

# Inspector General

United States  
Department of Defense



DoD Education Activity Needed Better Planning for  
Military Construction Projects

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## Acronyms and Abbreviations

BCA	Business Case Analysis
DoDDS-E	DoD Dependents Schools – Europe
DoDEA	Department of Defense Education Activity
EdSpecs	Education Facilities Specifications
MILCON	Military Construction
PDR	Project Definition Report
SECDEF	Secretary of Defense
USACE	U.S. Army Corps of Engineers



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SEP 24 2012

MEMORANDUM FOR PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE  
FOR PERSONNEL AND READINESS  
DIRECTOR, DEPARTMENT OF DEFENSE EDUCATION  
ACTIVITY

SUBJECT: DoD Education Activity Needed Better Planning for Military Construction  
Projects (Report No. DODIG-2012-136)

We are providing this report for review and comment. This report addresses the DoD Education Activity's major facilities renovation and construction initiative, valued at \$3.7 billion. The report highlights that DoD Education Activity officials could not support the accuracy and reliability of the requirements for the six FY 2012 military construction projects, valued at \$248.5 million, in Europe. In addition, the Director, DoD Education Activity, changed school requirements but did not complete a business case analysis or cost estimate, resulting in the Vicenza High School project needing additional funding. We considered management comments on a draft of this report when preparing the final report.

The Principal Deputy Assistant Secretary of Defense for Readiness and Force Management responded for the Principal Deputy Under Secretary of Defense for Personnel and Readiness and the Director, DoD Education Activity. Comments from the Principal Deputy Assistant Secretary were generally responsive and conformed with DoD Directive 7650.3. However, comments on Recommendation B.1 were nonresponsive and comments on Recommendation B.2 were partially responsive. Therefore, we request additional comments from the Principal Deputy Under Secretary of Defense for Personnel and Readiness and the Director, DoD Education Activity, by October 24, 2012.

If possible, send a portable document format (.pdf) file containing your comments to [audros@dodig.mil](mailto:audros@dodig.mil). Comments provided to the final report must be marked and portion-marked, as appropriate, in accordance with DoD Manual 5200.01, and must have the actual signature of the authorizing official for your organization. We are unable to accept the /Signed/ symbol in place of the actual signature. If you arrange to send classified comments electronically, you must send them over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Please direct questions to me at (703) 604-8866.

A handwritten signature in blue ink, reading "Alice F. Carey", is positioned above the typed name.

Alice F. Carey  
Assistant Inspector General  
Readiness, Operations, and Support





# Results in Brief: DoD Education Activity Needed Better Planning for Military Construction Projects

## What We Did

We reviewed the Department of Defense Education Activity (DoDEA) requirements process for military construction (MILCON) projects in Europe. Specifically, we determined whether MILCON requirements for DoD Dependents Schools - Europe projects were accurate, reliable, and met DoDEA standards. In FY 2010, DoDEA began a major facilities renovation and construction initiative, valued at \$3.7 billion. We reviewed the FY 2012 planned projects in Europe, which included six schools and a programmed budget of \$248.5 million.

## What We Found

DoDEA officials could not support the accuracy and reliability of the costs of the requirements for the six FY 2012 MILCON projects in Europe. Specifically, DoDEA officials did not consistently use the costs provided by U.S. Army Corps of Engineers (USACE), as required by DoD guidance. This occurred because DoDEA officials disagreed with the methodology USACE used to develop the unit costs, however, the methodology DoDEA used did not result in the unit costs submitted to Congress; altered USACE supporting facilities costs due to changes in initial assumptions; and failed to use the USACE costs when DoDEA officials received the costs after the DoDEA deadline. As a result, DoDEA officials reduced the USACE project costs on the DD Forms 1391 for the FY 2012 MILCON projects in Europe by \$15.3 million. DoDEA was at risk for not having enough funding to complete the projects to DoDEA facility standards.

Further, the Director, DoDEA, changed school requirements, but did not complete a business case analysis or prepare a cost estimate, as required for new initiatives by Secretary of Defense guidance. This occurred because the Director, DoDEA, incorrectly determined that the process to develop the 21<sup>st</sup> Century education facilities specifications (EdSpecs) was sufficient to fulfill the business case

analysis requirement and incorrectly decided that cost estimates prepared for individual MILCON projects met the Secretary of Defense guidance. As a result, DoDEA officials did not know the full impact on a school building's size or cost for incorporating 21<sup>st</sup> Century EdSpecs into the FY 2012 MILCON projects. For example, the design architect for Vicenza High School determined that fully incorporating the 21<sup>st</sup> Century EdSpecs required 130,000 square feet and would not fit into the congressionally approved square footage of 117,788. However, the design architect provided two options to incorporate 21<sup>st</sup> Century EdSpecs and remain within 117,788 square feet, but determined that the project, valued at \$41.8 million, still needed additional funding of \$11.6 to \$13.9 million.

## What We Recommend

Among other recommendations, we recommend:

- The Principal Deputy Under Secretary of Defense for Personnel and Readiness require responsible DoDEA officials to use the construction agents' costs for developing construction requirements, or provide documented and approved rationale and methodology for deviating from policy; and
- The Director, DoDEA, complete a business case analysis, to include developing cost estimates to build a 21<sup>st</sup> Century EdSpecs school.

