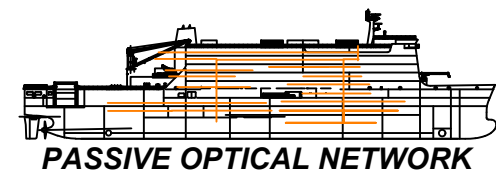


NATIONAL SECURITY MULTI-MISSION VESSEL TECHNOLOGY SCHEMATIC DESIGN



PASSIVE OPTICAL NETWORK

ABBREVIATIONS	
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
ANT	ANTENNA
AP	ACCESS POINT
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BB	BACKBONE
BLW	BELOW
C	CONDUCTOR
CA	CABLE
CAT	CATEGORY
CCTV	CLOSED CIRCUIT TELEVISION
DAS	DISTRIBUTED ANTENNA SYSTEM
DC	DIRECT CURRENT
DIST	DISTANCE
DMZ	DEMILITERIZED ZONE
EA	EACH
EIA	ELECTRONICS INDUSTRY ASSOCIATION
EQ	EQUIPMENT
EXT	EXTERNAL / EXTERIOR
FDF	FIBER DISTRIBUTION FRAME
FO	FIBER OPTIC
FOC	FIBER OPTIC CABLE
FR	FROM
H/W	HARDWARE
IP	INTERNET PROTOCOL
IPTV	INTERNET PROTOCOL TELEVISION
LAN	LOCAL AREA NETWORK
MTD	MOUNTED
OLT	OPTICAL LIGHT TERMINAL
ONT	OPTICAL NETWORK TERMINAL
PA	PUBLIC ADDRESS
POE	POWER OVER ETHERNET
PON	PASSIVE OPTICAL NETWORK
PR	PAIR
PTZ	PAN TILT ZOOM
RAU	REMOTE ANTENNA UNIT
RM	ROOM
S/W	SOFTWARE
SM	SINGLE-MODE
STR	STRAND
SVR	SERVER
TERM	TERMINATION
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TR	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VMS	VIDEO MANAGEMENT SERVER
VOIP	VOICE OVER IP
WIFI	WIRELESS FIDELITY
ZB	ZONE DISTRIBUTION BOX

DRAWING INDEX	
SHT 1	NSMV TECHNOLOGY - INDEX, LEGEND, ABBREVIATIONS & GENERAL NOTES
SHT 2	NSMV - TECHNOLOGY FLOOR PLAN L4 / L5
SHT 3	NSMV - TECHNOLOGY FLOOR PLAN L3 / L2
SHT 4	NSMV - TECHNOLOGY FLOOR PLAN L1 / LM
SHT 5	NSMV - TECHNOLOGY 2ND AND 3RD DECKS
SHT 6	NSMV - TECHNOLOGY 4TH DECK / TANK TOP
SHT 7	NSMV - TECHNOLOGY ENLARGED & PARTIAL PLANS
SHT 8	NSMV - TECHNOLOGY ENLARGED & PARTIAL PLANS
SHT 9	NSMV - TECHNOLOGY SYSTEMS RISER DIAGRAM
SHT 10	NSMV - TECHNOLOGY PUBLIC ADDRESS SINGLE LINE
SHT 11	NSMV - TECHNOLOGY SINGLE LINE DETAILS
SHT 12	NSMV - TECHNOLOGY SINGLE LINE DETAILS

GENERAL NOTES

- ALL WORK, INCLUDING BUT NOT LIMITED TO: CABLING, PATHWAYS, SUPPORT STRUCTURES, WIRING, EQUIPMENT, INSTALLATION, WORKMANSHIP, MAINTENANCE, AND TESTING SHALL COMPLY WITH THE LATEST EDITIONS AND RELATED SECTIONS OF THE EIA/TIA STANDARDS, NATIONAL ELECTRICAL CODE® (NEC®), NATIONAL ELECTRICAL SAFETY CODE, ALL APPLICABLE LOCAL RULES AND REGULATIONS, EQUIPMENT MANUFACTURERS' INSTRUCTIONS, AMERICAN BUREAU OF SHIPPING, STEEL VESSEL RULES, LATEST EDITION, PART 4, CHAP. 8 ELECTRICAL SYSTEMS, APPLICABLE RULES, AND US COAST GUARD, 46 CFR SUBCHAPTER J ELECTRICAL ENGINEERING, APPLICABLE REGULATIONS
- THE DESIGN BUILD CONTRACTOR SHALL PROVIDE A FULLY FUNCTIONAL INTEGRATED IP NETWORK SYSTEM THAT INCLUDES ALL COMPONENTS, EQUIPMENT, SWITCHES, SERVERS, SOFTWARE AND OTHER INTERFACE DEVICES REQUIRED TO SUPPORT THE FOLLOWING SYSTEMS AND SUB-SYSTEMS: PASSIVE OPTICAL LAN, LOCAL AREA NETWORKS, DAS, VOICE OVER IP TELEPHONE/PAGING SYSTEM, IPTV SYSTEM, IP CAMERA, MONITORING AND DISPLAY SYSTEM AND WIFI SYSTEM.

LEGEND

- PRIMARY COMPOSITE FIBER/COPPER CABLE
6STR SM / 4C ## AWG UON
- BACKUP COMPOSITE FIBER/COPPER CABLE
6STR SM / 4C ## AWG UON
- COMPOSITE FIBER/COPPER CABLE
1STR SM / 2C ## AWG
- CAT 6A FOUR(4) PR UTP
- 4 PORT OPTICAL NETWORK TERMINAL-ONT
- ZB GPON AND DAS ZONE DISTRIBUTION BOX.
- WIFI ACCESS POINT
- DAS REMOTE ANTENNA UNIT AND ANTENNA
- IP POE PTZ CAMERA – EXTERIOR MOUNTED, ENVIRONMENTALLY PROTECTED, PAN TILT ZOOM
- IP POE PTZ CAMERA – INTERIOR MOUNTED, PAN TILT ZOOM

REVISIONS

No.	DESCRIPTION	BY/DATE/APPD
X	SCHEMATIC DESIGN	DPT 11/14/16 EVR

REFERENCES

No.	TITLE	DWG No.
1	GENERAL ARRANGEMENT	2015-017-03-01
2	OUTLINE SPECIFICATIONS	2015-017-03-35
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-



Herbert Engineering Corp.

