



DEPARTMENT OF THE NAVY
JOINT BASE PEARL HARBOR-HICKAM
850 TICONDEROGA ST STE 100
PEARL HARBOR HI 96860-5102

JBPHHINST 11410.5
22 Dec 14

JOINT BASE PEARL HARBOR-HICKAM INSTRUCTION 11410.5

Subj: SHIP SERVICES

Ref: (a) OPNAVINST 11310.3B
(b) SOPAPEARLINST 5000.1H
(c) Tagout User's Manual (TUMS)
(d) NAVFAC PWBL 005 - 480 Volt Ship Connect
(e) NAVFAC PWBL 006 - 480 Volt Ship Disconnect
(f) NAVFAC PWBL 007 - 4160 Volt Ship Connect
(g) NAVFAC PWBL 008 - 4160 Volt Ship Disconnect
(h) NAVFAC MO-340 - Ship-to-Shore Hose Handling
Operations Manual

Encl: (1) JBPHH Shore Power Check List
(2) Ship Services Activity Areas
(3) Ship Service Utility Connections and/or
Disconnections, Operator Responsibilities
(4) Telephone Authorization by Ship/Sub Class
(5) Hull Source Circuit Breaker Listing

Ref:

1. Purpose. To delineate command responsibilities and procedures for Ship Services support to ships berthed in Joint Base Pearl Harbor-Hickam (JBPHH). This instruction is a major revision and should be read in its entirety.

2. Background. This instruction standardizes procedures for obtaining Ship Services at JBPHH and identifies responsible parties. This instruction outlines procedures for ensuring safe and proper connections between the Navy electrical system and ships berthed outside the Shipyard Controlled Industrial Area (CIA). Additionally, this instruction delineates the number of telephone lines that JBPHH will fund by ship class and outlines procedures for obtaining additional telephone lines.

3. Discussion. Naval Facilities Engineering Command, Hawaii (NAVFAC HI) is designated as the Ship Services operator for JBPHH berths A-1 through A-7, B-3 through B-26, F-1 through F-13, M-1 through M-4, S-1 through S-21B, V-5, V-6, Y-2, Y3A and

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Y3B. To preclude any incidents, it is requested that ships and NAVFAC HI Ship Services branch Electrician (PRJ326J) comply with hookup procedures noted in refs (c) through (h) prior to energizing any ship to shore circuit. Utilize THOF-500 shore power cables in lengths of 130, 150 and 180 feet. These cables are terminated with a MIL-C-24368/1 connector plug on each end. The MIL-C-24368/1 connector is Mine Safety and Health Administration (MSHA) approved and accepted as fire and explosion proof, which will eliminate phasing and fire problems pier side.

4. Definitions

a. Ship Services. Port services available at JBPHH as defined by Utility and In-port services.

b. Utility Services. The connection, disconnection, or provision of pier-side utility services for berthing: Steam, electrical power (AC), low-pressure (LP) compressed air, high-pressure (HP) compressed air, Ship's Wastewater Collection Ashore System/Collection Holding and Transfer system (SWWCAS/CHT), potable water, salt water, demineralized water.

Note: Provision of portable (mobile) utility generating equipment for utility services that are not an integral part of the existing shore-based utility plant at the specific berth (i.e. portable steam) may be available.

c. In-Port Services. Shore side services provided during the period of berthing.

- (1) Bilge water collection and waste oil disposal
- (2) Provisions for hazardous waste management and disposal, which are contained in ref (d).
- (3) Transportation Support
- (4) Crane Service
- (5) NIPERNET/SIPERNET Connectivity
- (6) Refuse Service
- (7) Cable TV Service

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(8) Telephone Service

d. User. United States Navy and other vessels authorized to receive Utility and In-port Services.

e. Fleet Support Coordinating Activity. The primary fleet support activity coordinating fleet support in JBPHH.

f. Ship Services Activity. The activity maintaining plant account or having operational assignment control over specific berthing areas and providing Ship Services at those locations.

g. Ship Services Operator. The activity/organization providing labor/equipment in support of Ship Services.

5. Responsibilities

a. JBPHH Operations Department is designated as primary Fleet Support Coordinating Activity, and will:

(1) Exercise overall coordination for Ship Services within the Pearl Harbor Naval Complex, which includes JBPHH, Pearl Harbor Naval Shipyard & Intermediate Maintenance Facility (PHNSY and IMF), Fleet Logistics Center, Pearl Harbor (FLC Pearl Harbor) and Naval Magazine, Pearl Harbor (NAVMAG Pearl).