## Management Comments and Our Response

The Principal Deputy Assistant Secretary of Defense for Readiness and Force Management, provided comments that were generally responsive. However, some of the Principal Deputy Assistant Secretary's comments were nonresponsive or partially responsive. Therefore, we request additional comments be provided as specified in the recommendations table on the back of this page.

## Recommendations Table

<b>Management</b>	<b>Recommendations Requiring Comment</b>	<b>No Additional Comments Required</b>
Principal Deputy Under Secretary of Defense for Personnel and Readiness	B.2	A.1
Director, Department of Defense Education Activity	B.1	A.2

**Please provide comments by October 24, 2012.**

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# Introduction

## Objectives

Our objective was to evaluate the Department of Defense Education Activity (DoDEA) requirements process for military construction (MILCON) projects in Europe. Specifically, we determined whether MILCON requirements for DoD Dependents Schools – Europe (DoDDS-E) projects were accurate, reliable, and met Service and DoDEA standards. See the appendix for our scope and methodology.

## Background

DoDEA is responsible for managing the education of military dependent children around the world. In FY 2010, DoDEA began a major facilities renovation and construction initiative. This initiative, valued at \$3.7 billion, included the planned renovation or replacement of most DoD Dependent Schools worldwide and was scheduled to continue through FY 2016. In FY 2012, DoDEA planned seven MILCON projects in Europe, including one project in Italy, one project in the United Kingdom, and five projects in Germany. After initial planning, DoDEA deferred the project in the United Kingdom at the request of a Service. In FY 2012, DoDEA changed the facilities requirements for MILCON projects.

## *Responsible Organizations*

Multiple organizations play a significant role in developing MILCON requirements for DoDDS-E. Key organizations include: DoDEA, DoDDS-E, and the DoD construction agent, U.S. Army Corps of Engineers (USACE)-Europe.<sup>1</sup>

## **DoDEA and DoDDS – Europe**

DoDEA is a DoD field activity and reports to the Under Secretary of Defense for Personnel and Readiness. The Director, DoDEA, is responsible for establishing the MILCON program, which includes preparing and submitting completed DD Forms 1390, “FY XXXX Military Construction Program;” DD Forms 1391, “FY XXXX Military Construction Program Data;” and DD Forms 1391c, “FY XXXX Military Construction Program Data (Continuation)” to the Under Secretary of Defense (Comptroller)/Chief Financial Officer, DoD for inclusion in the budget. DoDEA consists of domestic and overseas school systems. The overseas school system includes DoDDS-E and DoD Dependents Schools-Pacific.

DoDDS-E officials’ responsibilities include identifying MILCON project requirements. Further, officials complete project documentation (DD Forms 1390, 1391, and 1391c) for MILCON projects in Europe, and review all phases of project design with the MILCON agents.

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<sup>1</sup>Throughout the report, we use “DoDEA” and “DoDDS-E” officials to refer to DoDEA Headquarters Logistics and Facilities personnel and DoDDS-E Facilities personnel, respectively, unless otherwise noted.

## DoD Construction Agents

DoD Directive 4270.5, “Military Construction,” February 12, 2005, specifies construction agents for executing design and construction for military facilities outside the United States. The Directive designated USACE as the DoD construction agent in Germany and the Naval Facilities Engineering Command as the DoD construction agent in Italy. DoD construction agents provide input into the design of the facilities, identify project costs, and manage the actual construction. At the request of the Naval Facilities Engineering Command, USACE-Europe completed the planning phase for the FY 2012 MILCON project in Italy. Therefore, USACE-Europe was the DoD construction agent for all the planning for projects we reviewed.

## DoDEA Multiyear MILCON Program

In March 2008, DoDEA provided Congress with a report that detailed school conditions. As a result, congressional officials became concerned that the rate of MILCON funding for DoDEA was not sufficient to maintain quality schools. DoDEA provided a second report to Congress in October 2009, summarizing the condition of schools and the DoDEA MILCON program. This report identified 62 of the 76 DoDDS-E schools (approximately 82 percent) that were in poor or failing conditions.

DoDEA and Office of the Secretary of Defense officials developed a plan to address \$3.7 billion in funding needs for MILCON school projects worldwide. The DoDEA multiyear program included approximately \$1.8 billion in funding for MILCON projects across Europe. For FY 2012, Congress approved \$248.5 million for six MILCON projects in Europe.<sup>2</sup> Table 1 provides a detailed list of the FY 2012 projects.

**Table 1. DoDEA 2012 MILCON Projects in Europe**

<b>School</b>	<b>Location</b>	<b>Funded Amount (in thousands)</b>	<b>Project Type</b>	<b>Changed Facility Requirements</b>
Ansbach Middle	Germany	\$11,672	Addition	No
Netzaberg Middle	Germany	\$6,529	Addition	No
Spangdahlem Elementary	Germany	\$41,876	Renovation/Addition	Yes
Spangdahlem Middle/High	Germany	\$87,167	Replacement	Yes
Vicenza High	Italy	\$41,864	Replacement	Yes
Wetzel Elementary	Germany	\$59,419	Replacement	Yes
<b>Total</b>		<b>\$248,527</b>		

<sup>2</sup>Congress approved \$35.0 million for Alconbury High School, which DoDEA officials deferred at the request of a Service.