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Marine Engineers Annapolis Shanghai
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CONVERGED TECHNOLOGY SOLUTIONS

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CHANTILLY, VA 20151

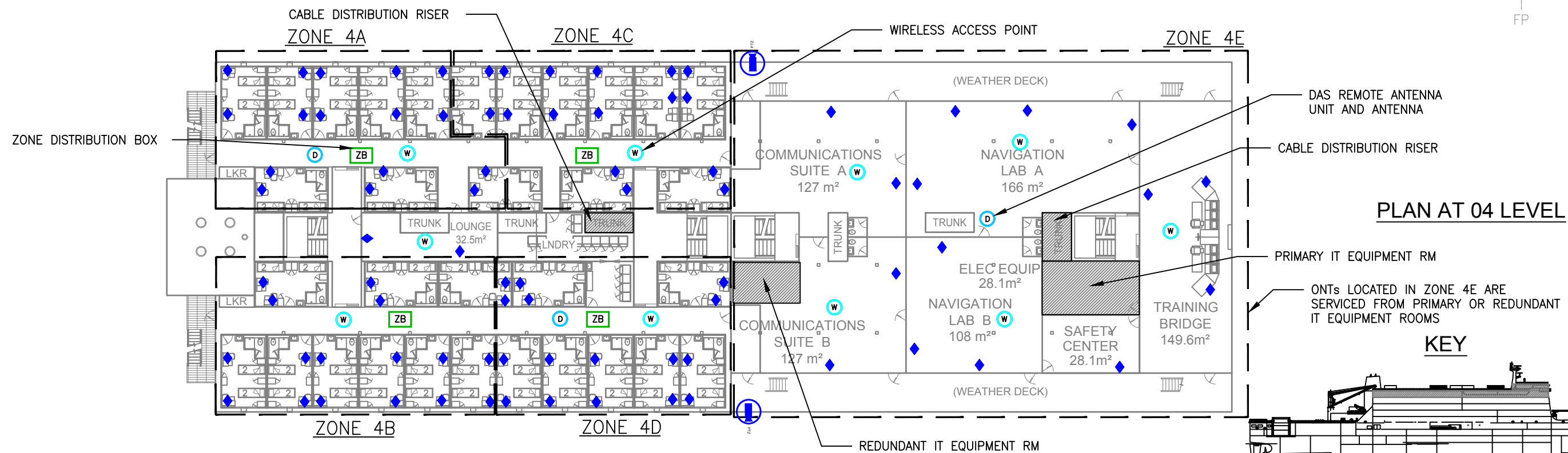
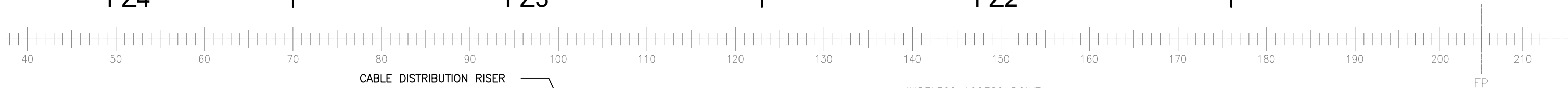
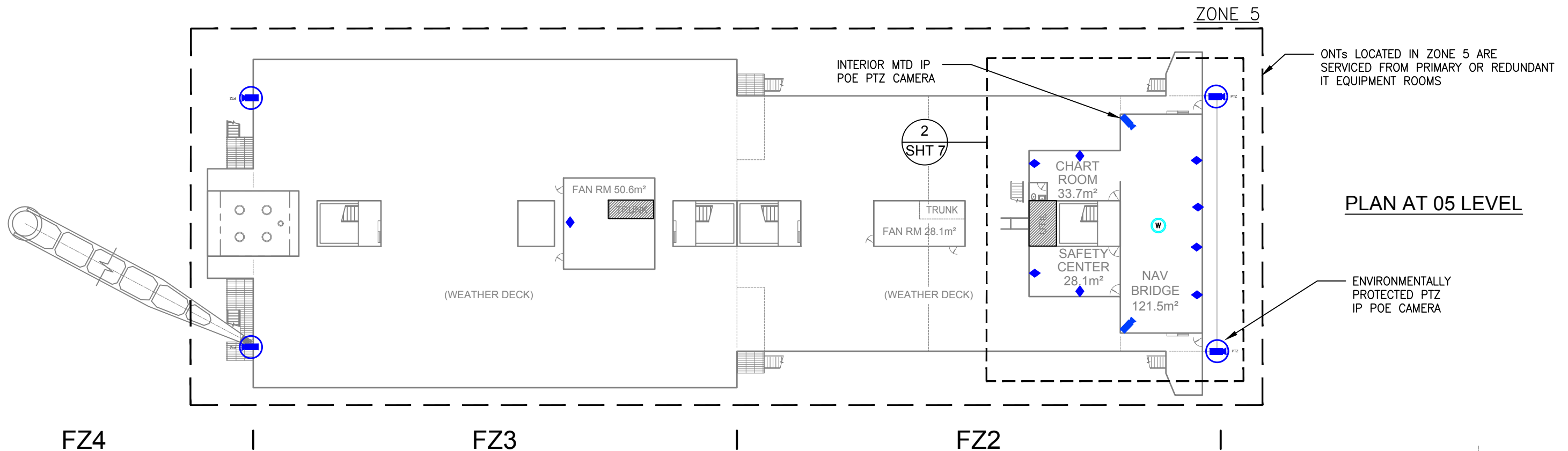
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CHKD:	DPT	APPD:	EVR	ACADFILE:	SHT1 TECH...DWG
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ABS APPROVAL: -					

