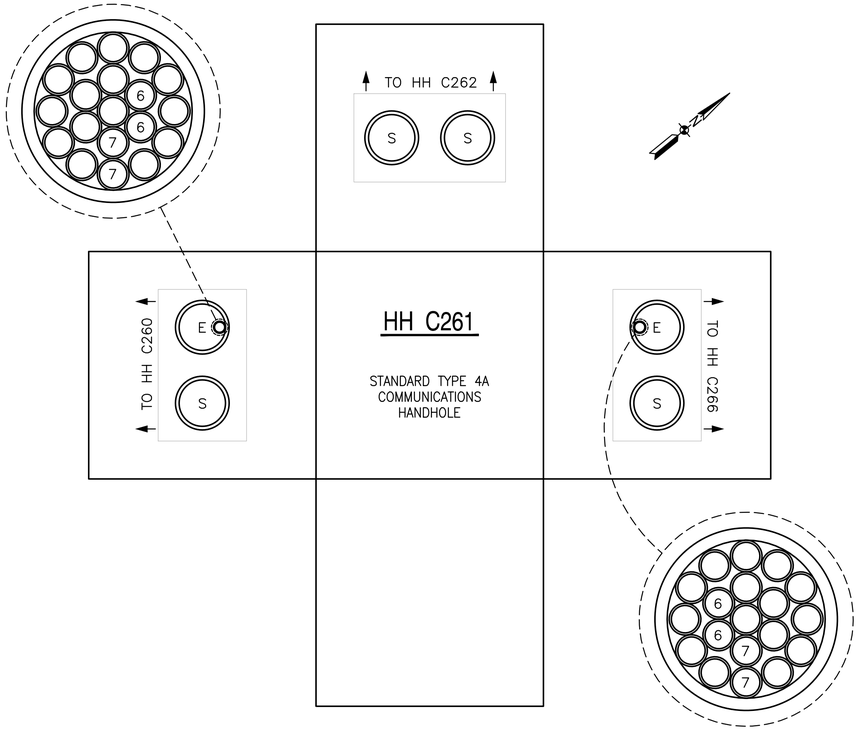
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691861
SHEET 328 OF 368

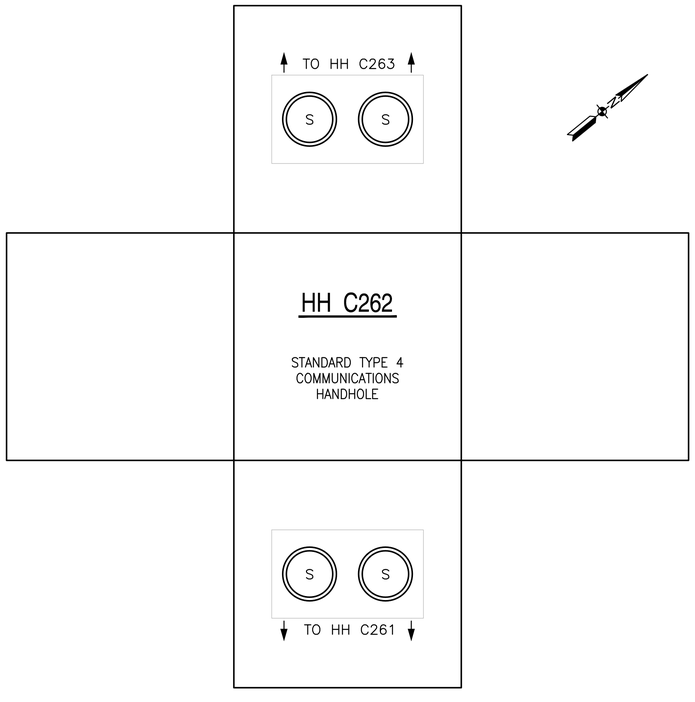
EA755

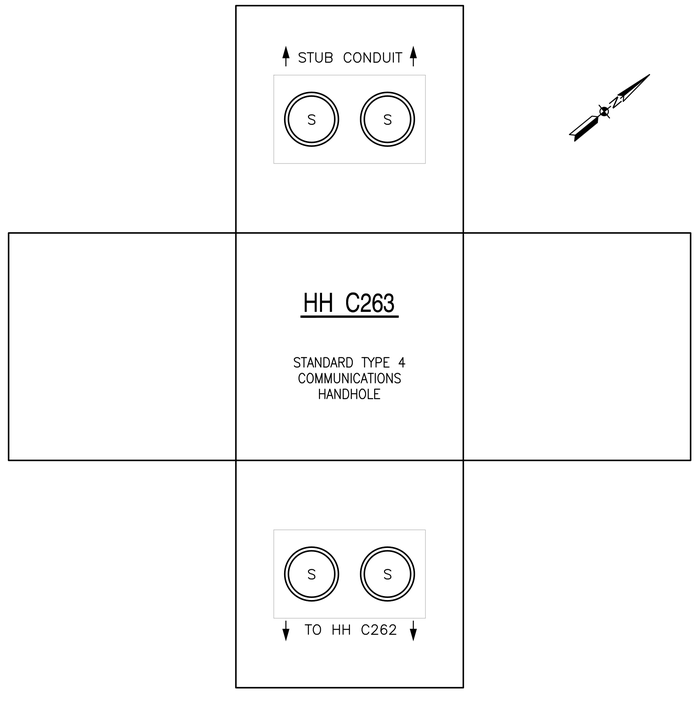
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: d:\SMO\10861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA755.dwg LAYOUT NAME: EA755 PLOTTED: Tuesday, March 24, 2015 - 11:05am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

ACTIVITY

DISPATCH TO: MAIL

DES: SL | DRN: SL | CHK: DJP

PM/TM

BRANCH MANAGER: WED

CHIEF ENG/ARCH

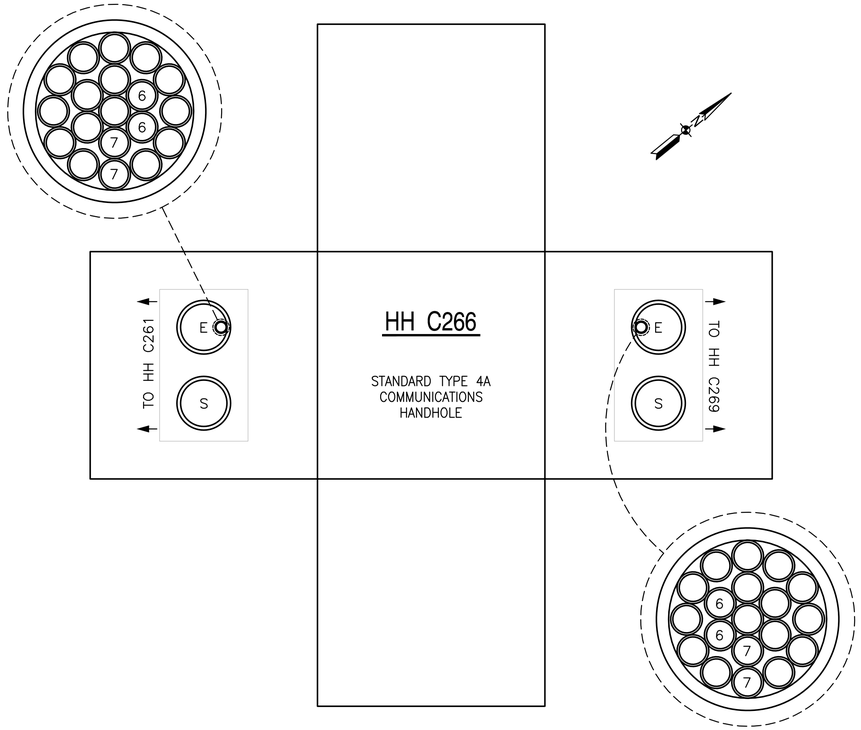
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 COMM.

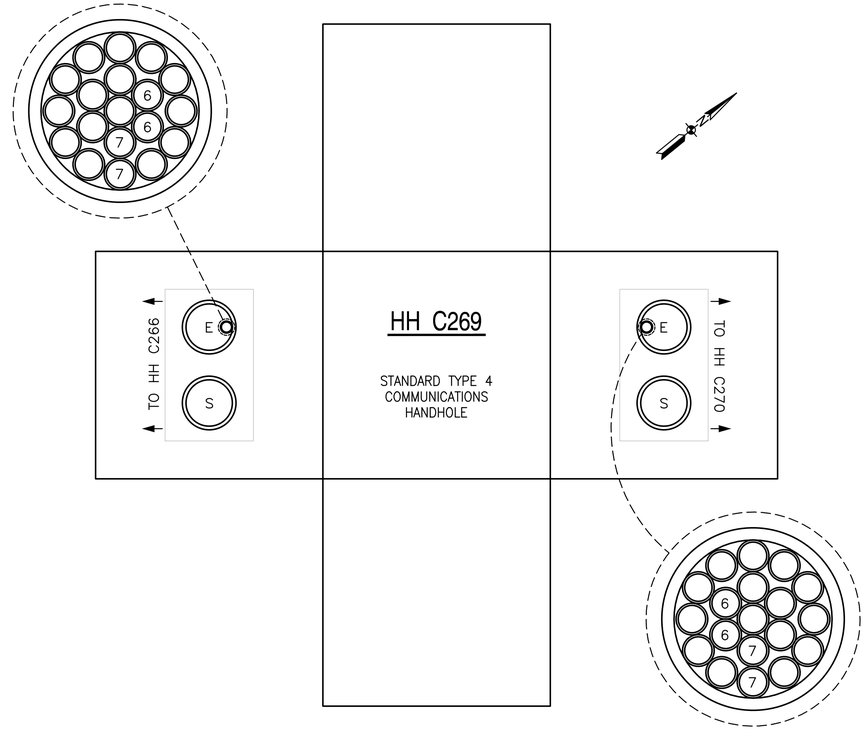
SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691862
SHEET 329 OF 368

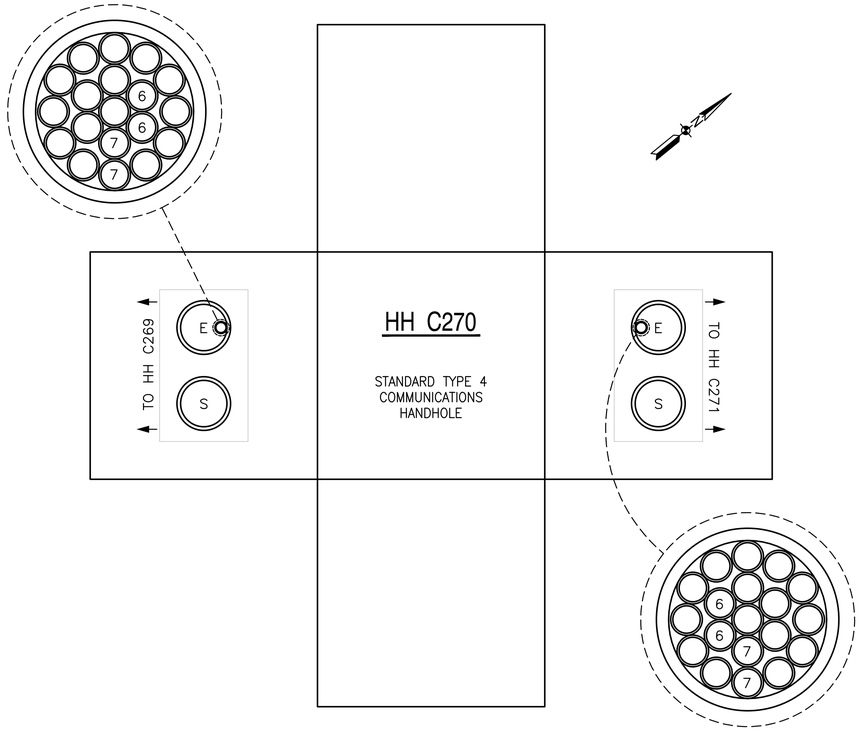
EA756

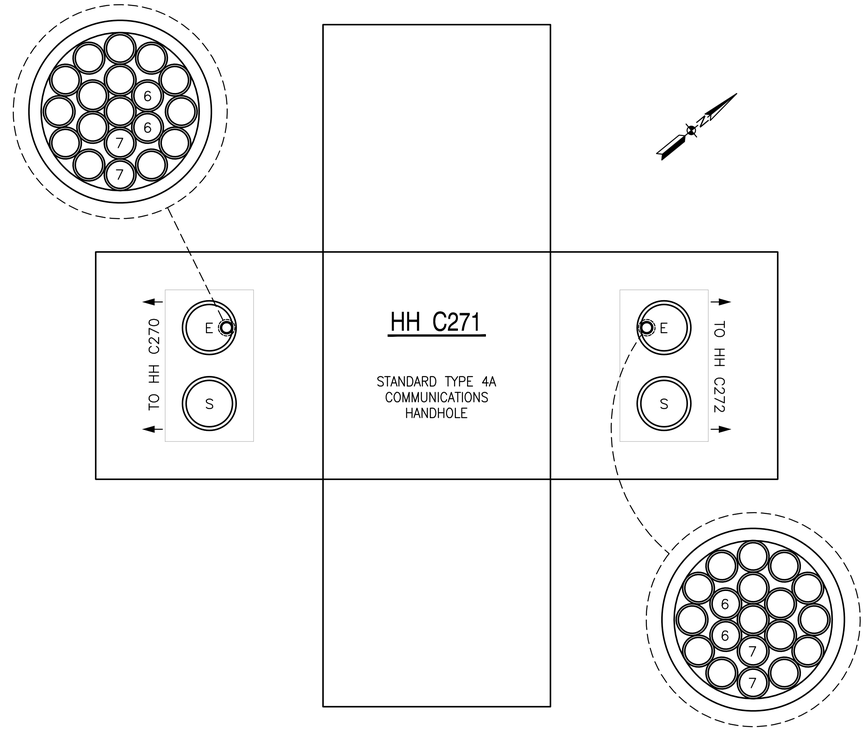
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: z:\SMO\106861_DOB_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-DOB-EA756.dwg LAYOUT NAME: EA756 PLOTTED: Tuesday, March 24, 2015 - 11:05am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

OIC COMMANDER NAVFAC

AS NOTED

RESPONSIBLE TO MIL

DES SL | DRW SL | CHK DJP

PM/TM

BRANCH MANAGER WED

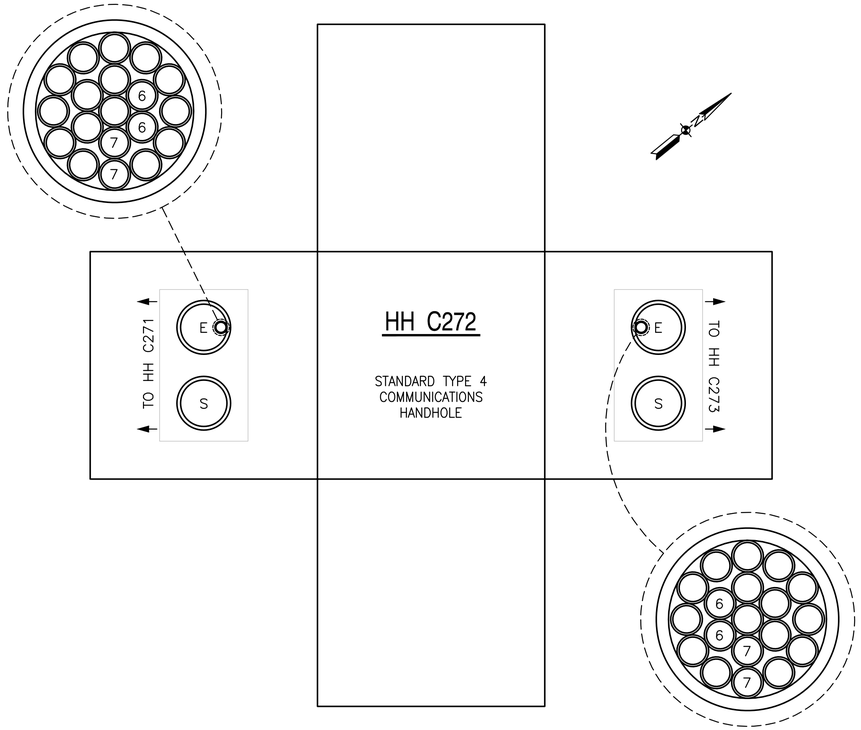
CHIEF ENG/ARCH

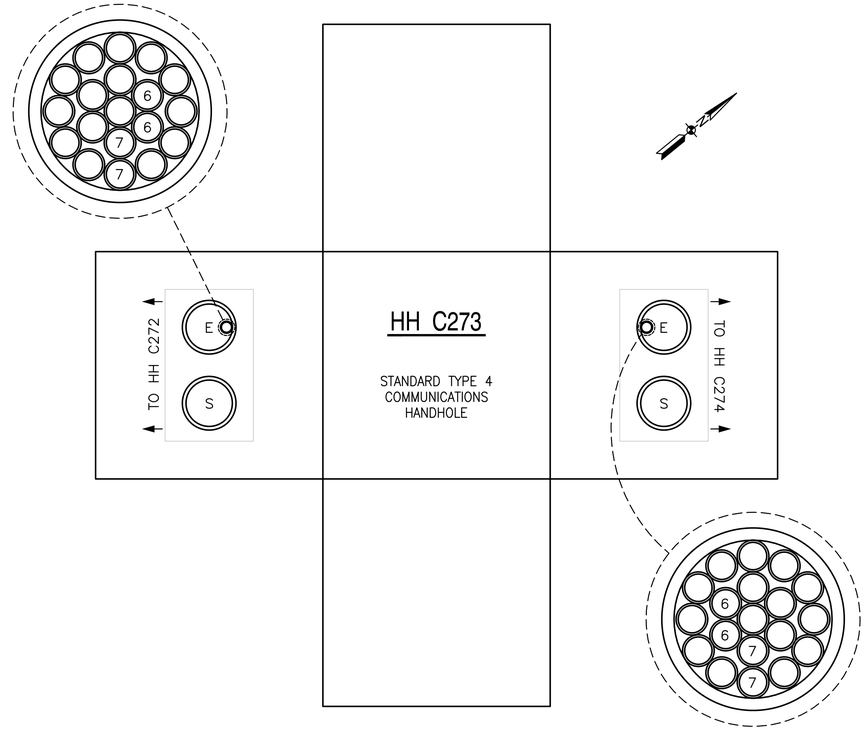
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 COMM.

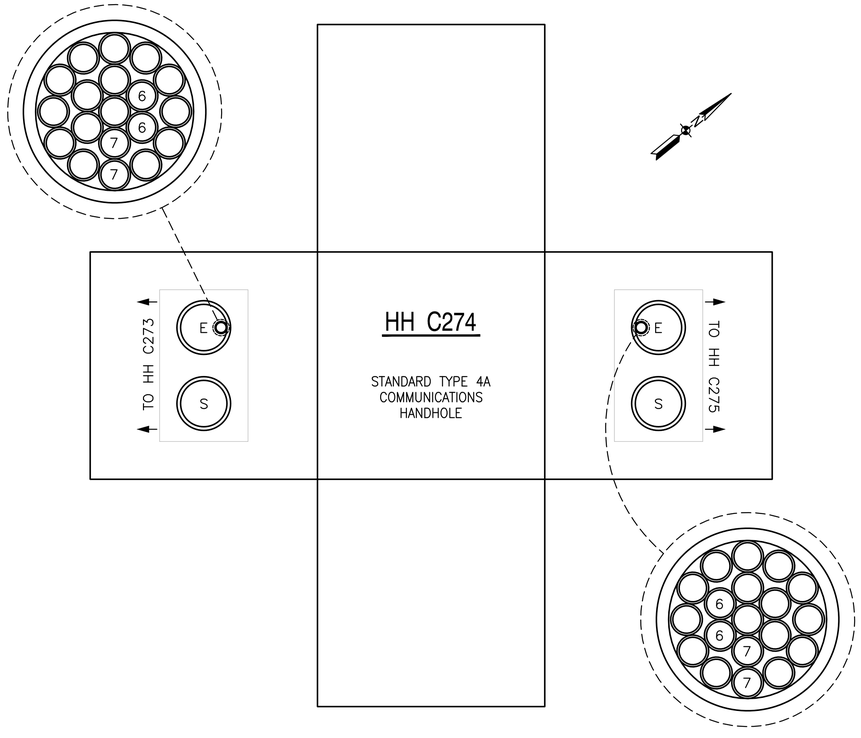
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691863
SHEET 330 OF 368
EA757

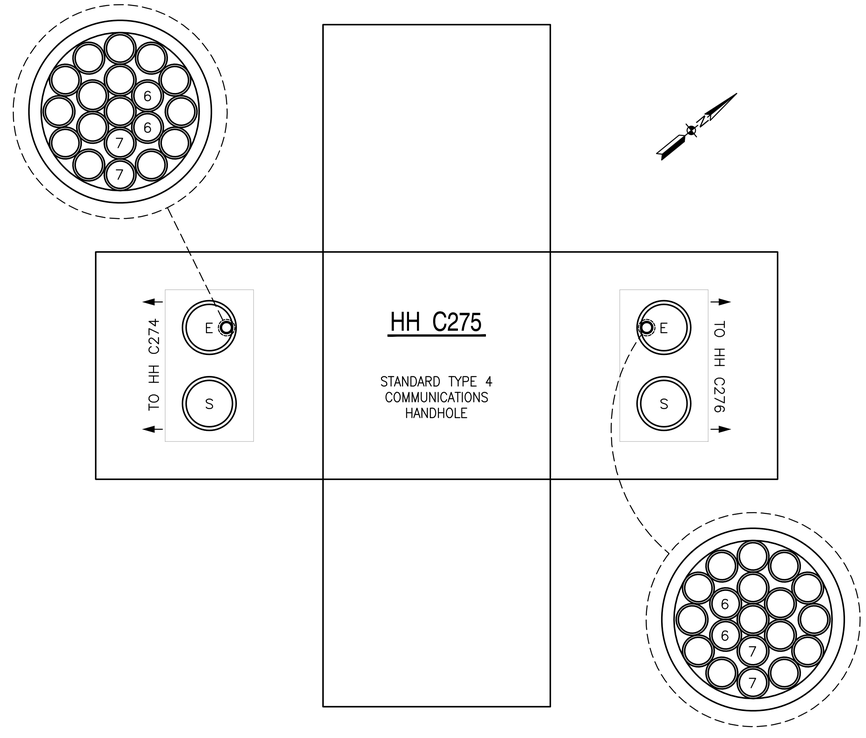
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: d:\SMO\10861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA757.dwg LAYOUT NAME: EA757 PLOTTED: Tuesday, March 24, 2015 - 11:05am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

OIC COMMANDER NAVFAC

AS NOTED

RESPONSIBLE TO MAIL

DES SL | DRW SL | CHK DJP

PM/TM

BRANCH MANAGER WED

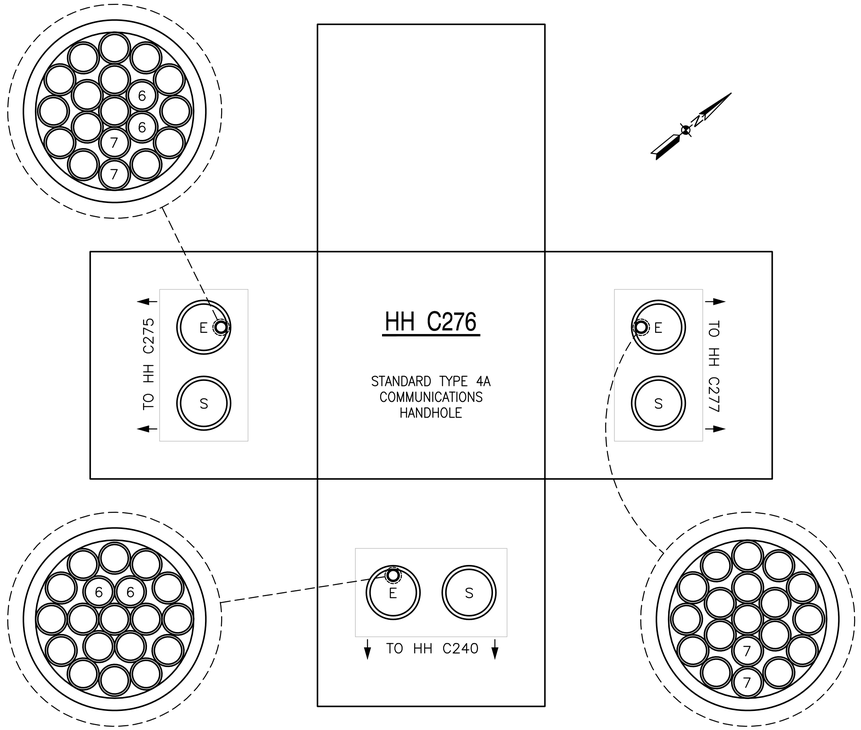
CHIEF ENG/ARCH

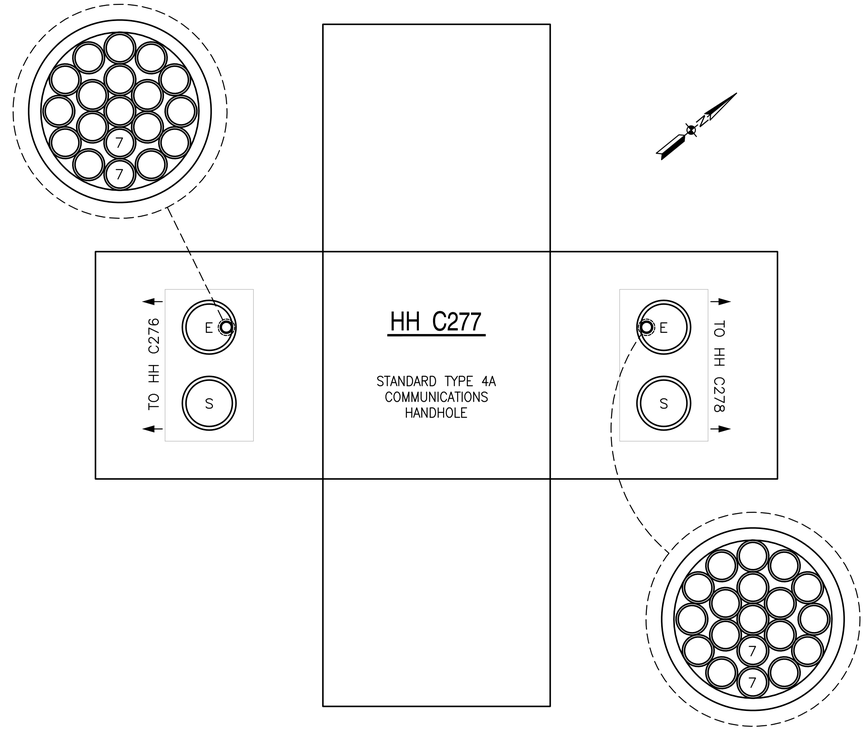
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 COMM.

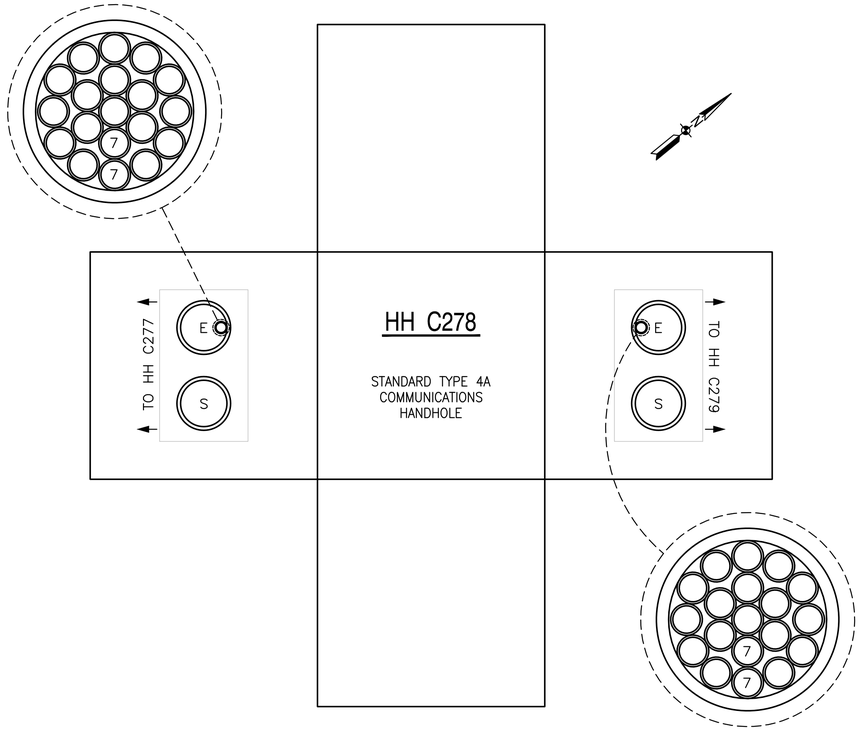
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691864
SHEET 331 OF 368
EA758

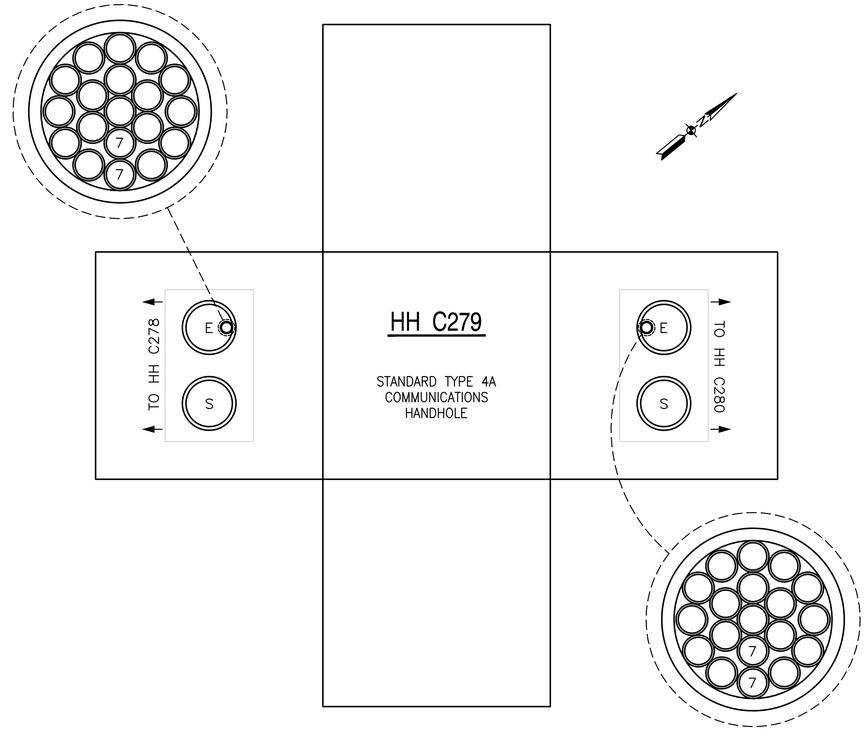
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: J:\SMO\10861_DOB_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-DOB-EA758.dwg LAYOUT NAME: EA758 PLOTTED: Tuesday, March 24, 2015 - 11:05am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