## ***DoDEA Initiated Actions to Define 21<sup>st</sup> Century Education Facilities Specifications***

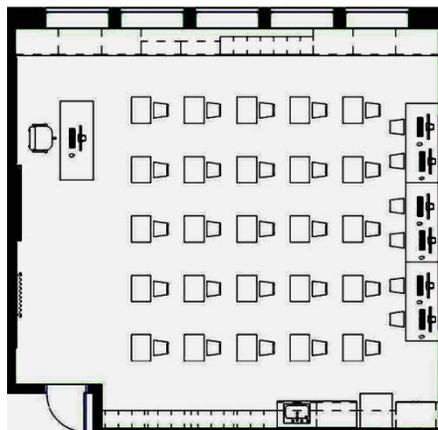
During our review, DoDEA changed their requirements for MILCON projects from traditional education facilities specifications (EdSpecs) to 21<sup>st</sup> Century EdSpecs. On June 4, 2010, the U.S. Senate Report 111-201, to accompany the National Defense Authorization Act for 2011, directed the Secretary of Defense (SECDEF) to establish a formal process for incorporating the best practices and design innovations in public and private school construction into the design of DoD Dependents Schools. In November 2010, DoDEA officials met with congressional staff to clarify the committee's request. DoDEA officials stated that congressional staff recommended DoDEA officials meet with design experts and align the new construction with leading design practices in education and architecture. The outcome of the meeting resulted in DoDEA developing 21<sup>st</sup> Century EdSpecs.

In April 2011, DoDEA embarked on an ambitious overhaul of the EdSpecs for constructing future DoD Dependents Schools by holding three work sessions between April and June 2011 with industry leaders, teachers, students, and design firms on developing the 21<sup>st</sup> Century EdSpecs. In October 2011, DoDEA officials released the 21<sup>st</sup> Century EdSpecs and directed a fundamental shift on how to build DoDEA facilities to support the shift in education. According to the 21<sup>st</sup> Century EdSpecs, the schools included a redesigned learning environment to reach beyond traditional classrooms.

### **Traditional Designs**

The traditional classroom design consists of an enclosed room with rows of individual desks facing toward one teacher desk. Figure 1 shows the traditional classroom layout according to the 2007 and 2010 EdSpecs.

**Figure 1. Traditional School Design Based on 2010 Ed Specs**

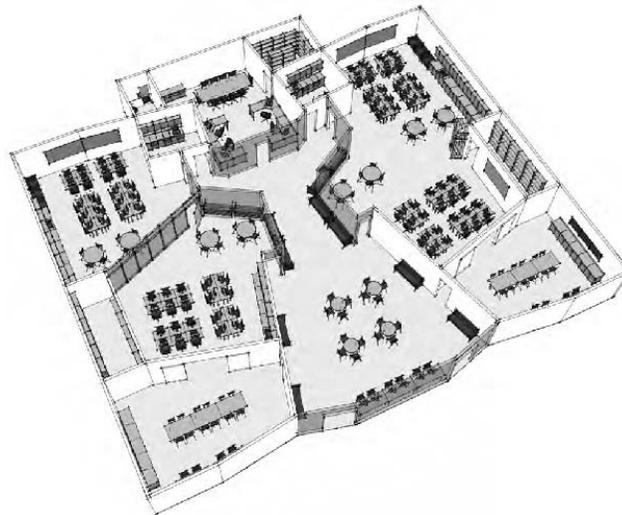


Source: DoDEA.

## 21<sup>st</sup> Century Designs

The 21<sup>st</sup> Century design includes neighborhoods, which are large open general learning spaces called learning studios. A learning studio generally accommodates 18 to 25 students and a typical neighborhood would include four studios. The 21<sup>st</sup> Century EdSpecs state that the space separation within the neighborhoods may include typical walls and doors, but most of the separations will be made of glass or moveable walls and furniture to allow extended flexibility for teaching and learning. Figure 2 shows a 21<sup>st</sup> Century School neighborhood layout.

**Figure 2. 21<sup>st</sup> Century Neighborhood Concept**



Source: Jacobs Engineering Group, Inc.

## Review of Internal Controls

DoD Instruction 5010.40, “Managers’ Internal Control Program (MICP) Procedures,” July 29, 2010, requires DoD organizations to implement a comprehensive system of internal controls that provides a reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. We identified control weaknesses in DoDEA’s requirements process. DoDEA officials did not use DoD construction agent cost estimates to develop project costs. Additionally, DoDEA officials did not complete a comprehensive business case analysis (BCA) as required by SECDEF guidance. We will provide a copy of the report to the senior official responsible for internal controls in DoDEA and the Principal Deputy Under Secretary of Defense for Personnel and Readiness.

## **Finding A. Costs Used for FY 2012 MILCON Projects in Europe Were Unsupportable**

DoDEA officials could not support the accuracy and reliability of the costs of the requirements for the six FY 2012 MILCON projects in Europe. Specifically, DoDEA officials did not consistently use the costs provided by USACE, as required by DoD guidance. This occurred because DoDEA officials:

- disagreed with the methodology USACE used to develop the unit costs; however, the methodology DoDEA stated they used did not result in the unit costs submitted to Congress;
- altered USACE supporting facilities costs because of changes in initial assumptions without consulting USACE on the changes; and
- failed to use the project definition report (PDR) costs for Wetzel Elementary School when DoDEA officials received the costs after the DoDEA deadline, even though officials received the costs more than 3 months before the DD Form 1391 was due to Congress.

As a result, DoDEA officials reduced the USACE project costs on the DD Forms 1391 for the FY 2012 MILCON projects in Europe by \$15.3 million. DoDEA was at risk for not having enough funding to complete the projects to DoDEA facility standards.