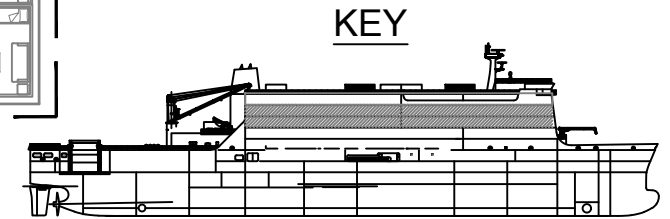
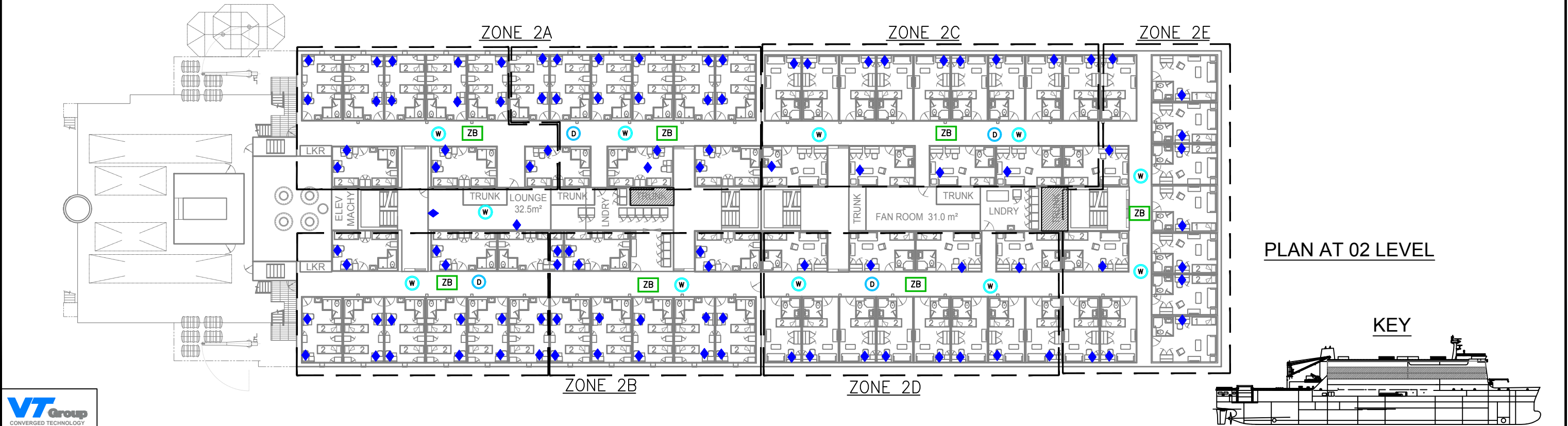
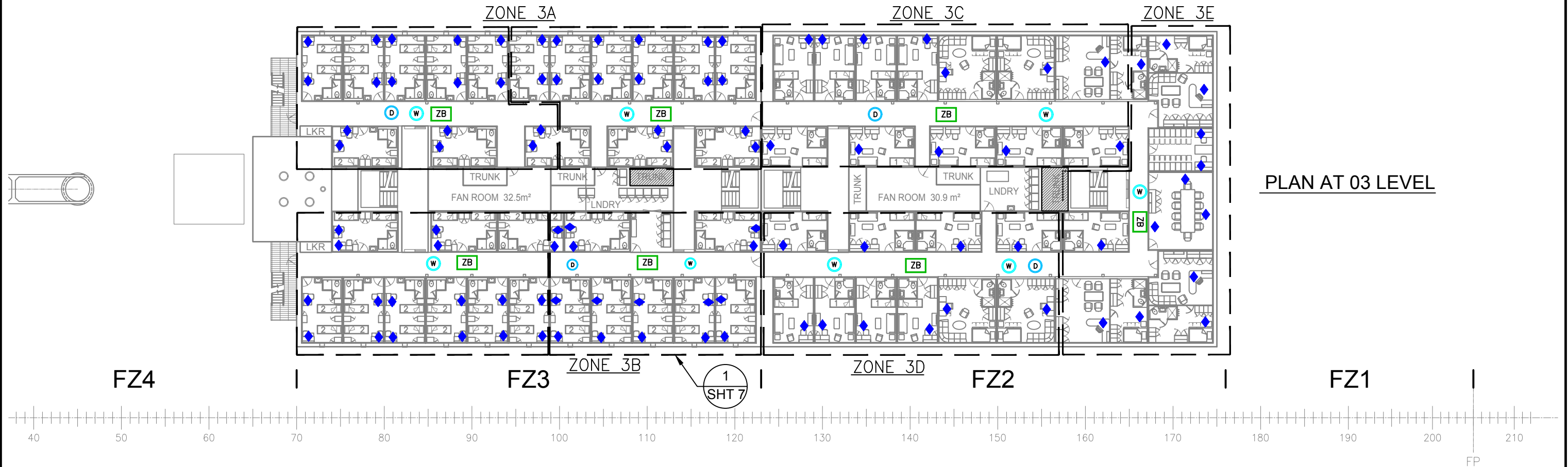