(2) Serve as the initial point of contact for logistics requirement (LOGREQ) reports for the user, except for submarine LOGREQ reports, which will be processed by the Naval Submarine Support Command (NSSC).

(3) Notify the appropriate Ship Services operator of the user's requirements.

(4) Notify NAVFAC HI service desk when and where a ship is scheduled to moor and electrical power requirements requested.

(5) Instruct Harbor Pilots and Dock Masters to work closely with NAVFAC HI Ship Services branch (PRJ326J) Electrician to ensure ship is properly berthed to receive the MIL-C-24368/1 connected cables, to minimize the number of cables required.

b. Naval Facilities Engineering Command, Hawaii (NAVFAC HI) will:

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(1) Identify, based on existing and projected berthing plans, any Ship Services utility system deficiencies and program for the correction of such deficiencies. Maintain overall coordination for NAVFAC HI Ship Services branch. Contact NAVFAC HI Ship Boarding Officer at 471-8550.

(2) Hold plant accounts, operate and maintain Ship Services support on a reimbursable basis.

a. Rates will be established for each commodity based on the costs required to provide that service.

(3) Ensure Ship Services branch provides Ship Service support during normal working hours; any additional NAVFAC HI Ship Services branch support during other than the normally scheduled shifts will be accomplished on an as-required basis.

(4) Make all electrical power connections from the shore power outlet on the pier up to, but not including, the shore power connector on board the ship. NAVFAC HI Ship Services branch Electrician will provide connect and disconnect of Ship Services. Crews dedicated to NAVFAC HI Ship Services branch Electrician will be available on a two-shift basis from 0500-2000, Monday through Friday. For more information contact NAVFAC HI Ship Services branch at 473-0897.

(5) Notify JBPHH Port Logistics and ship's force in the event power cannot be immediately furnished due to problems not readily correctable, then initiate corrective action.

(6) Determine and notify ship's force Electrical Officer if more than a four-man ship's force working party is needed to safely lay out shore power cables.

(7) Provide a certified listing of source circuit breakers for each pier shore power bunker to ship's force Electrical Officer to use in the lockout/tagout of shore power.

(8) Hold plant accounts, operate and maintain the central SWWCAS/CHT hose cleaning and maintenance facility.

a. NAVFAC HI Ship Services branch (PRJ326J) will clean and provide hoses; as well as, connect and disconnect of

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hoses. Hose connections from shore connection points on the pier will be made.

b. NAVFAC HI Environmental Department, Bilge Water Branch (ENV123) will schedule bilge trucks if needed and authorize the discharge of bilge water into BOWTS system per environmental regulations. Contact at 471-7733.

(9) Provide transportation support as required based on availability through the Transportation Department (PW7). Crane services for other than the placement of utility cables/hoses, brows, and platforms will be funded by the activity. Support funding will be provided by the activity unless specified otherwise.

471-3152 x 246: C-Pool Government Sedans, Vans, Pick-up
 471-3152 x 235: C-Pool Government Buses, Forklifts, Manlifts, Stake Trucks
 471-3152 x 234: Tractor Trailer Flatbeds
 471-3152 x 236: Cranes Service
 471-3134 x 227: Commercial Rentals

(10) Provide Refuse service for both foreign and domestic garbage. Contact at 474-9363.

(11) Recoup costs for all Ship Services performed not funded by CNRH, for which a pre-determined rate has not been established, based on a cost reimbursable basis for the actual charges incurred. The activity fiscally responsible for providing reimbursement will be determined by the type or location of the service provided.

c. Ship Services Activities (JBPHH, PHNSY and IMF, FLC Pearl Harbor, and NAVMAG Pearl Harbor, West Loch Branch) will:

(1) Hold plant account control over berthing areas.

(2) Hold plant account for ship-to-shore collateral equipment inventory associated with meeting the requirements of Ship Services in their areas of operator responsibility.

(3) Receive Ship Service support from NAVFAC HI on routine basis subcustody the plant account of all collateral equipment required to provide the service(s) to NAVFAC HI.

(4) Budget for the operation of Ship Services including shore side connections/disconnections and the initial procurement and replacement of ship-to-shore collateral equipment as required for berthing areas shown in enclosure (2).

(5) Provide services for ship's overhaul, repair or other industrial availability. These services will be charged to overhaul and repair funds in accordance with ref (b).