### **Accuracy and Reliability of MILCON Cost Requirements Not Supported**

DoDEA officials could not support the accuracy and reliability of the cost of the requirements for the FY 2012 MILCON projects in Europe. Use of a subject matter expert, USACE, to develop MILCON requirements is required by DoD guidance, and is a good business practice. However, DoDEA did not consistently use the costs provided by USACE.

### ***DoD Guidance Requires the Use of DoD Construction Agent Costs***

Using construction experts' detailed analysis of anticipated MILCON costs would help ensure DoD properly budgets for construction projects. DoD Manual 1342.6-M, "Administrative and Logistic Responsibilities for DoD Dependents Schools," August 11, 1995, provides guidance for the administrative and logistic support of DoDEA. For MILCON projects, the manual states cost "shall be based on regional Military Department engineers [DoD construction agents] current building costs rather than unit costs and area costs factors provided for specific program years by the OSD [Office of the Secretary of Defense]."

## **Officials Did Not Use USACE Costs**

Throughout the audit, DoDEA officials confirmed that they knew of the requirement to use the USACE costs to prepare the DD Forms 1391. However, DoDEA officials did not consistently use the costs prepared by USACE for the FY 2012 MILCON projects in Europe.

## **Officials Outlined Process That Followed Guidance**

DoDDS-E officials outlined the process they followed to develop the DD Form 1391 costs. Officials stated that USACE, along with DoDDS-E and local officials, held onsite planning meetings to discuss the proposed project. USACE used information from these planning meetings to develop a PDR.<sup>3</sup> USACE developed PDRs for five of six schools. USACE did not develop costs for Ansbach Middle School because the project was an addition and design funds were not available. DoDDS-E officials stated the PDRs were then used to develop the DD Forms 1391.<sup>4</sup>

The Director, DoDEA, stated DoDEA has “a well defined estimating process that relies heavily on the DoD Construction Agent [USACE]” for costs. The Director stated the DoDEA Area Facilities personnel (DoDDS-E) prepare initial school sizing documents based on the projected student population, staffing components, and DoDEA EdSpecs. After preparing the sizing documents, DoDEA initiates a PDR, normally provided by the construction agent. The construction agent provides a finished PDR with enough lead time for review and comment. The PDR contains costs based on the primary facility costs, estimated site costs, utility connections, and other individual line items as required. The Director stated DoDEA used the costs for the submission of the appropriate fiscal year’s budget DD Form 1391. Finally, the Director stated that the costs were continually refined during the design process.

The process outlined by the Director included the same steps provided by DoDDS-E facilities officials. In both, officials stated they used the costs from the PDRs to develop the DD Forms 1391. However, a comparison of the PDRs and the DoDEA DD Forms 1391 revealed that officials did not use the PDR numbers for the FY 2012 MILCON projects in Europe.

## **Guidance Not Consistently Followed**

Officials did not consistently use USACE to develop the FY 2012 DD Forms 1391 costs for the projects in Europe. The primary facility<sup>5</sup> unit costs DoDEA officials used on the FY 2012 DD Forms 1391 differed from the costs contained in the USACE PDRs for four

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<sup>3</sup>A PDR consists of a description of the MILCON project and includes information on the site requirements, architectural and design features, project sketches, and costs.

<sup>4</sup>We did not validate the accuracy of the USACE figures because DoDEA changed facility requirements to 21<sup>st</sup> Century EdSpecs.

<sup>5</sup>Primary facilities include the building and installed building equipment and furnishings normally funded with MILCON funds.

of the five schools that had a PDR completed.<sup>6</sup> Table 2 outlines the differences between the per-square-foot unit costs on the approved DD Forms 1391 and the PDRs.

**Table 2. Difference Between DD Forms 1391 and PDR Unit Costs**

School	DD Form 1391 Facility Unit Cost	PDR Facility Unit Cost	Unit Cost Difference
Netzaberg Middle	\$326.50	\$335.75	\$(9.25)
Spangdahlem Elementary	240.81	240.81	*
Spangdahlem Middle/High	273.40	282.11	(8.71)
Vicenza High	250.70	250.00	0.70
Wetzel Elementary	232.50	276.44	(43.94)

\* See paragraph below for discussion on Spangdahlem Elementary School.

For Spangdahlem Elementary School, DoDEA officials incorrectly used the overall primary facility unit cost from the PDR for the new construction unit cost. Specifically, USACE aggregated the primary facility costs for construction, renovation, and temporary facilities into one overall unit cost in the PDR. DoDEA officials took the USACE overall unit cost and used it for only the primary construction unit cost on the DD Form 1391. DoDEA officials then listed separate costs for renovation and temporary facilities on the DD Form 1391. Because USACE included work in the unit cost that DoDEA listed as separate line items, a comparison between the PDR unit cost and the DD Form 1391 unit cost was not possible.

In addition to the unit cost difference, the DD Forms 1391 contained costs for supporting facilities<sup>7</sup> that differed significantly from the supporting facility costs USACE identified in the PDRs. Table 3 on page 8 shows the discrepancies for supporting facilities costs between the approved DD Forms 1391 and the PDRs, with an overall increase of approximately \$6.3 million.

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<sup>6</sup>USACE did not develop costs for Ansbach Middle School because the project was an addition and design funds were not available.

<sup>7</sup> Supporting facilities include costs for items necessary to, but not part of, the primary facility, and include: paving, walks, curbs and gutters; site preparation and development; water, sewer and gas; storm drainage; electrical service; communication; antiterrorism/force protection; demolition; and steam water distribution.