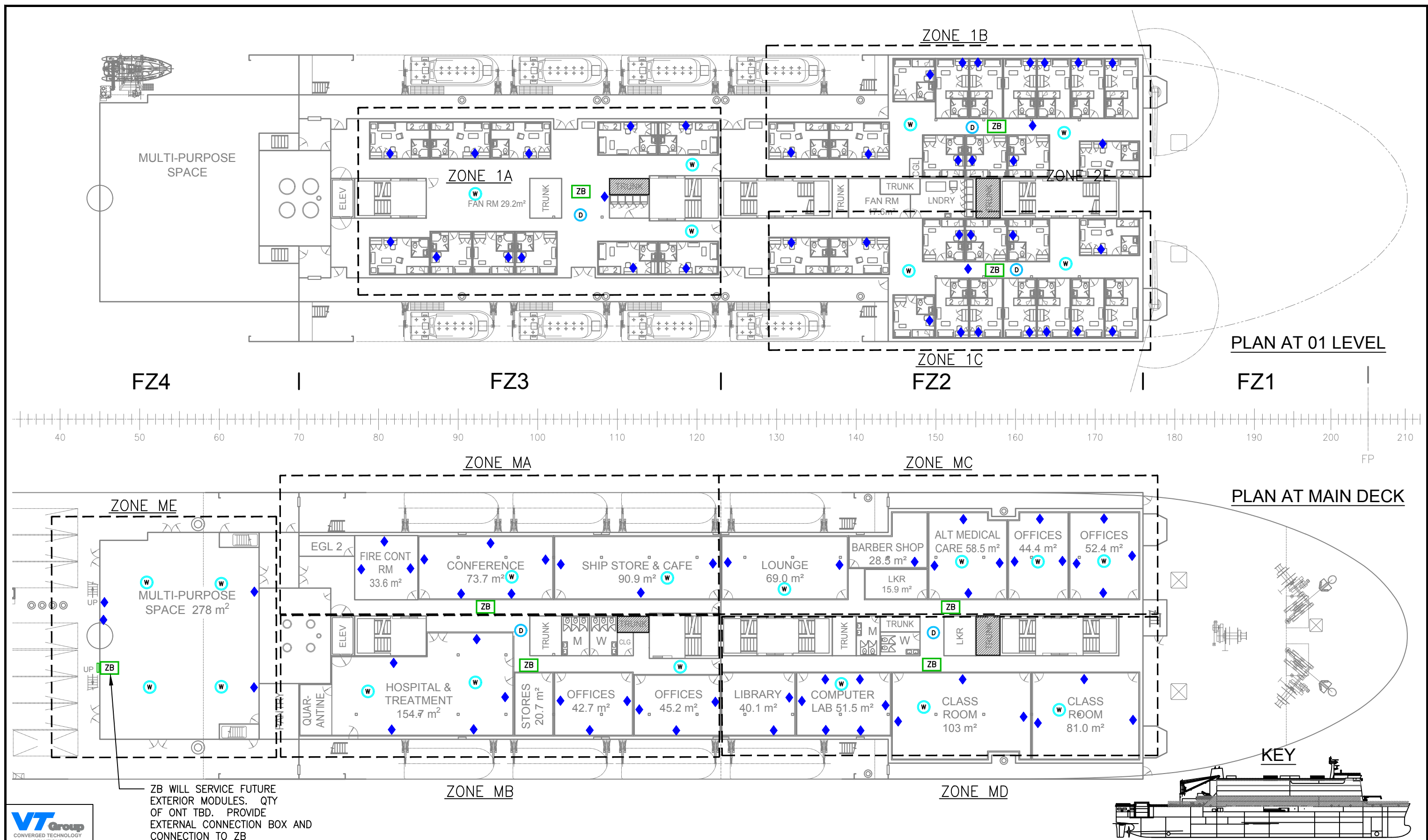
U.S. Maritime Administration

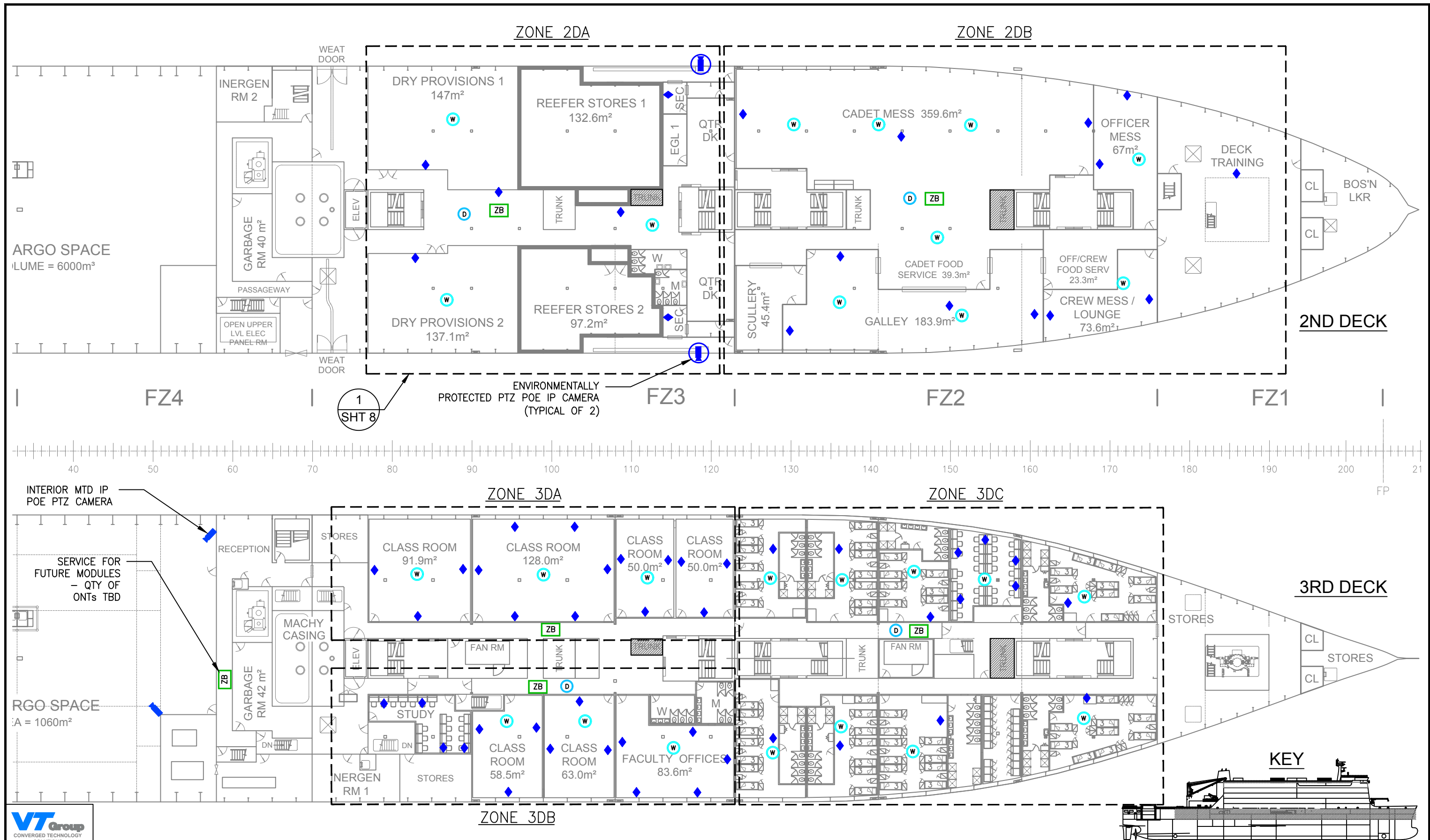
NSMV PHASE 3 DESIGN TECHNOLOGY - INDEX, LEGEND, ABBREVIATIONS & GENERAL NOTES

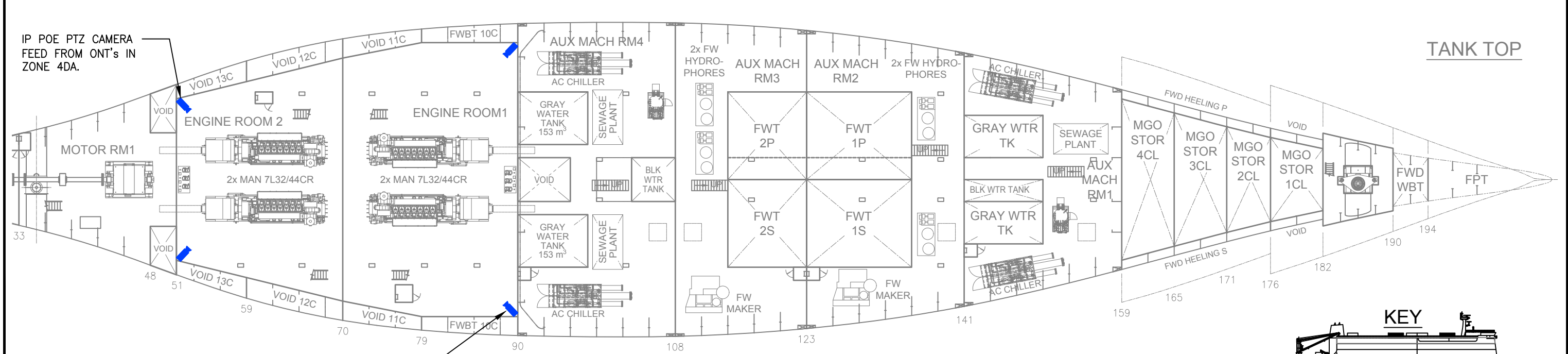
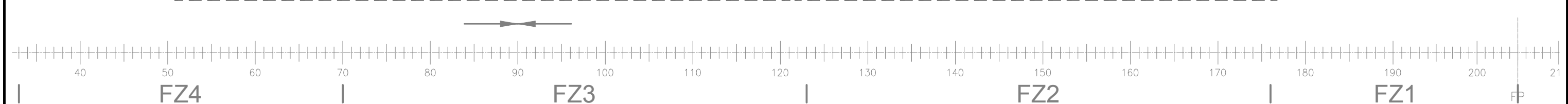
