

**Washington Headquarters Services
 FY 2015 Military Construction, Defense-Wide
 (\$ in Thousands)**

<u>State/Installation/Project</u>	<u>Authorization Request</u>	<u>Approp. Request</u>	<u>New/ Current Mission</u>	<u>Page No.</u>
Virginia				
Pentagon Redundant Chilled Water Loop	15,100	15,100	C	181
Total	15,100	15,100		

1. COMPONENT Washington Headquarters Services		FY 2015 MILITARY CONSTRUCTION PROGRAM					2. DATE March 2014				
3. INSTALLATION AND LOCATION Pentagon Reservation, Arlington, Virginia				4. COMMAND OSD/DA&M/WHS			5. AREA CONSTRUCTION COST INDEX 1.00				
6. PERSONNEL		(1) PERMANENT			(2) STUDENTS			(3) SUPPORTED			(4) TOTAL
		OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	
a. AS OF December 2012											
											31,000
7. INVENTORY DATA (\$000)											
a. TOTAL ACREAGE										1	
b. INVENTORY TOTAL AS OF										N/A	
c. AUTHORIZATION NOT YET IN INVENTORY										N/A	
d. AUTHORIZATION REQUESTED IN THIS PROGRAM (1,000)										15,100	
e. AUTHORIZATION INCLUDED IN FOLLOWING PROGRAM										N/A	
f. PLANNED IN NEXT THREE PROGRAM YEARS										N/A	
g. REMAINING DEFICIENCY										N/A	
h. GRAND TOTAL (1,000)										15,100	
8. PROJECTS REQUESTED IN THIS PROGRAM											
a. CATEGORY						b. COST (\$000)		DESIGN START		STATUS COMPLETE	
(1) CODE	(2) PROJECT TITLE		(3) SCOPE								
82725	REDUNDANT CHILLED WATER LOOP					15,100		3/14		8/16	
9. FUTURE PROJECTS											
N/A											
10. MISSION OR MAJOR FUNCTIONS											
Expand existing mission critical chilled water distribution to provide mission critical cooling to mission critical rooms and equipment.											
11. OUTSTANDING POLLUTION AND SAFETY DEFICIENCIES											
										(\$000)	
A. Air Pollution										0	
B. Water Pollution										0	
C. Occupational Safety and Health										0	

1. COMPONENT Washington Headquarters Services	FY 2015 MILITARY CONSTRUCTION PROJECT DATA	2. DATE March 2014	REPORT CONTROL SYMBOL
3. INSTALLATION AND LOCATION Pentagon Reservation, Arlington, Virginia	4. PROJECT TITLE Redundant Chilled Water Loop		
5. PROGRAM ELEMENT	6. CATEGORY CODE 82725	7. PROJECT NUMBER	8. PROJECT COST (\$000) 15,100

11. REQUIREMENT

PROJECT: Expand existing mission critical chilled water distribution to provide mission critical cooling to mission critical rooms and equipment.

REQUIREMENT: Rooms which have been identified as mission critical are currently served by normal building chilled water. This distribution has not been afforded the reliability benefit of the existing dedicated backup chilled water plant, and relies solely on the primary chilled water plant. These rooms include mission critical powered equipment which will not be provided cooling in the event of a loss of normal chilled water distribution. The installation of this backup chilled water loop will provide the air handling units with mission critical cooling, and increased reliability due to connectivity with the existing backup mission critical cooling plant.

CURRENT SITUATION: The existing distribution of mission critical chilled water relies on isolation of the main normal chilled water plant supply, feeding mission critical chilled water through the same piping infrastructure as the normal distribution. While physically connected, the existing isolation valve scheme provides separation between the systems, operationally separating the main chilled water plant and the backup chilled water plant, when the backup chilled water plant is operational. Mission critical chilled water is only supplied to those systems which are within the existing isolation schemes. The new backup mission critical chilled water distribution system will be dedicated to only mission critical equipment, expanding mission critical chilled water distribution to critical equipment outside of the capabilities of the normal piping isolation critical distribution scheme. This distribution system will operate under the same premise, connecting into existing normal chilled water under normal conditions, and being capable of being fed from the backup chilled water plant for a mission critical feed of chilled water. The identified air handling units to be connected to the new mission critical distribution system are currently outside the backup mission critical chilled water isolation scheme, and will not be provided mission critical chilled water should the main normal chilled water plant be taken down by emergency or failure.

IMPACT IF NOT PROVIDED: Without this project, the Pentagon Reservation will be unable to achieve the level of enhanced reliability recommend in various WHS Balanced Survivability Assessments.

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12. SUPPLEMENTAL DATA:

A. Estimated Design Data:

1. Status:

- (a) Date Design Started: _____ March 2014
- (b) Parametric Cost Estimate Used to Develop Costs (Yes/No): Yes
- (c) Percent Complete as of January, 2014 _____ 0%
- (d) Date 35 Percent Complete: _____ Jul 2014
- (e) Date Design Complete: _____ Jun 2015
- (f) Type of Design Contract: _____ Design/Build

2. Basis:

- (a) Standard or Definitive Design: _____ No
- (b) Date Design was Most Recently Used: _____ NA

3. Total Cost (c) = (a) + (b) or (d) + (e)

- (a) Production of Plans and Specifications: _____ \$0.914M
- (b) All other Design Costs: _____ \$0.914M
- (c) Total: _____ \$1.829M
- (d) Contract: _____ Design/Build
- (e) In-house: _____ No
- Cost of reproduction of plans and specs: _____ \$0.073M

- 4. Contract Award: _____ Mar 2015
- 5. Construction Start: _____ Aug 2015
- 6. Construction Complete: _____ Aug 2016

B. Equipment associated with this project which will be provided from other appropriations – Not Applicable