**Table 3. Difference Between DD Forms 1391 Supporting Facilities Total and PDR Supporting Facilities Total**  
(thousands)

School	DD Form 1391 Supporting Facilities Total	PDR Supporting Facilities Total	Difference
Ansbach Middle	*	No PDR	N/A
Netzaberg Middle	\$279	\$119	\$ 160
Spangdahlem Elementary	7,080	7,125	(45)
Spangdahlem Middle/High	15,393	13,949	1,444
Vicenza High	6,968	7,318	(350)
Wetzel Elementary	15,087	9,997	5,090
<b>Total</b>	<b>\$44,807</b>	<b>\$38,508</b>	<b>\$6,299</b>

\*The DD Form 1391 for Ansbach Middle School contained a supporting facilities cost of \$3.0 million. However, this number was not included in the table because there was no PDR for this project.

### **Methodology for Developing Costs Not Supportable**

DoDEA officials provided various explanations for their use of a different methodology for developing the final costs on the DD Forms 1391 submitted to Congress. DoDEA officials did not use some USACE costs because DoDEA officials:

- disagreed with the methodology USACE used to develop the unit costs; however, the methodology DoDEA stated they used did not result in the unit costs submitted to Congress;
- altered USACE supporting facilities costs due to changes in initial assumptions without consulting USACE on the changes; and
- failed to use the PDR costs for Wetzel Elementary School when DoDEA officials received the costs after the DoDEA deadline, although officials received the costs more than 3 months before the DD Form 1391 was due to Congress.

DoDEA officials developed a different methodology to identify costs for the final DD Forms 1391. However, the methodology that DoDEA officials stated they used did not result in the unit costs submitted to Congress, and DoDEA officials could not provide the methodology used to calculate some supporting facility costs.

*The methodology that DoDEA officials stated they used did not result in the unit costs submitted to Congress, and DoDEA officials could not provide the methodology used to calculate some supporting facility costs.*

### **DoDEA Disagreed With USACE Methodology**

DoDEA officials disagreed with the methodology USACE used to develop the unit costs and used an alternative cost estimation process for the FY 2012 projects.

## **DoDEA Believed USACE Allocation and Historical Data Was Inaccurate**

DoDEA officials stated they did not use the USACE unit costs because the unit costs USACE provided separated out parts of the school building and allocated different unit costs to each area. For example, USACE listed the unit cost for the primary school building plus separate unit costs for a multipurpose room and administrative offices. DoDEA officials stated that they preferred using one unit cost for the entire school building since a school consists of one structure. Additionally, DoDEA officials stated they originally used the USACE costs, but made changes because USACE used historical MILCON data to determine the unit cost. DoDEA officials did not believe the historical data was accurate because the data was inconsistent and there was not a good database to generate costs used in the DD Forms 1391. DoDEA officials stated that limited data points were available to support the cost per square foot in the historical data.

## **DoDEA Used Alternative Methodology for Unit Costs That Could Not Be Verified**

DoDDS-E officials stated that they used the Unified Facilities Criteria 3-701-01, “DoD Facilities Pricing Guide for FY 2010,” June 2010 (DoD Pricing Guide), to develop the unit costs for the FY 2012 MILCON projects. The DoD Pricing Guide provides standard unit costs for various structures built within DoD and outlines the cost adjustment factors that should be used to adjust the standard unit costs. However, the document states that these costs are not intended to limit more detailed cost estimates. Since USACE provided detailed cost estimates for the MILCON projects, DoDEA should have used the USACE costs or provided the approved rationale and methodology for deviating from policy.

The final unit costs in the DD Forms 1391 did not match the calculation from the DoD Pricing Guide for any of the FY 2012 MILCON projects. Although DoDEA officials stated they used the DoD Pricing Guide to develop the unit costs for the FY 2012 MILCON projects, the unit costs in the DD Forms 1391 differed from those developed using the formula in the DoD Pricing Guide. Table 4 on page 10 shows the unit cost difference between the calculation from the DoD Pricing Guide and the square foot unit costs in the DD Forms 1391.

**Table 4. Comparison of DD Forms 1391 Unit Price to DoD Pricing Guide Unit Cost Calculation**

School	DD Form 1391 Unit Cost	DoD Pricing Guide Unit Cost Calculation	Unit Cost Difference
Ansbach Middle	\$252.00	\$246.53	\$5.47
Netzaberg Middle	326.50	235.72	90.78
Spangdahlem Elementary	240.81*	249.52	(8.71)
Spangdahlem Middle/High	273.40	256.79	16.61
Vicenza High	250.70	325.09	(74.39)
Wetzel Elementary	232.50	249.52	(17.02)

\* DoDEA listed separate costs for construction, renovation, and temporary facilities. The DoD Pricing Guide does not include unit costs for renovation or temporary facilities, so the \$240.81 for new construction was the appropriate comparison.

When asked how the unit costs in the DD Forms 1391 were calculated, a DoDDS-E official reiterated that DoDDS-E used the DoD Pricing Guide; however, he was unable to recalculate the numbers used in the DD Forms 1391 using the formula.