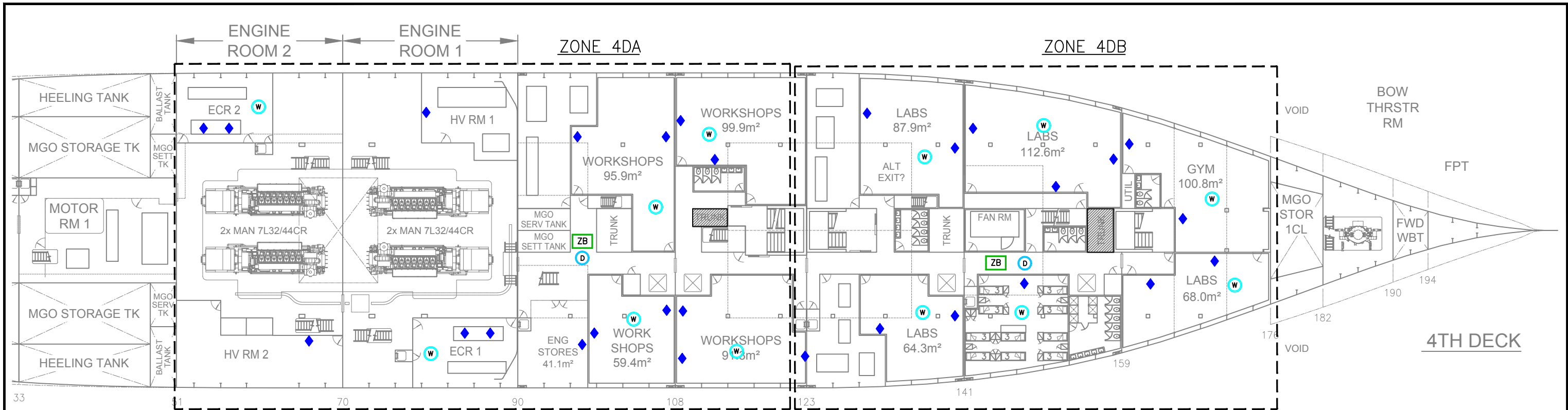
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DATE:	-			
FILE:	-		SHEET 1 OF 12	REV 0





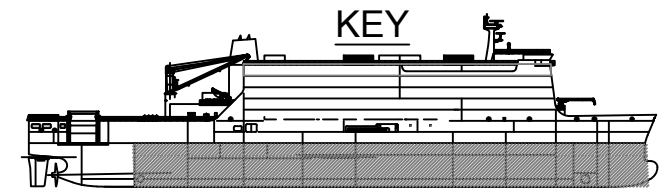






IP POE PTZ CAMERA
FEED FROM ONT's IN
ZONE 4DA.

IP POE PTZ CAMERA
FEED FROM ONT's IN
ZONE 4DA.