(6) In the case of JBPHH, replacement of platforms and brows will be included in the activity budget.

d. Ship Services Operators (NAVFAC HI, FLC Pearl Harbor, PHNSY and IMF, JBPHH and NAVMAG Pearl Harbor, West Loch Branch) will:

(1) Make utility shore side connections/disconnections for designated activity areas as shown in enclosure (3), funding provided by Commander Navy Region Hawaii (CNRH) Centrally managed Operating Budget (CMOB).

(2) Coordinate crane service for the placement and removal of brows and platforms for designated activity areas as shown in enclosure (3), funding provided by CNRH CMOB.

(3) Ensure proper shore side handling and physical security for Ship Services ship-to-shore collateral equipment.

e. User (Ship's Commanding Officer) will:

(1) Submit Ship Services requirements to JBPHH Port Logistics in accordance with Article 816 of ref (b). Submarines shall submit requirements to NSSC.

(2) Make all shipboard utility connections/disconnections. **Ship/Submarine forces are not authorized to connect or disconnect any shore-side utilities unless it is an emergency.**

(3) Provide as appropriate: fresh water hoses, salt water hoses, steam hoses, high-pressure compressed air hoses,

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North Atlantic Treaty Organization (NATO) connector's cable TV and, telephone lines up to pier connections.

(4) Provide manpower to transport SWWCAS/CHT hose from pier to ship when moored outboard at all berths.

(5) Provide manpower to lay out and recover shore power cables and SWWCAS/CHT hose at JBPHH berths.

f. Ship's/Submarine's force will:

(1) Station qualified electrician personnel topside in such a manner as to ensure that visual line of sight contact is maintained between the ship's connection point and the shore connection point. These personnel will have overall safety responsibility and will stop the evolution at any step in the operation that is deemed unsafe.

(2) Ensure the ship's shore tie circuit breakers, the Off Hull Source Circuit Breaker, and remote operators are open and tagged to prevent accidental closing while making connections.

(3) Furnish NAVFAC HI Ship Services branch Electrician information as to voltage requirements and maximum anticipated ampere load. Verify power provided is approximately the right value and polarity or phase rotation is correct prior to closing shore tie breakers.

(4) Provide a working party of four men or more on the pier as deemed necessary by NAVFAC HI Ship Services branch Electrician to lay out cables neatly upon arrival and assist with recovery of shore power cables.

6. Procedures

a. Requesting of Services. Activities of fleet units desiring Ship Services shall make their requests known to JBPHH Port Logistics, telephone numbers 473-1168/1183/2158 at least twenty-four hours in advance. Requests may also be made via LOGREQ. LOGREQS will be addressed to JB PEARL HARBOR-HICKAM HI//, NAVFAC HI PEARL HARBOR HI//, NAVSUP FLT LOG CTR PEARL HARBOR HI// and other addressees as deemed appropriate.

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b. Establishment of Support. Ship Services Activities requiring Ship Services on a routine basis shall establish a standing job order(s) with the cognizant Ship Services Operator, defining the scope of pier side services to be provided. These Ship Services Activities, other than JBPHH, will submit requests to NAVFAC HI using a Work Request Form (NAVCOMPT 140). The Work Request Form establishing NAVFAC HI support must include a statement specifically identifying the services needed.

c. Scheduling and Prioritizing of Services. All requests for support should be scheduled as far in advance as possible. Services should be arranged by 10:30 the day before services are required Monday through Friday. All other requests for services will be handled on a case-by-case basis. It is also necessary that JBPHH Port Logistics (473-1168) be notified of revisions to previously scheduled movements at the earliest possible time. JBPHH Port Logistics will establish the priority for NAVFAC HI response and will resolve any duplication in scheduling which may occur.

d. Request for Telephone Service. Requests for telephone service should be addressed using a LOGREQ. If the lines are available on the pier, the requested number of lines, will be provided and funded by COMNAVREGHI for hook up, disconnect and local service. Contact NCTAMS at 471-4971.

(1) DSN Service. Afloat units are to advise JBPHH Port Logistics which phone lines are to be DSN capable in advance of the actual hook up.

(2) Additional Telephone Lines/Long Distance Service. If additional telephone lines and/or long distance capability is desired, the ship or afloat staff provide funding with a DD Form 1149 to NCTAMS PAC via JBPHH Port Logistics. Contact NCTAMS at 471-4971.

e. Control of Telephones. All JBPHH funded telephones are to be used for official communication in support of command matters essential to mission performance. The unit receiving the telephone service will be totally responsible for controlling telephone usage and funding all toll charges. Unit is responsible for the following:

(1) Ensure a minimum number of commercial long distance

telephone calls are authorized commensurate with efficient operations.