ACTIVITY

PREPARED TO MIL

DES SL | DRW SL | CHK DJP

PM/TM

BRANCH MANAGER WED

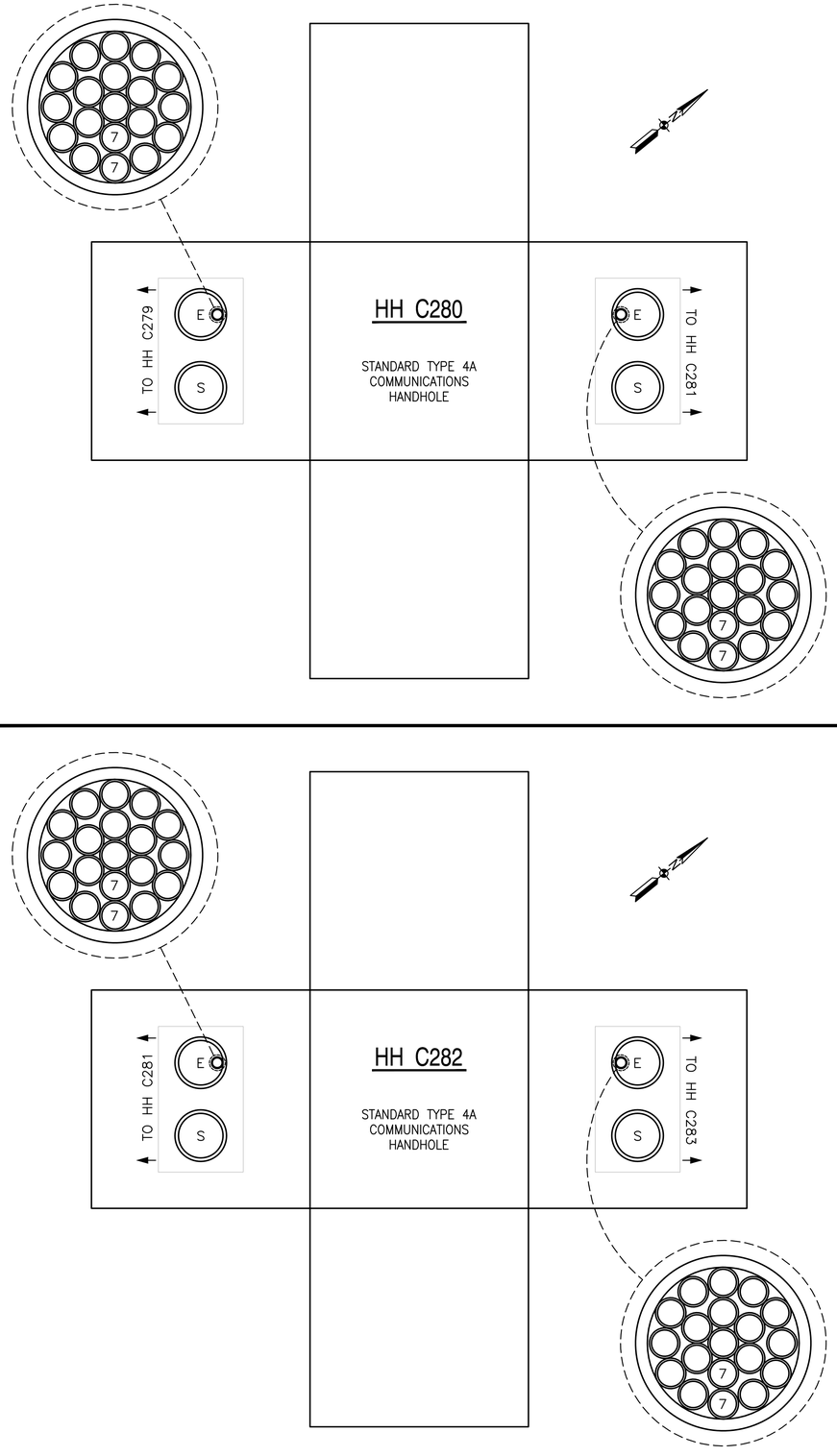
CHIEF ENG/ARCH

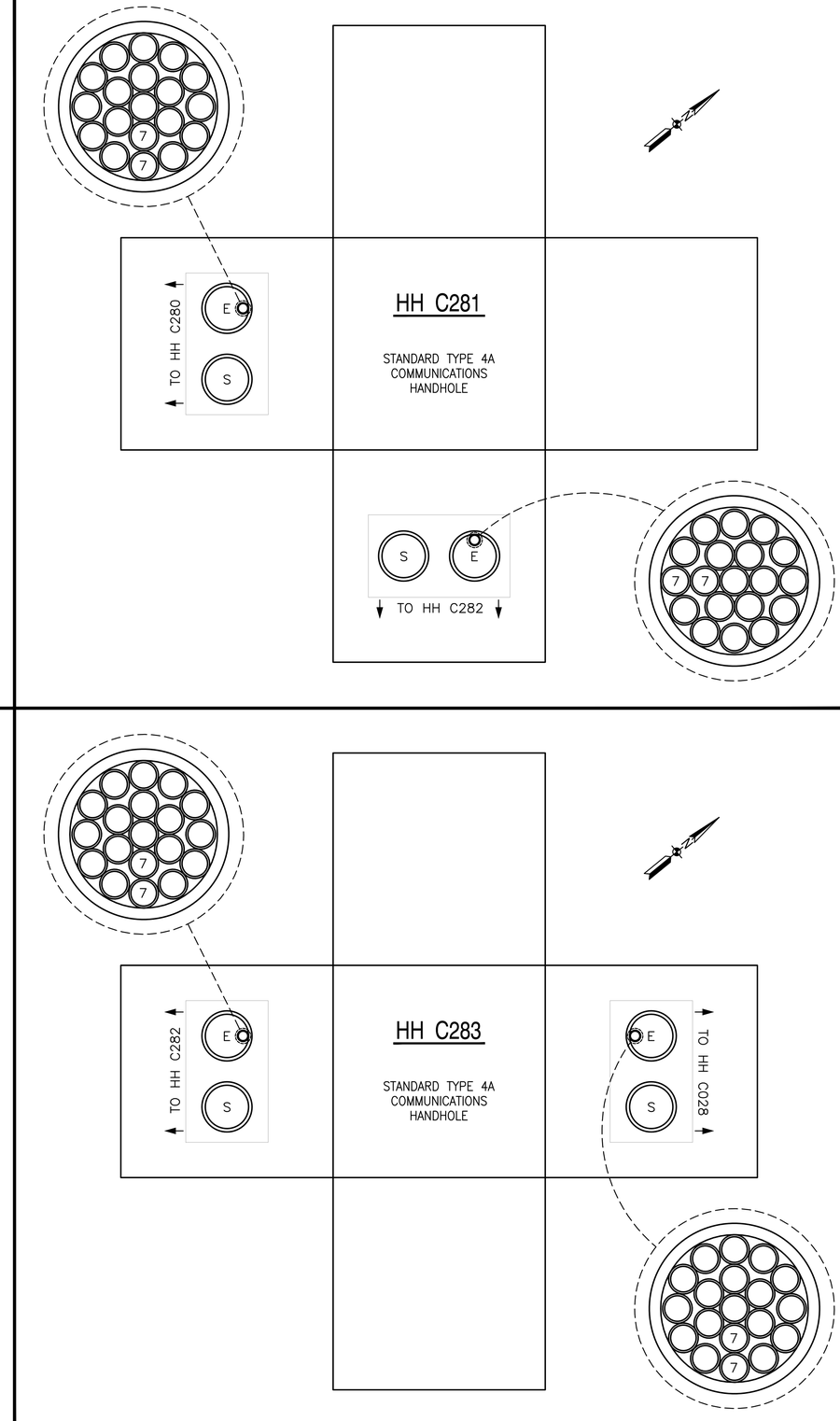
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 COMM.

SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691865
SHEET 332 OF 368
EA759

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: J:\SMO\109861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA759.dwg LAYOUT NAME: EA759 PLOTTED: Tuesday, March 24, 2015 - 11:06am USER: Rhurst





GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

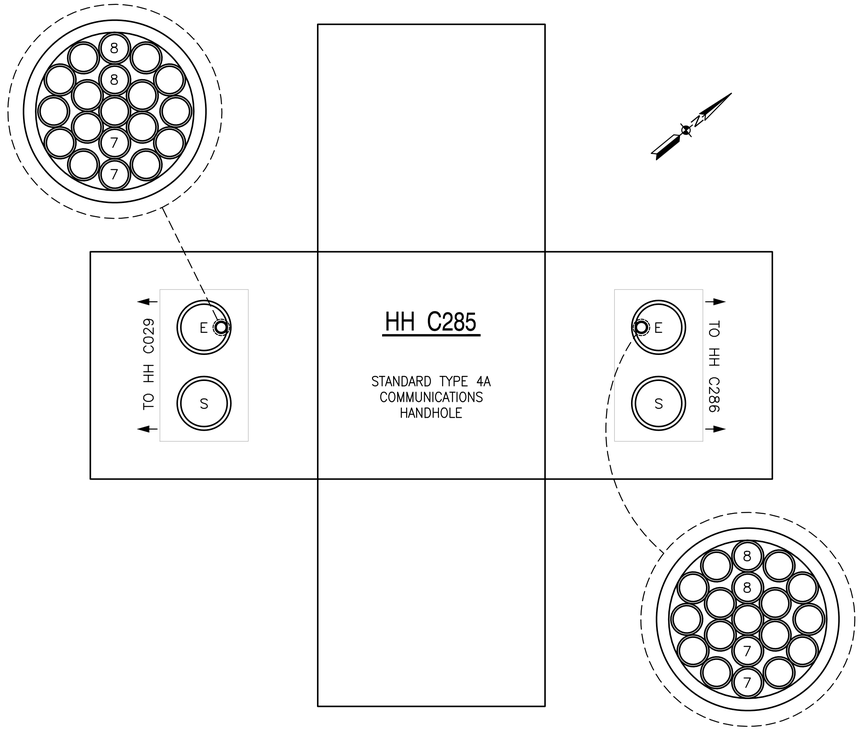
A/E INFO

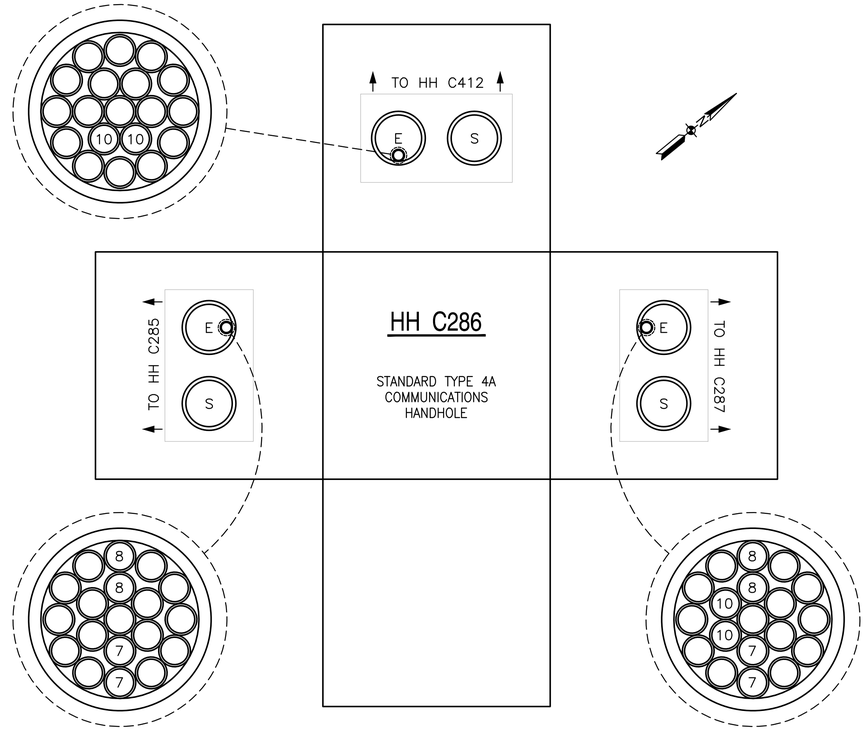
APPROVED
OIC COMMANDER NAVFAC
ACTIVITY
RESPONSIBLE TO NAVFAC
DES SL | DRW SL | CHK DJP
PM/TM
BRANCH MANAGER WED
CHIEF ENG/ARCH

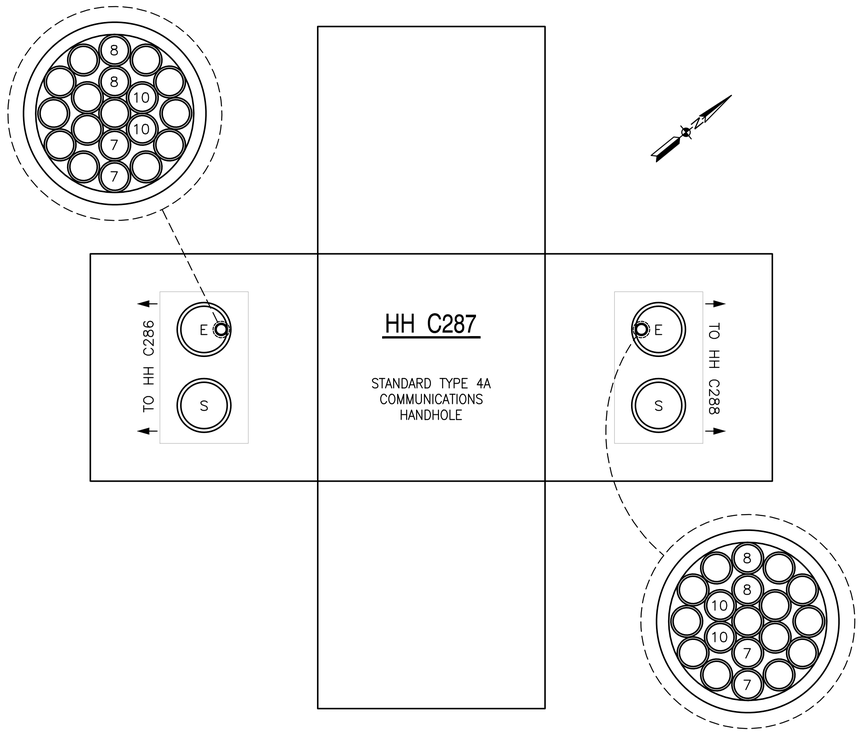
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 COMM.

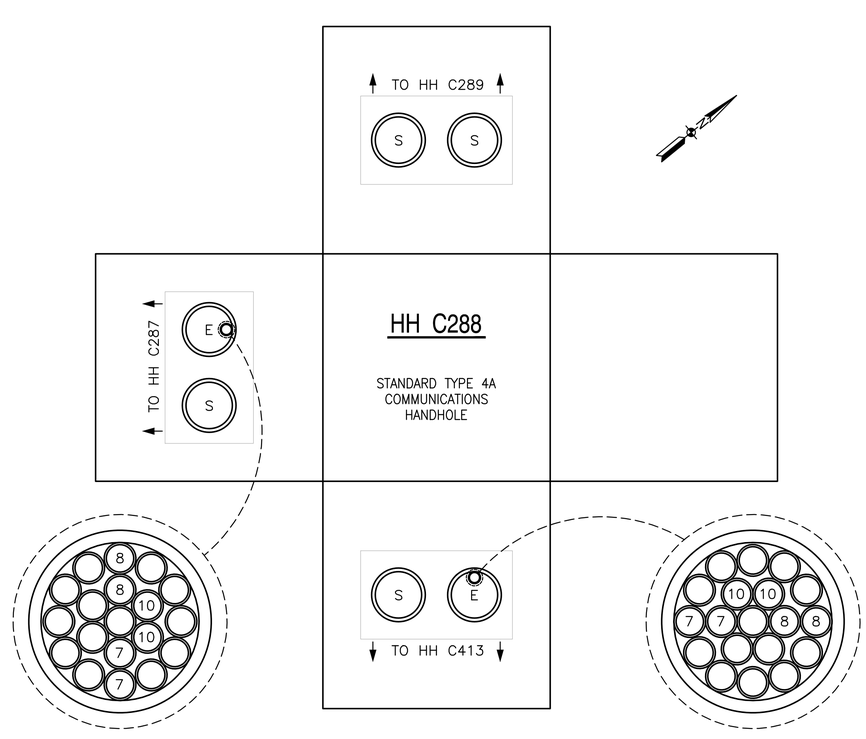
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691866
SHEET 333 OF 368
EA760
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: J:\SMO\100861_DOB_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-DOB-EA760.dwg LAYOUT NAME: EA760 PLOTTED: Tuesday, March 24, 2015 - 11:06am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

(1) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.

(2) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.

(3) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.

(4) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.

(5) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.

(6) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.

(7) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.

(8) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.

(9) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.

(10) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

( ) EMPTY/SPARE TUBE.

SHEET KEYNOTES

[1] PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.

[2] PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

AS-BUILTS

RESPONSIBLE TO: DATE:

DES: SL	DRN: SL	CHK: DJP

PM/TM:

BRANCH MANAGER: WED

CHIEF ENG/ARCH:

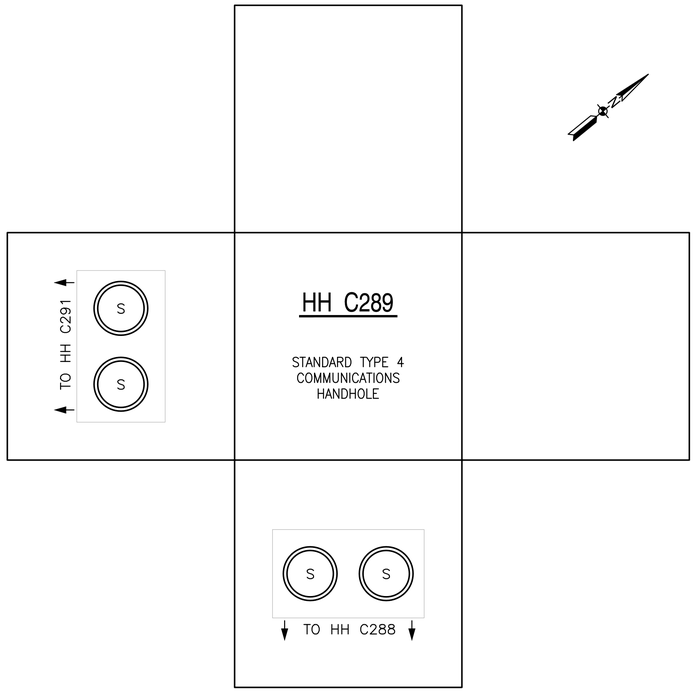
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
HR IPT
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 COMM.

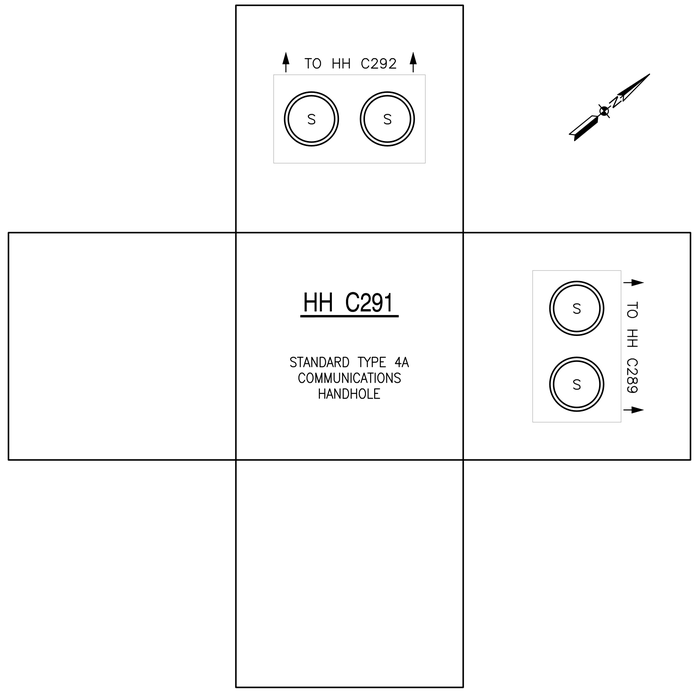
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691867
SHEET: 334 OF: 368

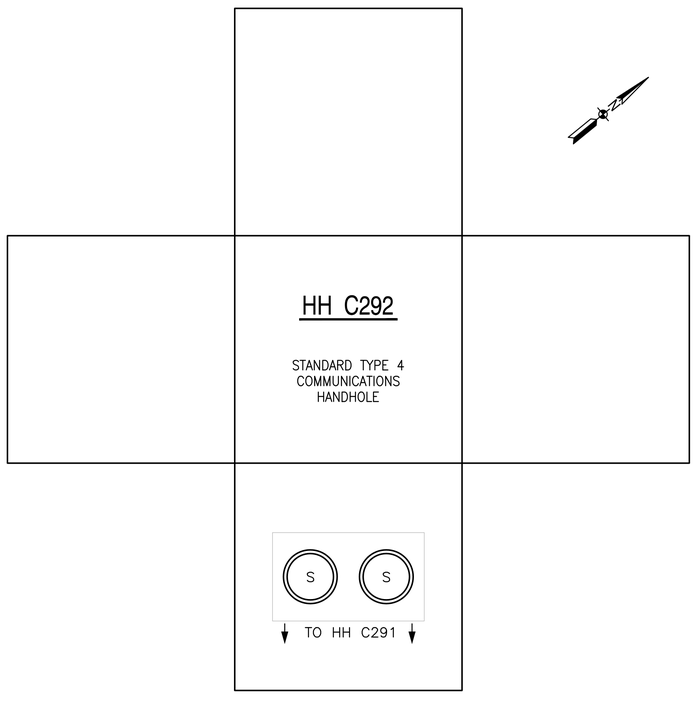
EA761

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: (G:\SMO\100861_DOB_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-DOB-EA761.dwg LAYOUT NAME: EA761 PLOTTED: Tuesday, March 24, 2015 - 11:06am USER: Rhurst







GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

ACTIVITY

DISPATCH TO: MAIL

DES: SL | DRW: SL | CHK: DJP

PM/DM

BRANCH MANAGER: WED

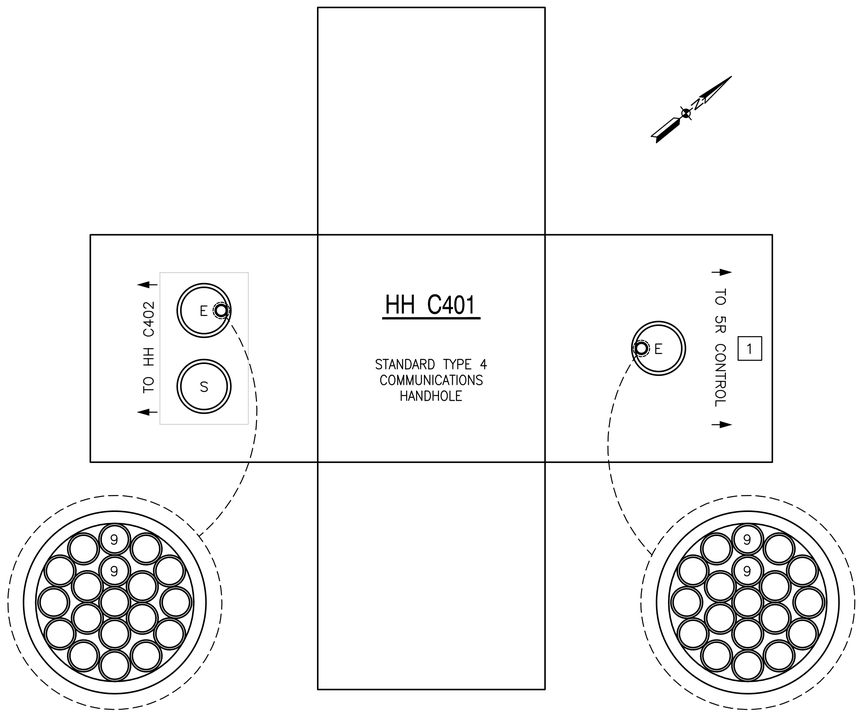
CHIEF ENG/ARCH

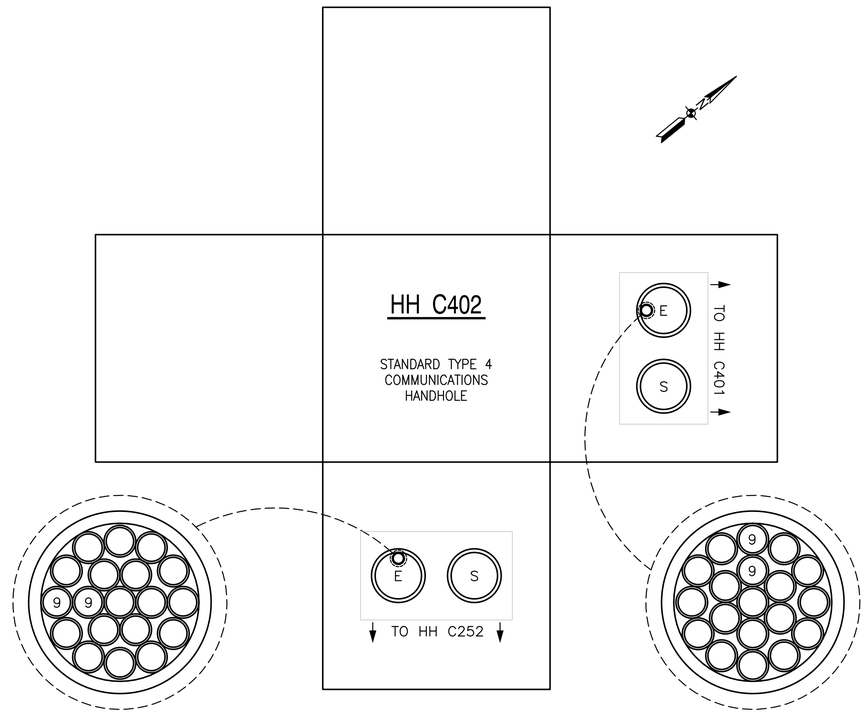
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – PHASE 1 COMM.

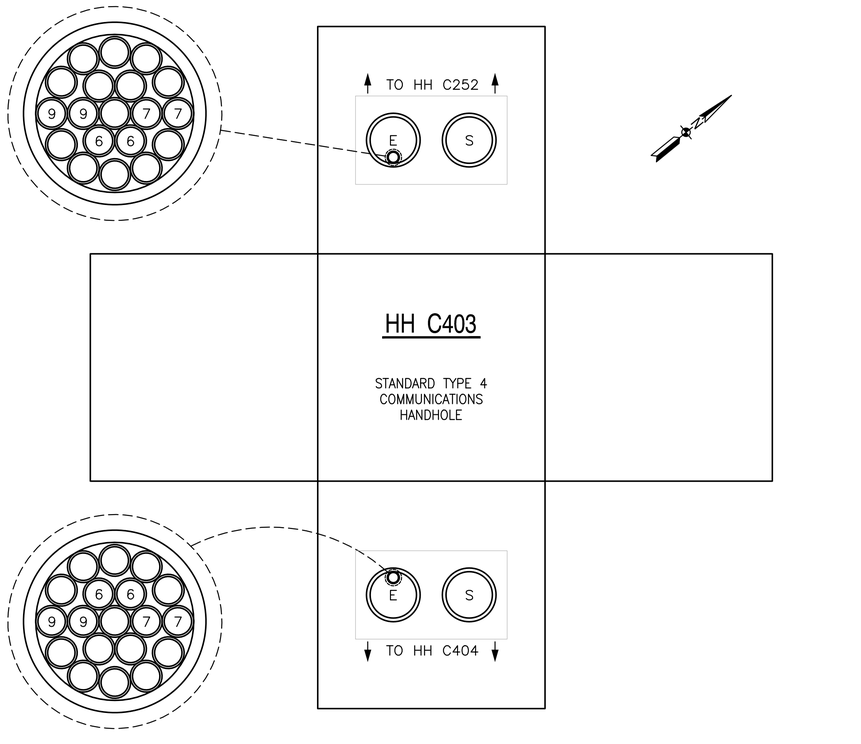
SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.: 12691868
SHEET 335 OF 368
EA762

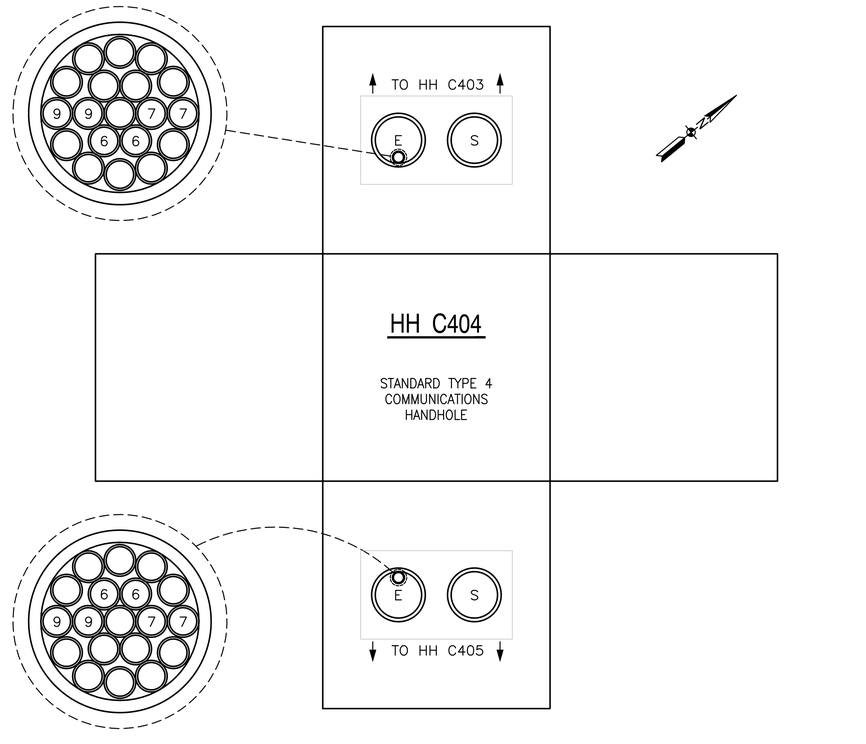
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: (G:\SMO\100861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA762.dwg LAYOUT NAME: EA762 PLOTTED: Tuesday, March 24, 2015 - 11:06am USER: Rhurst









GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.
2. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.
5. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.
6. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.
7. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.
8. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.
9. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.
10. (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

ACTIVITY

PREPARED TO MEET

DES	SL	DRN	SL	CHK	DJP

PM/TM

BRANCH MANAGER WED

CHIEF ENG/ARCH

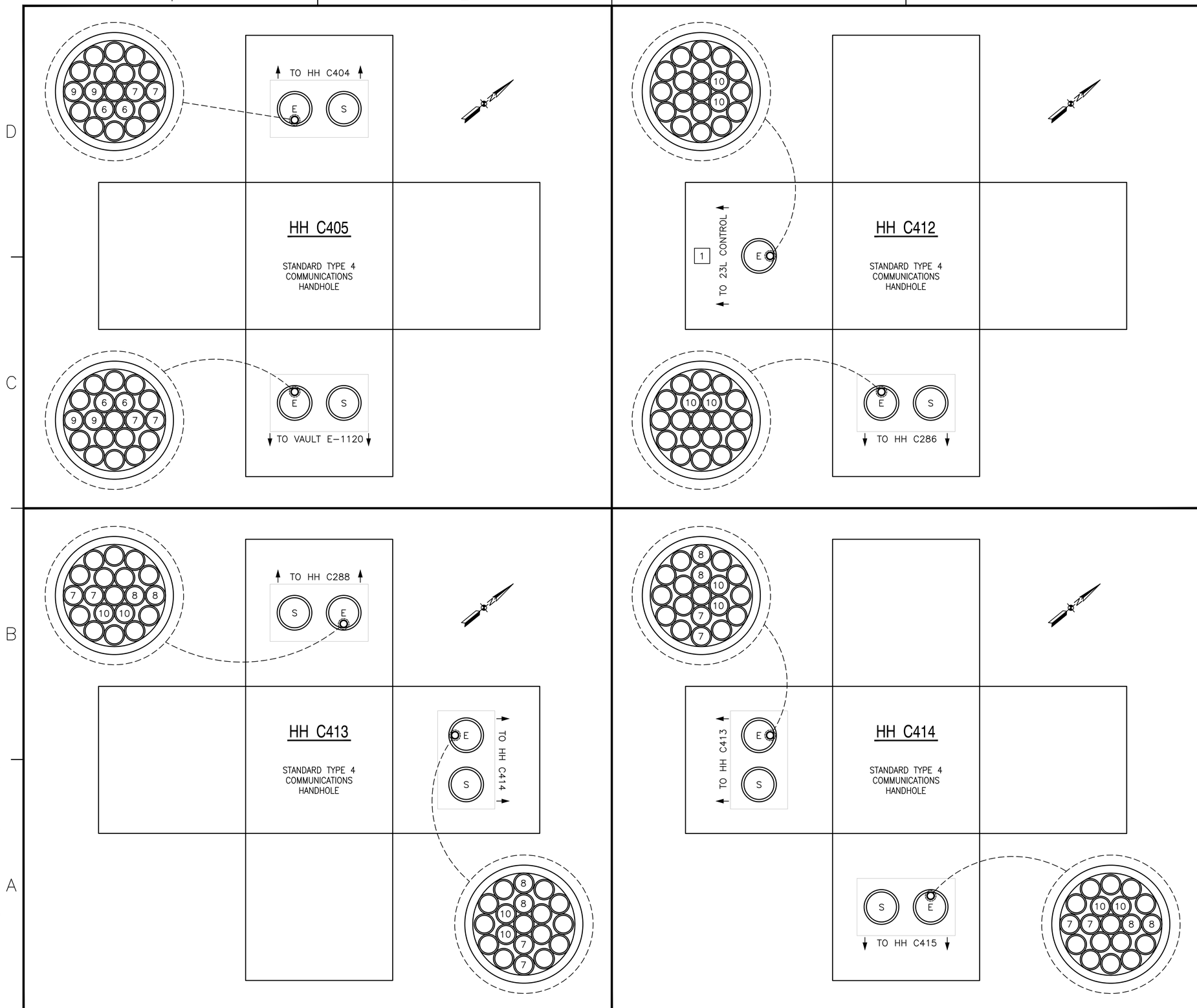
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
HANDHOLE & MANHOLE DIAGRAMS – PHASE 2 COMM.

SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691869
SHEET 336 OF 368

EA763

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: (X:\SMO\100861_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-008-EA763.dwg LAYOUT NAME: EA763 PLOTTED: Tuesday, March 24, 2015 - 11:07am USER: Rhurst



GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19–TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

(1) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO LIGHTING/ELECTRICAL VAULT E–145.

(2) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO AIRCRAFT CONTROL TOWER.

(3) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3015 TO RUNWAY 14L WAVE–OFF CONTROL PANEL.

(4) EXISTING TO REMAIN (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–145 TO RUNWAY 32R WAVE–OFF CONTROL PANEL.

(5) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 INSTALLED IN PHASE 1.

(6) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–101 TO LIGHTING/ELECTRICAL VAULT E–1120 INSTALLED IN PHASE 2.

(7) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO LIGHTING/ELECTRICAL VAULT E–3036 INSTALLED IN PHASE 2.

(8) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO LIGHTING/ELECTRICAL VAULT E–3015 INSTALLED IN PHASE 2.

(9) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–1120 TO RUNWAY 5R WAVE–OFF CONTROL PANEL.

(10) (1) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E–3036 TO RUNWAY 23L WAVE–OFF CONTROL PANEL.

( ) EMPTY/SPARE TUBE.

SHEET KEYNOTES

[1] PROVIDE CONDUIT FROM HANDHOLE TO WAVE–OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.

[2] PROVIDE (2) 6–STRAND, SINGLE–MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E–101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

CDR COMMANDER NAVFAC

ACTIVITY

RESPONSIBLE TO DATE

DES SL | DRW SL | CHK DJP

PM/TM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY

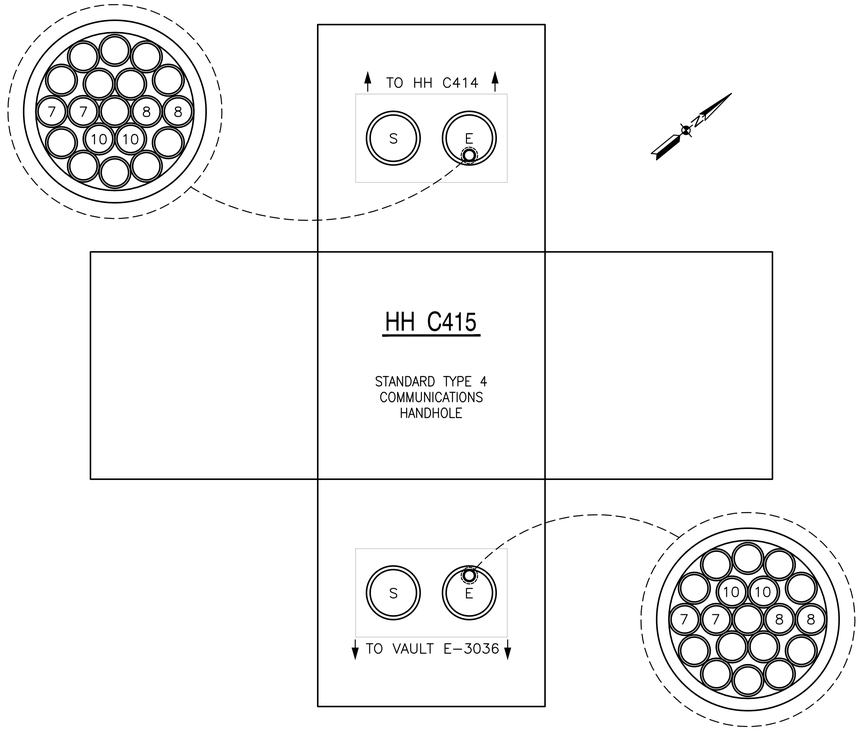
HANDHOLE & MANHOLE DIAGRAMS – PHASE 2 COMM.

SCALE: NOT TO SCALE
E/PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691870
SHEET 337 OF 368

EA764

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: (X:\SMO\100861_DOB_Energy_and_Reliab\CADD\ELECTRICAL\10-0861-DOB-EA764.dwg LAYOUT NAME: EA764 PLOTTED: Tuesday, March 24, 2015 - 11:07pm USER: Rhurst



GENERAL NOTES

1. SEE STANDARD MANHOLE/HANDHOLE DETAILS ON DRAWING EA503.
2. HANDHOLE AND MANHOLE DIAGRAMS SHOWN ON THIS DRAWING ARE NOT TO SCALE AND ARE FOR COORDINATION PURPOSES ONLY.

DUCTBANK CONDUIT LEGEND

E – 4" PVC SCHEDULE 40 CONDUIT WITH A 19-TUBE INNERDUCT/TUBE CABLE. PROVIDE FIBER OPTIC CABLE AS INDICATED BY ENLARGED TUBE CABLE DETAILS SHOWN FOR EACH HANDHOLE.

S – SPARE 4" PVC SCHEDULE 40 CONDUIT.

TUBE CABLE DETAIL LEGEND

1. EXISTING TO REMAIN (1) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E-3015 TO LIGHTING/ELECTRICAL VAULT E-145.
2. EXISTING TO REMAIN (1) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E-145 TO AIRCRAFT CONTROL TOWER.
3. EXISTING TO REMAIN (1) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E-3015 TO RUNWAY 14L WAVE-OFF CONTROL PANEL.
4. EXISTING TO REMAIN (1) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E-145 TO RUNWAY 32R WAVE-OFF CONTROL PANEL.
5. (1) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLE FROM TOWER TO LIGHTING/ELECTRICAL VAULT E-101 INSTALLED IN PHASE 1.
6. (1) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E-101 TO LIGHTING/ELECTRICAL VAULT E-1120 INSTALLED IN PHASE 2.
7. (1) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E-1120 TO LIGHTING/ELECTRICAL VAULT E-3036 INSTALLED IN PHASE 2.
8. (1) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E-3036 TO LIGHTING/ELECTRICAL VAULT E-3015 INSTALLED IN PHASE 2.
9. (1) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E-1120 TO RUNWAY 5R WAVE-OFF CONTROL PANEL.
10. (1) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLE FROM LIGHTING/ELECTRICAL VAULT E-3036 TO RUNWAY 23L WAVE-OFF CONTROL PANEL.

EMPTY/SPARE TUBE.

SHEET KEYNOTES

1. PROVIDE CONDUIT FROM HANDHOLE TO WAVE-OFF CONTROL PANEL AS SHOWN ON CONSTRUCTION PLANS.
2. PROVIDE (2) 6-STRAND, SINGLE-MODE FIBER OPTIC CABLES FROM TOWER TO LIGHTING/ELECTRICAL VAULT E-101 THROUGH EXISTING TUBE CABLES INSTALLED IN EXISTING DUCTBANK DURING PREVIOUS CONTRACT.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley

COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO: DATE

DES SL DRW SL CHK DJP

PM/DM

BRANCH MANAGER WED

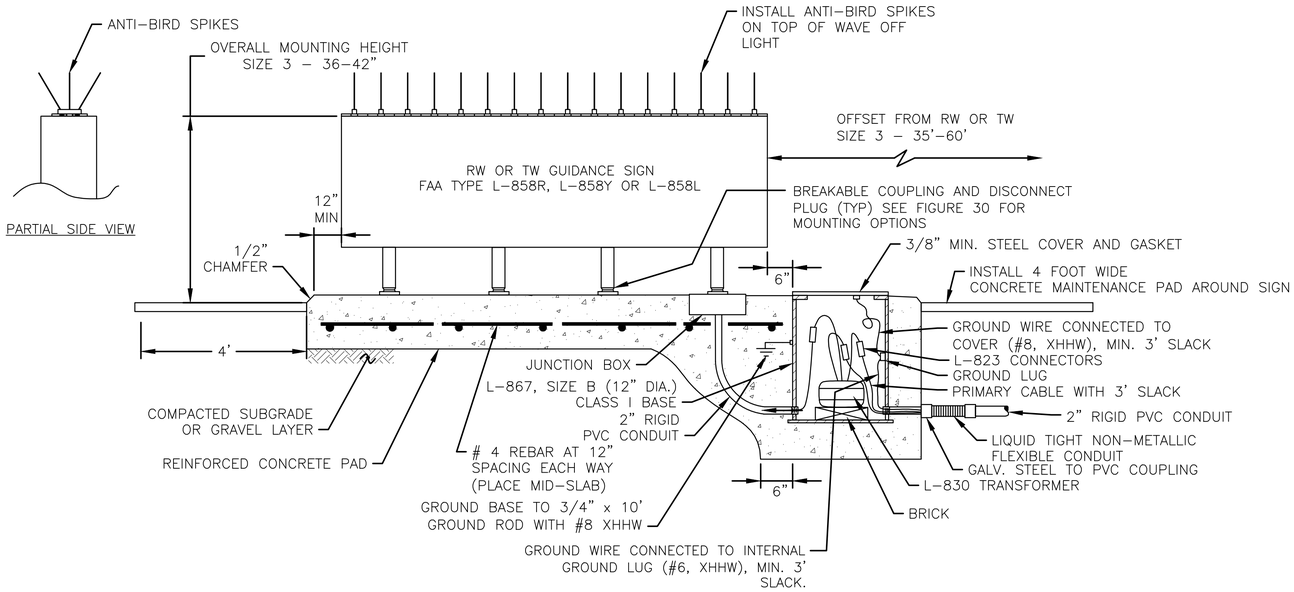
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
HR IPT NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
HANDHOLE & MANHOLE DIAGRAMS – PHASE 2 COMM.

SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.: 12691871
SHEET 338 OF 368
EA765

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\SMD\100863_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-EA765.dwg LAYOUT NAME: EA765 PLOTTED: Tuesday, March 24, 2015 - 11:07am USER: Rhurst

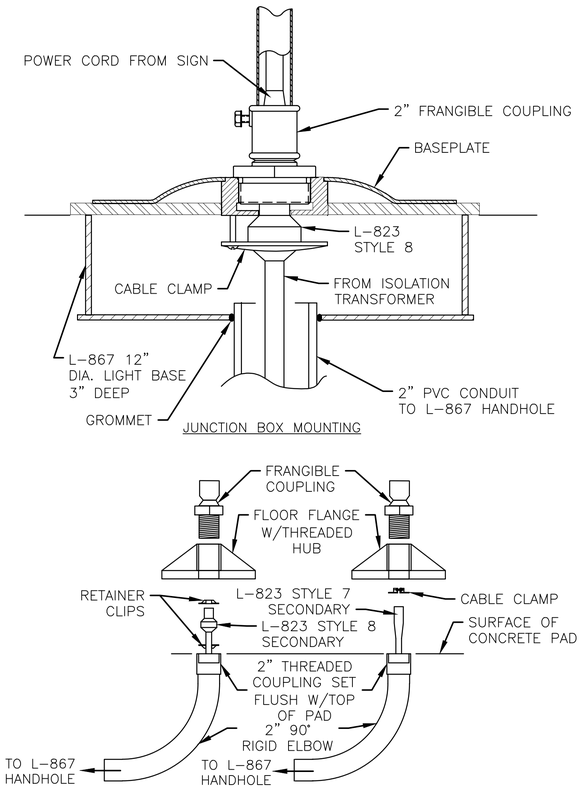


AIRFIELD GUIDANCE SIGN DETAIL (1)

NOT TO SCALE ES501

NOTES:

1. DO NOT CONNECT COUNTERPOISE ABOVE CONDUIT LEADING TO SIGN TO THE BASE. CONNECT COUNTERPOISE TO SEPARATE GROUND ROD.
2. FOUNDATION: THICKNESS = 12"
   WIDTH = MIN. 3'. PROVIDE 12" CLEAR ON ALL SIDES OF SIGN.
   SLOPE FOUNDATION SURFACE TO DRAIN AWAY FROM SIGN, APPROX. 2% (1/4"/FT)
3. MAXIMUM OVERALL SIGN LENGTH: SIZE 3 – 170"
4. PROVIDE TETHERS, MINIMUM 2 PER SIGN.
5. INSTALL 4' CONCRETE WIDE PAD AROUND FOUNDATION FOR PROTECTION FROM MOWERS.
6. CONCRETE FOUNDATION SHALL BE FLUSH WITH FINISHED GRADE.



SIGN BASE POWER LEG MOUNTING DETAILS (2)

NOT TO SCALE ES501

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley

COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES RCH DRW RCH CHK DJP

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
HR IPT
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

ELECTRICAL SIGN DETAILS

SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691884
SHEET 351 OF 368

ES501

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\SMD\100863_008_Energy_and_Reliabili\CADD\ELECTRICAL\10-0863-008-ES501.dwg LAYOUT NAME: ES501 PLOTTED: Tuesday, March 24, 2015 - 11:07am USER: Rhurst

GENERAL SHEET NOTES

1. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 1.
2. ALL SIGNS ARE PER FAA AC 150/5345-44 (LATEST ISSUE).
3. SIGN TYPES ARE PER FAA AC 150/5345-44 (LATEST ISSUE) AND ARE AS FOLLOWS:
   - Y – DIRECTION, DESTINATION, AND BOUNDARY SIGNS – BLACK LEGEND ON A YELLOW BACKGROUND
   - R – MANDATORY INSTRUCTION SIGNS – BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON A RED BACKGROUND
   - L – RUNWAY AND TAXIWAY LOCATION SIGNS – YELLOW LEGEND AND BORDER ON A BLACK BACKGROUND
   - B – RUNWAY DISTANCE REMAINING SIGN – WHITE LEGEND ON A BLACK BACKGROUND
   - / – SIGN TYPE SEPARATOR

CONSTRUCTION KEYNOTES

1 Θ – NO ENTRY SIGN

SIGN SCHEDULE - PHASE 1

SIGN #	SIZE	STYLE	CLASS	MODE	CIRCUIT	DISTANCE FROM EDGE (FT)	LEGEND (SIDE A)				TYPE	LEGEND (SIDE B)				TYPE
001	3	3	2	2	T6.1	35-60	↑14L				Y					
040	3	3	2	2	T6.1	35-60	NTU TACAN CH 113 BRG 359 DIST .5 MI				Y					
041	3	3	2	2	T6.1	35-60	B1	←B			L/Y	B1				L
042	3	3	2	2	T6.1	35-60	B				L	B				L
045	3	3	2	2	T7.1	35-60	B	←A→			L/Y	B				L
046	3	3	2	2	T7.1	35-60	B				L	B				L
047	3	3	2	2	T7.1	35-60	C ROSE	→			Y	←	C ROSE			L
048	3	3	2	2	T7.1	35-60	B	B2↘			L/Y	B				L
049	3	3	2	2	T7.1	35-60	↖B	B			Y/L	B				L
050	3	3	2	2	T7.1	35-60	32R↑				Y	B3	B→			L/Y
51	3	3	2	2	T7.1	35-60	NTU TACAN CH 113 BRG 127 DIST .9 MI				Y					
052	3	3	2	2	T1.1	35-60	←FUEL	10			Y					
053	3	3	2	2	T1.2	35-60	FUEL	10→			Y					
054	3	3	2	2	T1.1	35-60	←FUEL	9			Y					
055	3	3	2	2	T1.2	35-60	FUEL	9→			Y					
056	3	3	2	2	T1.1	35-60	←FUEL	8			Y					
057	3	3	2	2	T1.2	35-60	FUEL	8→			Y					
058	3	3	2	2	T1.1	35-60	←FUEL	7			Y					
059	3	3	2	2	T1.2	35-60	FUEL	7→			Y					
060	3	3	2	2	T7.1	35-60	SPOT 4				Y	SPOT 4				Y
061	3	3	2	2	T1.1	35-60	↙B↗	B2			Y/L	B2				L
062	3	3	2	2	T1.1	35-60	←A	B→			Y/Y					
063	3	3	2	2	T1.1	35-60	SPOT 2				Y	SPOT 2				Y
064	3	3	2	2	T1.1	35-60	↖A↘	A7			Y/L	A7				L
065	3	3	2	2	T1.2	35-60	↖A↘	A7			Y/L	A7				L
066	3	3	2	2	T7.1	35-60	B	←A→			L/Y	B				L
069	3	3	2	2	T8	35-60	←32R	23L→			Y/Y					
070	3	3	2	2	T3.1	35-60	←P→				Y					
071	3	3	2	2	T3.1	35-60	P				L	P				L
072	3	3	2	2	T3.1	35-60	←A	P	A8↑		Y/L/Y	P				L
074	3	3	2	2	T5.1	35-60	A	←B→			L/Y	A				L
075	3	3	2	2	T5.1	35-60	↙A7	A			Y/L	A				L
076	3	3	2	2	T1.1	35-60	←FUEL	6			Y					
077	3	3	2	2	T1.2	35-60	FUEL	6→			Y					
078	3	3	2	2	T1.1	35-60	←FUEL	5			Y					
079	3	3	2	2	T1.2	35-60	FUEL	5→			Y					
080	3	3	2	2	T1.1	35-60	←FUEL	4			Y					
081	3	3	2	2	T1.2	35-60	FUEL	4→			Y					
082	3	3	2	2	T1.1	35-60	←FUEL	3			Y					
083	3	3	2	2	T1.2	35-60	FUEL	3→			Y					
084	3	3	2	2	T1.1	35-60	←FUEL	2			Y					
085	3	3	2	2	T1.2	35-60	FUEL	2→			Y					
086	3	3	2	2	T1.1	35-60	←FUEL	1			Y					
087	3	3	2	2	T1.2	35-60	FUEL	1→			Y	←A5	A			Y/L
088	3	3	2	2	T4.1	35-60	←A→	A5			Y/L	A5				L
089	3	3	2	2	T4.2	35-60	A5	←A→			L/Y	A5				L
090	3	3	2	2	T4.1	35-60	A	A5→			L/Y	A				L
091	3	3	2	2	T4.1	35-60	←A4	A			Y/L	A				L
1 092	3	3	2	2	T4.1	35-60						Θ				M
093	3	3	2	2	T4.2	35-60	A4	←A→			L/Y	A4				L
094	3	3	2	2	T4.1	35-60	A	A4→			L/Y	A				L
1 095	3	3	2	2	T9.1	35-60	Θ				M					
1 096	3	3	2	2	T9.1	35-60	Θ				M					
097	3	3	2	2	T9.1	35-60	←ORD				Y					
098	3	3	2	2	T9.2	35-60	ORD→				Y					
1 099	3	3	2	2	T9.2	35-60	Θ				M					
1 100	3	3	2	2	T9.1	35-60	Θ				M					
103	3	3	2	2	T9.1	35-60	NTU TACAN CH 113 BRG 215 DIST 1.3 MI				Y					
104	3	3	2	2	T9.1	35-60	A1	←A			L/Y	A1				L
105	3	3	2	2	T9.1	35-60	←A2	A			Y/L	A				L
106	3	3	2	2	T9.1	35-60	SPOT 1				Y	SPOT 1				Y
107	3	3	2	2	T9.1	35-60	A2	←A→			L/Y	A2				L
108	3	3	2	2	T9.2	35-60	A	A2→			L/Y	A				L
109	3	3	2	2	T9.1	35-60	←A3	A			Y/L	A				L
110	3	3	2	2	T9.1	35-60	5L↑				Y					
111	3	3	2	2	T9.1	35-60	←A	↖A4	A3	A→	Y/Y/L/Y	A3				L
112	3	3	2	2	T4.2	35-60	A	A3→			L/Y	A				L
113	3	3	2	2	T4.2	35-60	A	A5→			L/Y	A				L
114	3	3	2	2	T4.1	35-60	A	←A6→			L/Y	A				L
115	3	3	2	2	T4.1	35-60	A6	←A→			L/Y	A6				L
116	3	3	2	2	T4.2	35-60	←A6→	A			Y/L	A				L
117	3	3	2	2	T4.1	35-60	A	A7↗			L/Y	A				L
118	3	3	2	2	T5.1	35-60	OPS→				Y	←OPS				Y
119	3	3	2	2	T5.1	35-60	SPOT 3				Y	SPOT 3				Y
120	3	3	2	2	T5.2	35-60	A				L	A				L
121	3	3	2	2	T5.2	35-60	A	←B→			L/Y	A				L
123	3	3	2	2	T2.1	35-60	←A8	A	P→		Y/L/Y	A				L
124	3	3	2	2	T2.2	35-60	A8	P↗	A→		L/Y/Y	23R↑				Y
125	3	3	2	2	T2.1	35-60	NTU TACAN CH 113 BRG 81 DIST .8 MI				Y					
177	3	3	2	2	T9.1	35-60	NTU TACAN CH 113 BRG 209 DIST .6 MI				Y					
178	3	3	2	2	T3.1	35-60	←32R	23L→			Y/Y					
179	3	3	2	2	T4.1	55	←5R	23L→			Y/Y					
180	3	3	2	2	T4.2	55	←5R	23L→			Y/Y					
181	3	3	2	2	T4.2	55	←5R	23L→			Y/Y					
182	3	3	2	2	T7.2	55	←14R	32L→			Y/Y					
183	3	3	2	2	T5.1	35-60	SPOT 5				Y	SPOT 5				Y
200	3	4	2	2	UNLIT	55	ARM / DEARM				Y					
201	3	4	2	2	UNLIT	55	ARM / DEARM				Y					
202	3	4	2	2	UNLIT	55	ARM / DEARM				Y					
203	3	4	2	2	UNLIT	55	ARM / DEARM				Y					
204	3	4	2	2	UNLIT	55	ARM / DEARM				Y					
205	3	4	2	2	UNLIT	55	ARM / DEARM				Y					
206	3	4	2	2	UNLIT	55	ARM / DEARM				Y					

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

M/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES RCH DRN RCH CHK DJP
M/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
AIRFIELD GUIDANCE SIGN SCHEDULES

SCALE NOT TO SCALE
A/E PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691888
SHEET 355 OF 368

ES601

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-ES601.dwg LAYOUT NAME: ES601 PLOTTED: Tuesday, March 24, 2015 - 11:07am USER: Rhurst

SIGN SCHEDULE - PHASE 2																	
SIGN #	SIZE	STYLE	CLASS	MODE	CIRCUIT	DISTANCE FROM EDGE (FT)	LEGEND (SIDE A)				TYPE	LEGEND (SIDE B)				TYPE	
044	3	3	2	2	R3.2	35-60	B	23L-5R			L/M	"HOLD"	B			Y/L	1
067	3	3	2	2	R3.1	35-60	B	23L-5R			L/M	"HOLD"	B			Y/L	1
101	3	3	2	2	R3.2	35-60	A1	5R-23L			L/M	"HOLD"	A1			Y/L	1
102	3	3	2	2	R3.1	35-60	5R-23L	A1			M/L	A1	"HOLD"			L/Y	1
126	3	3	2	2	R3.1	35-60	A8	5R-23L			L/M	"HOLD"	A8			Y/L	1
127	3	3	2	2	R3.2	35-60	5R-23L	A8			M/L	A8	"HOLD"			L/Y	1
128	3	3	2	2	R3.1	35-60	A8→				Y						
129	4	3	2	2	R3.1	50-75	11				B	1				B	
130	4	3	2	2	R3.1	50-75	○				B	○				B	
131	4	3	2	2	R3.1	50-75	10				B	2				B	
134	3	3	2	2	R3.1	35-60	←B				Y						
135	4	3	2	2	R3.1	50-75	9				B	3				B	
136	3	3	2	2	R3.1	35-60	B→				Y						
137	4	3	2	2	R3.1	50-75	8				B	4				B	
138	4	3	2	2	R3.1	50-75	7				B	5				B	
139	3	3	2	2	R3.1	35-60	←A6				Y						
140	3	3	2	2	R3.1	35-60	A6	5R-23L			L/M	"HOLD"	A6			Y/L	1
141	3	3	2	2	R3.1	35-60	A6→				Y						
142	4	3	2	2	R3.1	50-75	6				B	6				B	
143	4	3	2	2	R3.1	50-75	5				B	7				B	
144	3	3	2	2	R3.1	35-60	←A3				Y						
145	3	3	2	2	R3.1	35-60	5R-23L	A3			M/L	A3	"HOLD"			L/Y	1
146	3	3	2	2	R3.2	35-60	A3	5R-23L			L/M	"HOLD"	A3			Y/L	1
147	3	3	2	2	R3.1	35-60	A3→				Y						
148	4	3	2	2	R3.1	50-75	3				B	6				B	
149	3	3	2	2	R3.1	35-60	←A2				Y						
150	3	3	2	2	R3.1	35-60	A2	5R-23L			L/M	"HOLD"	A2			Y/L	1
151	4	3	2	2	R3.1	50-75	○				B	○				B	2
152	4	3	2	2	R3.1	50-75	1				B	11				B	
153	3	3	2	2	R3.1	35-60	←A1				Y						
154	4	3	2	2	R3.2	35-60	1				B	11				B	
155	4	3	2	2	R3.2	50-75	○				B	○				B	2
156	4	3	2	2	R3.2	35-60	2				B	10				B	
157	4	3	2	2	R3.2	35-60	3				B	9				B	
158	3	3	2	2	R3.2	35-60	23L-5R	A3			M/L	A3	"HOLD"			L/Y	1
159	3	3	2	2	R3.1	35-60	A3	23L-5R			L/M	"HOLD"	A3			Y/L	1
160	4	3	2	2	R3.2	35-60	5				B	7				B	
161	4	3	2	2	R3.2	35-60	6				B	6				B	
162	3	3	2	2	R3.2	35-60	23L-5R	A6			M/L	A6	"HOLD"			L/Y	1
163	3	3	2	2	R3.1	35-60	A6	23L-5R			L/M	"HOLD"	A6			Y/L	1
164	4	3	2	2	R3.2	35-60	7				B	5				B	
165	4	3	2	2	R3.2	35-60	8				B	4				B	
166	3	3	2	2	R3.2	35-60	B→				Y						
167	4	3	2	2	R3.2	35-60	9				B	3				B	
168	3	3	2	2	R3.2	35-60	B→				Y						
171	4	3	2	2	R3.2	35-60	10				B	2				B	
172	4	3	2	2	R3.2	50-75	○				B	○				B	2
173	4	3	2	2	R3.2	35-60	11				B	1				B	
174	3	3	2	2	R3.2	35-60	←A8				Y						
175	3	3	2	2	R3.2	35-60	23L-5R	A8			M/L	A8	"HOLD"			L/Y	1
176	3	3	2	2	R3.1	35-60	A8	23L-5R			L/Y	"HOLD"	A8			Y/L	1

GENERAL SHEET NOTES

1. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 1.
2. ALL SIGNS ARE PER FAA AC 150/5345-44 (LATEST ISSUE).
3. SIGN TYPES ARE PER FAA AC 150/5345-44 (LATEST ISSUE) AND ARE AS FOLLOWS:
   - Y – DIRECTION, DESTINATION, AND BOUNDARY SIGNS – BLACK LEGEND ON A YELLOW BACKGROUND
   - R – MANDATORY INSTRUCTION SIGNS – BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON A RED BACKGROUND
   - L – RUNWAY AND TAXIWAY LOCATION SIGNS – YELLOW LEGEND AND BORDER ON A BLACK BACKGROUND
   - B – RUNWAY DISTANCE REMAINING SIGN – WHITE LEGEND ON A BLACK BACKGROUND
   - / – SIGN TYPE SEPARATOR

CONSTRUCTION KEYNOTES

1 "HOLD" BOUNDARY SIGN –

2 ○ - ARRESTING GEAR SIGN

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES: RCH DRWN: RCH CHK: DJP

M/CM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
AIRFIELD GUIDANCE SIGN SCHEDULES

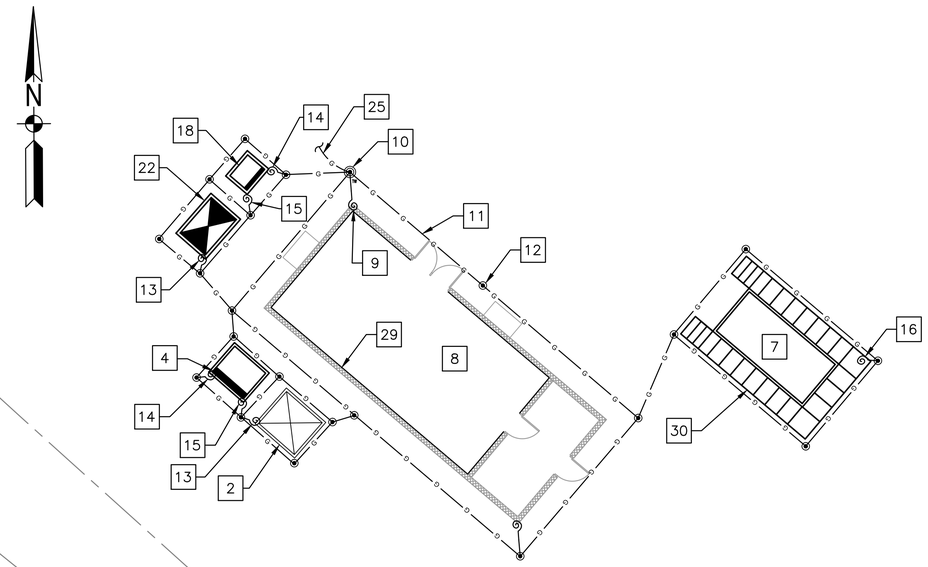
HR IPT

SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691889
SHEET 356 OF 368

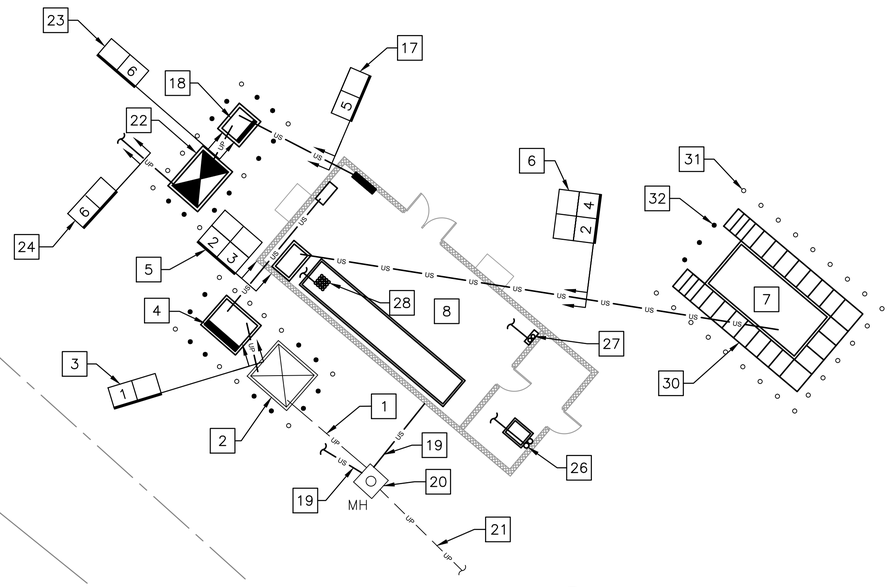
ES602

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\SMD\100863_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008 ES602.dwg LAYOUT NAME: ES602 PLOTTED: Tuesday, March 24, 2015 - 11:07am USER: Rhurst



VAULT E-3036 SITE PLAN GROUNDING (1)
1"=10'



VAULT E-3036 SITE PLAN POWER (2)
1"=10'

GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-402, E-403, AND E-601 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. REFER TO DRAWING E-501 FOR GROUNDING DETAILS.
6. REFER TO DRAWING E-611 FOR CABLE SCHEDULE.
7. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 2.