HEC
Herbert Engineering Corp.
PROJECT FILE: 2015-017-03

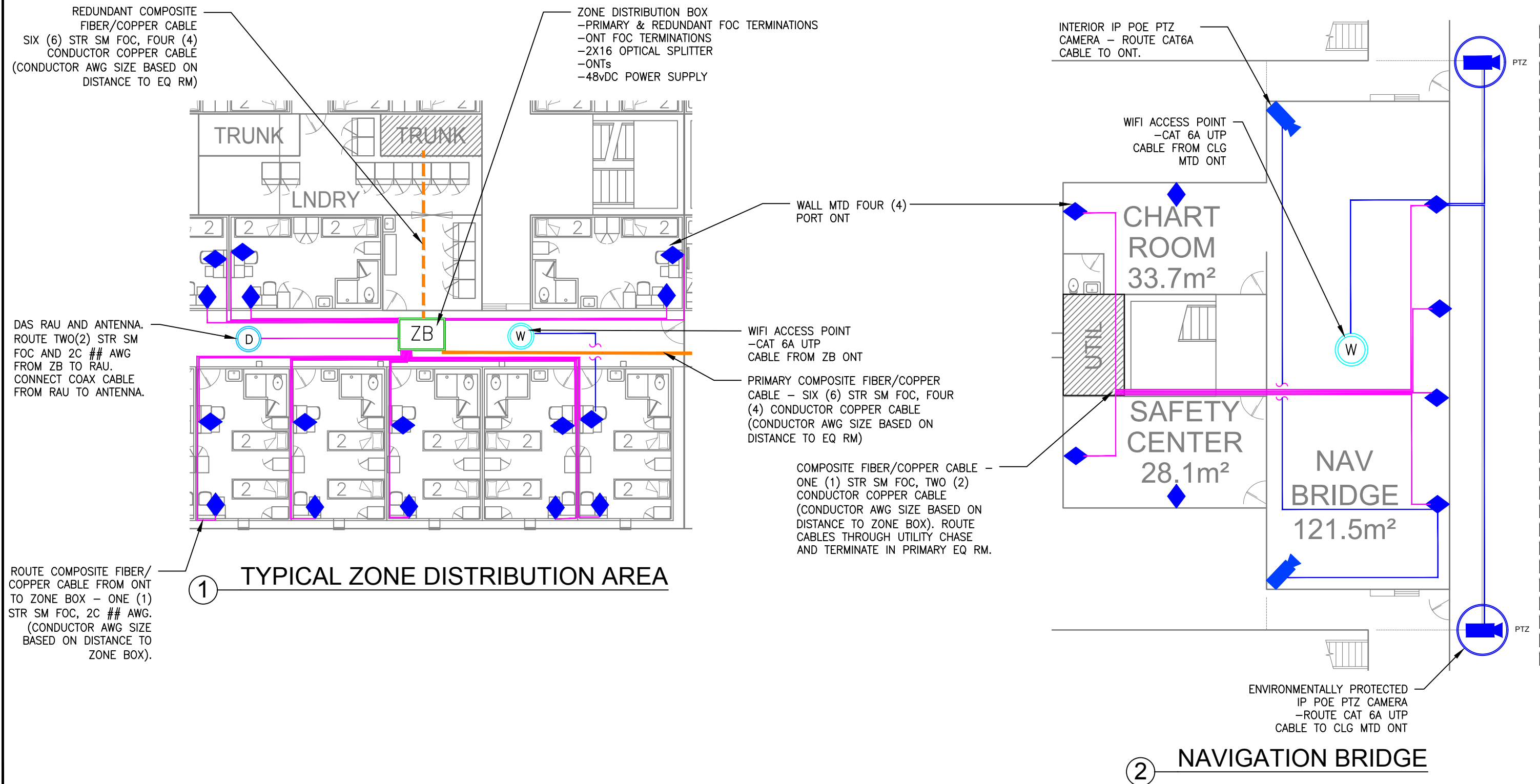
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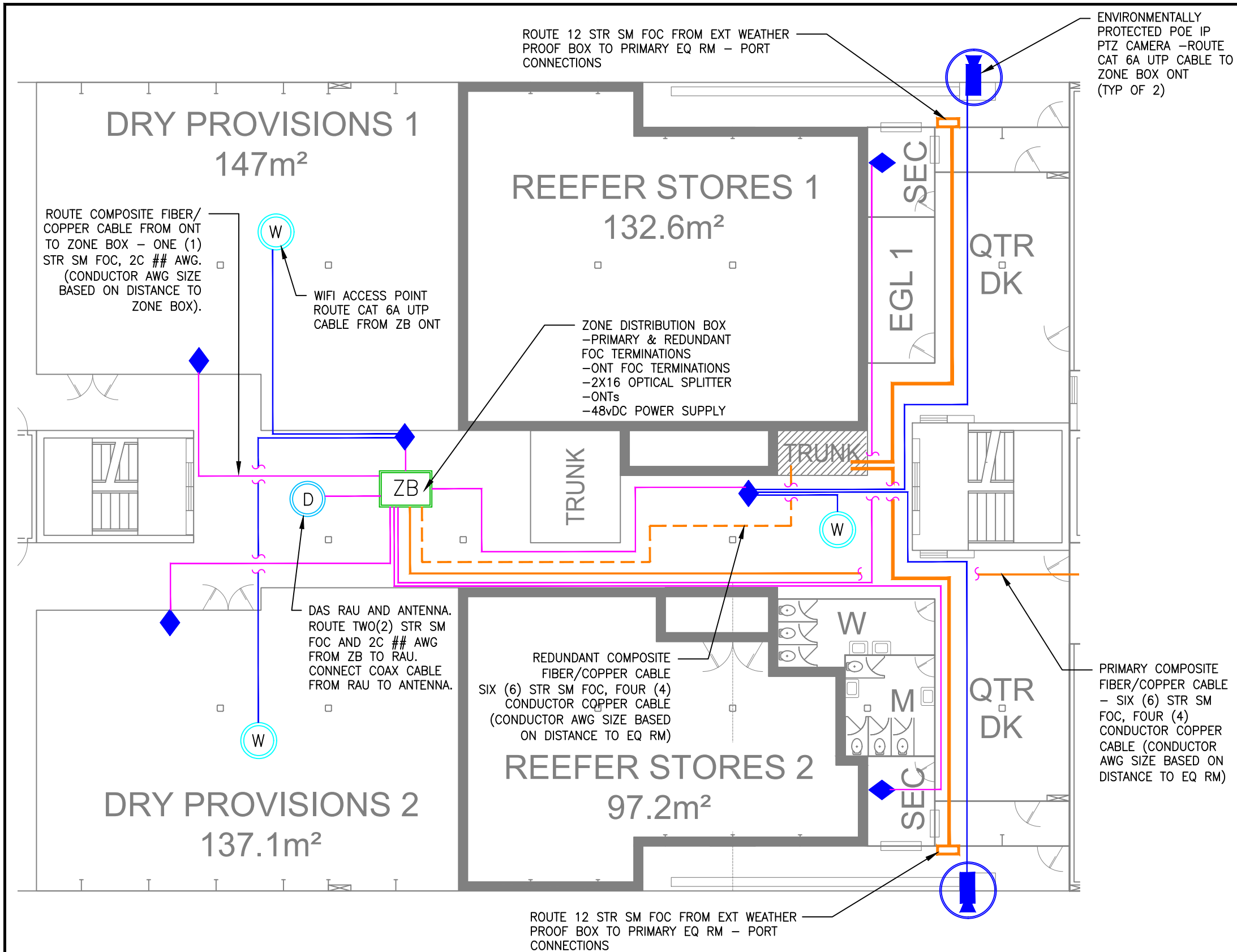