(2) Maintain a Toll Card record and review telephone bills to ensure that only official long distance calls are placed and paid for with ship's operating target (OPTAR).

(3) Establish and maintain a positive system of security and control of official telephone(s) under their cognizance to preclude unofficial charges.

(4) Fund the replacement cost of any telephone company equipment that is damaged or not returned upon sailing.

(5) As soon as practical, advise JBPHH Port Operations (473-1168/1183) of the location of the telephone numbers assigned.

7. Action. Addressees will take steps to carry out the provisions of this instruction within their organization.



S. Keeve

Distribution:

<https://g2.navy.mil/tscnrh/JOINTBASEPEARLHARBOR-HICKAMHI/JBPHH%20Instructions/Forms?Instructions.aspx>

JOINT BASE PEARL HARBOR HICKAM SHORE POWER CHECKLIST

In accordance with OPNAVINST 13310.3B, connecting of shore power cables on the pier and energizing of circuits will be accomplished only by qualified NAVFAC HI Ship Services branch (PRJ326J) Electricians in direct coordination with the Electrical Officer and Senior Electrician from the receiving ship. Compliance of this checklist is mandatory and both the NAVFAC HI Ship Services branch (PRJ326J) Electrician, and the Ship/Submarine Electrical Officer, Electrical Chief Petty Officer (CPO), or Petty Officer in Charge (POIC) of shore power will follow connect/disconnect steps.

1. Connect (Refer to NAVFAC PWBL 005 & NAVFAC PWBL 007 for detailed procedures)

a. NAVFAC HI Ship Services branch (PRJ326J) Electrician makes contact with Ship/Submarine Electrical Officer, Electrical CPO or POIC of shore power.

b. NAVFAC HI Ship Services branch (PRJ326J) Electrician gives meter readings to Ship/Submarine electrician for all shore power cables being used. Submarine electrical personnel will red danger lock and tag shore power outlets.

c. NAVFAC HI Ship Services branch (PRJ326J) Electrician and Ship/Submarine electrician visually inspect each cable for damage and ensure all terminations are free of salt, moisture, and/or corrosion.

d. Ship/Submarine personnel assist NAVFAC HI Ship Services branch (PRJ326J) Electrician with rigging shore power cables onto vessel.

e. Ship/Submarine electricians connect cables to ship/submarine outlets leaving safety interlocks down. Submarines do not have safety interlocks on board.

f. NAVFAC HI Ship Services branch (PRJ326J) Electrician tests shore receptacles to ensure proper operation and conditions before connecting shore power cables to bunker outlets leaving safety interlocks down.

g. Ship/Submarine Electrical Officer, Electrical CPO or POIC of shore power confirms all connections are complete and gives permission for both NAVFAC HI Ship Services branch (PRJ326J) Electrician and Ship/Submarine electrician to close and lock safety interlocks. Submarines do not have safety interlocks on board.

h. Ship Electrical Officer, Electrical CPO or POIC of shore power confirms all safety interlocks are closed and locked. When all has been completed the Ship Electrical Officer, Electrical CPO or POIC of shore power gives NAVFAC HI Ship Services branch (PRJ326J) Electrician permission to close circuit breakers. Ships electrical personnel will check and confirm phase rotation and voltage.

i. Submarine Electrical Officer, Electrical CPO or POIC of shore power confirms all safety interlocks are closed and locked. When all has been completed the Submarine Electrical Officer, Electrical CPO or POIC of shore power removes red danger locks and tags and gives NAVFAC HI Ship Services branch (PRJ326J) Electrician permission to close and open circuit breakers one at a time to check phase rotation and voltage. When completed the NAVFAC HI Ship Services branch (PRJ326J) Electrician will close all circuit breakers.