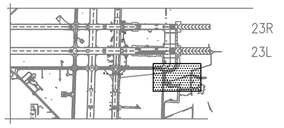
CONSTRUCTION KEYNOTES

1. EXISTING 6-WAY 5" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE MANHOLE TO 4-WAY, 5KV PAD MOUNTED SWITCH. DUCTBANK INCLUDES TWO (2)-5" POWER FEEDERS, ONE (1)-5" CONTROL, AND THREE (3)-5" SPARE. EACH FEEDER: 3# 250 AWG MV-105 + 1# 250 G. REFER TO DETAIL 1 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
2. EXISTING 4-WAY, 5 KV PAD MOUNTED SWITCH ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. 2-WAY 5" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE PAD MOUNTED SWITCH TO PAD MOUNTED TRANSFORMER. REFER TO DETAIL 2 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
4. 225KVA, 4160V-480Y/277V PAD MOUNTED TRANSFORMER ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
5. 4-WAY 4" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE PAD MOUNTED TRANSFORMER TO SERVICE ENTRANCE DISCONNECT. REFER TO DETAIL 3 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
6. 4-WAY 4" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE GENERATOR TO ATS. REFER TO DETAIL 3 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
7. 200KW, 250KVA, 480V, 3 PHASE, 4 WIRE, DIESEL STANDBY GENERATOR, IN WEATHERPROOF ENCLOSURE, WITH 325 GALLONS DOUBLE-WALL SUB-BASE FUEL TANK WITH LEAK DETECTION, MOUNTED ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
8. VAULT E-3036. REFER TO DRAWINGS E-402 AND E-403 FOR ADDITIONAL INFORMATION.
9. #4/0 AWG BARE COPPER FROM THE TEST WELL TO THE MAIN ELECTRICAL ROOM GROUNDING PLATE.
10. GROUNDING TEST WELL.
11. #4/0 AWG BARE COPPER. TYPICAL FOR THE ENTIRE GROUNDING SYSTEM UON.
12. GROUNDING ROD. TYPICAL.
13. #4/0 AWG BARE COPPER FROM THE GROUNDING ROD TO THE 5KV SWITCH. TYPICAL FOR THREE LOCATIONS.

CONSTRUCTION KEYNOTES

14. #4/0 AWG BARE COPPER FROM THE GROUNDING ROD TO THE TRANSFORMER ENCLOSURE.
15. #500 KCMIL BARE COPPER FROM THE GROUNDING ROD TO THE TRANSFORMER XO.
16. #4/0 AWG BARE COPPER FROM THE GROUNDING ROD TO THE GENERATOR, GENERATOR ENCLOSURE, GENERATOR CONCRETE PAD, AND CATWALK. TYPICAL FOR THREE LOCATIONS.
17. 2-WAY 2" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM MAIN DISTRIBUTION PANEL TO PAD MOUNTED TRANSFORMER. REFER TO DETAIL 2 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
18. 37.5KVA, 480V-4160V PAD MOUNTED TRANSFORMER ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
19. REFER TO EA SERIES DRAWINGS.
20. EXISTING MANHOLE.
21. EXISTING 5KV FEEDER.
22. 5 KV PAD MOUNTED SWITCH ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE PAD DETAIL.
23. 2-WAY 5"C SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE PAD MOUNTED TRANSFORMER TO PAD MOUNTED SWITCH. REFER TO DETAIL 2 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
24. 2-WAY 5"C SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM PAD MOUNTED DISCONNECT SWITCH TO MANHOLE SHOWN ON EA SERIES DRAWINGS. REFER TO DETAIL 2 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
25. #6 AWG BARE COPPER FOR GROUNDING WIRE CONNECTION TO AIRFIELD DUCTBANKS. TYPICAL OF 4.
26. STUB UP (2) 4"C FOR FIBER TO ALCMS CABINET FROM COMMUNICATIONS HANDHOLE HH-C415 SHOWN ON DRAWING EA141-C
27. STUB UP (2) 5"C TO ALSF CABINET FROM AIRFIELD HANDHOLE HH-E415 SHOWN ON DRAWING EA141-C.
28. STUB UP (16) 2"C TO CCR FROM AIRFIELD MANHOLE MH-A415 SHOWN ON DRAWING EA141-C. COORDINATE CONDUIT STUB UP LOCATION WITH CCR MANUFACTURER PRIOR TO INSTALLATION.
29. PROVIDE MULTI-POINT SYSTEM GROUNDING PLATE ALONG THE PERIMETER OF THE INTERIOR WALL OF THE VAULT. REFER TO DRAWING E-501 FOR ADDITIONAL INFORMATION.
30. PROVIDE CATWALK FOR GENERATOR. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
31. PROVIDE BOLLARD. REFER TO DETAIL 4 ON DRAWING EA508 FOR MORE INFORMATION. (TYP.)
32. PROVIDE REMOVABLE BOLLARD. REFER TO DETAIL 5 ON DRAWING EA508 FOR MORE INFORMATION. (TYP.)

KEY MAP C



GRAPHIC SCALE

1"=10' 0 10' 20' 40'

NO.	DESCRIPTION	DATE	APPR

NAVFAC

Muguerel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
Lic. No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SJM | DRW SJM | CHK MG
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

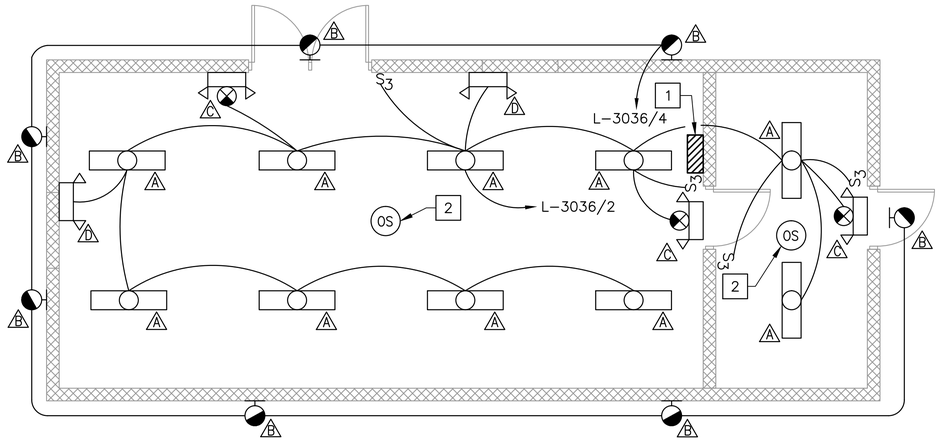
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
VAULT E-3036 - SITE PLAN POWER

SCALE: 1"=10'
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691875
SHEET 342 OF 368

E-401

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Parset\Task 008\10-0863-008-E-401.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:56am USER: jrothe



VAULT E-3036 LIGHTING PLAN

1/4"=1'-0"

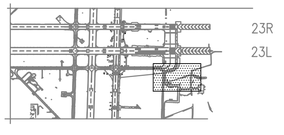
GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-401, E-601, AND E-403 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. REFER TO DRAWING E-609 FOR LIGHTING FIXTURE SCHEDULE AND DETAILS.
6. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF EXTERIOR WALL MOUNTED LIGHT FIXTURES.
7. REFER TO DRAWING E-610 FOR PANEL SCHEDULES.
8. EXIT AND EGRESS LIGHTING SHALL BE CONNECTED ON THE UN-SWITCHED PORTION OF THE CIRCUIT.
9. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 2.
10. REFER TO DETAIL 2 ON DRAWING E-502 FOR LIGHTING CONTROL DIAGRAM.

CONSTRUCTION KEYNOTES

1. 250A, 208Y/120V PANEL L-3036 WITH 225A MAIN CIRCUIT BREAKER.
2. OCCUPANCY/VACANCY SENSOR SWITCH. THE SENSOR MUST BE WIRED AS VACANCY SENSOR (MANUAL ON, AUTOMATIC OFF). CEILING-MOUNT SENSOR MUST ACHIEVE MANUAL-ON VIA TOGGLE SWITCH WIRED IN SERIES WITH (AND DOWNSTREAM OF) THE OCCUPANCY SENSOR POWER PACK. PROVIDE LOW VOLTAGE POWER PACKS AS REQUIRED. SENSOR MUST BE EQUIPPED WITH THE FOLLOWING: ADJUSTABLE TIMER SETTINGS; SELF-ADJUSTING TECHNOLOGY TO MINIMIZE NUISANCE SWITCHING; LOW VOLTAGE AUXILIARY RELAY/CONTACTS; OPTIONAL AMBIENT LIGHT SENSING OVERRIDE. PROVIDE ALL WIRING AND CONDUIT NECESSARY FOR A COMPLETE FUNCTIONAL LIGHTING CONTROL SYSTEM. REFER TO DETAIL 2 ON DRAWING E-502 FOR ADDITIONAL INFORMATION.

KEY MAP C



GRAPHIC SCALE

1/4"=1'-0"

1' 0 2' 4' 8'

NO.	DESCRIPTION	DATE	APPR

NAVFAC

Muguirel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
Lic. No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SJM | DRW SJM | CHK MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

VAULT E-3036 – LIGHTING PLAN

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

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

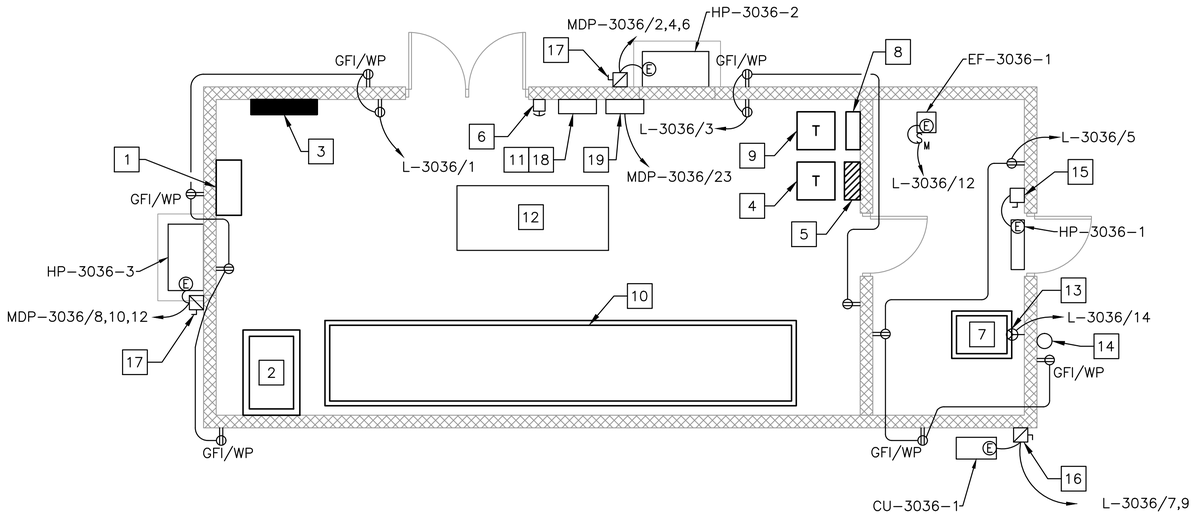
NAVFAC DRAWING NO.
12691876

SHEET 343 OF 368

E-402

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-402.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:26am USER: jrothe



VAULT E-3036 POWER PLAN

1/4"=1'-0"

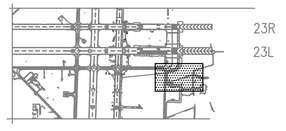
GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-401, E-402, AND E-601 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. UNLESS OTHERWISE NOTED, ELECTRICAL WORK AND MATERIALS ARE NEW AND MUST BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
6. REFER TO DRAWING E-610 FOR PANEL SCHEDULES.
7. PROVIDE CONCRETE HOUSEKEEPING PAD FOR EACH FLOOR MOUNTED ELECTRICAL EQUIPMENT.
8. ELECTRICAL EQUIPMENT INSTALLED OUTDOOR MUST BE IN NEMA 4X STAINLESS STEEL ENCLOSURE UON. ELECTRICAL EQUIPMENT INSTALLED INDOOR MUST BE IN NEMA 12 ENCLOSURE UON.
9. ELECTRICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, SWITCHBOARDS, PANEL BOARDS, MOTOR STARTERS, ENCLOSED CIRCUIT BREAKERS, DISCONNECT SWITCHES, TRANSFORMERS, ENCLOSURES, AND WIRING DEVICES MUST BE UL LISTED FOR ITS INTENDED USE.
10. RECEPTACLE OUTLETS INSTALLED OUTDOORS AND/OR IN WET LOCATIONS MUST BE LISTED WEATHER-RESISTANT TYPE WITH A WEATHERPROOF WHILE-IN-USE COVER THAT IS LISTED AND IDENTIFIED AS "EXTRA-DUTY".
11. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 2.

CONSTRUCTION KEYNOTES

1. 400A, 3 POLE, 480Y/277V SERVICE ENTRANCE RATED DISCONNECT SAFETY SWITCH, FUSED AT 400A.
2. 400A, 4 POLE, 65KA WITHSTAND CURRENT RATING, DELAYED OPEN TRANSITION AUTOMATIC TRANSFER SWITCH WITH ISOLATION BYPASS INSTALLED ON 4" CONCRETE PAD.
3. 400A, 480Y/277V MAIN DISTRIBUTION PANEL WITH 400A MAIN CIRCUIT BREAKER WITH ELECTRONIC TRIP UNIT WITH LSI FEATURE.
4. 75KVA, 480V-208Y/120V WALL MOUNTED DRY TYPE TRANSFORMER. PROVIDE NECESSARY MOUNTING HARDWARE FOR INSTALLATION.
5. 250A, 208Y/120V PANEL WITH 225A MAIN CIRCUIT BREAKER.
6. EMERGENCY SHUT-OFF SWITCH FOR GENERATOR. PROVIDE WIRING AND CONDUIT FROM THE SWITCH TO THE GENERATOR AS REQUIRED BY THE GENERATOR MANUFACTURER.
7. AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (ALCMS) CABINET. REFER TO DRAWING EA510 FOR RACK DETAIL.
8. RE-INSTALL EXISTING ALSF 240/120V PANEL.
9. 15KVA, 480V-240/120V WALL MOUNTED DRY TYPE TRANSFORMER.PROVIDE NECESSARY MOUNTING HARDWARE FOR INSTALLATION.
10. CONSTANT CURRENT REGULATOR SWITCHGEAR (CCR).
11. GENERATOR ANNUNCIATOR PANEL. PROVIDE WIRING AND CONDUIT FROM THE PANEL TO THE GENERATOR AS REQUIRED BY THE GENERATOR MANUFACTURER.
12. PORTABLE FORKLIFT. REFER TO DRAWING EA513 FOR MORE INFORMATION.
13. PROVIDE 30A, 1 POLE, 120V NEMA L5-30 RECEPTACLE FOR ALCMS CABINET. FIELD COORDINATE EXACT LOCATION AND MOUNTING HEIGHT.
14. PROVIDE NEW ANTENNA. COORDINATE WIRE AND CONDUIT REQUIREMENTS WITH THE CLIENT AND ANTENNA MANUFACTURER.
15. INSTALL WIRING TO OUTDOOR SPLIT SYSTEM UNIT CU-3036-1 PER MANUFACTURER REQUIREMENTS VIA A 30A NON-FUSED DISCONNECT SWITCH. COORDINATE WITH MECHANICAL CONTRACTOR.
16. PROVIDE 208V, 2 POLE, 30A FUSED DISCONNECT SWITCH IN NEMA 4X STAINLESS STEEL ENCLOSURE WITH 15A FUSES.
17. PROVIDE 480V, 3 POLE, 30A FUSED DISCONNECT SWITCH IN NEMA 4X STAINLESS STEEL ENCLOSURE WITH 20A FUSES.
18. PROVIDE (1) 3/4" C FROM GENERATOR ANNUNCIATOR PANEL TO ALCMS PANEL.
19. PROVIDE LIGHTING CONTACTOR PANEL. REFER TO DETAIL 3 ON DRAWING EA605 FOR MORE INFORMATION.

KEY MAP C



GRAPHIC SCALE

1/4"=1'-0"

1' 0 2' 4' 8'

APPR	DATE	DESCRIPTION	SYM

NAVFAC

Muguerel Giurgiu

COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SJM | DRW SJM | CHK MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA - VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
VAULT E-3036 - POWER PLAN

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

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

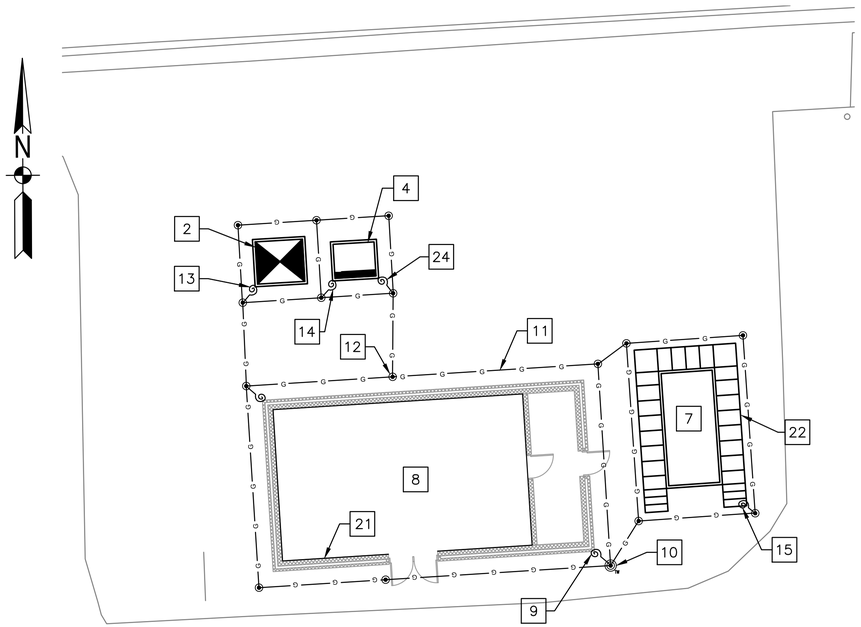
NAVFAC DRAWING NO.
12691877

SHEET 344 OF 368

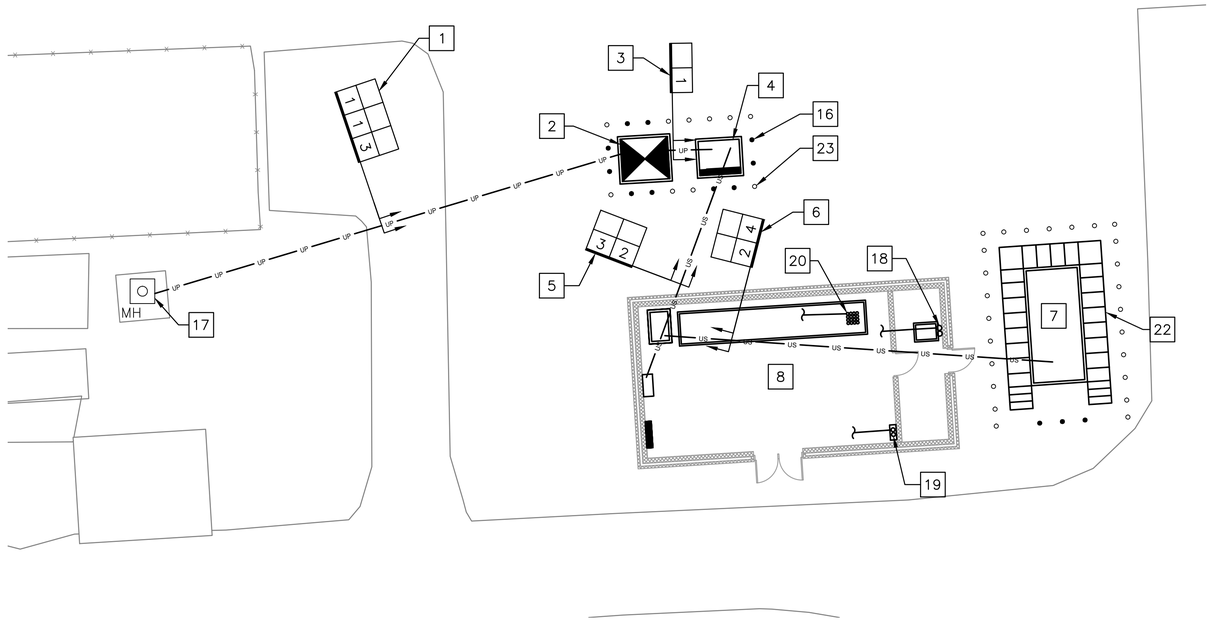
E-403

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-403.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:26am USER: jrolhe



VAULT E-101 SITE PLAN GROUNDING (1)
1"=10'



VAULT E-101 SITE PLAN POWER (2)
1"=10'

GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-602, E-405, AND E-406 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. REFER TO DRAWING E-501 FOR GROUNDING DETAILS.
6. REFER TO DRAWING E-611 FOR CABLE SCHEDULE.
7. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 1.

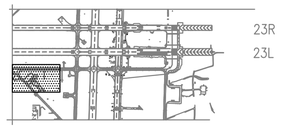
CONSTRUCTION KEYNOTES

1. 6-WAY 5" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE MANHOLE TO 4-WAY, 5KV PAD MOUNTED SWITCH. REFER TO DETAIL E1 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
2. 4-WAY, 5 KV PAD MOUNTED SWITCH ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. 2-WAY 5" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE PAD MOUNTED SWITCH TO PAD MOUNTED TRANSFORMER. REFER TO DETAIL 2 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
4. 225KVA, 4160V-480Y/277V PAD MOUNTED TRANSFORMER ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
5. 4-WAY 4" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE PAD MOUNTED TRANSFORMER TO SERVICE ENTRANCE DISCONNECT. REFER TO DETAIL 3 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
6. 4-WAY 4" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE GENERATOR TO ATS. REFER TO DETAIL 3 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
7. 200KW, 250KVA, 480V, 3 PHASE, 4 WIRE, DIESEL STANDBY GENERATOR, IN WEATHERPROOF ENCLOSURE, WITH 325 GALLONS DOUBLE-WALL SUB-BASE FUEL TANK WITH LEAK DETECTION, ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
8. VAULT E-101. REFER TO DRAWINGS E-405 AND E-406 FOR ADDITIONAL INFORMATION.
9. #4/0 AWG BARE COPPER FROM THE TEST WELL TO THE MAIN ELECTRICAL ROOM GROUNDING PLATE.
10. GROUNDING TEST WELL.
11. #4/0 AWG BARE COPPER. TYPICAL FOR THE ENTIRE GROUNDING SYSTEM UON.
12. GROUNDING ROD. TYPICAL.
13. #4/0 AWG BARE COPPER FROM THE GROUNDING ROD TO THE 5KV SWITCH. TYPICAL FOR THREE LOCATIONS.

CONSTRUCTION KEYNOTES

14. #500 KCMIL BARE COPPER FROM THE GROUNDING ROD TO THE TRANSFORMER XO.
15. #4/0 AWG BARE COPPER FROM THE GROUNDING ROD TO THE GENERATOR, GENERATOR ENCLOSURE, GENERATOR CONCRETE PAD, AND CATWALK. TYPICAL FOR THREE LOCATIONS.
16. PROVIDE REMOVABLE BOLLARD. REFER TO DETAIL 5 ON DRAWING EA508 FOR MORE INFORMATION. (TYP.)
17. EXISTING MANHOLE.
18. STUB UP (2) 4"C FOR FIBER TO ALCMS CABINET FROM COMMUNICATIONS HANDHOLE HH-C242 SHOWN ON DRAWING EA138-C.
19. STUB UP (2) 5"C TO ALSF CABINET FROM AIRFIELD HANDHOLE SHOWN ON DRAWING EA138-C.
20. STUB UP (16) 2"C TO CCR FROM AIRFIELD MANHOLE MH-A242 SHOWN ON DRAWING EA138-C. COORDINATE CONDUIT STUB UP LOCATION WITH CCR MANUFACTURER PRIOR TO INSTALLATION.
21. PROVIDE MULTI-POINT SYSTEM GROUNDING PLATE ALONG THE PERIMETER OF THE INTERIOR WALL OF THE VAULT. REFER TO DRAWING E-501 FOR ADDITIONAL INFORMATION.
22. PROVIDE CATWALK FOR GENERATOR. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
23. PROVIDE BOLLARD. REFER TO DETAIL 4 ON DRAWING EA508 FOR MORE INFORMATION. (TYP.)
24. #4/0 AWG BARE COPPER FROM THE GROUNDING PAD TO THE TRANSFORMER ENCLOSURE.

KEY MAP C



GRAPHIC SCALE

1"=10' 0 10' 20' 40'

APPR	DATE	DESCRIPTION	SYM

NAVFAC

Muguel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

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ACTIVITY

SATISFACTORY TO DATE

DES: SJM | DRW: SJM | CHK: MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

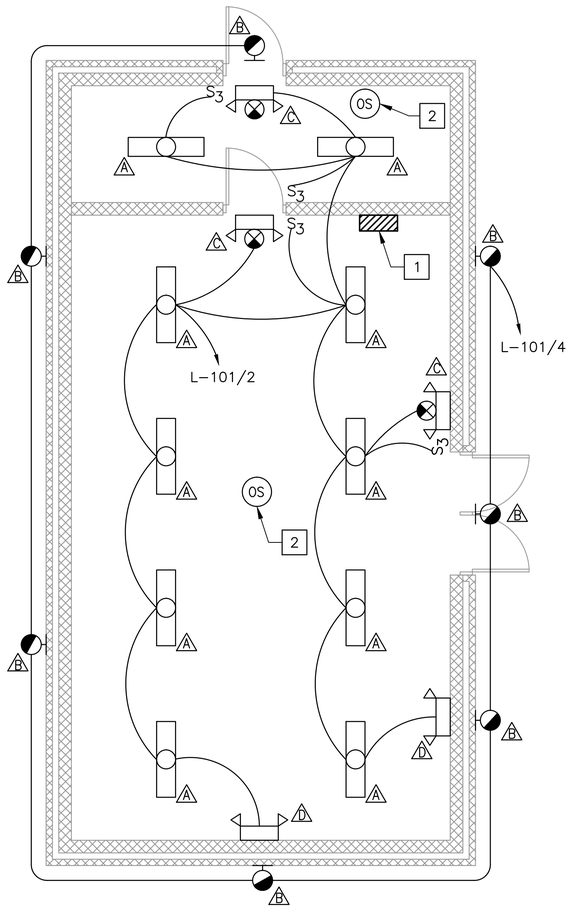
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
VAULT E-101 - SITE PLAN POWER

SCALE: 1"=10'
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691878
SHEET 345 OF 368

E-404

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-404.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:57am USER: jrolhe



VAULT E-101 LIGHTING PLAN

1/4"=1'-0"

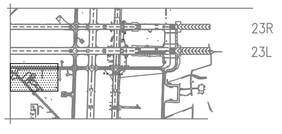
GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-404, E-406, AND E-602 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. REFER TO DRAWING E-609 FOR LIGHTING FIXTURE SCHEDULE AND DETAILS.
6. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF EXTERIOR WALL MOUNTED LIGHT FIXTURES.
7. REFER TO DRAWING E-610 FOR PANEL SCHEDULES.
8. EXIT AND EGRESS LIGHTING SHALL BE CONNECTED ON THE UN-SWITCHED PORTION OF THE CIRCUIT.
9. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 1.
10. REFER TO DETAIL 2 ON DRAWING E-502 FOR LIGHTING CONTROL DIAGRAM.

☐ CONSTRUCTION KEYNOTES

1. 250A, 208Y/120V PANEL L-101 WITH 225A MAIN CIRCUIT BREAKER.
2. OCCUPANCY/VACANCY SENSOR SWITCH. THE SENSOR MUST BE WIRED AS VACANCY SENSOR (MANUAL ON, AUTOMATIC OFF). CEILING-MOUNT SENSOR MUST ACHIEVE MANUAL-ON VIA TOGGLE SWITCH WIRED IN SERIES WITH (AND DOWNSTREAM OF) THE OCCUPANCY SENSOR POWER PACK. PROVIDE LOW VOLTAGE POWER PACKS AS REQUIRED. SENSOR MUST BE EQUIPPED WITH THE FOLLOWING: ADJUSTABLE TIMER SETTINGS; SELF-ADJUSTING TECHNOLOGY TO MINIMIZE NUISANCE SWITCHING; LOW VOLTAGE AUXILIARY RELAY/CONTACTS; OPTIONAL AMBIENT LIGHT SENSING OVERRIDE. PROVIDE ALL WIRING AND CONDUIT NECESSARY FOR A COMPLETE FUNCTIONAL LIGHTING CONTROL SYSTEM. REFER TO DETAIL 2 ON DRAWING E-502 FOR ADDITIONAL INFORMATION.

KEY MAP C



GRAPHIC SCALE

1/4"=1'-0"

1' 0 2' 4' 8'

APPR	DATE	DESCRIPTION	SYM

NAVFAC

Mugurel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
Lic. No. 046781
PROFESSIONAL ENGINEER
SEAL

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PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

VAULT E-101 – LIGHTING PLAN

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

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

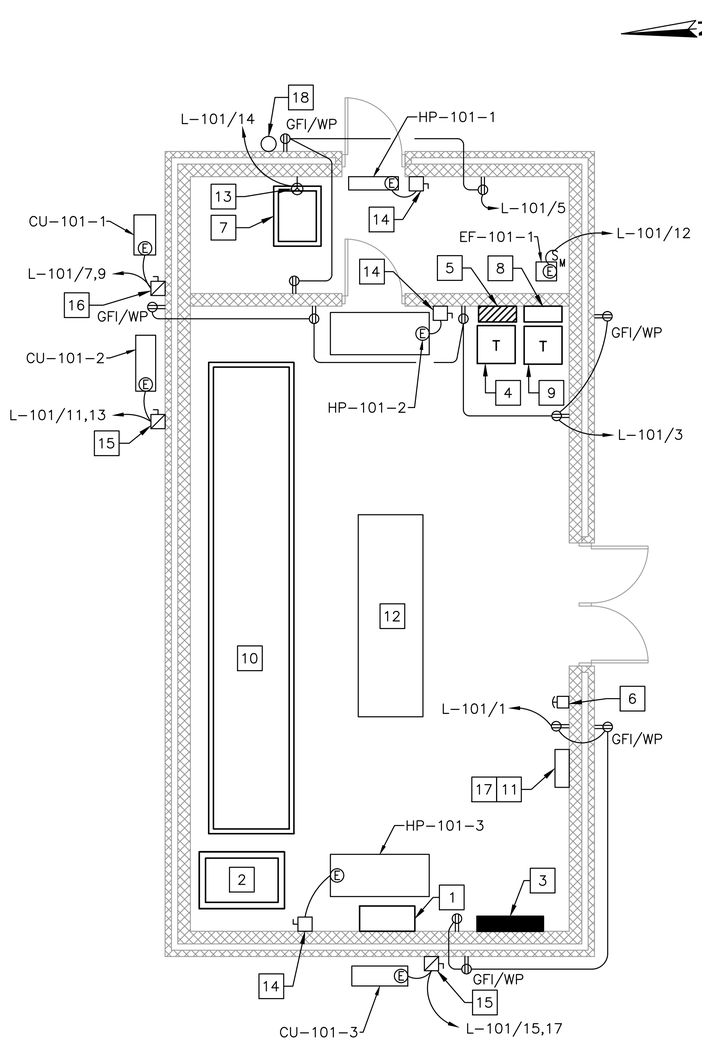
NAVFAC DRAWING NO.
12691879

SHEET 346 OF 368

E-405

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-405.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:27am USER: jrothe



VAULT E-101 POWER PLAN

1/4"=1'-0"

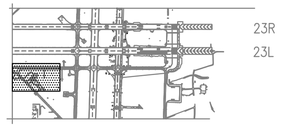
GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-404, E-405, AND E-602 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. UNLESS OTHERWISE NOTED, ALL ELECTRICAL WORK AND MATERIALS ARE NEW AND MUST PROVIDED BY THE ELECTRICAL CONTRACTOR.
6. REFER TO DRAWING E-610 FOR PANEL SCHEDULES.
7. PROVIDE CONCRETE HOUSEKEEPING PAD FOR EACH FLOOR MOUNTED ELECTRICAL EQUIPMENT.
8. ELECTRICAL EQUIPMENT INSTALLED OUTDOOR MUST BE IN NEMA 4X STAINLESS STEEL ENCLOSURE UON. ELECTRICAL EQUIPMENT INSTALLED INDOOR MUST BE IN NEMA 12 ENCLOSURE UON.
9. ELECTRICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, SWITCHBOARDS, PANEL BOARDS, MOTOR STARTERS, ENCLOSED CIRCUIT BREAKERS, DISCONNECT SWITCHES, TRANSFORMERS, ENCLOSURES, AND WIRING DEVICES MUST BE UL LISTED FOR ITS INTENDED USE.
10. RECEPTACLE OUTLETS INSTALLED OUTDOORS AND/OR IN WET LOCATIONS MUST BE LISTED WEATHER-RESISTANT TYPE WITH A WEATHERPROOF WHILE-IN-USE COVER THAT IS LISTED AND IDENTIFIED AS "EXTRA-DUTY".
11. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 1.