U.S. Maritime Administration

**NSMV - TECHNOLOGY
4TH DECK / TANK-TOP**

2015-017-03-33
SHEET 6 OF 12 REV 0

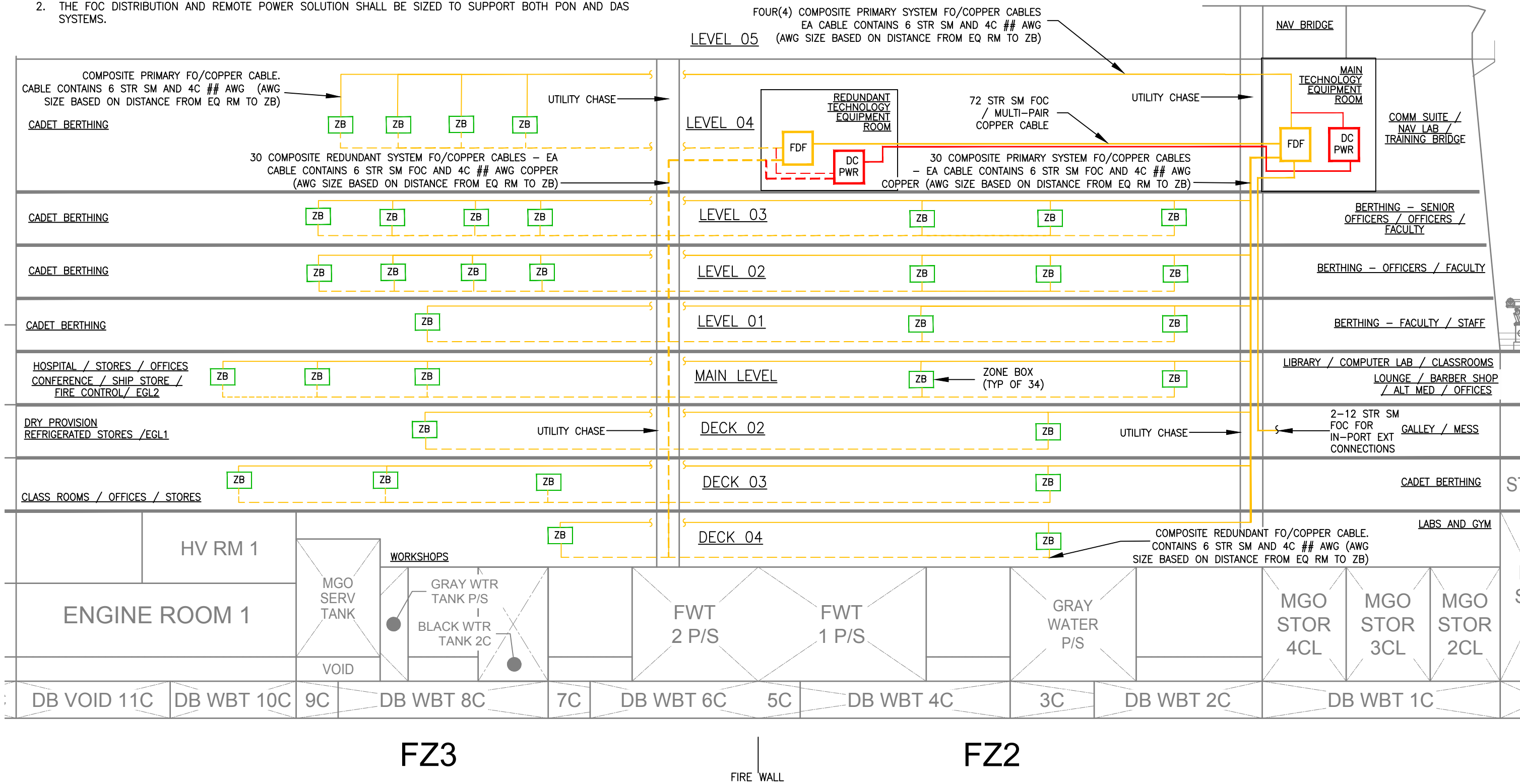


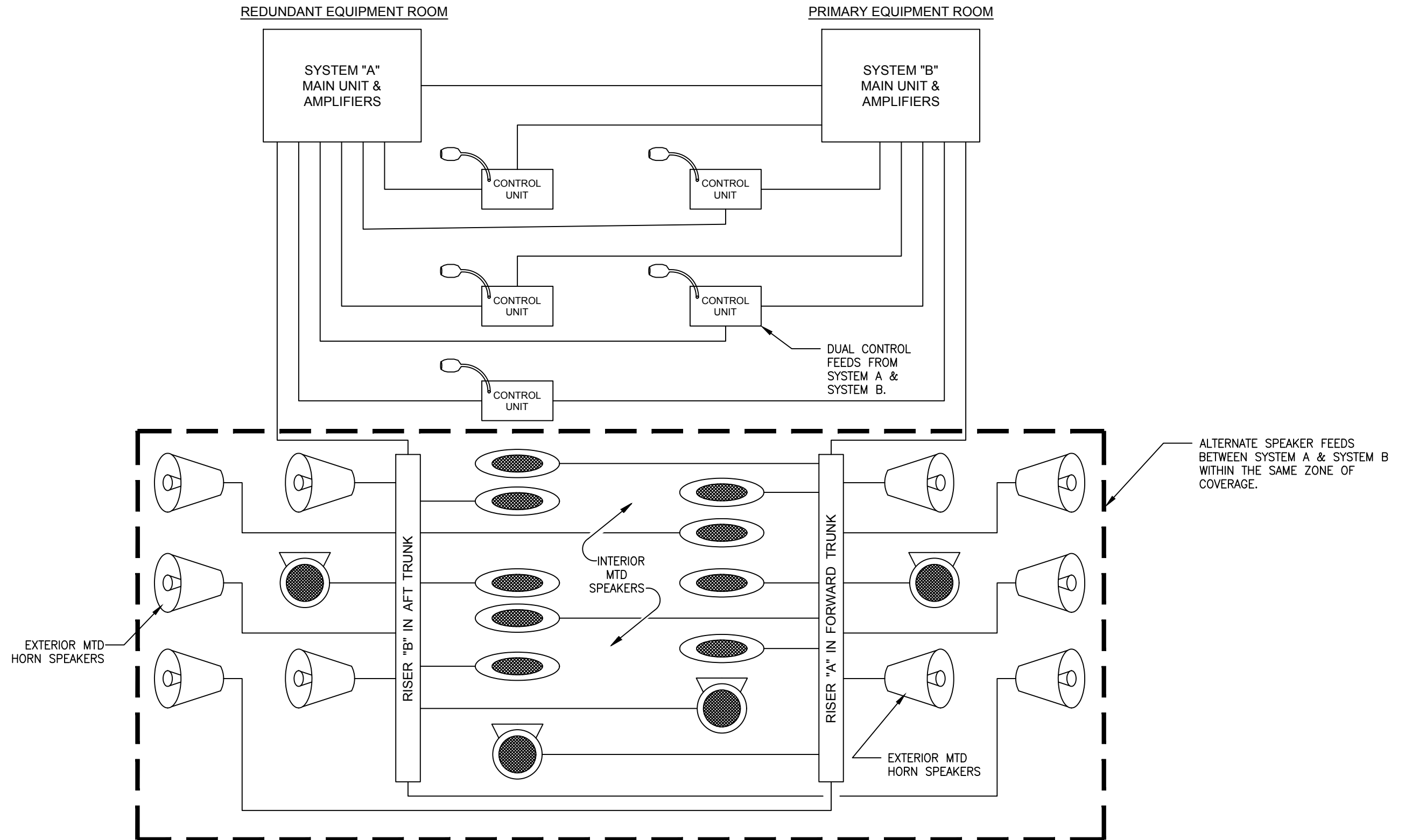


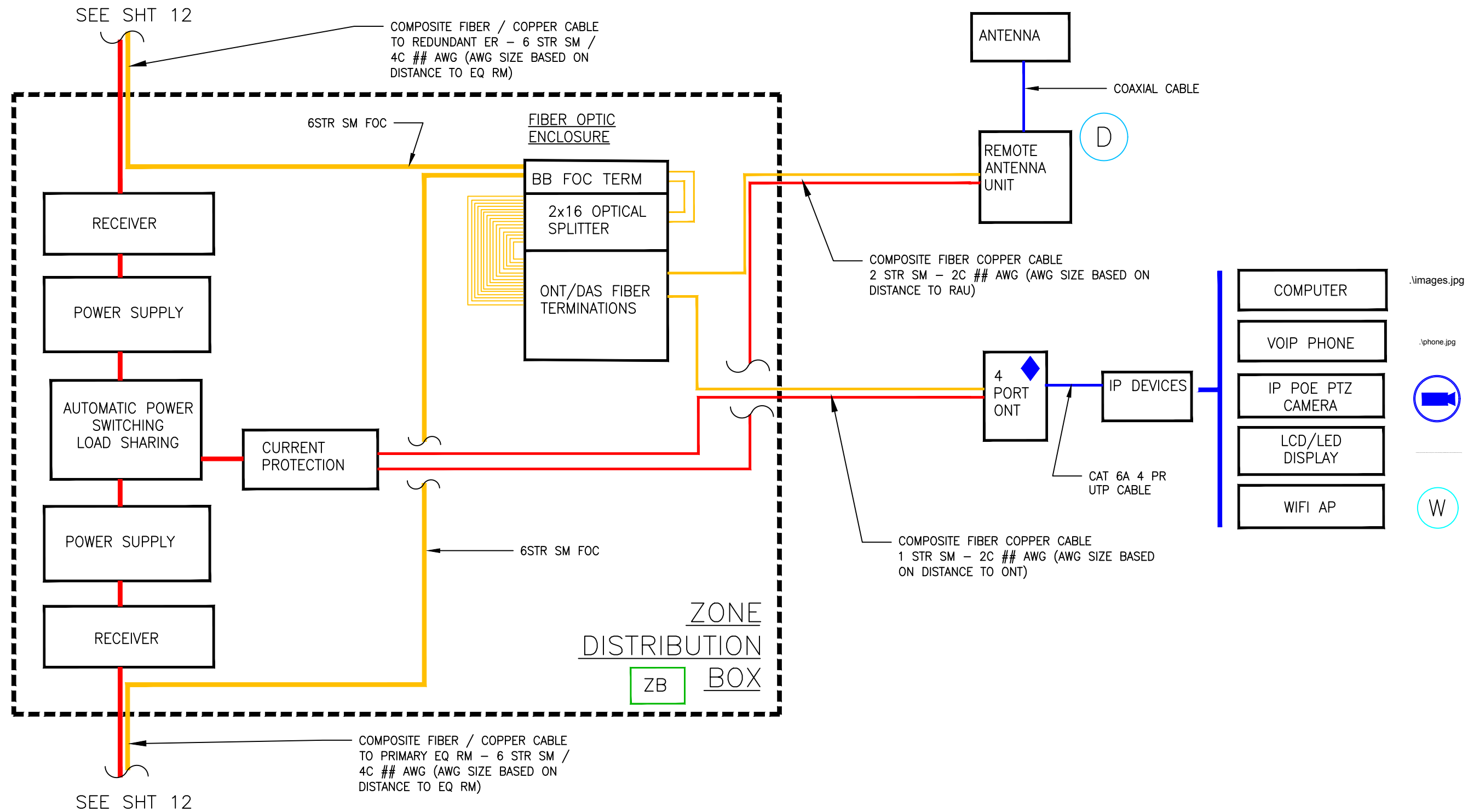
① SECOND DECK - QUARTER DECK AREA



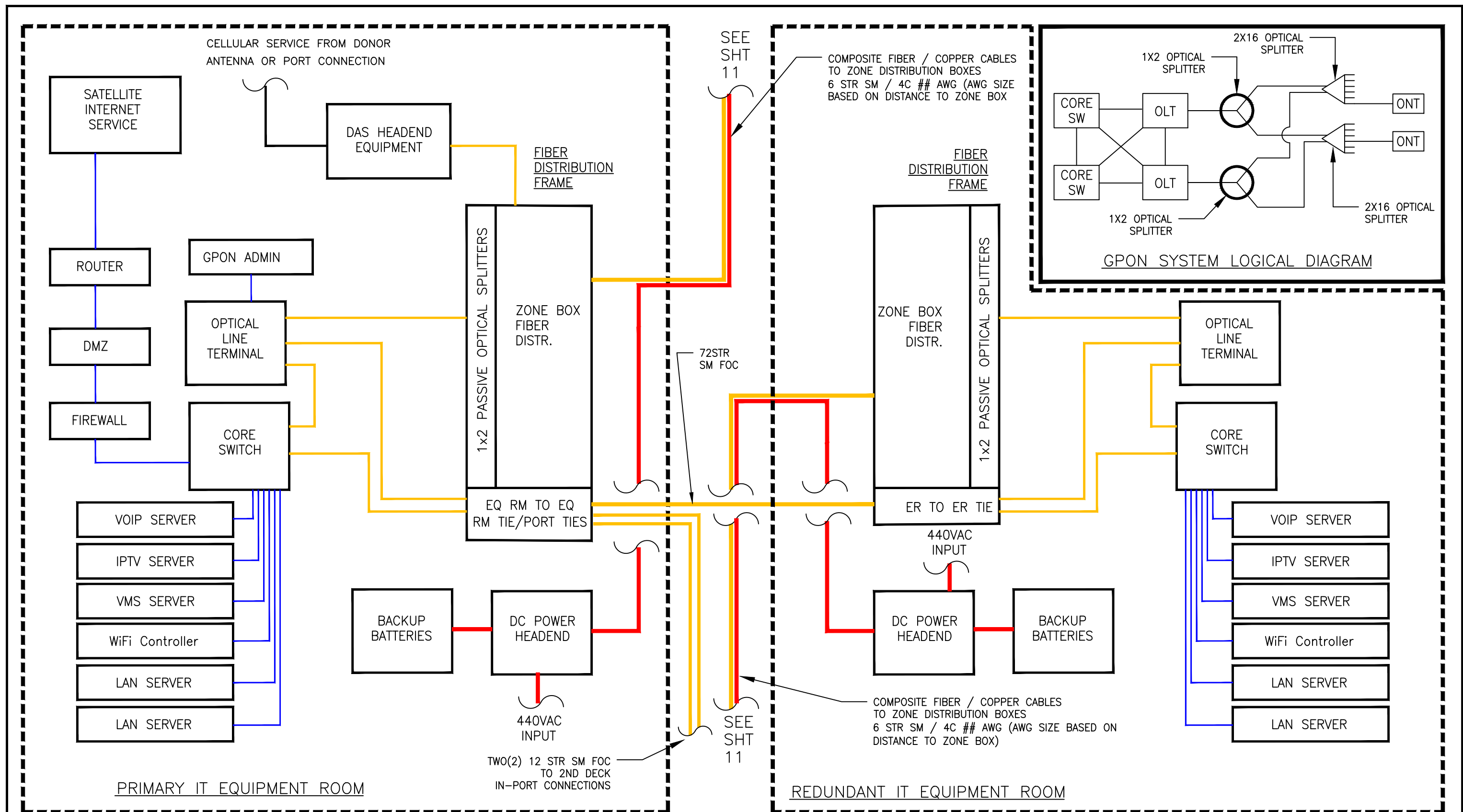
- SHEET NOTES:**
- 1. THE SYSTEM RISER ILLUSTRATED WILL PROVIDE IP DATA TRANSPORT OVER PON AND WIFI FOR VIDEO (CCTV FEEDS, VIDEO ON DEMAND, OFF AIR STATION BROADCASTS), DATA (LAN, INTERNET) AND VOICE (VOIP, PUBLIC ADDRESS, AUDIO) APPLICATIONS.
 - 2. THE FOC DISTRIBUTION AND REMOTE POWER SOLUTION SHALL BE SIZED TO SUPPORT BOTH PON AND DAS SYSTEMS.







ZONE DISTRIBUTION BOX TO ONT SINGLE LINE DETAIL



EQUIPMENT ROOMS SINGLE LINE DETAIL