2. Disconnect (Refer to NAVFAC PWBL 006 & NAVFAC PWBL 008 for detailed procedures)

a. NAVFAC HI Ship Services branch (PRJ326J) Electrician makes contact with Ship/Submarine Electrical Officer, Electrical CPO or POIC of shore power one hour prior to underway time.

b. Ship/Submarine Electrical Officer, Electrical CPO or POIC of shore power confirms vessel is on Ship/Submarine power one hour prior to underway time.

c. When confirmed, the Ship/Submarine Electrical Officer, Electrical CPO or POIC of shore power gives NAVFAC HI Ship Services branch (PRJ326J) Electrician permission to open circuit.

d. NAVFAC HI Ship Services branch (PRJ326J) Electrician tests shore power cables with an approved Tic-Tracer to confirm shore power cables are de-energized.

e. NAVFAC HI Ship Services branch (PRJ326J) Electrician unlocks safety interlocks and leaves them unlocked. Shipboard electrical personnel unlock safety interlocks and leave them unlocked.

f. NAVFAC HI Ship Services branch (PRJ326J) Electrician will remove shore power cable heads from electrical bunker, cap and lay shore power cable heads on the ground. Submarine electrical personnel will red danger lock and tag shore power outlets.

g. Ship/Submarine personnel will remove shore power cable heads from vessel shore power outlets, and cap and lay shore power heads on the deck. Submarine electrical personnel will then remove red danger lock and tag.

h. Ship/Submarine personnel will assist NAVFAC HI Ship Services branch (PRJ326J) Electrician with recovery of shore power cables.

SHIP SERVICES AND UTILITY CONNECTIONS/DISCONNECTIONS
OPERATOR RESPONSIBILITIES

ACTIVITY AREAS

<u>Ships Service</u>	<u>JBPHH</u>	<u>FLC 1</u>	<u>PHNSY & IMF</u>	<u>NAVMAG</u>	<u>SUB PIERS</u>
Electric Power	NAVFAC	*	PHNSY&IMF	*	NAVFAC
Fresh Water	3	3	PHNSY&IMF	3	3
Salt Water	3	*	PHNSY&IMF	*	3
Steam	NAVFAC	*	*	*	*
LP Air	NAVFAC	*	PHNSY&IMF	*	3/4
HP Air	*	*	*	*	3/5
Crane Svc	NAVFAC	FLC 2	PHNSY&IMF	NAVFAC	NAVFAC
SWWCAS/CHT	NAVFAC	NAVAFC	PHNSY&IMF	NAVFAC	NAVFAC
Telephone	3/6	3/6	3/6	3/6	3/6
Cable TV	3/7	3/7	3/7	*	3/7
Garbage	NAVFAC	NAVAFC	NAVFAC	NAVFAC	NAVFAC
Fiber Optic	3/8	3/8	3/8	*	3/8
Bilge Water	NAVFAC	NAVFAC	NAVFAC	*	NAVFAC

- 1 - JBPHH assigns berthing in coordination with FLC Pearl.
- 2 - FLC PEARL will accomplish when berthing incident to fueling and/or supply loadout requirements.
- 3 - User makes all connections/disconnections.
- 4 - 125 PSIG air available.
- 5 - 4500 PSIG air available
- 6 - Questions concerning telephone service contact NCTAMS (808) 471-4971.
- 7 - Questions concerning cable service contact Oceanic Cable.

8 - NAVFAC provides Fiber Optic cable only. Questions concerning service contact SPAWAR (808) 474-7779.

9 - V5 and V6 have shore power.

* - None available.

** - Ships under availability for Shipyard repair will be provided Ship Service connections and disconnections by Shipyard personnel wherever the ship is berthed. Ships not under availability that are normally serviced at a JBPHH berth will be provided Ship Services by NAVFAC Personnel when berthed in a Shipyard area.

SHIP SERVICES ACTIVITY AREAS

<u>ACTIVITY AREAS</u>	<u>BERTHS</u>
JOINT BASE PEARL HARBOR-HICKAM	A-1 through A-7 B-3 through B-26 F-1 through F-13 M-1 through M-4 S-1A through S-21B V-1 through V-6 Y2, Y3A and Y3B

FLEET LOGISTICS CENTER PEARL HARBOR	H-1 through H-4 K-3 through K-11
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PHNSY & IMF	B-1 through B-2 DD-1 through DD-4 O-1 through O-2 GD 1, 2, 4 and 6
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NAVMAG PEARL HARBOR (West Loch)	W-1 through W-5
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JBPHH Port Operations Department assigns berthing in coordination with the appropriate activity.