CONSTRUCTION KEYNOTES

1. 400A, 3 POLE, 480Y/277V SERVICE ENTRANCE RATED DISCONNECT SAFETY SWITCH, FUSED AT 400A.
2. 400A, 4 POLE, 65KA WITHSTAND CURRENT RATING, DELAYED OPEN TRANSITION AUTOMATIC TRANSFER SWITCH WITH ISOLATION BYPASS INSTALLED ON 4" CONCRETE PAD.
3. 400A, 480Y/277V MAIN DISTRIBUTION PANEL WITH 400A MAIN CIRCUIT BREAKER WITH ELECTRONIC TRIP UNIT WITH LSI BREAKER.
4. 75KVA, 480V-208Y/120V WALL MOUNTED DRY TYPE TRANSFORMER. PROVIDE NECESSARY MOUNTING HARDWARE FOR INSTALLATION.
5. 250A, 208Y/120V PANEL WITH 225A MAIN CIRCUIT BREAKER.
6. EMERGENCY SHUT-OFF SWITCH FOR GENERATOR. PROVIDE WIRING AND CONDUIT FROM THE SWITCH TO THE GENERATOR AS REQUIRED BY THE GENERATOR MANUFACTURER.
7. AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (ALCMS) CABINET. REFER TO DRAWING EA510 FOR RACK DETAIL.
8. PROVIDE NEW 240/120V, 100A PANEL.
9. PROVIDE NEW 15KVA TRANSFORMER. TRANSFORMER MUST BE WALL MOUNTED, PROVIDE NECESSARY MOUNTING HARDWARE FOR INSTALLATION.
10. CONSTANT CURRENT REGULATOR SWITCHGEAR (CCR).
11. GENERATOR ANNUNCIATOR PANEL. PROVIDE WIRING AND CONDUIT FROM THE PANEL TO THE GENERATOR AS REQUIRED BY THE GENERATOR MANUFACTURER.
12. PORTABLE FORKLIFT. REFER TO DRAWING EA513 FOR MORE INFORMATION.
13. PROVIDE 30A, 1 POLE, 120V NEMA L5-30 RECEPTACLE FOR ALCMS CABINET. FIELD COORDINATE EXACT LOCATION AND MOUNTING HEIGHT.
14. INSTALL WIRING TO OUTDOOR SPLIT SYSTEM UNIT PER MANUFACTURER REQUIREMENTS VIA A 30A NON-FUSED DISCONNECT SWITCH. COORDINATE WITH MECHANICAL CONTRACTOR.
15. PROVIDE 208V, 2 POLE, 30A DISCONNECT SWITCH IN NEMA 4X STAINLESS STEEL ENCLOSURE WITH 20A FUSES.
16. PROVIDE 208V, 2 POLE, 30A DISCONNECT SWITCH IN NEMA 4X STAINLESS STEEL ENCLOSURE WITH 15A FUSES.
17. PROVIDE (1) 3/4" C FROM GENERATOR ANNUNCIATOR PANEL TO ALCMS PANEL.
18. PROVIDE NEW ANTENNA. COORDINATE WIRE AND CONDUIT REQUIREMENTS WITH THE CLIENT AND ANTENNA MANUFACTURER.

KEY MAP C



GRAPHIC SCALE

1/4"=1'-0"

1' 0 2' 4' 8'

APPR	DATE	DESCRIPTION	SYM

NAVFAC

Muguirel Giurgiu

COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
PE No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

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ACTIVITY

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DES SJM | DRW SJM | CHK MG

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BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

VAULT E-101 - POWER PLAN

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

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

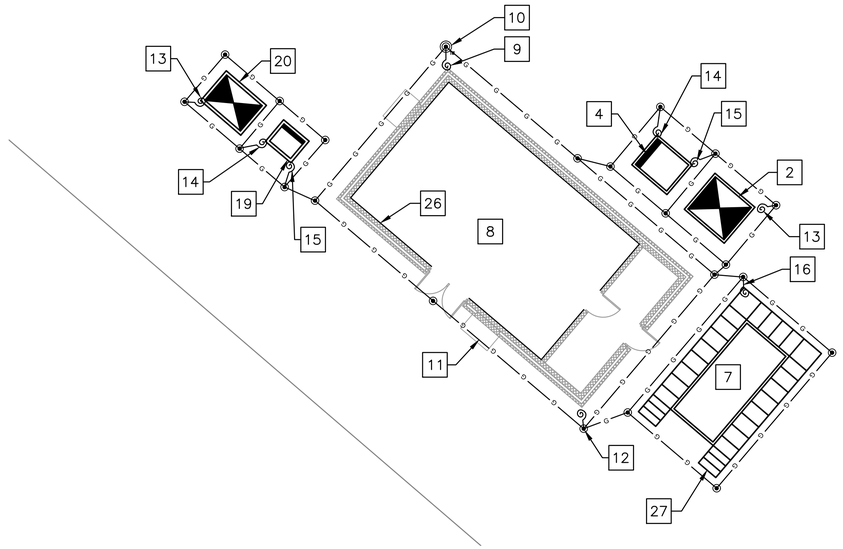
NAVFAC DRAWING NO.
12691880

SHEET 347 OF 368

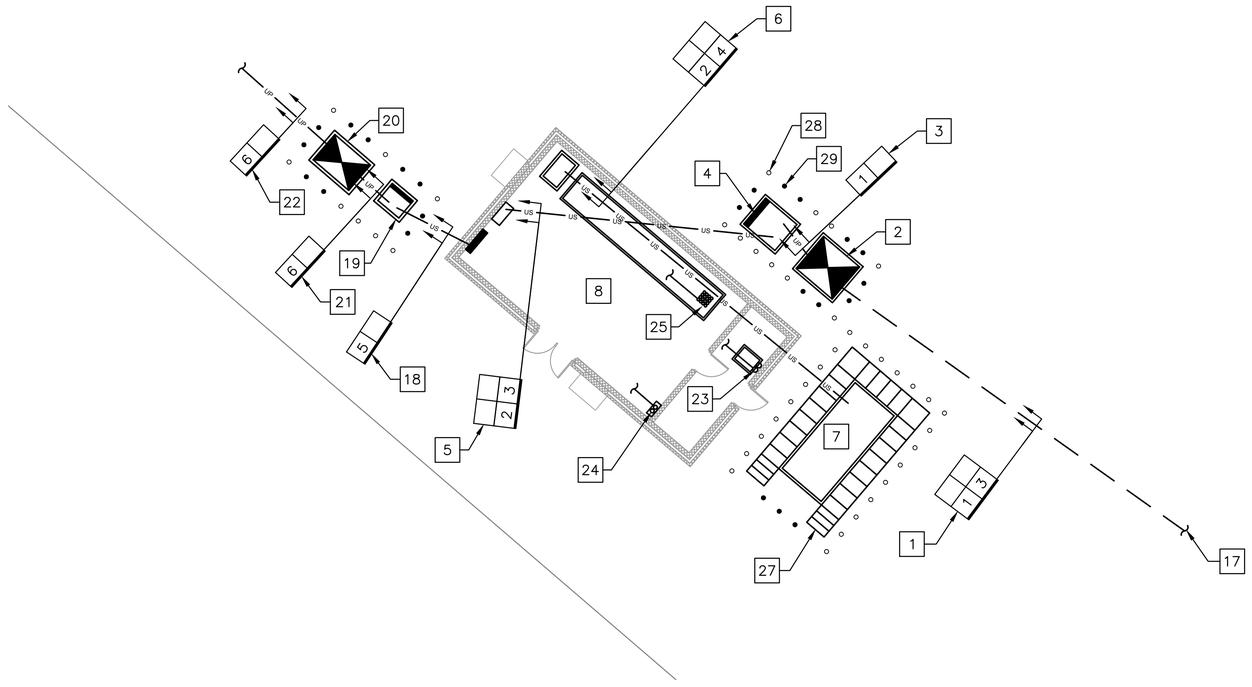
E-406

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-406.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:28am USER: jrothe



SITE PLAN GROUNDING (1)
1"=10'



SITE PLAN POWER (2)
1"=10'

GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-408, E-409, AND E-603 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. REFER TO DRAWING E-501 FOR GROUNDING DETAILS.
6. REFER TO DRAWING E-611 FOR CABLE SCHEDULE.
7. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 2.

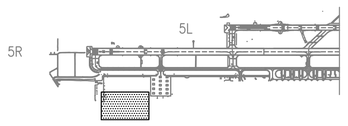
CONSTRUCTION KEYNOTES

1. 4-WAY 5" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE MANHOLE TO 4-WAY, 5KV PAD MOUNTED SWITCH. REFER TO DETAIL 3 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
2. 4-WAY, 5 KV PAD MOUNTED SWITCH ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. 2-WAY 5" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE PAD MOUNTED SWITCH TO PAD MOUNTED TRANSFORMER. REFER TO DETAIL 2 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
4. 225KVA, 4160V-480Y/277V PAD MOUNTED TRANSFORMER ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
5. 4-WAY 4" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE PAD MOUNTED TRANSFORMER TO SERVICE ENTRANCE DISCONNECT. REFER TO DETAIL E3 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
6. 4-WAY 4" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE GENERATOR TO ATS. REFER TO DETAIL E3 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
7. 200KW, 250KVA, 480V, 3 PHASE, 4 WIRE, DIESEL STANDBY GENERATOR, IN WEATHERPROOF ENCLOSURE, WITH 325 GALLONS DOUBLE-WALL SUB-BASE FUEL TANK WITH LEAK DETECTION, ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
8. VAULT E-1120. REFER TO DRAWINGS E-408 AND E-409 FOR ADDITIONAL INFORMATION.
9. #4/0 AWG BARE COPPER FROM THE TEST WELL TO THE MAIN ELECTRICAL ROOM GROUNDING PLATE.

CONSTRUCTION KEYNOTES

10. GROUNDING TEST WELL.
11. #4/0 AWG BARE COPPER. TYPICAL FOR THE ENTIRE GROUNDING SYSTEM UON.
12. GROUNDING ROD. TYPICAL.
13. #4/0 AWG BARE COPPER FROM THE GROUNDING ROD TO THE 5KV SWITCH. TYPICAL FOR THREE LOCATIONS.
14. #4/0 AWG BARE COPPER FROM THE GROUNDING ROD TO THE TRANSFORMER ENCLOSURE.
15. #500 KCMIL BARE COPPER FROM THE GROUNDING ROD TO THE TRANSFORMER XO.
16. #4/0 AWG BARE COPPER FROM THE GROUNDING ROD TO THE GENERATOR, GENERATOR ENCLOSURE, GENERATOR CONCRETE PAD, AND CATWALK. TYPICAL FOR THREE LOCATIONS.
17. CONTINUE DUCTBANK AND WIRING FOR 100' TO EXISTING POWER POLE. REFER TO EA SERIES FOR EXACT LOCATION AND DRAWING E-504 FOR DETAILS.
18. 2-WAY 2" SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM MAIN DISTRIBUTION PANEL TO PAD MOUNTED TRANSFORMER. REFER TO DETAIL 2 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
19. 37.5KVA, 480V-4160V PAD MOUNTED TRANSFORMER ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
20. 5 KV PAD MOUNTED SWITCH ON CONCRETE PAD. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE PAD DETAIL.
21. 2-WAY 5"C SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM THE PAD MOUNTED TRANSFORMER TO PAD MOUNTED SWITCH. REFER TO DETAIL 2 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
22. 2-WAY 5"C SCHEDULE 40 PVC IN CONCRETE ENCASED DUCTBANK FROM PAD MOUNTED DISCONNECT SWITCH TO MANHOLE SHOWN ON EA SERIES DRAWINGS. REFER TO DETAIL 2 ON DRAWING E-503 FOR ADDITIONAL INFORMATION.
23. STUB UP (2) 4"C FOR FIBER TO ALCMS CABINET FROM COMMUNICATIONS HANDHOLE HH-C405 SHOWN ON DRAWING EA133-B.
24. STUB UP (2) 5"C TO ALSF CABINET FROM AIRFIELD HANDHOLE HH-E405 SHOWN ON DRAWING EA133-B.
25. STUB UP (16) 2"C TO CCR FROM AIRFIELD MANHOLE MH-A405 SHOWN ON DRAWING EA133-B. COORDINATE CONDUIT STUB UP LOCATION WITH CCR MANUFACTURER PRIOR TO INSTALLATION.
26. PROVIDE MULTI-POINT SYSTEM GROUNDING PLATE ALONG THE PERIMETER OF THE INTERIOR WALL OF THE VAULT. REFER TO DRAWING E-501 FOR ADDITIONAL INFORMATION.
27. PROVIDE CATWALK FOR GENERATOR. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
28. PROVIDE BOLLARD. REFER TO DETAIL 4 ON DRAWING EA508 FOR MORE INFORMATION. (TYP.)
29. PROVIDE REMOVABLE BOLLARD. REFER TO DETAIL 5 ON DRAWING EA508 FOR MORE INFORMATION. (TYP.)

KEY MAP B



GRAPHIC SCALE

1"=10' 0 10' 20' 40'

APPR	DATE	DESCRIPTION	SYM

NAVFAC

Muguerel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
PE No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

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FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES: SJM	DRW: SJM	CHK: MG

PM/OM
BRANCH MANAGER WED
CHIEF ENG/ARCH

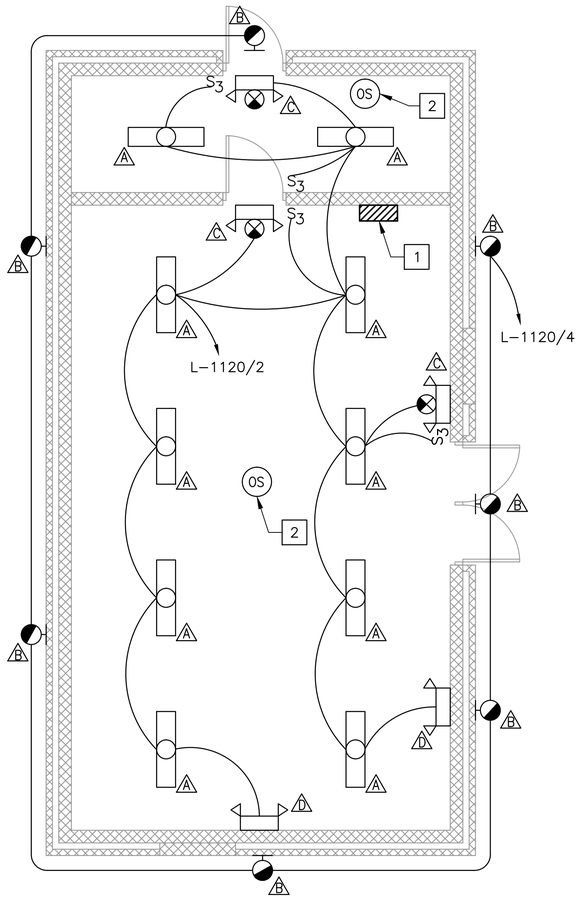
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
VAULT E-1120 - SITE PLAN POWER

SCALE:	1"=10'
EPROJECT NO.:	1291651
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12691881
SHEET	348 OF 368

E-407

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Phase1\Task 008\10-0863--008-E-407.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:57am USER: jrothe



VAULT E-1120 LIGHTING PLAN
1/4"=1'-0"

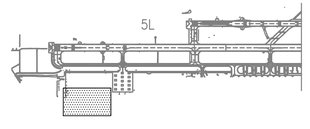
GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-407, E-603, AND E-409 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. REFER TO DRAWING E-609 FOR LIGHTING FIXTURE SCHEDULE AND DETAILS.
6. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF EXTERIOR WALL MOUNTED LIGHT FIXTURES.
7. REFER TO DRAWING E-611 FOR PANEL SCHEDULES.
8. EXIT AND EGRESS LIGHTING SHALL BE CONNECTED ON THE UN-SWITCHED PORTION OF THE CIRCUIT.
9. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 2.
10. REFER TO DETAIL 2 ON DRAWING E-502 FOR LIGHTING CONTROL DIAGRAM.

☐ CONSTRUCTION KEYNOTES

1. 250A, 208Y/120V PANEL L-1120 WITH 225A MAIN CIRCUIT BREAKER.
2. OCCUPANCY/VACANCY SENSOR SWITCH. THE SENSOR MUST BE WIRED AS VACANCY SENSOR (MANUAL ON, AUTOMATIC OFF). CEILING-MOUNT SENSOR MUST ACHIEVE MANUAL-ON VIA TOGGLE SWITCH WIRED IN SERIES WITH (AND DOWNSTREAM OF) THE OCCUPANCY SENSOR POWER PACK. PROVIDE LOW VOLTAGE POWER PACKS AS REQUIRED. SENSOR MUST BE EQUIPPED WITH THE FOLLOWING: ADJUSTABLE TIMER SETTINGS; SELF-ADJUSTING TECHNOLOGY TO MINIMIZE NUISANCE SWITCHING; LOW VOLTAGE AUXILIARY RELAY/CONTACTS; OPTIONAL AMBIENT LIGHT SENSING OVERRIDE. PROVIDE ALL WIRING AND CONDUIT NECESSARY FOR A COMPLETE FUNCTIONAL LIGHTING CONTROL SYSTEM. REFER TO DETAIL 2 ON DRAWING E-502 FOR ADDITIONAL INFORMATION.

KEY MAP B



GRAPHIC SCALE

1/4"=1'-0"

1' 0 2' 4' 8'

NO.	DESCRIPTION	DATE	APPR

NAVFAC

Mugurel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
Lic. No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

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ACTIVITY

SATISFACTORY TO DATE

DES SJM | DRW SJM | CHK MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

VAULT E-1120 – LIGHTING PLAN

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

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

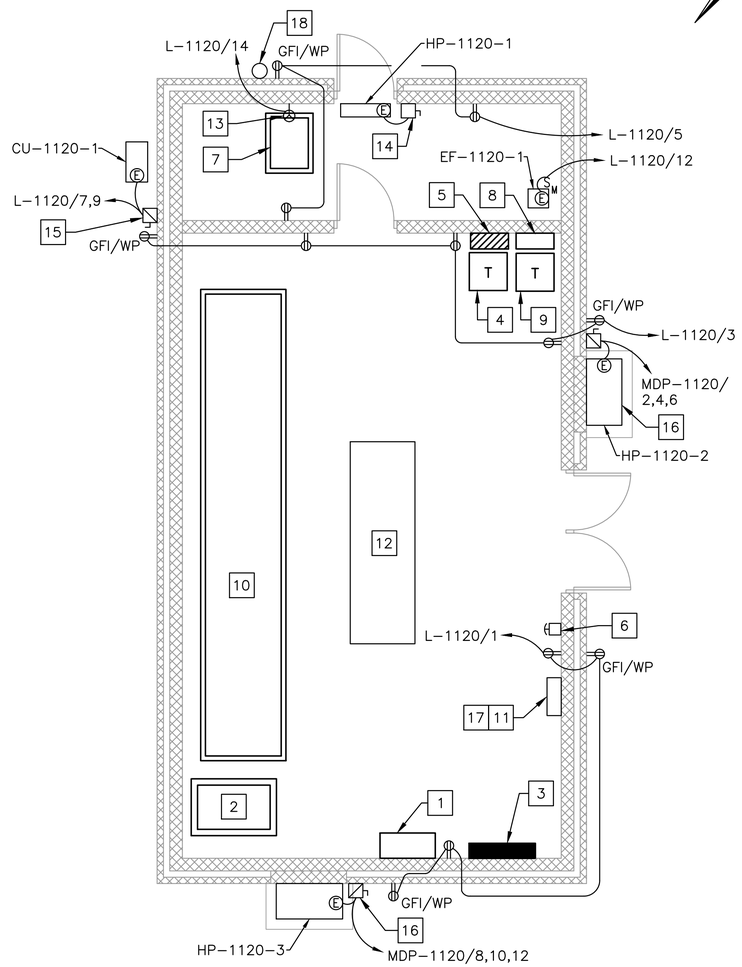
NAVFAC DRAWING NO.
12691882

SHEET 349 OF 368

E-408

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-408.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:29am USER: jrothe



VAULT E-1120 POWER PLAN

1/4"=1'-0"

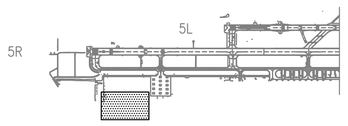
GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-407, E-408, AND E-603 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, ELECTRICAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. UNLESS OTHERWISE NOTED, ELECTRICAL WORK AND MATERIALS ARE NEW AND MUST BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
6. REFER TO DRAWING E-611 FOR PANEL SCHEDULES.
7. PROVIDE CONCRETE HOUSEKEEPING PAD FOR EACH FLOOR MOUNTED ELECTRICAL EQUIPMENT.
8. ELECTRICAL EQUIPMENT INSTALLED OUTDOOR MUST BE IN NEMA 4X STAINLESS STEEL ENCLOSURE UON. ELECTRICAL EQUIPMENT INSTALLED INDOOR MUST BE IN NEMA 12 ENCLOSURE UON.
9. ELECTRICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, SWITCHBOARDS, PANEL BOARDS, MOTOR STARTERS, ENCLOSED CIRCUIT BREAKERS, DISCONNECT SWITCHES, TRANSFORMERS, ENCLOSURES, AND WIRING DEVICES MUST BE UL LISTED FOR ITS INTENDED USE.
10. RECEPTACLE OUTLETS INSTALLED OUTDOORS AND/OR IN WET LOCATIONS MUST BE LISTED WEATHER-RESISTANT TYPE WITH A WEATHERPROOF WHILE-IN-USE COVER THAT IS LISTED AND IDENTIFIED AS "EXTRA-DUTY".
11. ALL WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 2.

CONSTRUCTION KEYNOTES

1. 400A, 3 POLE, 480Y/277V SERVICE ENTRANCE RATED DISCONNECT SAFETY SWITCH, FUSED AT 400A.
2. 400A, 4 POLE, 65KA WITHSTAND CURRENT RATING, DELAYED OPEN TRANSITION AUTOMATIC TRANSFER SWITCH WITH ISOLATION BYPASS INSTALLED ON 4" CONCRETE PAD.
3. 400A, 480Y/277V MAIN DISTRIBUTION PANEL WITH 400A MAIN CIRCUIT BREAKER WITH ELECTRONIC TRIP UNIT WITH LSI BREAKER.
4. 75KVA, 480V-208Y/120V WALL MOUNTED DRY TYPE TRANSFORMER. PROVIDE NECESSARY MOUNTING HARDWARE FOR INSTALLATION.
5. 250A, 208Y/120V PANEL WITH 225A MAIN CIRCUIT BREAKER.
6. EMERGENCY SHUT-OFF SWITCH FOR GENERATOR. PROVIDE WIRING AND CONDUIT FROM THE SWITCH TO THE GENERATOR AS REQUIRED BY THE GENERATOR MANUFACTURER.
7. AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (ALCMS) CABINET. REFER TO DRAWING EA510 FOR RACK DETAIL.
8. RE-INSTALL EXISTING ALSF 240/120V PANEL.
9. 15KVA, 480V-240/120V WALL MOUNTED DRY TYPE TRANSFORMER. PROVIDE NECESSARY MOUNTING HARDWARE FOR INSTALLATION.
10. CONSTANT CURRENT REGULATOR SWITCHGEAR (CCR).
11. GENERATOR ANNUNCIATOR PANEL. PROVIDE WIRING AND CONDUIT FROM THE PANEL TO THE GENERATOR AS REQUIRED BY THE GENERATOR MANUFACTURER.
12. PORTABLE FORKLIFT. REFER TO DRAWING EA513 FOR MORE INFORMATION.
13. PROVIDE 30A, 1 POLE, 120V NEMA L5-30 RECEPTACLE FOR ALCMS CABINET. FIELD COORDINATE EXACT LOCATION AND MOUNTING HEIGHT.
14. INSTALL WIRING TO OUTDOOR SPLIT SYSTEM UNIT PER MANUFACTURER REQUIREMENTS VIA A 30A NON-FUSED DISCONNECT SWITCH. COORDINATE WITH MECHANICAL CONTRACTOR.
15. PROVIDE 208V, 2 POLE, 30A DISCONNECT SWITCH IN NEMA 4X STAINLESS STEEL ENCLOSURE WITH 15 FUSES.
16. PROVIDE 480V, 3 POLE, 30A DISCONNECT SWITCH IN NEMA 4X STAINLESS STEEL ENCLOSURE WITH 20A FUSES.
17. PROVIDE (1) 3/4" C FROM GENERATOR ANNUNCIATOR PANEL TO ALCMS PANEL.
18. PROVIDE NEW ANTENNA. COORDINATE WIRE AND CONDUIT REQUIREMENTS WITH THE CLIENT AND ANTENNA MANUFACTURER.

KEY MAP B



GRAPHIC SCALE

1/4"=1'-0"

1' 0 2' 4' 8'

APPR	DATE	DESCRIPTION	STM

NAVFAC

Mugurel Giurgiu

COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
Reg. No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

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ACTIVITY

SATISFACTORY TO DATE

DES SJM | DRW SJM | CHK MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

VAULT E-1120 – POWER PLAN

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

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

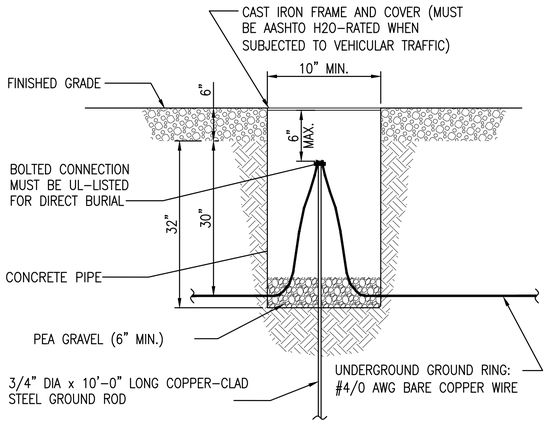
NAVFAC DRAWING NO.
12691883

SHEET 350 OF 368

E-409

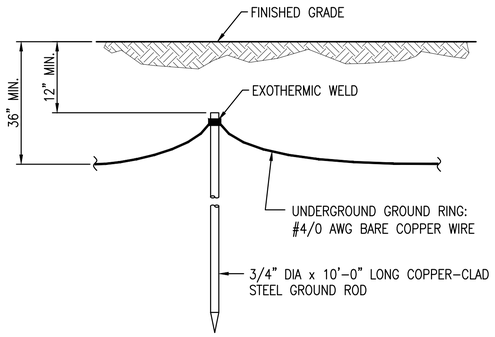
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Pionset\Task 008\10-0863-008-E-409.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:29am USER: jrothe



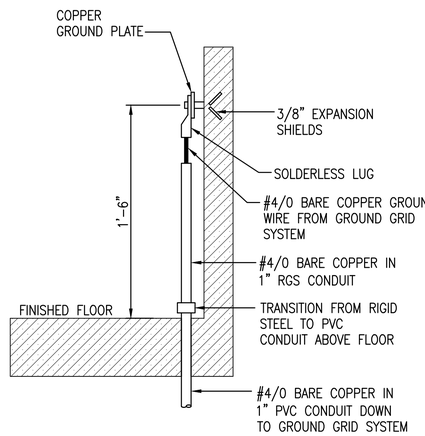
GROUND TEST WELL DETAIL 1

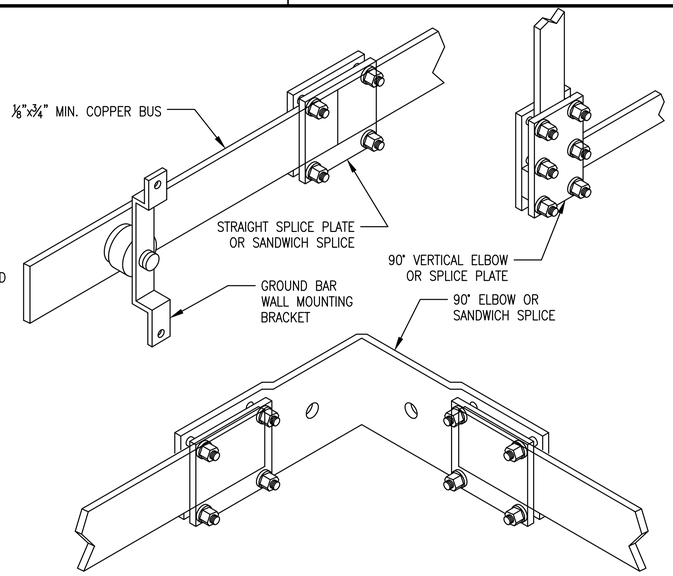
NTS E-501



GROUND ROD DETAIL 2

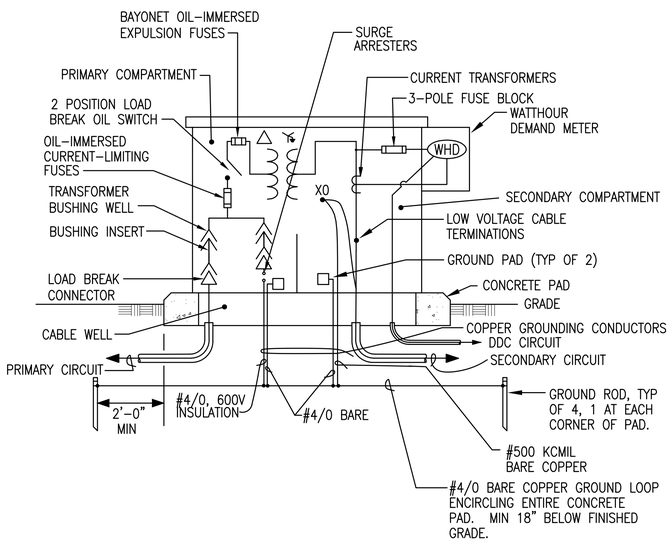
NTS E-501





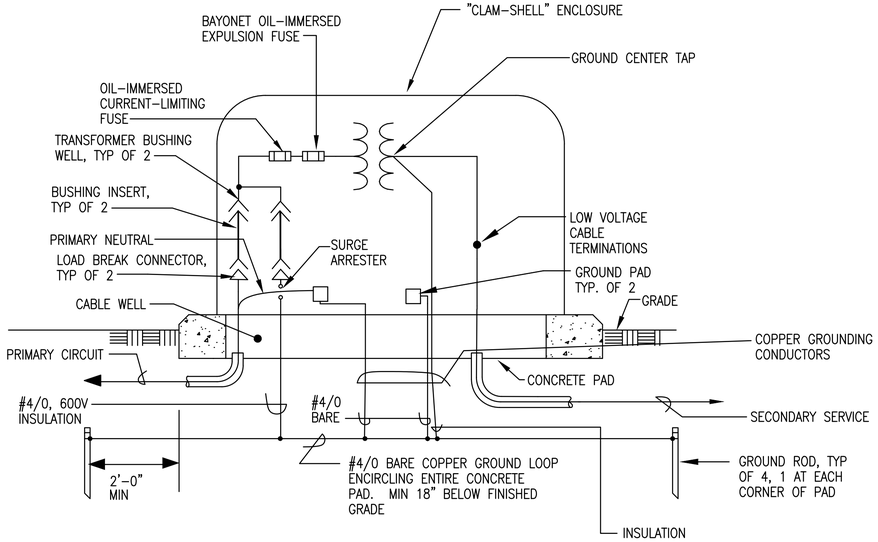
GROUNDING DETAIL 3

NTS E-501



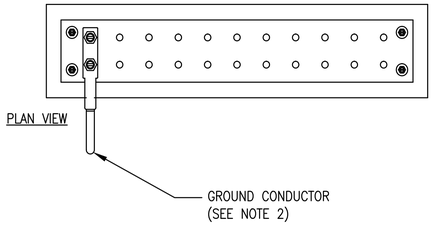
PAD MOUNTED TRANSFORMER DETAIL 4

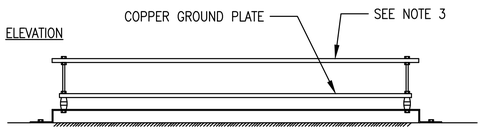
NTS E-501



SINGLE PHASE PAD MOUNTED TRANSFORMER DETAIL 5

NTS E-501





NOTES:

1. GROUND LUGS MUST BE COMPRESSION TYPE. ALT 1500 SERIES (RICHARDS MANUFACTURING) OR APPROVED EQUAL.
2. INSULATE GROUND CONDUCTOR, SIZED AS INDICATED ON PLANS. CONDUCTOR MUST BE COLOR CODED AS FOLLOWS:

   MULTIPOINT: GREEN WITH ORANGE STRIPE
   GREEN WITH RED STRIPE

3. CLEAR PLASTIC, PLEXIGLASS OR EQUAL, COVER PLATES MUST BE PERMANENTLY MARKED AS "GROUND PLATE".
4. EXCEPT SINGLE POINT SYSTEM GROUND PLATES, MOUNTING BRACKETS MUST BE BONDED TO ITS PLATE BY A NO.2 AWG INSULATED WIRE.