### ***DoDEA Altered USACE Costs Because of Changes in Initial Assumptions***

DoDEA altered USACE supporting facilities costs in the DD Forms 1391 because of changes to initial assumptions. However, DoDEA officials did not consult with USACE officials to identify areas where reasonable budget cuts could occur or how modifications would alter the estimated costs. As previously stated, DoDEA officials coordinated with USACE officials to develop the initial costs. Subsequent to that coordination, DoDEA officials revised the costs because of changes in initial assumptions but did not coordinate the changes with USACE. Although no guidance requires DoDEA officials to coordinate changes to costs, officials should work with USACE offices in order to minimize impact to projects.

DoDEA officials provided a spreadsheet with explanations for the differences between the DD Forms 1391 and the USACE PDR supporting facilities costs. DoDEA officials reduced 18 of the 41 costs for the supporting facilities because of the FY 2012 budget rescission.<sup>8</sup> Additionally, DoDEA officials stated several line items were erroneously included, excluded, overstated, or understated from the costs and changed the items accordingly. For example, DoDEA officials increased antiterrorism/force protection costs at three of the schools to meet anticipated additional DoDDS-E requirements beyond the Unified Facilities Criteria requirements. DoDEA officials stated that USACE only considered the Unified Facilities Criteria requirements and did not include any of

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<sup>8</sup> Rescission is the cancellation of budget authority previously provided by Congress.

the DoDDS-E requirements. DoDDS-E officials issued the enhanced guidance after USACE officials completed the FY 2012 PDRs.

While the DD Form 1391 costs for some supporting facilities line items matched the USACE costs, other line item costs differed substantially. USACE-Europe officials expressed concerns that DoDEA officials altered the cost estimates in the DD Forms 1391 without first consulting USACE. DoDEA officials should coordinate with the DoD construction agents when changing DD Forms 1391.

### ***Officials Did Not Update DD Form 1391 When USACE Costs Were Received After the DoDEA Deadline***

DoDEA officials failed to update the DD Form 1391 when they received the USACE costs after the DoDEA deadline, but the costs were received more than 3 months before the Under Secretary of Defense (Comptroller)/Chief Financial Officer, DoD, submitted the form to Congress. DoDEA officials decided in July 2010 to move the Wetzel Elementary School project from a future construction year. Because the USACE planning calendar did not permit an earlier date for the planning meetings, the Wetzel Elementary School planning meetings were not held until August 2010. DoDEA guidance requires budget estimate submissions in July. Therefore, DoDDS-E officials submitted a Draft DD Form 1391 for the Wetzel Elementary School MILCON project to DoDEA for the budget estimate submission before receiving the USACE costs. Although DoD 1342.6-M requires officials to use the DoD construction agent estimates, DoDEA officials did not update the supporting facilities costs on the DD Form 1391 when they received the USACE costs at a later date. The supporting facilities for the Wetzel Elementary School had a difference of over \$5 million between the USACE costs and the DD Form 1391, the largest difference for the five schools.

### **DoDEA Risks Not Having Enough Funding**

DoDEA officials could not provide the costs in the DD Forms 1391 and did not consult with USACE on the changes. As a result, DoDEA was at risk for not having enough funding to complete the projects to DoDEA facility standards. Overall, DoDEA officials reduced the total costs on the DD Forms 1391 for the FY 2012 MILCON projects by \$15.3 million from the costs in the USACE PDRs. Table 5 on page 12 identifies the differences between the DD Forms 1391 and USACE PDR Total Project Costs.

**Table 5. Comparison of DD Forms 1391 Total Project Costs and USACE PDRs**  
(thousands)

School	DD Form 1391 Total Project Cost	USACE PDR Total Project Cost	Total Project Cost Difference
Ansbach Middle	*	No PDR	N/A
Netzaberg Middle	\$6,529	\$6,336	\$193
Spangdahlem Elementary	41,876	52,005	(10,129)
Spangdahlem Middle/High	87,167	90,252	(3,085)
Vicenza High	41,864	42,116	(252)
Wetzel Elementary	59,419	61,490	(2,071)
<b>Totals</b>	<b>\$236,855</b>	<b>\$252,199</b>	<b>(\$15,344)</b>

\*The DD Form 1391 for Ansbach Middle School contained a total project cost of \$11.7 million. However, this number was not included in the table as there was no PDR for this project.

Even before the change to 21<sup>st</sup> Century EdSpecs for the 2012 school projects, DoDEA officials used a methodology based on costs other than those developed by USACE. This led to costs that could not be matched to the requirements, as DoDEA officials could not provide the calculations used to develop the facility unit prices or the methodology used to calculate some supporting facility costs. However, the DD Forms 1391 provide the funding basis for the FY 2012 schools, regardless of the EdSpecs used in the design. A study for one FY 2012 school showed that incorporating the 21<sup>st</sup> Century EdSpecs will require additional funds. DoDEA was uncertain on how to incorporate the 21<sup>st</sup> Century EdSpecs for the FY 2012 projects. This indicated that DoDEA did not conduct sufficient planning for the new schools.

The Chief of Facilities, DoDEA, stated they planned to reprogram other MILCON funding to cover any underfunded amounts. However, section 2853, title 10, United States Code, only allows organizations to reprogram funds to meet “unusual variations in cost” that could not have been reasonably anticipated. Because the DoDEA MILCON projects would not qualify under this definition, DoDEA would require congressional approval for any reprogramming actions taken.