TELEPHONE AUTHORIZATION BY SHIP/SUB CLASS

SHIP CLASS	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	TYPE 6	TOTAL
AS			6**	2***			8
AE/AFS			3**	1***			4
AGF/LCC			7**	3***			10
AOE			4**	1***			5
ARS			2**	1***			3
CG			4**	2***			6
CVN			7**	3***			10
DDG/DD			4**	1***			5
FFG			3**	1***			4
LHA/LHD			6**	1***			7
LPD			4**	1***			5
LSD			3**	1***			4
SSN/SSBN	2*		2**				4
AFLOAT STAFFS (in additions to ship telephones)							
CARGRU			5**	5***			10
DESRON			3	1***			4
FLTCDR	12*		15**	3***			30
PHIBRON			3	1***			4
CRUDESGRU			5	5***			10
PHIBGRU			3	2***			5
MINERON			3	1***			4

TELEPHONE SERVICE

TYPE 1 Regular line with local service only
 TYPE 2 Regular line with commercial long distance
 TYPE 3 Commercial line with DSN no long distance
 TYPE 4 Commercial line with priority DSN no long distance
 TYPE 5 Commercial line with DSN & commercial long distance
 TYPE 6 Commercial line with priority DSN & commercial long distance

NOTES:

- * May be upgraded to TYPE 2 if unit provides funding
- ** May be upgraded to TYPE 5 if unit provides funding
- *** May be upgraded to TYPE 6 if unit provides funding

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Phones in addition to those listed above may be provided if:

Lines are available at assigned berth.

Unit funds all costs (connect, disconnect, long distance)

Hull Source Circuit Breaker Listing

PIER	SUBSTATION	BREAKER	REMOTE OPERATOR
S1A	J17A	S1-1	S1A-1
		S1-2	S1A-2
		S1-3	S1A-3
		S1-4	S1A-4

PIER	SUBSTATION	BREAKER	REMOTE OPERATOR
S1A	J17A	S1A-5	S1A-5
		S1A-6	S1A-6
		S1A-7	S1A-7
		S1A-8	S1A-8

S1B	J15A	S1B-1	S1B-1
		S1B-2	S1B-2
		S1B-3	S1B-3
		S1B-4	S1B-4

S1B	J15A	S1B-5	S1B-5
		S1B-6	S1B-6
		S1B-7	S1B-7
		S1B-8	S1B-8

S8	J11	S8A1	8A1
		S8A2	8A2
		S8A3	8A3
		S8A4	8A4

S8	J11	S8B1	8B1
		S8B2	8B2
		S8B3	8B3
		S8B4	8B4

S9	J11	S9A1	9A1
		S9A2	9A2
		S9A3	9A3
		S9A4	9A4
S10	J3	S10-1	S10-1
		S10-2	S10-2
		S10-3	S10-3
		S10-4	S10-4

S9	J11	S9B1	9B1
		S9B2	9B2
		S9B3	9B3
		S9B4	9B4
S10	J3	S10-5	S10-5
		S10-6	S10-6
		S10-7	S10-7
		S10-8	S10-8

PIER	SUBSTATION	BREAKER	REMOTE OPERATOR
S11	J3	S11-1	S11-1
		S11-2	S11-2
		S11-3	S11-3
		S11-4	S11-4

PIER	SUBSTATION	BREAKER	REMOTE OPERATOR
S11	J3	S11-5	S11-5
		S11-6	S11-6
		S11-7	S11-7
		S11-8	S11-8

S21A	K20	S21A-1	S21A-1
		S21A-2	S21A-2
		S21A-3	S21A-3
		S21A-4	S21A-4

S21B	K20	S21B-1	S21B-1
		S21B-2	S21B-2
		S21B-3	S21B-3
		S21B-4	S21B-4

S21B	K20	S21B-5	S21B-5
		S21B-6	S21B-6
		S21B-7	S21B-7
		S21B-8	S21B-8

Y2	K30	Y2-1	Y2-1
		Y2-2	Y2-2
		Y2-3	Y2-3
		Y2-4	Y2-4

Y2	K30	Y2-5	Y2-5
		Y2-6	Y2-6
		Y2-7	Y2-7
		Y2-8	Y2-8

Y3A	K34	A-1A	A-1A
		A-1B	A-1B
		A-1C	A-1C

Y3A	K34	A-2A	A-2A
		A-2B	A-2B
		A-2C	A-2C

		A-1D	A-1D
PIER	SUBSTATION	BREAKER	REMOTE OPERATOR
Y3B	K34	B-1A	B-1A
		B-1B	B-1B
		B-1C	B-1C
		B-1D	B-1D

		A-2D	A-2D
PIER	SUBSTATION	BREAKER	REMOTE OPERATOR
Y3B	K34	B-2A	B-2A
		B-2B	B-2B
		B-2C	B-2C
		B-2D	B-2D