GROUNDING DETAIL 6

NTS E-501

GENERAL SHEET NOTES

1. THE WORK SHOWN ON THIS DRAWING IS COMMON TO BOTH PHASE 1 AND PHASE 2.

APPR	DATE	DESCRIPTION	SYM

NAVFAC

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COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
Lic. No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SJM | DRW SJM | CHK MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

ELECTRICAL DETAILS

SCALE: NTS
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691884
SHEET 351 OF 368

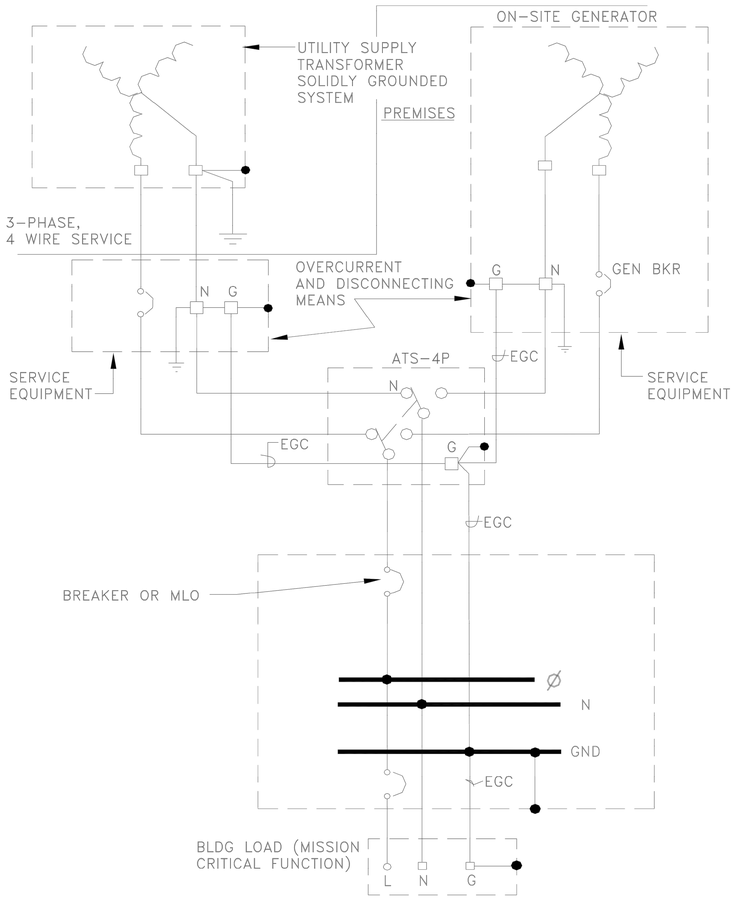
E-501

DRAWFORM REVISION: 10 MARCH 2009

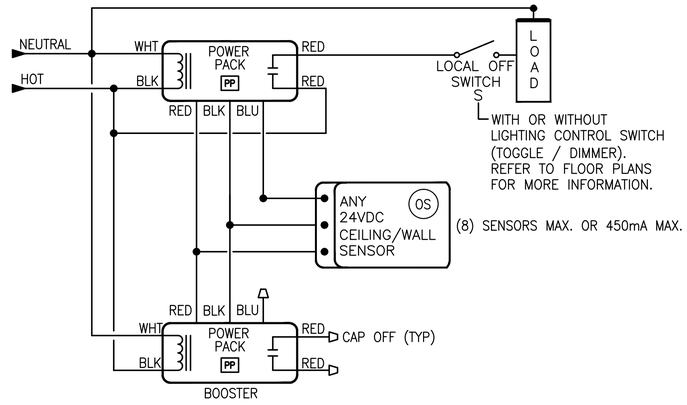
FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-501.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:29am USER: jrothe

GENERAL SHEET NOTES

1. THE WORK SHOWN ON THIS DRAWING IS COMMON TO BOTH PHASE 1 AND PHASE 2.



TYPICAL GROUNDING DIAGRAM (1)
NTS E-502



TYPICAL LIGHTING CONTROL DIAGRAM (2)
NTS E-402,E-405,E-408

SYM	DESCRIPTION	DATE	APPR

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NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ELECTRICAL DETAILS

SCALE: NTS
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691885
SHEET 352 OF 368

E-502

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-502.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:30am USER: jrothe

GENERAL SHEET NOTES

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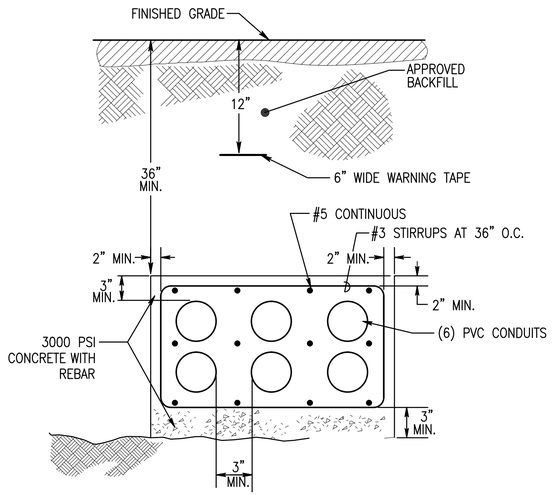
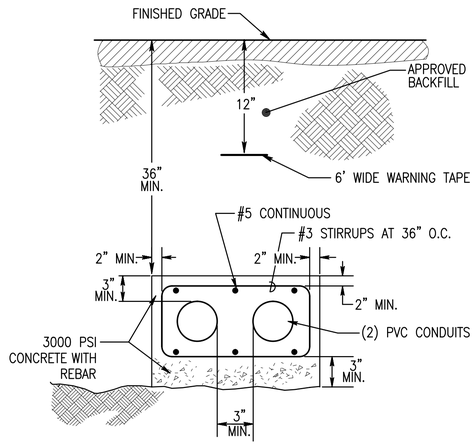
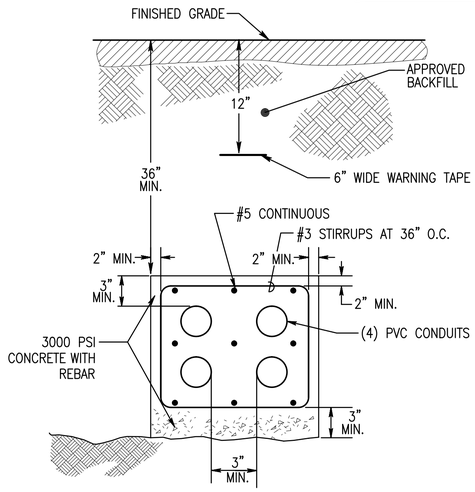


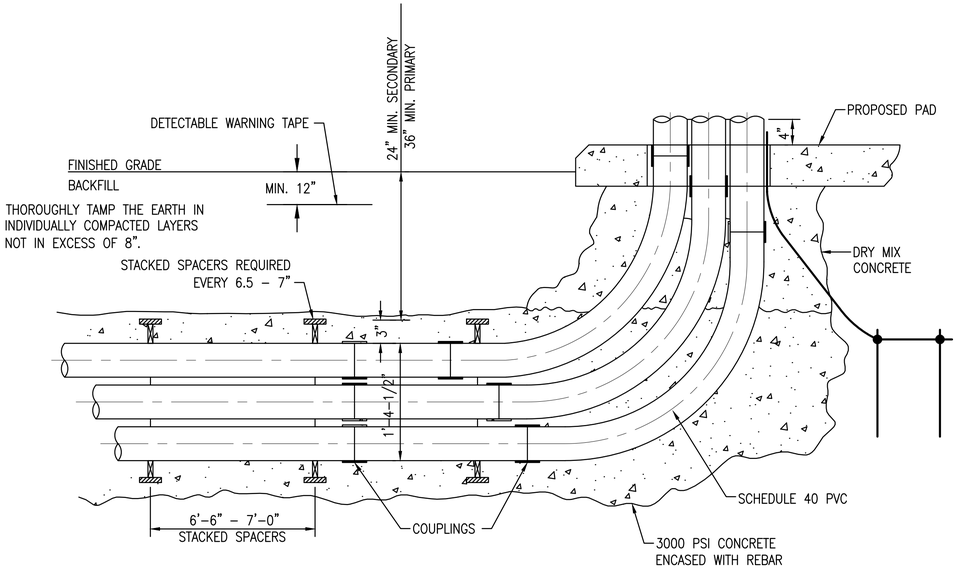
6-WAY DUCTBANK DETAIL (1)
NTS E-404



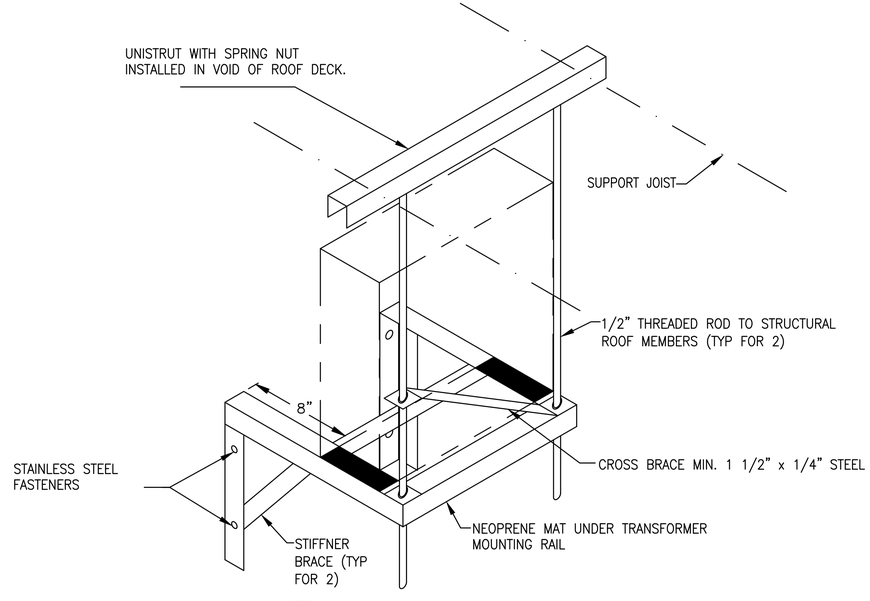
2-WAY DUCTBANK DETAIL (2)
NTS E-401, E-404, E-407



4-WAY DUCTBANK DETAIL (3)
NTS E-401, E-404, E-407



TURNING CONDUIT INTO EQUIPMENT PAD DETAIL (4)
NTS E-503



NOTES:
1. FRAME TO BE MINIMUM HSS 4" x 3" x 5/16"
2. FULL WELD AT ALL JOINTS
3. EPOXY ENAMEL PAINT ASSEMBLY PRIOR TO INSTALLATION
4. CONTRACTOR SHALL PROVIDE CALCULATIONS TO CONFIRM ADEQUACY OF TRANSFORMER'S SUPPORT.

TYPICAL WALL MOUNTED TRANSFORMER SUPPORT (5)
NTS E-503

APPR | DATE | DESCRIPTION | SYM

NAVFAC

Mugurel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
Reg. No. 046781
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NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ELECTRICAL DETAILS

SCALE: NTS
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691886
SHEET 353 OF 368
E-503
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-503.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 – 9:30am USER: jrothe

POLE LINE MATERIAL LIST

1. FLAT STEEL BRACE (TWO PIECES)
2. MACHINE BOLT, 3/8" X LENGTH NEEDED WITH WASHER, NUT AND LOCKWASHER
3. 8' WOOD CROSSARM WITH CROSS SECTION DIMENSIONS OF 3 1/2" X 4 1/2"
4. MACHINE BOLT, 5/8" X LENGTH NEEDED WITH WASHER, NUT AND LOCKWASHER
5. TIMBER CONNECTOR
6. LAGSCREW, 1/2" X 4"
7. ANGLE STEEL BRACE (TWO PIECES)
8. MACHINE BOLT, 1/2" X LENGTH NEEDED, WITH WASHER, NUT & LOCKWASHER
9. DEADEND BOX
10. STEEL PIN
11. PIN INSULATOR
12. GRID GAIN, USED ONLY WHEN THERE IS NO POLE GAIN
13. ANGLE STEEL BRACE (ONE PIECE)
14. 10' WOOD CROSSARM WITH CROSS SECTION DIMENSIONS OF 3 1/2" X 4 1/2"
15. 5/8" EYE NUT
16. 5/8" EYE BOLT, LENGTH AS NEEDED, WITH WASHER, NUT & LOCKWASHER
17. EXTENSION LINK
18. BELL TYPE SUSPENSION INSULATOR WITH CONNECTING HARDWARE
19. STRAIN CLAMP
20. STEEL ANGLE PIN
21. CLUSTER MOUNTING BRACKET, STEEL
22. TRANSFORMER GROUNDING CONNECTION
23. STIRRUP
24. SECONDARY LEAD SUPPORT BRACKET
25. ADAPTER PLATE FOR CLUSTER MOUNTING
26. CLEVIS BRACKET FOR SPOOL INSULATOR
27. SPOOL INSULATOR
28. U BOLT CLAMP
29. PREFORMED GUY GRIP
30. GUY HOOK
31. GUY STRAIN INSULATOR
32. GUY WIRE, SIZE AS SPECIFIED
33. #4 WP CU. SOFT DRAWN GROUND WIRE
34. GROUND CLAMP
35. CONDUIT COUPLING
36. CONDUIT BEND
37. INSULATED BUSHING
38. PERFORATED STRAPPING, 1-1/2" WIDE
39. HOT LINE CLAMP
40. FUSED CUTOUT, AS SPECIFIED
41. SURGE ARRESTER, AS SPECIFIED
42. POLE TOP PIN (RIDGE PIN) - 24 INCHES LONG
43. CROSSARM ANGLE PIN
44. ANGLE POLE TOP PIN
45. WEATHERPROOF SOFT DRAWN WIRE-SIZE
    - (a) TO MATCH OR EXCEED AMPACITY OF CONNECTING CABLE, OR
    - (b) AT 125% OF TRANSFORMER FULL LOAD CURRENT, BUT NOT LESS THAN NO. 4 AWG

POLE LINE MATERIAL LIST

SKETCH DATE	JUNE 2002	STYLE	OH-1.5

POLE LINE MATERIAL LIST

46. TRI-MOUNT BRACKET
47. TERMINATOR
48. MOUNTING BRACKET
49. CABLE GRIP HANGER
50. HOSE CLAMP
51. STUD, 3/4" X 1-3/4"
52. LINE POST INSULATOR
53. TRIPLE INSULATOR BRACKET
54. ANGLE CLAMP
55. INSULATOR, LINE POST CLAMP
56. 4' CROSSARM
57. CROSSARM GAIN BRACKET
58. PULLEY BRACKET
59. WEDGE CLAMP
60. MIDSPAN SERVICE CLAMP
61. STUD, 7"
62. SADDLE, ANGLE
63. SADDLE CROSSARM
64. FITTING, POLE TOP
65. CONNECTOR
66. SUSPENSION CLAMP
67. TIE, SERVICE CABLE
68. 54" FIBERGLASS STRAIN INSULATOR
69. PVC RISER SHIELD
70. PVC EXTENSION SHIELD
71. PVC BACK PLATE
72. 8' WOOD CROSSARM WITH CROSS SECTION DIMENSIONS OF 4 3/4" X 5 3/4"
73. 10' WOOD CROSSARM WITH CROSS SECTION DIMENSIONS OF 4 3/4" X 5 3/4"
74. BACK-UP CURRENT LIMITING FUSE

POLE LINE MATERIAL LIST

SKETCH DATE	JUNE 2002	STYLE	OH-1.5A

EXPLANATORY NOTES - METHOD OF SHOWING SYMBOLS

1. SYMBOLS ARE SHOWN IN THE BASIC ORDER AS THEY APPEAR ON THE POLE, BY STARTING AT THE TOP AND WORKING DOWN.
2. NUMERALS PRECEDING THE SYMBOL INDICATE THE MINIMUM REQUIRED VOLTAGE (KV) RATING (5,15,35) OF THE ASSEMBLY, IF APPLICABLE.
3. NUMERAL FOLLOWING THE SYMBOL INDICATES THE NUMBER OF CONDUCTORS ASSOCIATED WITH THE ASSEMBLY, IF APPLICABLE.
4. NUMERAL IN PARENTHESIS FOLLOWING THE SYMBOL DENOTES THE NUMBER OF ASSEMBLIES REQUIRED, IF MORE THAN ONE.
5. DATA IN PARENTHESIS FOLLOWING THE SYMBOL PROVIDES INFORMATION RELATIVE TO THE SYMBOL.

EXPLANATION OF SYMBOLS LISTED FOR POLE ON SKETCH OH-1.3

PROVIDE 45 FOOT LONG, CLASS 3 POLE CONTAINING:

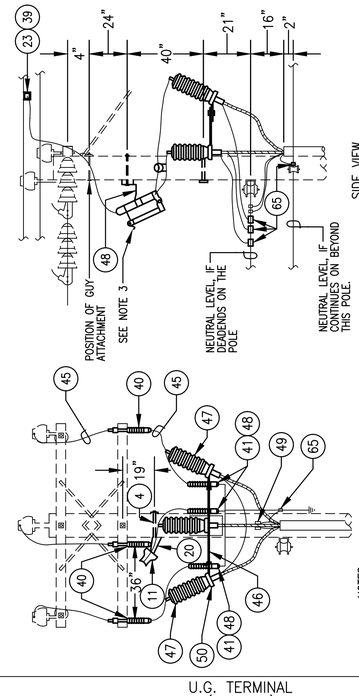
- X-FB - 8' CROSSARM WITH FLAT BRACE
- 35FR3 - 35KV INSULATORS, FLAT (MOUNTED HORIZONTAL ON CROSS-ARM), RIDGE PIN (CENTER PHASE ON POLE TOP PIN), THREE CONDUCTORS
- X-FB - 8' CROSSARM WITH FLAT BRACE
- 15F3 - 15KV INSULATORS, FLAT (MOUNTED HORIZONTAL ON CROSSARM), THREE CONDUCTORS. NOTE: THIS SYMBOL CALLS FOR THREE CROSSARM MOUNTED PINS IN LIEU OF RIDGE PIN ON CENTER PHASE.
- TF - TRANSFORMER ON FLAT (HORIZONTAL) CONSTRUCTION. DATA IN PARENTHESIS DESCRIBES THE TRANSFORMER CHARACTERISTICS.
- S1 - SECONDARY, ONE CONDUCTOR, TANGENT CONSTRUCTION (COMMON NEUTRAL).
- SDE2 - SECONDARY DEADEND, TWO CONDUCTORS, OPEN WIRE
- GUY (5/16") - DOWN GUY - WIRE SIZE 5/16"
- ANCHOR (10" SCREW) - 10" SCREW TYPE ANCHOR WITH 12 FT. GUY LEAD. NOTE: NO PLATE IS INCLUDED FOR THE ANCHOR SYMBOL.
- GROUND - NO EXPLANATION NECESSARY

EXPLANATION OF NOTES/SYMBOLS

SKETCH DATE	JUNE 2002	STYLE	OH-1.3A

GENERAL SHEET NOTES

1. THE WORK SHOWN ON THIS DRAWING IS TO BE COMPLETED UNDER PHASE 2.

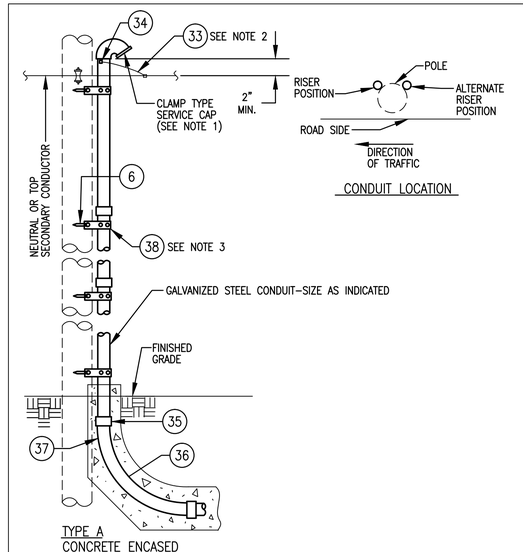


NOTES

1. MODIFY POSITION OF TERMINAL ON DEADENDS TO BE UNDER THE CONDUCTORS AND THE CUTOUTS ON THE BACKSIDE OF CROSSARM. POLE RISER MUST BE OFFSET TO CLEAR NEUTRAL CLEVIS BRACKET.
2. CONNECT BOTTOM LEAD OF ARRESTER DIRECTLY TO POLE GROUND. INTERCONNECT CABLE INSULATION SHIELD DRAIN WIRES AND CONDUIT RISER GROUND TO MULTI-GROUNDED NEUTRAL (IF EXISTING) AND POLE GROUND.
3. CUTOUT PROVIDES A FUSE OR A SOLID BLADE (NON-FUSED) OPTION. COORDINATE WITH SPECIFIC DESIGN REQUIREMENTS PROVIDED.

U.G. TERMINAL
(0-25KV)

SKETCH DATE	JUNE 2002	STYLE	OH-31

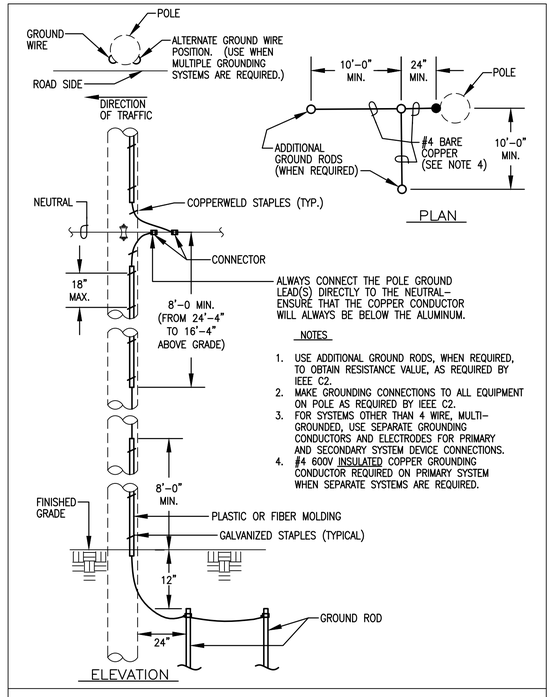


NOTES

1. ON CONDUIT RISER FOR PRIMARY CIRCUITS, ELIMINATE SERVICE CAP AND PROVIDE GROUNDING TYPE INSULATING BUSHING.
2. BOND CONDUIT TO POLE GROUND AND SYSTEM NEUTRAL (IF EXISTING). SEE GROUNDING NOTES ON SKETCH OH-41.
3. SPACE STRAPS AT MAXIMUM OF 4' INTERVALS.

CONDUIT RISER
(SIZE & TYPE AS INDICATED)

SKETCH DATE	JUNE 2002	STYLE	OH-35



NOTES

1. USE ADDITIONAL GROUND RODS, WHEN REQUIRED, TO OBTAIN RESISTANCE VALUE, AS REQUIRED BY IEEE C2.
2. MAKE GROUNDING CONNECTIONS TO ALL EQUIPMENT ON POLE AS REQUIRED BY IEEE C2.
3. FOR SYSTEMS OTHER THAN 4 WIRE, MULTI-GROUNDED, USE SEPARATE GROUNDING CONDUCTORS AND ELECTRODES FOR PRIMARY AND SECONDARY SYSTEM DEVICE CONNECTIONS.
4. #4 600V INSULATED COPPER GROUNDING CONDUCTOR REQUIRED ON PRIMARY SYSTEM WHEN SEPARATE SYSTEMS ARE REQUIRED.

GROUND

SKETCH DATE	JUNE 2002	STYLE	OH-41

APPR | DATE | DESCRIPTION | SYM

NAVFAC

MUGUREL GIURGIU
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SJM | DRW SJM | CHK MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC
NAVAL AIR STATION OCEANA - VIRGINIA BEACH, VIRGINIA
HR IPT

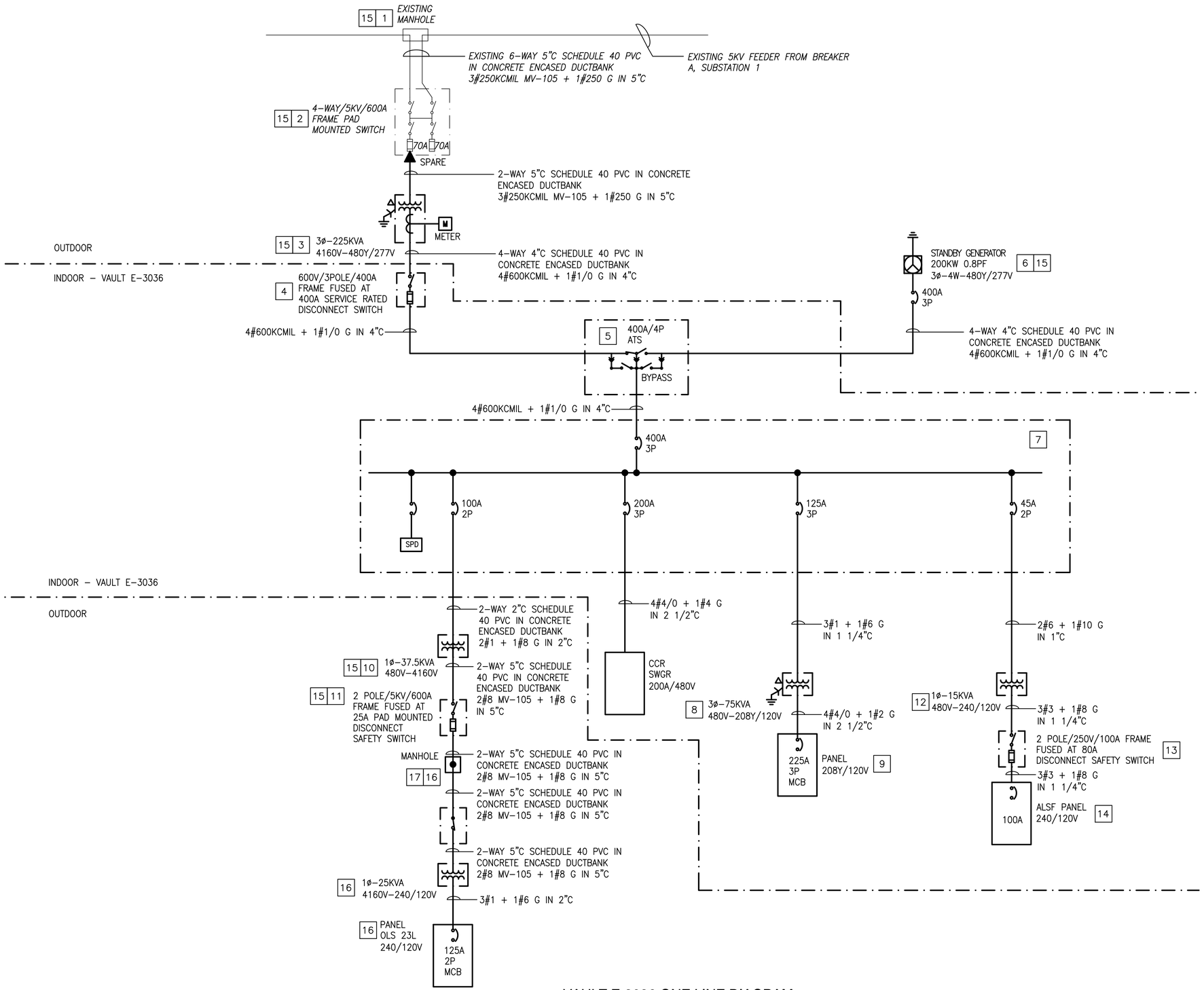
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
ELECTRICAL DETAILS

SCALE: NTS
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691887
SHEET 354 OF 368

E-504

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-504.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:30am USER: jrothe



VAULT E-3036 ONE LINE DIAGRAM

NTS

GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-401, E-402, AND E-403 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. UNLESS OTHERWISE NOTED, ELECTRICAL WORK AND MATERIALS ARE NEW AND MUST BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
6. THE WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 2.

CONSTRUCTION KEYNOTES

1. EXISTING MANHOLE WITH 5KV FEEDER FOR VAULT E-3036 CONNECTED IN A LOOP CONFIGURATION TO EXISTING FEEDER FROM BREAKER A, SUBSTATION 1. REFER TO DRAWING EA141-C FOR MORE INFORMATION.
2. EXISTING 4-WAY, 600A, 5KV PAD MOUNTED SWITCH ON CONCRETE PAD.
3. 225KVA, 4160V-480Y/277V, PAD MOUNTED OIL-FILED TRANSFORMER WITH KWH REVENUE METER.
4. 400A, 3 POLE, 480Y/277V, 35KAIC SERVICE ENTRANCE RATED DISCONNECT SAFETY SWITCH, FUSED AT 400A.
5. 400A, 4 POLE, 480Y/277V, 35KAIC DELAYED OPEN TRANSITION, AUTOMATIC TRANSFER SWITCH WITH ISOLATION BYPASS.
6. 200KW, 250KVA, 3 PHASE, 4 WIRE, 480Y/277V, DIESEL STANDBY GENERATOR, IN WEATHERPROOF ENCLOSURE, WITH 325 GALLONS SUB-BASE FUEL TANK.
7. 400A, 480Y/277V, 35KAIC MAIN DISTRIBUTION PANEL WITH 400A MAIN CIRCUIT BREAKER.
8. 75KVA, 480V-208Y/120V, WALL MOUNTED DRY TYPE TRANSFORMER.
9. 250A, 208Y/120V PANEL WITH 225A MAIN CIRCUIT BREAKER.
10. 37.5KVA, 480V-4160V, SINGLE PHASE PAD MOUNTED OIL-FILED TRANSFORMER.
11. 600A, 5KV PAD MOUNTED SWITCH ON CONCRETE PAD.
12. RELOCATED 15KVA, 480V-240/120V, SINGLE PHASE WALL MOUNTED DRY TYPE TRANSFORMER.
13. 100A, 2 POLE, 250V, 10KAIC, DISCONNECT SAFETY SWITCH FUSED AT 80A.
14. RELOCATED ALSF PANEL.
15. REFER TO DRAWING E-401 FOR EQUIPMENT LOCATION AND FEEDER ROUTING.
16. REFER TO EA-SERIES FOR EQUIPMENT LOCATION, FEEDER ROUTING, AND MANHOLES.
17. AIRFIELD MANHOLE SHOWN FOR DIAGRAMMATIC PURPOSES ONLY. REFER TO EA-SERIES FOR MANHOLE QUANTITIES, LOCATIONS, AND DIMENSIONS.