## DoDEA Issued Guidance to Improve DD Form 1391 Preparation in the Future

Before we announced the audit in August 2011, DoDEA officials issued additional guidance to synchronize DD Form 1391 preparation with DoD construction agent costs and prevent unsupportable costs in the future. DoDEA released the “DoDEA Facilities Management Guide Form 1391 Planning and Preparation,” April 18, 2011. On December 7, 2011, DoDEA released “DoDEA Facilities Management Guide, Parametric Design Charrette (Code 3)

*DoDEA officials issued additional guidance to synchronize DD Form 1391 preparation with DoD construction agent costs and prevent unsupportable costs in the future.*

Instruction.” Additionally, DoDEA officials provided training briefings on the new guidance to their employees and the construction agents involved. These guides apply to FY 2013 projects and beyond.

## **Conclusion**

Instead of working with construction agents to identify areas where reasonable changes could be made, DoDEA officials appeared to have made seemingly arbitrary and undocumented changes to the costs. While DoDEA officials cannot control budget cuts and changes will occur after officials complete initial planning phases, DoDEA should consult with the construction agents when making changes to the cost estimates. In addition, any changes should be based on a repeatable and logical methodology. Because DoDEA did not consult with the construction agents and did not use a repeatable and logical methodology, the costs for the six FY 2012 MILCON projects in Europe were unsupported, and the DD Forms 1391 DoDEA submitted to Congress lack credibility. Using construction experts’ detailed analysis of anticipated MILCON will help ensure DoD properly budgets for construction projects. Because DoDEA officials did not follow the guidance for preparing DD Forms 1391, the Principal Deputy Under Secretary of Defense for Personnel and Readiness needs to ensure that DoDEA officials follow guidance or provide rationale for not following guidance.

## **Recommendations, Management Comments, and Our Response**

**A.1. We recommend that the Principal Deputy Under Secretary of Defense for Personnel and Readiness, require the Director, DoD Education Activity, to use the construction agents’ costs, as required in the DoD Manual 1342.6-M, “Administrative and Logistic Responsibilities for DoD Dependents Schools,” for developing construction requirements or provide documented and approved rationale and methodology for deviating from policy.**

### ***Principal Deputy Assistant Secretary of Defense for Readiness and Force Management Comments***

The Principal Deputy Assistant Secretary of Defense for Readiness and Force Management, responding for the Principal Deputy Under Secretary of Defense for Personnel and Readiness, agreed. The Principal Deputy Assistant Secretary stated the report briefly discussed the guidance DoDEA issued to improve processes for estimating costs. He recommended that we add this information to the Results in Brief section of the report to more fairly reflect that DoDEA identified problems pertaining to cost estimates prior to the announcement of the audit.

### ***Our Response***

Comments from the Principal Deputy Assistant Secretary of Defense were responsive, and no additional comments are required. Although the Principal Deputy Assistant Secretary recommended that we add information to the Results in Brief, we did not revise the report because our scope of review included FY 2012 MILCON projects and the

respective guidance applied to FY 2013 MILCON projects, and beyond. In addition, we did not test whether the controls in the guidance were adequate or effective because the guidance did not apply to the projects in our scope of review.

**A.2. We recommend the Director, DoD Education Activity, coordinate with the respective construction agents when changes occur during military construction planning to minimize impact to the projects.**

***Principal Deputy Assistant Secretary of Defense for Readiness and Force Management Comments***

The Principal Deputy Assistant Secretary of Defense for Readiness and Force Management, responding for the Director, DoDEA, agreed and stated that DoDEA has developed a Program Management Plan. The Principal Deputy Assistant Secretary stated that the plan outlines the respective construction agent and DoDEA personnel responsibilities and approvals when any changes occur during the project planning and construction process. The plan is currently being coordinated between DoDEA and the DoD construction agents. The Director, DoDEA, expects to approve the plan by the end of September 2012.

***Our Response***

Comments from the Principal Deputy Assistant Secretary of Defense were responsive, and no additional comments are required.

## **Finding B. Planning for Inclusion of 21<sup>st</sup> Century Facility Design Standards in MILCON Projects Needed Improvement**

The Director, DoDEA, changed school requirements, but did not complete a BCA that included all the critical components or prepare a cost estimate, as required for new initiatives by SECDEF guidance. This occurred because the Director, DoDEA, incorrectly determined that the process to develop the 21<sup>st</sup> Century EdSpecs was sufficient to fulfill the business case requirement and met the intent of the SECDEF guidance. Additionally, DoDEA officials incorrectly decided that cost estimates prepared for individual MILCON projects met the SECDEF guidance.

As a result, DoDEA officials did not know the full impact on a school building's size or cost for incorporating 21<sup>st</sup> Century EdSpecs into the FY 2012 projects. For example, the design architect for Vicenza High School determined that the 21<sup>st</sup> Century EdSpecs requires 130,000 square feet and would not fit into the scope of the congressionally approved square footage of 117,788 square feet. The design architect determined that the project, originally funded at approximately \$41.8 million, would need additional funding of \$11.6 to \$13.9 million, depending on the option chosen to meet 21<sup>st</sup> Century EdSpecs.

### **Inadequate Planning for Incorporating 21<sup>st</sup> Century EdSpecs Into Schools**

The Director, DoDEA, did not have adequate planning for the requirements process, for the FY 2012 through FY 2016 MILCON projects. Specifically, the Director, DoDEA, changed school requirements from the 2010 EdSpecs to 21<sup>st</sup> Century EdSpecs, but did not complete a comprehensive BCA that included all the critical components or prepare a cost estimate as required by SECDEF guidance. Preparing a BCA would allow DoD leaders to make informed decisions.