NO.	DESCRIPTION	DATE	APPR

NAVFAC

Muguirel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SJM | DRW SJM | CHK MC
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

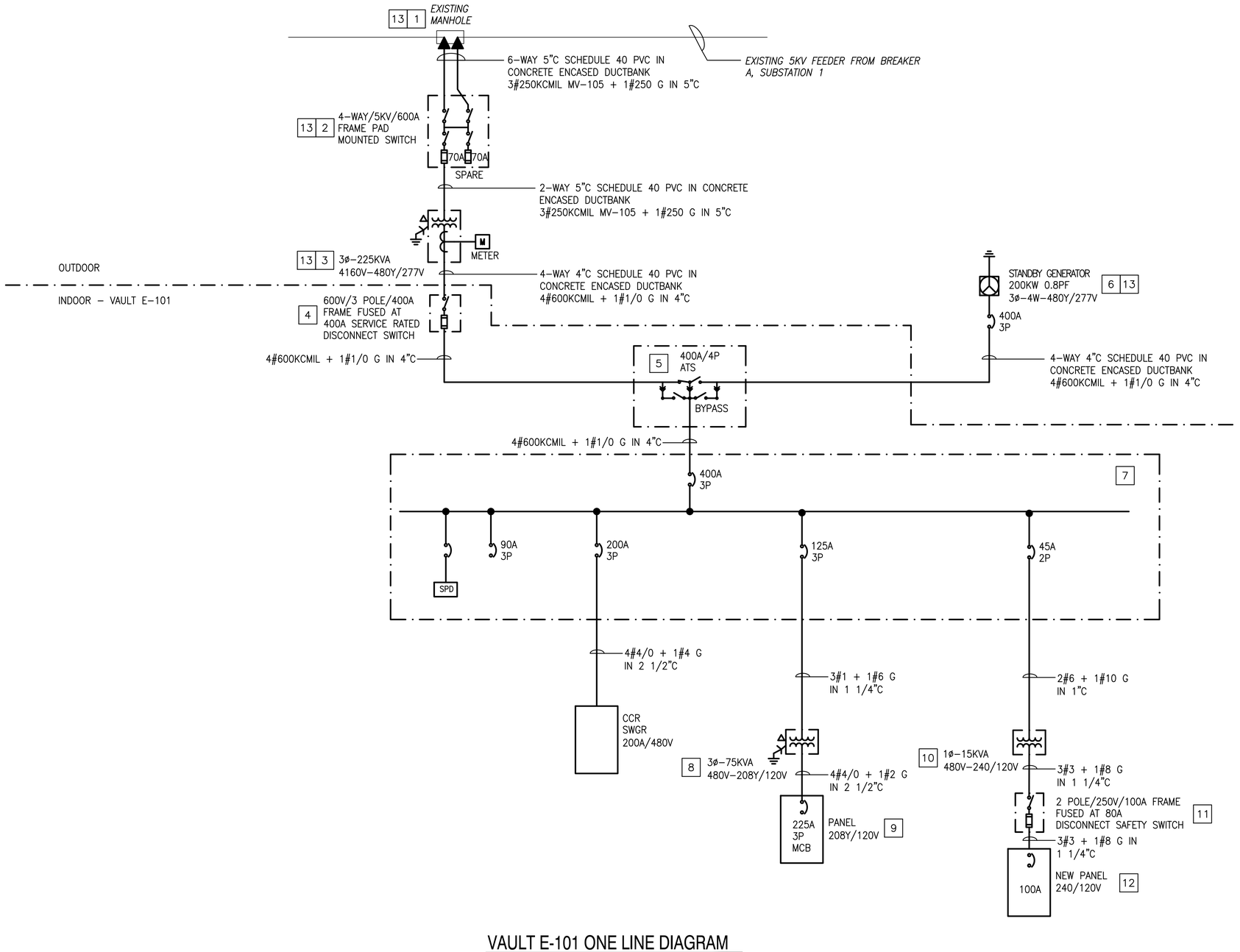
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC
NAVAL AIR STATION OCEANA - VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
VAULT E-3036 - ONE LINE DIAGRAM

SCALE: NTS
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691888
SHEET 355 OF 368

E-601

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\58427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-601.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:30am USER: jrothe



VAULT E-101 ONE LINE DIAGRAM

NTS

GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-404, E-405, AND E-406 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. UNLESS OTHERWISE NOTED, ELECTRICAL WORK AND MATERIALS ARE NEW AND MUST BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
6. THE WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 1.

CONSTRUCTION KEYNOTES

1. EXISTING MANHOLE CONNECT NEW FEEDER FOR VAULT E-101 IN A LOOP CONFIGURATION TO EXISTING FEEDER FROM BREAKER A, SUBSTATION 1. REFER TO DRAWING EA143-C FOR MORE INFORMATION.
2. 4-WAY, 600A, 5KV PAD MOUNTED SWITCH ON CONCRETE PAD.
3. 225KVA, 4160V-480Y/277V, PAD MOUNTED OIL-FILED TRANSFORMER WITH KWH REVENUE METER.
4. 400A, 3 POLE, 480Y/277V, 35KAIC SERVICE ENTRANCE RATED DISCONNECT SAFETY SWITCH, FUSED AT 400A.
5. 400A, 4 POLE, 480Y/277V, 35KAIC DELAYED OPEN TRANSITION, AUTOMATIC TRANSFER SWITCH WITH ISOLATION BYPASS.
6. 200KW, 250KVA, 3 PHASE, 4 WIRE, 480Y/277V, DIESEL STANDBY GENERATOR, IN WEATHERPROOF ENCLOSURE, WITH 325 GALLONS SUB-BASE FUEL TANK.
7. 400A, 480Y/277V, 35KAIC MAIN DISTRIBUTION PANEL WITH 400A MAIN CIRCUIT BREAKER.
8. 75KVA, 480V-208Y/120V, WALL MOUNTED DRY TYPE TRANSFORMER.
9. 250A, 208Y/120V PANEL WITH 225A MAIN CIRCUIT BREAKER.
10. NEW 15KVA, 480V-240/120V, SINGLE PHASE WALL MOUNTED DRY TYPE TRANSFORMER.
11. 100A, 2 POLE, 250V, 10KAIC, DISCONNECT SAFETY SWITCH FUSED AT 80A.
12. NEW ALSF PANEL.
13. REFER TO DRAWING E-404 FOR EQUIPMENT LOCATION AND FEEDER ROUTING.

APPR | DATE | DESCRIPTION | SYM

NAVFAC

Muguerel Giurgiu

COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
Lic. No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

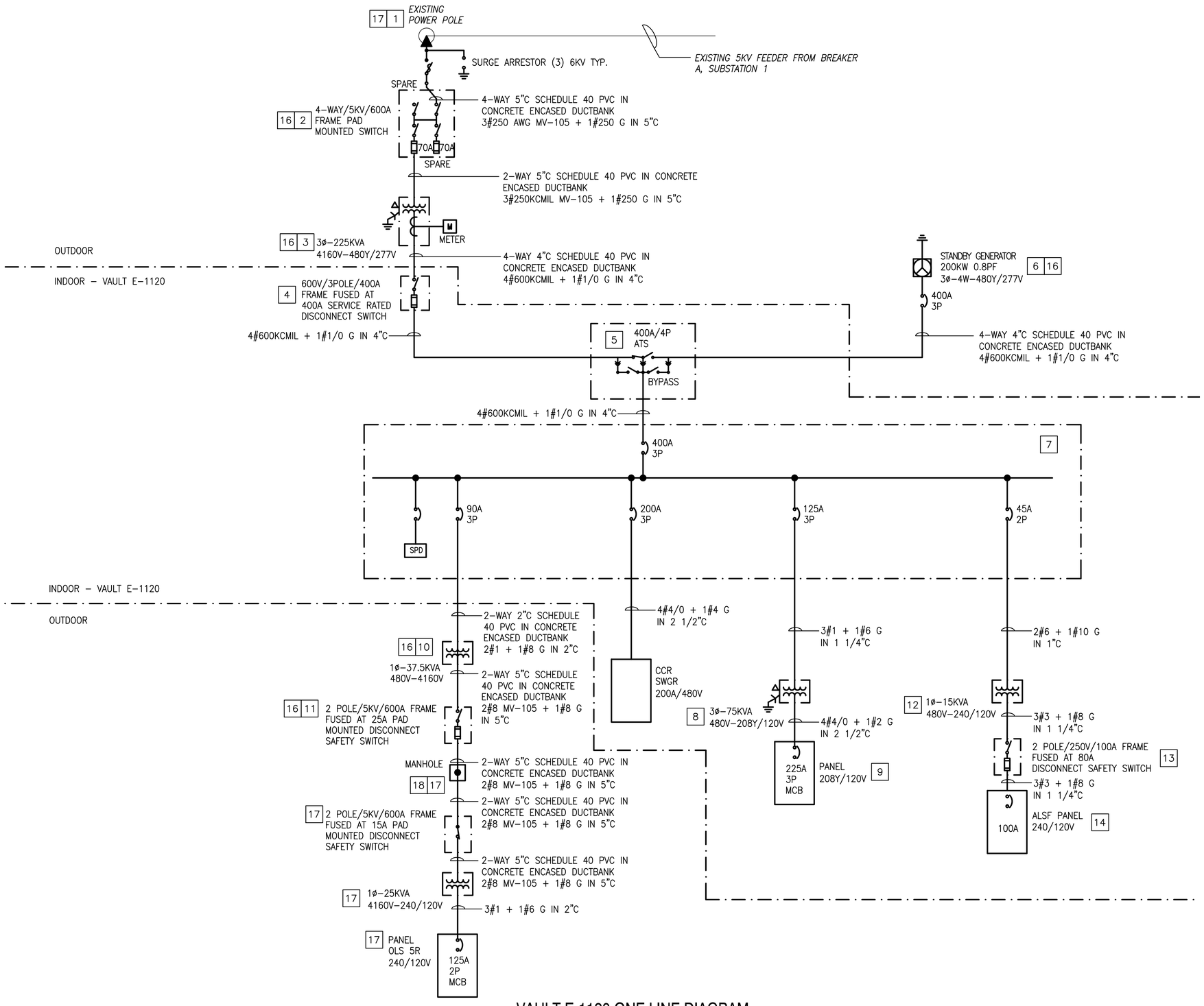
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SJM | DRW SJM | CHK MG
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA - VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
VAULT E-101 - ONE LINE DIAGRAM

SCALE: NTS
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691889
SHEET 356 OF 368
E-602

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-602.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:31am USER: jnthe



VAULT E-1120 ONE LINE DIAGRAM

NTS

GENERAL SHEET NOTES

1. REFER TO DRAWINGS E-001 THRU E-005 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES.
2. REFER TO DRAWINGS E-407, E-408, AND E-409 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL, CIVIL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
5. UNLESS OTHERWISE NOTED, ELECTRICAL WORK AND MATERIALS ARE NEW AND MUST BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
6. THE WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 2.

CONSTRUCTION KEYNOTES

1. EXISTING POWER POLE. CONNECT NEW FEEDER FOR VAULT E-1120 IN A LOOP CONFIGURATION TO EXISTING FEEDER FROM BREAKER A, SUBSTATION 1. REFER TO DRAWING EA133-B FOR MORE INFORMATION.
2. 4-WAY, 600A, 5KV PAD MOUNTED SWITCH ON CONCRETE PAD.
3. 225KVA, 4160V-480Y/277V, PAD MOUNTED OIL-FILED TRANSFORMER WITH KWH REVENUE METER.
4. 400A, 3 POLE, 480Y/277V, 35KAIC SERVICE ENTRANCE RATED DISCONNECT SAFETY SWITCH, FUSED AT 400A.
5. 400A, 4 POLE, 480Y/277V, 35KAIC DELAYED OPEN TRANSITION, AUTOMATIC TRANSFER SWITCH WITH ISOLATION BYPASS.
6. 200KW, 250KVA, 3 PHASE, 4 WIRE, 480Y/277V, DIESEL STANDBY GENERATOR, IN WEATHERPROOF ENCLOSURE, WITH 325 GALLONS SUB-BASE FUEL TANK.
7. 400A, 480Y/277V, 35KAIC MAIN DISTRIBUTION PANEL WITH 400A MAIN CIRCUIT BREAKER.
8. 75KVA, 480V-208Y/120V, WALL MOUNTED DRY TYPE TRANSFORMER.
9. 250A, 208Y/120V PANEL WITH 225A MAIN CIRCUIT BREAKER.
10. 37.5KVA, 480V-4160V, SINGLE PHASE PAD MOUNTED OIL-FILED TRANSFORMER.
11. 600A, 5KV PAD MOUNTED SWITCH ON CONCRETE PAD.
12. RELOCATED 15KVA, 480V-240/120V, SINGLE PHASE WALL MOUNTED DRY TYPE TRANSFORMER.
13. 100A, 2 POLE, 250V, 10KAIC, DISCONNECT SAFETY SWITCH FUSED AT 80A.
14. RELOCATED ALSF PANEL.
15. POLE MOUNTED CUT-OFF SWITCH WITH SURGE ARRESTOR. REFER DRAWING E-504 FOR ADDITIONAL INFORMATION.
16. REFER TO DRAWING E-407 FOR EQUIPMENT LOCATION AND FEEDER ROUTING.
17. REFER TO EA-SERIES FOR EQUIPMENT LOCATION, FEEDER ROUTING, MANHOLES, POLE.
18. AIRFIELD MANHOLE SHOWN FOR DIAGRAMMATIC PURPOSES ONLY. REFER TO EA-SERIES FOR MANHOLE QUANTITIES, LOCATIONS, AND DIMENSIONS.

APPR | DATE | DESCRIPTION | SYM

NAVFAC

Mugurel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SJM | DRW SJM | CHK MG
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

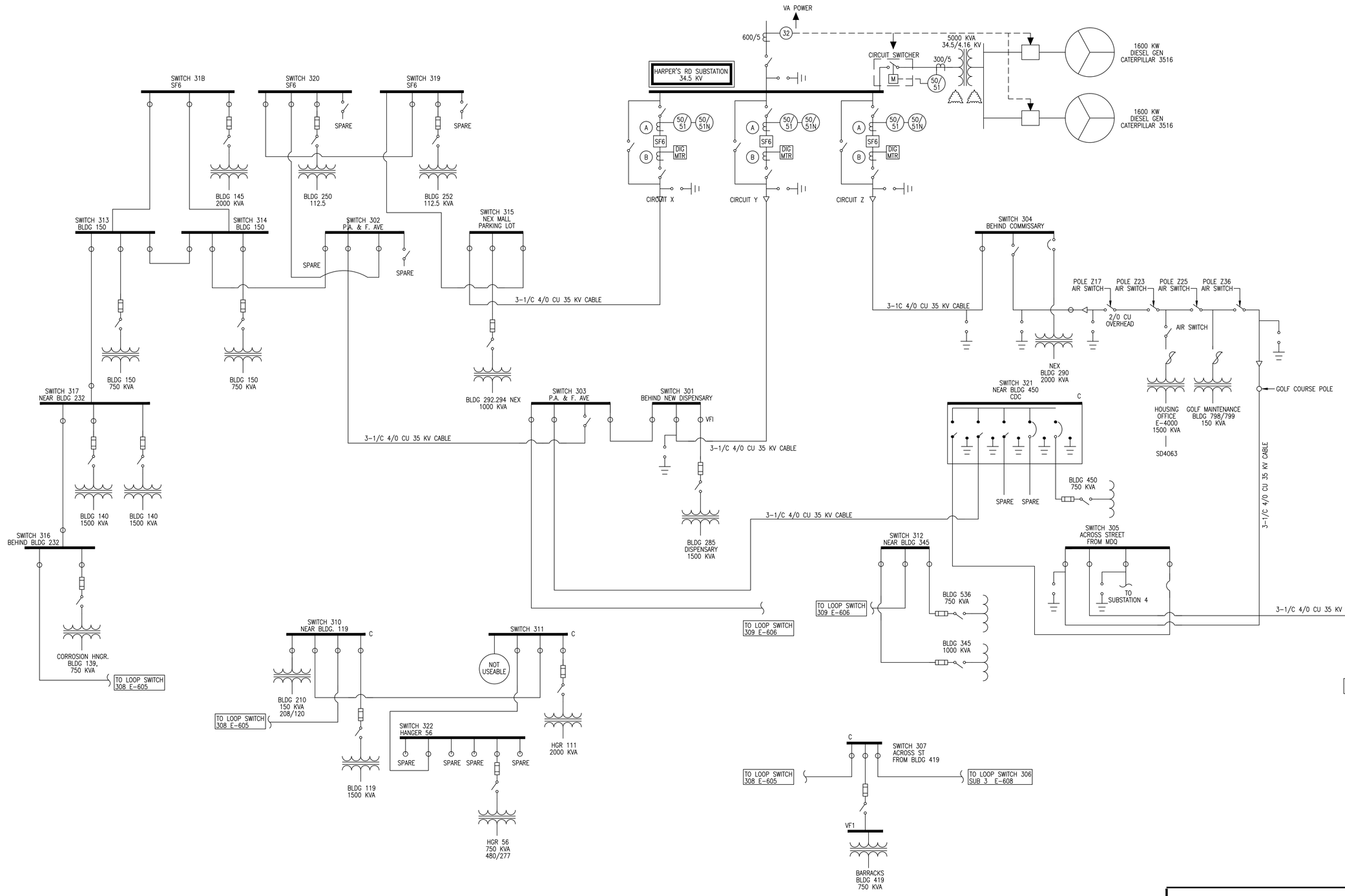
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC
NAVAL AIR STATION OCEANA - VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
VAULT E-1120 - ONE LINE DIAGRAM

SCALE: NTS
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691890
SHEET 357 OF 368

E-603

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-603.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:31am USER: jrothe



OCEANA POWER DISTRIBUTION - ONE LINE DIAGRAM

NOT TO SCALE

E-604

1

GENERAL SHEET NOTES

1. THE OCEANA POWER DISTRIBUTION DRAWINGS ARE INCLUDED TO ASSIST COORDINATION OF MEDIUM VOLTAGE POWER OUTAGES WITH THE OCEANA DEPARTMENT OF PUBLIC WORKS.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley

COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES JB DRW RRR CHK DJP

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

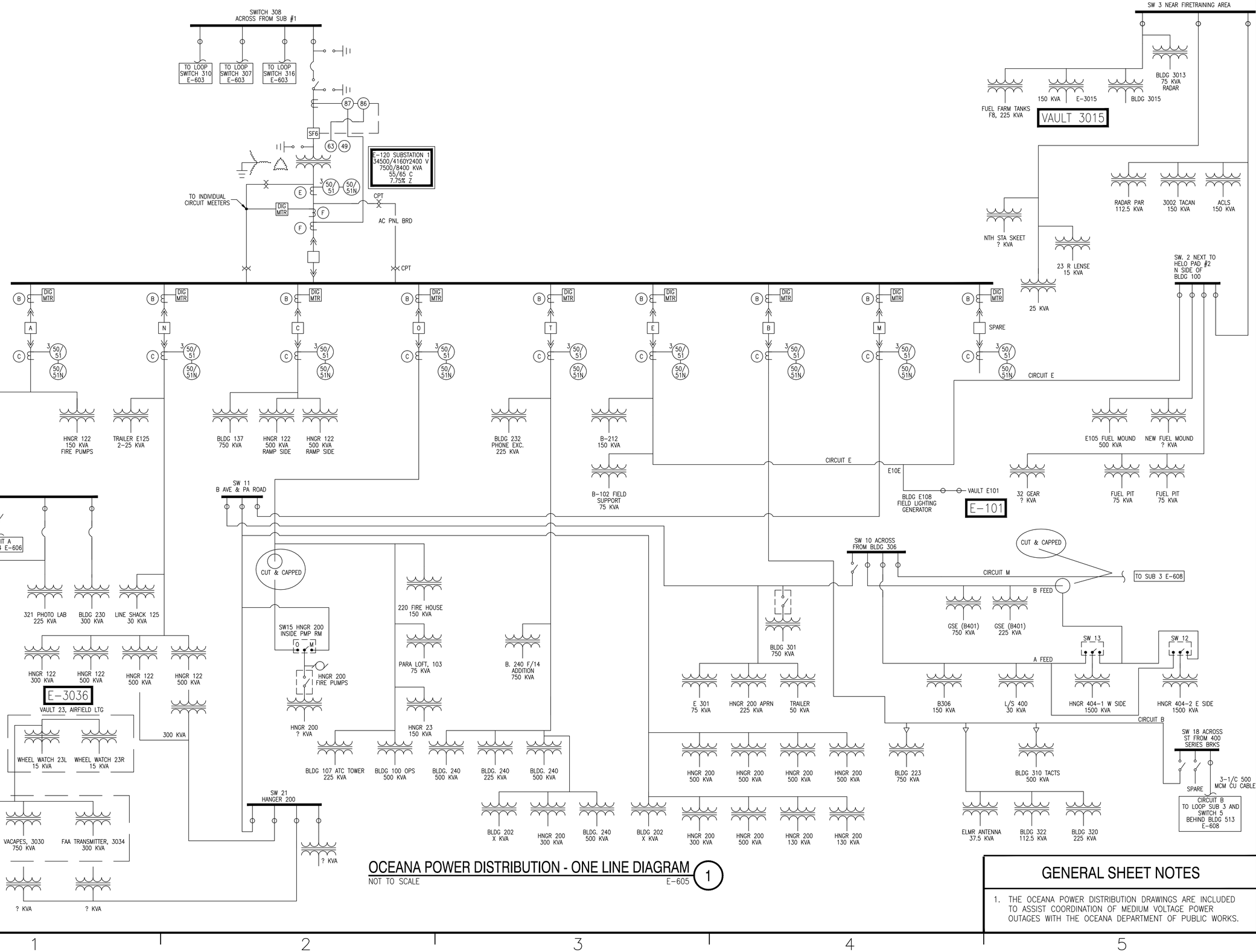
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
HR IPT
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
OCEANA POWER DISTRIBUTION – ONE LINE DIAGRAM

SCALE: NOT TO SCALE
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691891
SHEET 358 OF 368

E-604

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\SMD\100863_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0863-008-E-604.dwg LAYOUT NAME: E-604 OCEANA POWER DISTRIBUTION – ONE LINE DIAGRAM PLOTTED: Tuesday, March 24, 2015 – 11:07am USER: Rhurst



OCEANA POWER DISTRIBUTION - ONE LINE DIAGRAM

NOT TO SCALE

E-605 (1)

GENERAL SHEET NOTES

1. THE OCEANA POWER DISTRIBUTION DRAWINGS ARE INCLUDED TO ASSIST COORDINATION OF MEDIUM VOLTAGE POWER OUTAGES WITH THE OCEANA DEPARTMENT OF PUBLIC WORKS.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

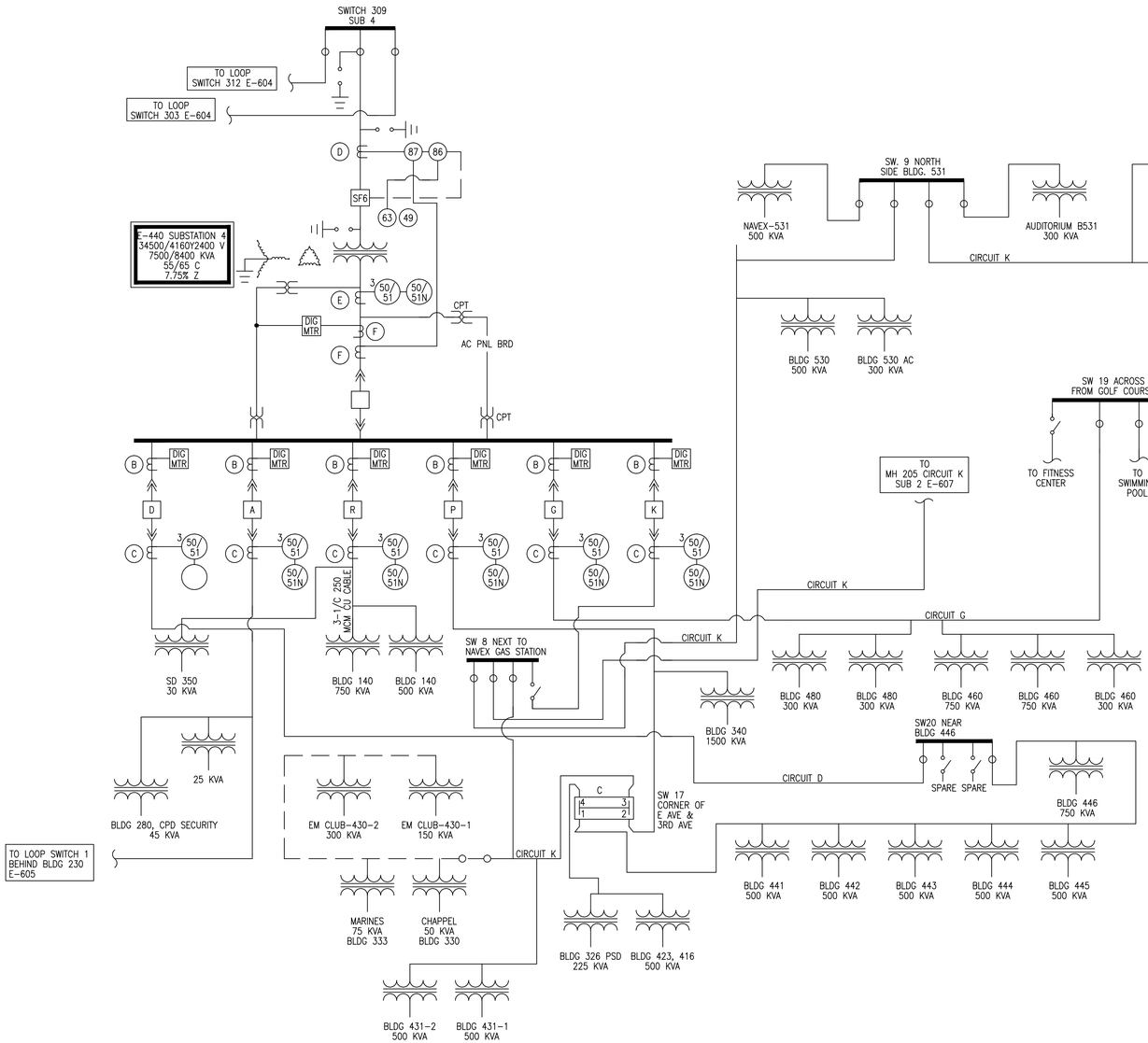
David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES JB DRW RRR CHK DJP
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
OCEANA POWER DISTRIBUTION – ONE LINE DIAGRAM

SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691892
SHEET 359 OF 368
E-605
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\SMD\100863_008_Energy_and_Reliab\CAD\ELECTRICAL\10-0863-008-E-605.dwg LAYOUT NAME: E-605 OCEANA POWER DISTRIBUTION - ONE LINE DIAGRAM PLOTTED: Tuesday, March 24, 2015 - 11:08am USER: Rhurst



OCEANA POWER DISTRIBUTION - ONE LINE DIAGRAM (1)

NOT TO SCALE — E-606

GENERAL SHEET NOTES

1. THE OCEANA POWER DISTRIBUTION DRAWINGS ARE INCLUDED TO ASSIST COORDINATION OF MEDIUM VOLTAGE POWER OUTAGES WITH THE OCEANA DEPARTMENT OF PUBLIC WORKS.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES JB DRW RRR CHK DJP
M/OM
BRANCH MANAGER WED
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR #PT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
ENERGY AND RELIABILITY
OCEANA POWER DISTRIBUTION – ONE LINE DIAGRAM

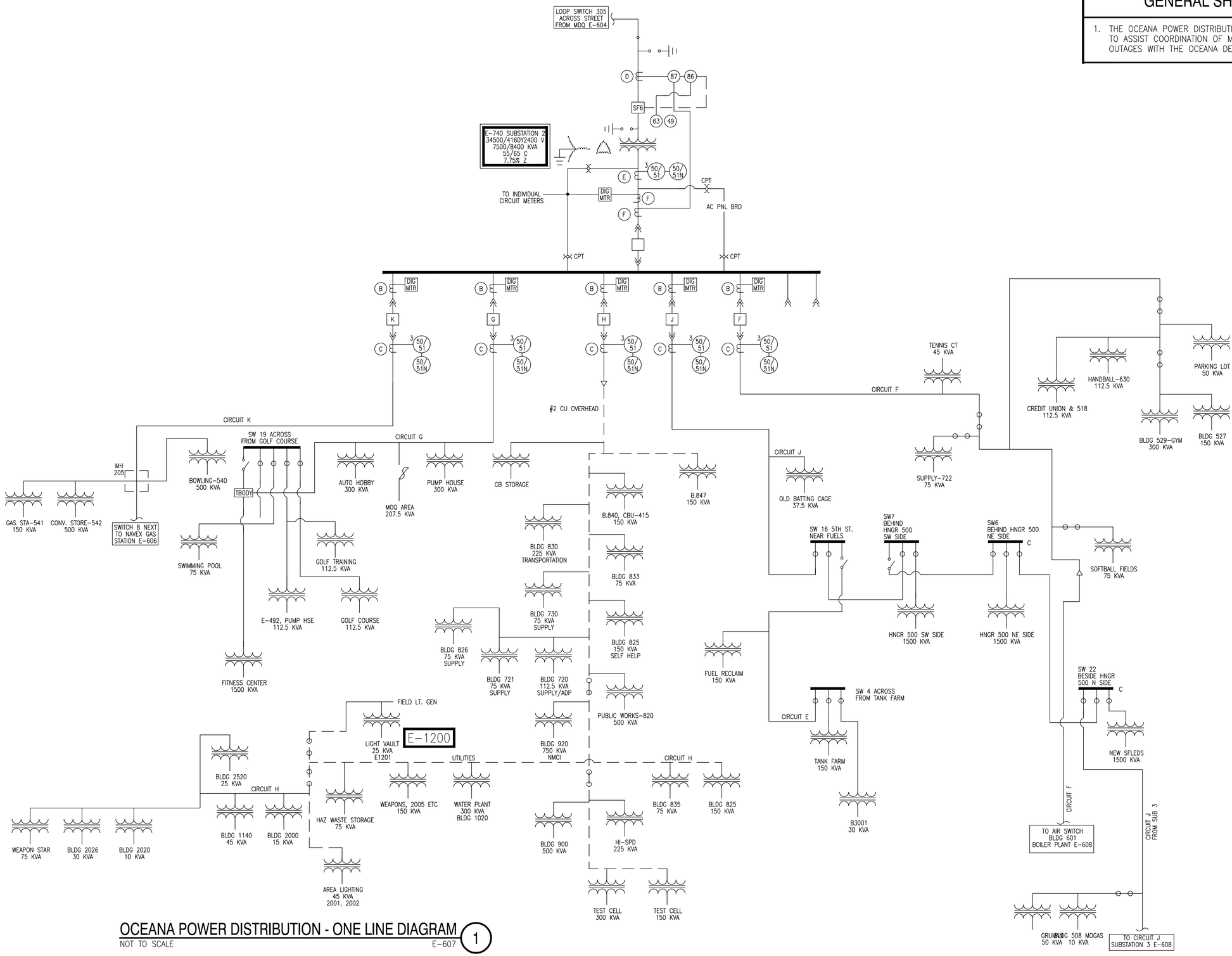
SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691893
SHEET 360 OF 368
E-606

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CAD\ELECTRICAL\10-0863-008-E-606.dwg LAYOUT NAME: E-606 OCEANA POWER DISTRIBUTION - ONE LINE DIAGRAM PLOTTED: Tuesday, March 24, 2015 - 11:08am USER: Rhurst

GENERAL SHEET NOTES

1. THE OCEANA POWER DISTRIBUTION DRAWINGS ARE INCLUDED TO ASSIST COORDINATION OF MEDIUM VOLTAGE POWER OUTAGES WITH THE OCEANA DEPARTMENT OF PUBLIC WORKS.



OCEANA POWER DISTRIBUTION - ONE LINE DIAGRAM (1)

NOT TO SCALE E-607

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES	JB	DRN	RRR	CHK	DJP

W/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

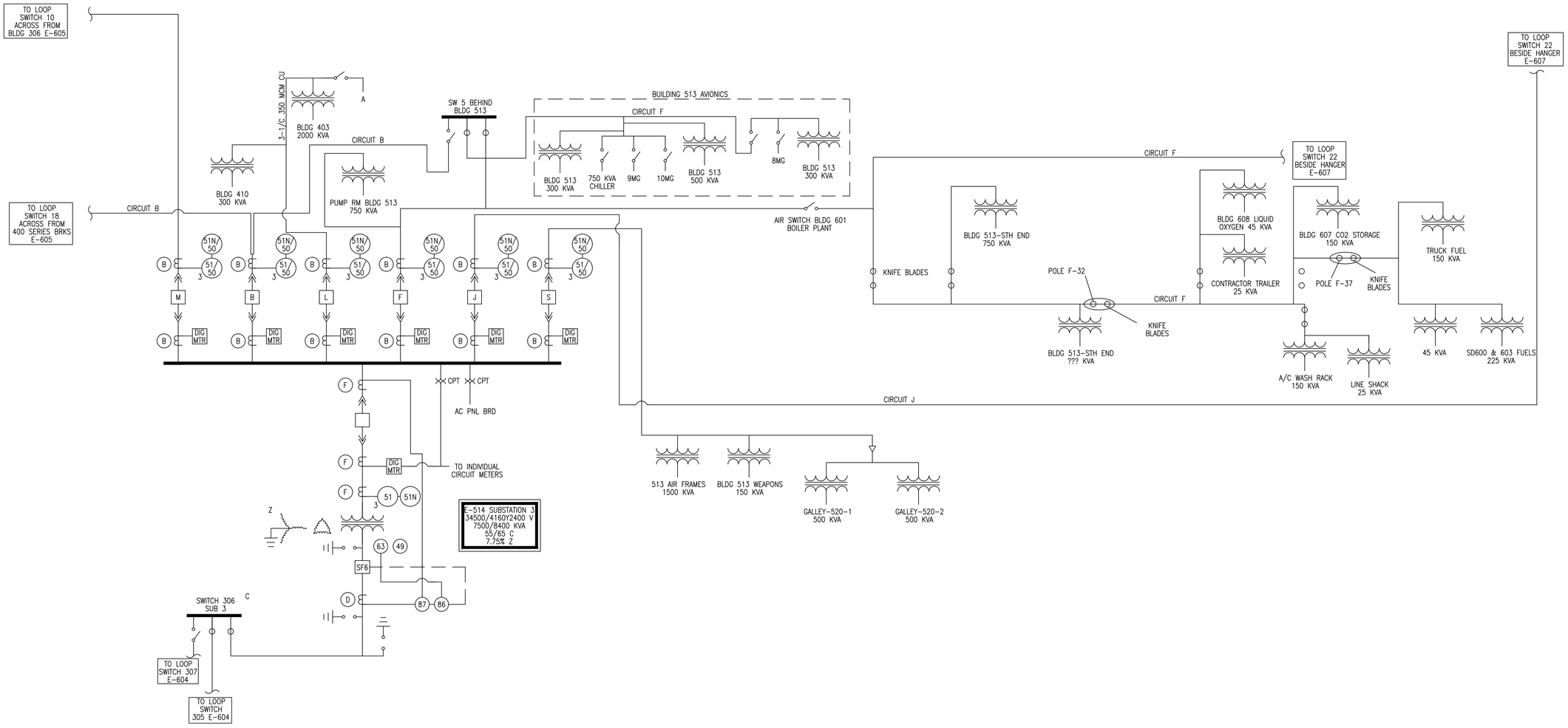
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
OCEANA POWER DISTRIBUTION – ONE LINE DIAGRAM

SCALE NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.: 12691894
SHEET 361 OF 368

E-607

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-E-607.dwg LAYOUT NAME: E-607 OCEANA POWER DISTRIBUTION – ONE LINE DIAGRAM PLOTTED: Tuesday, March 24, 2015 - 11:08am USER: Rhurst



OCEANA POWER DISTRIBUTION - ONE LINE DIAGRAM

NOT TO SCALE

E-608 (1)

GENERAL SHEET NOTES

1. THE OCEANA POWER DISTRIBUTION DRAWINGS ARE INCLUDED TO ASSIST COORDINATION OF MEDIUM VOLTAGE POWER OUTAGES WITH THE OCEANA DEPARTMENT OF PUBLIC WORKS.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES JB DRN RRR CHK DJP

M/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
HR IPT

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

OCEANA POWER DISTRIBUTION – ONE LINE DIAGRAM

SCALE: NOT TO SCALE
PROJECT NO.: 1291651
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 12691895
SHEET: 362 OF: 368

E-608

DRAWFORM REVISION: 10 MARCH 2009

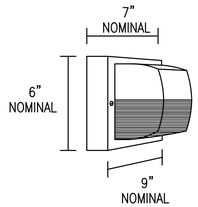
FILE NAME: O:\SMD\100863_008_Energy_and_Reliab\CADD\ELECTRICAL\10-00863-008-E-608.dwg LAYOUT NAME: E-608 OCEANA POWER DISTRIBUTION - ONE LINE DIAGRAM PLOTTED: Tuesday, March 24, 2015 - 11:08am USER: Rhurst

GENERAL SHEET NOTES

1. THE WORK SHOWN ON THIS DRAWING IS COMMON TO BOTH PHASE 1 AND PHASE 2.

LIGHTING FIXTURE SCHEDULE

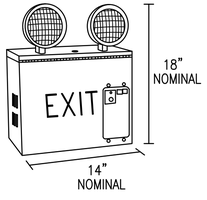
FIXTURE TYPE	WATTAGE	NUMBER AND TYPE OF LAMPS	VOLTAGE	MOUNTING	NOTES
A	37 W	LED	120V	PENDANT 10'–8" AFF	
B	50 W	LED	120V	WALL MOUNTED 11' AFF	PROVIDE PHOTOCELL
C	(2) 1 W LAMPS	(2) LED	120V	WALL MOUNTED 8' AFF	COMBINATION EXIT SIGN/ EMERGENCY WALL PACK
D	(2) 1.8 W LAMPS	(2) LED	120V	WALL MOUNTED 8' AFF	



LUMINAIRE REQUIREMENTS:

1. HOUSING – ONE–PIECE, DIE–CAST ALUMINUM WITH BAKED–ON POLYESTER POWDER COAT FINISH IN BLACK.
2. DIFFUSER – CLEAR PRISMATIC, UV–STABILIZED, INJECTION–MOLDED POLYCARBONATE WITH MINIMUM 1/8" THICKNESS. DIFFUSER SECURED WITH TAMPER–RESISTANT STAINLESS STEEL SCREWS. BLACK HORIZONTAL FRONT EYELID FOR CUTOFF.
3. LED DRIVER – MOUNTED TO DIE–CAST ALUMINUM HOUSING FOR OPTIMAL HEAT SINKING. INCORPORATE BOTH CONDUCTION AND NATURAL CONVECTION FOR HEAT TRANSFER FROM LED SOURCE.
4. LAMPS – LED WITH A MINIMUM OUTPUT OF 4000 LUMENS. PROVIDE WITH WATTAGES AS INDICATED. SEE LIGHTING FIXTURE SCHEDULE.
5. CERTIFICATION – UL LISTED AND LABELED FOR WET LOCATIONS.
6. OPTIONS – INTEGRAL PHOTOCELL, WIRE GUARD.

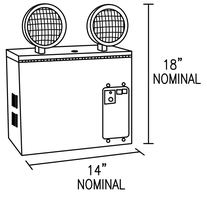
B WALL–MOUNTED HIGH ABUSE LED FIXTURE



LUMINAIRE REQUIREMENTS:

1. HOUSING – INJECTION–MOLDED, FLAME–RETARDANT, HIGH–IMPACT THERMOPLASTIC. EASILY REMOVABLE UNIVERSAL CHEVRONS FOR DIRECTIONAL INDICATION. TRACK AND SWIVEL ARRANGEMENT FOR FULL RANGE OF LAMP ADJUSTMENT.
2. INTERNAL COMPONENTS – FULLY AUTOMATIC, SOLID STATE, CONSTANT VOLTAGE, CURRENT–LIMITED BATTERY CHARGER; MAINTENANCE–FREE NICKEL–CADMIUM BATTERY; AND BUILT–IN OVERLOAD PROTECTION.
3. FACEPLATE INDICATORS – LED AC–ON INDICATOR AND INTEGRAL TEST SWITCH.
4. LAMP HEADS – UL FLAME RATED THERMOPLASTIC; FULLY ADJUSTABLE HORIZONTALLY AND VERTICALLY. SEALED BEAM, LED LAMPS, WATTAGE AS INDICATED IN LIGHTING FIXTURE SCHEDULE.
5. MOUNTING – DIRECTLY TO WALL USING MOUNTING HOLES IN REAR OF CABINET, ACCESSORY WALL BRACKETS, OR MOUNTING SHELF.
6. CERTIFICATION – UL LISTED AND LABELED. COMPLIES WITH UL 924 AND NFPA 101 REQUIREMENTS.
7. LETTERS/CHEVRONS – MINIMUM 6" HIGH WITH 3/4" STROKE. RED OR GREEN LETTERS AS INDICATED. CHEVRONS PUNCHED OUT THROUGH HOUSING AS REQUIRED.
8. OPTIONS – VOLTMETER, AMMETER, THREE–CONDUCTOR CORD SET, OR WIRE GUARD.

C COMBINATION EXIT SIGN / LED EMERGENCY LIGHTING UNIT



LUMINAIRE REQUIREMENTS:

1. HOUSING – INJECTION–MOLDED, FLAME–RETARDANT, HIGH–IMPACT THERMOPLASTIC. EASILY REMOVABLE UNIVERSAL CHEVRONS FOR DIRECTIONAL INDICATION. TRACK AND SWIVEL ARRANGEMENT FOR FULL RANGE OF LAMP ADJUSTMENT.
2. INTERNAL COMPONENTS – FULLY AUTOMATIC, SOLID STATE, CONSTANT VOLTAGE, CURRENT–LIMITED BATTERY CHARGER; MAINTENANCE–FREE NICKEL–CADMIUM BATTERY; AND BUILT–IN OVERLOAD PROTECTION.
3. FACEPLATE INDICATORS – LED AC–ON INDICATOR AND INTEGRAL TEST SWITCH.
4. LAMP HEADS – UL FLAME RATED THERMOPLASTIC; FULLY ADJUSTABLE HORIZONTALLY AND VERTICALLY. SEALED BEAM, LED LAMPS, WATTAGE AS INDICATED IN LIGHTING FIXTURE SCHEDULE.
5. MOUNTING – DIRECTLY TO WALL USING MOUNTING HOLES IN REAR OF CABINET, ACCESSORY WALL BRACKETS, OR MOUNTING SHELF.
6. CERTIFICATION – UL LISTED AND LABELED. COMPLIES WITH UL 924 AND NFPA 101 REQUIREMENTS.
7. OPTIONS – VOLTMETER, AMMETER, THREE–CONDUCTOR CORD SET, OR WIRE GUARD.

D LED EMERGENCY LIGHTING UNIT

LUMINAIRE REQUIREMENTS:

1. HOUSING – HIGH STRENGTH LIGHT–WEIGHT POLYMER FOR REFLECTOR AND DRIVER. HANGERS FOR SURFACE OR SUSPENDED INSTALLATION. PROVIDE MOUNTING HARDWARE.
2. LED DRIVER – MOUNTED TO HOUSING FOR OPTIMAL HEAT SINKING. INCORPORATE BOTH CONDUCTION AND NATURAL CONVECTION FOR HEAT TRANSFER FROM LED SOURCE.
3. LAMPS – LED WITH A MINIMUM OUTPUT OF 4000 LUMENS. PROVIDE WITH WATTAGES AS INDICATED. SEE LIGHTING FIXTURE SCHEDULE.
4. CERTIFICATION – UL LISTED AND LABELED.

A LED

APPR | DATE | DESCRIPTION | SYM

NAVFAC

Muguirel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
Reg. No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES SJM | DRW SJM | CHK MG
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

AIRFIELD LIGHTING VAULTS – LIGHT FIXTURE SCH.

SCALE: NTS
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691896
SHEET 363 OF 368

E-609

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-609.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:31am USER: jrothe

PANELBOARD MDP-3036 SCHEDULE (PHASE 2)

400 A. MAINS W/400A MCB*, 480Y/277 V., 3 PHASE, 4 WIRE, 35 KAIC MINIMUM, SURFACE MOUNT

LOAD SERVED	LOAD (KVA) A	B	C	BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE A B C	CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (KVA) A	B	C	LOAD SERVED
37.5KVA TRANSFORMER	9.4			100	1	1		2	12	20	4.32			HP-3036-2
		9.4				3		4				4.32		
SPARE				20		5		6					4.32	
CCR SWGR	44			200*	4/0	7		8	12	20	4.32			HP-3036-3
		44				9		10				4.32		
			44			11		12					4.32	
PANEL L-3036	4.35			125	1	13		14		30				SPARE
		2.81				15		16						
			2.63			17		18						
ALSF PANEL	5			45	6	19		20		30				SPARE
		5				21		22						
FLOODLIGHT NORTH PAD			1.44	20	6	23		24						
SPARE				20		25		26						SPACE
SPARE				20		27		28						SPACE
SPACE						29		30						SPACE
SPACE						31		32						SPACE
SPACE						33		34						SPACE
SPACE						35		36						SPACE
SPACE						37		38						SPACE
SPACE						39		40						SPACE
SPACE						41		42						SPACE
TOTAL	62.75	61.21	48.07								8.64	8.64	8.64	TOTAL

TOTAL CONNECTED KVA A: 71.39 B: 69.85 C: 56.71

* DENOTES 100% RATED CIRCUIT BREAKER WITH ELECTRONIC TRIP WITH LSI SETTINGS.

PANELBOARD L-3036 SCHEDULE (PHASE 2)

250 A. MAINS W/225A MCB, 208Y/120 V., 3 PHASE, 4 WIRE, 10 KAIC MINIMUM, SURFACE MOUNT

LOAD SERVED	LOAD (KVA) A	B	C	BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE A B C	CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (KVA) A	B	C	LOAD SERVED
RECEPTACLES	0.9			20	12	1		2	12	20	0.39			LIGHTING - INTERIOR
RECEPTACLES		0.54		20	12	3		4	12	20		0.41		LIGHTING - EXTERIOR
RECEPTACLES			0.72	20	12	5		6	12	20			1.2	GEN. BATTERY CHARGER
CU-3036-1	0.30			15	12	7		8	10	30	1.56			GEN JACKET COOLANT HEAT
		0.30				9		10				1.56		
CONTROL - LIGHTING			0.18	20		11		12	12	15			0.53	EF-3036-1
SPARE				20		13		14	10	30	1.2			ALCMS CABINET
SPARE				20		15		16		20				SPARE
SPARE				20		17		18		20				SPARE
SPARE				20		19		20		20				SPARE
SPARE				20		21		22		20				SPARE
SPARE				20		23		24		20				SPARE
SPARE				20		25		26		20				SPARE
SPARE				20		27		28		20				SPARE
SPACE						29		30						SPACE
SPACE						31		32						SPACE
SPACE						33		34						SPACE
SPACE						35		36						SPACE
SPACE						37		38						SPACE
SPACE						39		40						SPACE
SPACE						41		42						SPACE
TOTAL	1.20	0.84	0.90								3.15	1.97	1.73	TOTAL

TOTAL CONNECTED KVA A: 4.35 B: 2.81 C: 2.63

PANELBOARD MDP-101 SCHEDULE (PHASE 1)

400 A. MAINS W/400A MCB*, 480Y/277 V., 3 PHASE, 4 WIRE, 35 KAIC MINIMUM, SURFACE MOUNT

LOAD SERVED	LOAD (KVA) A	B	C	BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE A B C	CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (KVA) A	B	C	LOAD SERVED
ALSF PANEL	5			45	6	1		2		30				SPARE
		5				3		4						
CCR SWGR	44			200*	4/0	5		6						
		44				7		8		30				SPARE
			44			9		10						
PANEL L-101	6.11			125	1	11		12						
		4.97				13		14		30				SPARE
			6.15			15		16						
SPARE				20		17		18						
SPARE				20		19		20		30				SPARE
SPARE				20		21		22						
SPARE				20		23		24						
SPACE						25		26						SPACE
SPACE						27		28						SPACE
SPACE						29		30						SPACE
SPACE						31		32						SPACE
SPACE						33		34						SPACE
SPACE						35		36						SPACE
SPACE						37		38						SPACE
SPACE						39		40						SPACE
SPACE						41		42						SPACE
TOTAL	55.11	53.97	50.15								0	0	0	TOTAL

TOTAL CONNECTED KVA A: 55.11 B: 53.97 C: 50.15

* DENOTES 100% RATED CIRCUIT BREAKER WITH ELECTRONIC TRIP WITH LSI SETTINGS.

PANELBOARD L-101 SCHEDULE (PHASE 1)

250 A. MAINS W/225A MCB, 208Y/120 V., 3 PHASE, 4 WIRE, 10 KAIC MINIMUM, SURFACE MOUNT

LOAD SERVED	LOAD (KVA) A	B	C	BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE A B C	CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (KVA) A	B	C	LOAD SERVED
RECEPTACLES	0.72			20	12	1		2	12	20	0.39			LIGHTING - INTERIOR
RECEPTACLES		0.9		20	12	3		4	12	20		0.27		LIGHTING - EXTERIOR
RECEPTACLES			0.54	20	12	5		6	12	20			1.2	GEN. BATTERY CHARGER
CU-101-1	0.30			15	12	7		8	10	30	1.56			GEN JACKET COOLANT HEAT
		0.30				9		10				1.56		
CU-101-2			1.94	30	10	11		12	12	15			0.53	EF-101-1
	1.94					13		14	10	30	1.2			ALCMS CABINET
CU-101-3		1.94		30	10	15		16		20				SPARE
			1.94			17		18		20				SPARE
SPARE				20		19		20		20				SPARE
SPARE				20		21		22		20				SPARE
SPARE				20		23		24		20				SPARE
SPARE				20		25		26		20				SPARE
SPARE				20		27		28		20				SPARE
SPACE						29		30						SPACE
SPACE						31		32						SPACE
SPACE						33		34						SPACE
SPACE						35		36						SPACE
SPACE						37		38						SPACE
SPACE						39		40						SPACE
SPACE						41		42						SPACE
TOTAL	2.96	3.14	4.42								3.15	1.83	1.73	TOTAL

TOTAL CONNECTED KVA A: 6.11 B: 4.97 C: 6.15

APPR | DATE | DESCRIPTION | SYM

NAVFAC

Mugurel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SJM | DRW SJM | CHK MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

VAULTS E-3036 AND E-101 PANEL SCHEDULES

SCALE: NTS

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

NAVFAC DRAWING NO.
12691897

SHEET 364 OF 368

E-610

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-610.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 - 9:31am USER: jrothe

PANELBOARD MDP–1120 SCHEDULE

400 A. MAINS W/400A MCB*, 480Y/277 V., 3 PHASE, 4 WIRE, 35 KAIC MINIMUM, SURFACE MOUNT

LOAD SERVED	LOAD (KVA) A	LOAD (KVA) B	LOAD (KVA) C	BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE A B C	CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (KVA) A	LOAD (KVA) B	LOAD (KVA) C	LOAD SERVED
37.5KVA TRANSFORMER	9.4			90	1	1		2	12	20	4.32			HP-1120-2
		9.4				3		4				4.32		
SPARE				20		5		6					4.32	
CCR SWGR	44			200*	4/0	7		8	12	20	4.32			HP-1120-3
		44				9		10				4.32		
			44			11		12					4.32	
PANEL L-1120	4.17			125	1	13		14		30				SPARE
		3.17				15		16						
			2.27			17		18						
ALSF PANEL	5			45	6	19		20		30				SPARE
		5				21		22						
SPARE				20		23		24						
SPARE				20		25		26						SPACE
SPARE				20		27		28						SPACE
SPACE						29		30						SPACE
SPACE						31		32						SPACE
SPACE						33		34						SPACE
SPACE						35		36						SPACE
SPACE						37		38						SPACE
SPACE						39		40						SPACE
SPACE						41		42						SPACE
TOTAL	62.57	61.57	46.27								8.64	8.64	8.64	TOTAL

TOTAL CONNECTED KVA A: 71.21 B: 70.21 C: 54.91

* DENOTES 100% RATED CIRCUIT BREAKER WITH ELECTRONIC TRIP WITH LSI SETTINGS.

PANELBOARD L–1120 SCHEDULE

250 A. MAINS W/225A MCB, 208Y/120 V., 3 PHASE, 4 WIRE, 10 KAIC MINIMUM, SURFACE MOUNT

LOAD SERVED	LOAD (KVA) A	LOAD (KVA) B	LOAD (KVA) C	BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE A B C	CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (KVA) A	LOAD (KVA) B	LOAD (KVA) C	LOAD SERVED
RECEPTACLES	0.72			20	12	1		2	12	20	0.39			LIGHTING - INTERIOR
RECEPTACLES		0.9		20	12	3		4	12	20		0.41		LIGHTING - EXTERIOR
RECEPTACLES			0.54	20	12	5		6	12	20			1.2	GEN. BATTERY CHARGER
CU-1120-1	0.30			15	12	7		8	10	30	1.56			GEN JACKET COOLANT HEAT
		0.30				9		10				1.56		
SPARE				20		11		12	12	15			0.53	EF-1120-1
SPARE				20		13		14	10	30	1.2			ALCMS CABINET
SPARE				20		15		16		20				SPARE
SPARE				20		17		18		20				SPARE
SPARE				20		19		20		20				SPARE
SPARE				20		21		22		20				SPARE
SPARE				20		23		24		20				SPARE
SPARE				20		25		26		20				SPARE
SPARE				20		27		28		20				SPARE
SPACE						29		30						SPACE
SPACE						31		32						SPACE
SPACE						33		34						SPACE
SPACE						35		36						SPACE
SPACE						37		38						SPACE
SPACE						39		40						SPACE
SPACE						41		42						SPACE
TOTAL	1.02	1.2	0.54								3.15	1.97	1.73	TOTAL

TOTAL CONNECTED KVA A: 4.17 B: 3.17 C: 2.27

GENERAL SHEET NOTES

1. THE WORK SHOWN ON THIS DRAWING TO BE COMPLETED UNDER PHASE 2.

CABLE SCHEDULE

CABLE IDENTIFICATION EXIST	CABLE IDENTIFICATION NEW	DESCRIPTION	CONDUIT SIZE (INCHES)	REMARKS
	1	3# 250 KCMIL MV-105 + 1# 250 GRD	5"	PRIMARY MV POWER DISTRIBUTION CIRCUIT
	2	4# 600 KCMIL + 1# 1/0 GRD	4"	SECONDARY POWER DISTRIBUTION CIRCUITS
	3	CONTROL WIRING FOR METERING	4"	COORDINATE REQUIREMENTS WITH METER PROVIDER
	4	CONTROL WIRING FROM GENERATOR TO ANNUNCIATOR PANEL	4"	COORDINATE REQUIREMENTS WITH MANUFACTURER
	5	2# 1 AWG + 1# 8 GRD	2"	AIRFIELD LIGHTING CIRCUIT
	6	2# 8 AWG MV-105 + 1# 8 GRD	5"	AIRFIELD LIGHTING CIRCUIT

APPR | DATE | DESCRIPTION | SYM

NAVFAC

Mugurel Giurgiu
COMMONWEALTH OF VIRGINIA
MUGUREL GIURGIU
Reg. No. 046781
PROFESSIONAL ENGINEER
SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SJM | DRW SJM | CHK MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

VAULT E–1120 PANEL SCHEDULES

SCALE: NTS
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691898
SHEET 365 OF 368

E-611

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Electrical\Planset\Task 008\10-0863-008-E-611.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, March 24, 2015 – 9:32am USER: jrothe

VAULT 3036 - FRONT

ED401 A1

VAULT 3036 - FUEL TANK

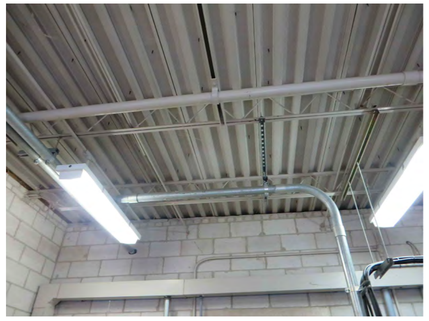
ED401 A2

VAULT 3036 - ALSF PANEL

ED402 A3

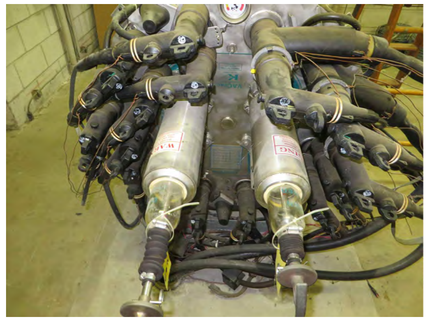
VAULT 3036 - RADIO CONTROL PANEL

ED402 A4



VAULT 3036 - ROOF JOISTS

ED402 A5



VAULT 3036 - TRANSFER SWITCH

ED402 A6

VAULT 3036 - CCR'S

ED402 A7

VAULT 3036 - 15KVA TRANSFORMER

ED402 A8

VAULT 3036 - 112.5KVA TRANSFORMER

ED402 A9

VAULT 3036 - 2400V SWITCH

ED402 A10

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER, NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SJM | DRWN SJM | CHK MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
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NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

PHOTO SHEET

SCALE NOT TO SCALE

PROJECT NO. 1291651

CONSTR. CONTR. NO.

NAVFAC DRAWING NO.
12691899

SHEET 366 OF 368

E-901

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\SMD\100963_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0863-008-E-901.dwg LAYOUT NAME: E-901 PLOTTED: Tuesday, March 24, 2015 - 11:08am USER: Rhurst

RUNWAY 5R-23L APPROACH LIGHTS B1
ED130C

RUNWAY 5R-23L HAND HOLE B2
ED129C

RUNWAY 5R-23L WAVE OFF LIGHTS B3
ED128C

RUNWAY 5R-23L OLS POWER PANELS B4
ED128C

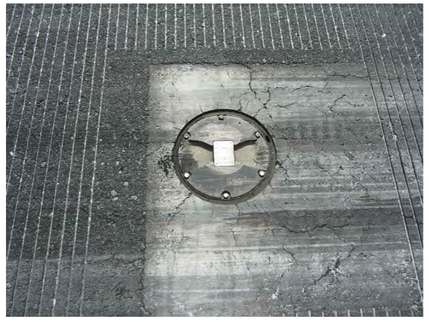
RUNWAY 5R-23L NEW HAND HOLE B5
ED128C

RUNWAY 5R-23L WIND CONE B6
ED121B

RUNWAY 5R-23L ARRESTING GEAR SIGN B7
ED128C

RUNWAY 5R-23L ARRESTING GEAR B8
ED128C

RUNWAY 5R-23L IN-PAVEMENT EDGE B9
ED128C



RUNWAY 5R-23L IN-PAVEMENT CENTERLINE B10
ED128C

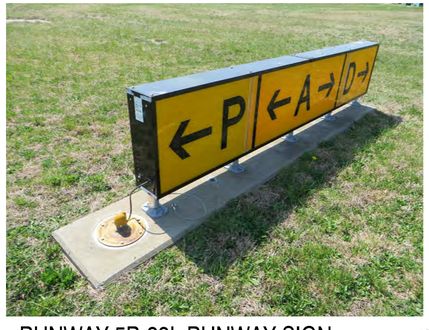
RUNWAY 5R-23L ABANDONED PAD B11
ED128C

RUNWAY DISTANCE REMAINING SIGN B12
ED128C

RUNWAY 5R-23L ELEVATED T/W EDGE B13
ED140C

RUNWAY 5R-23L WAVE OFF CONTROL B14
ED128C

RUNWAY 5R-23L TAXIWAY SIGN B15
ED139C



RUNWAY 5R-23L RUNWAY SIGN B16
ED127C

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED

FOR COMMANDER, NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SJM DRN SJM CHK MG

PM/DM

BRANCH MANAGER WED

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR #PT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

PHOTO SHEET

SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691900
SHEET 367 OF 368

E-902

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\100963_008_Energy_and_Reliabil\CADD\ELECTRICAL\10-0963-008-E-902.dwg LAYOUT NAME: E-902 PHOTO SHEET PLOTTED: Tuesday, March 24, 2015 - 11:08am USER: Rhurst

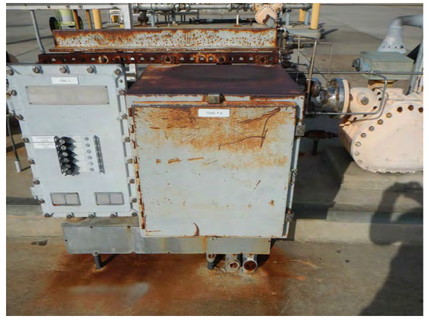
TAXIWAY A ELEVATED EDGE LIGHT C1
ED132B

TAXIWAY A INPAVEMENT LIGHT C2
ED132B

TAXIWAY A1 LIGHTED SIGN C3
ED134B

TAXIWAY A TACAN SIGN C4
ED120B

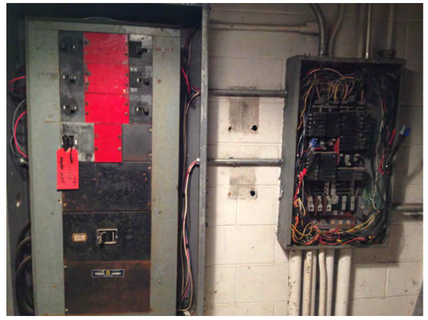
FUEL PIT FLOOD LIGHT C5
ED136B



FUEL PIT PANEL BOARD C6
ED137B

FUEL PIT LIGHTED SIGN C7
ED137B

FUEL PIT POWER STATION C8
ED137B



FUEL PIT LIGHTING POWER C9
ED151D

NORTH PAD FLOOD LIGHT C10
ED141C

NORTH PAD POWER PANEL C11
ED141C

ORDNANCE PAD 208Y/120V POWER C12
EA142B

ORDNANCE PAD 480Y/277V POWER C13
EA142B

SYM	DESCRIPTION	DATE	APPR

NAVFAC

David Parsley
COMMONWEALTH OF VIRGINIA
DAVID JONATHAN PARSLEY
Lic. No. 45530
PROFESSIONAL ENGINEER

A/E INFO

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

DES SJM | DRWN SJM | CHK MG
PM/DM
BRANCH MANAGER WED
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND -- MID-ATLANTIC
HR IPT
NAVAL AIR STATION OCEANA
NAVAL AIR STATION OCEANA - VIRGINIA BEACH, VIRGINIA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
PHOTO SHEET

SCALE NOT TO SCALE
PROJECT NO. 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691901
SHEET 368 OF 368

E-903

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\SMD\100963_008_Energy_and_Reliab\CADD\ELECTRICAL\10-0963-008-E-903.dwg LAYOUT NAME: E-903 PLOTTED: Tuesday, March 24, 2015 - 11:08am USER: Rhurst