### ***SECDEF Emphasized Costs in Guidance for New Initiatives and Proposals***

On August 9, 2010, the SECDEF directed that “any new proposal...come with a cost estimate.” On August 16, 2010, the SECDEF issued a memorandum, “Department of Defense Efficiency Initiatives,” which reiterated the requirement for a cost estimate for all DoD programs and policy proposals. On December 27, 2010, the SECDEF issued another memorandum, “Consideration of Costs in DoD Decision-Making,” which informed DoD Components of an internal Web site that contained the guidance and tools for performing a BCA on proposed changes to DoD policies and programs. The SECDEF urged DoD Components to begin using the tools immediately and on February 1, 2011, the SECDEF directed that all DoD Components must use the available Web site tools when preparing cost estimates for new proposals or initiatives.

## ***Key Components of a BCA***

The Assistant Secretary of Defense for Logistics and Materiel Readiness issued the draft “DoD Product Support Business Case Analysis Guidebook,” (BCA Guidebook) November 16, 2010, to assist components in conducting a BCA. The guidance defines a BCA as evaluating alternative solutions for obtaining best value while achieving operational requirements balancing cost, schedule, performance and risk. Key BCA components include: desired outcomes and requirements, alternatives, mission impacts, risk analysis and mitigation plans, recommendations, and an implementation plan.

## ***DoDEA Business Case Model to Adapt and Define 21<sup>st</sup> Century EdSpecs***

On January 24, 2012, the Director, DoDEA, provided a business case model to adapt and define 21<sup>st</sup> Century EdSpecs. The model consisted of four phases.

1. DoDEA hosted its first symposium, from April 4 through 7, 2011, with multiple experts from industry, education, school design/architecture firms, and government, and issued Work Session Report No. 1 outlining the results. DoDEA identified four major themes during this symposium under the overarching theme of a student-centered education: differentiated learning, multiple modalities, multidisciplinary teaching, and real-world skill development.
2. DoDEA conducted outreach, from May 6 through June 16, 2011, to key stakeholders soliciting Web-based input from students, teachers, administrators, and military partners. DoDEA officials issued Work Session Report No. 2 to summarize the results. The outreach emphasized the need for better student assessment, real-world relevant education, and teacher professional development.
3. DoDEA hosted another symposium, June 21 through 24, 2011, with leading architects experienced in designing and constructing facilities supporting 21<sup>st</sup> Century education. Officials issued Work Session Report No. 3 outlining the result. The symposium provided a framework for developing the 21<sup>st</sup> Century EdSpecs.
4. DoDEA held the final phase from July 26 through October 6, 2011, which resulted in publishing of 21<sup>st</sup> Century EdSpecs based on the information gathered during the three prior phases. DoDEA officials provided the draft 21<sup>st</sup> Century EdSpecs to teachers and administrators for review and comment. DoDEA officials completed revisions to the EdSpecs before publication.

## ***Business Case Model Lacked Critical Components***

During the process used to develop 21<sup>st</sup> Century EdSpecs, the Director, DoDEA, should have addressed the most critical components included in a BCA. However, the DoDEA BCA did not:

- consider alternatives,
- include a cost estimate during the assessment of mission and business impacts, or
- identify why the alternative chosen (21<sup>st</sup> Century EdSpecs) was the best choice.

## **Alternatives Not Considered**

DoDEA did not fully consider the benefits and drawbacks of proposed alternatives

*DoDEA did not fully consider the benefits and drawbacks of proposed alternatives compared to the 2010 EdSpecs.*

compared to the 2010 EdSpecs. According to the BCA Guidebook, alternatives should include the current method and a range of all possible solutions from which feasible solutions for in depth analysis are selected. The work session reports addressed

ideas of how schools should be built in the 21<sup>st</sup> Century, but the reports lacked detailed analysis of advantages and disadvantages of a new school design compared to the current method and design. Further, DoDEA moved forward with updating teaching methods and school design simultaneously rather than changing the curriculum prior to altering the school design. Work Session Report No. 1 discussed the benefits of this alternative stating “creating demonstration schools and teacher training programs now will be beneficial in new 21<sup>st</sup> Century education initiatives” and “the desired curriculum must be established prior to facility programming and design; in other words...form follows function.” The Director, DoDEA, stated that 21<sup>st</sup> Century Learning could be incorporated into the current facilities. However, the work session reports and the Director, DoDEA, did not explain why the best alternative was to develop 21<sup>st</sup> Century EdSpecs rather than implementing the new curriculum into existing schools and generating lessons learned that could be incorporated into the new EdSpecs.

## **Cost Estimates Not Included**

DoDEA officials did not complete a cost estimate to determine the mission and business impacts for building to the new EdSpecs. According to the BCA Guidebook,

organizations should generate a cost estimate during the assessment of mission and business impacts. Work Session Report No. 2 presented a comparison illustrating that DoDEA officials could expect a 21<sup>st</sup> Century School to be built with approximately the same square footage as a traditional school. However, DoDEA did not prepare a comparison of the cost to build a school to both specifications. Two buildings of the same size could have different costs depending on the design, technology and materials used. DoDEA officials’ consideration of the cost to build to the new EdSpecs would have helped minimize potential unfavorable impacts, such as smaller rooms, to the mission and business of DoDEA.

*DoDEA officials did not complete a cost estimate to determine the mission and business impacts for building to the new EdSpecs.*

## No Recommendation for the Alternative Chosen

The Director, DoDEA, did not make a recommendation or provide support for selecting 21<sup>st</sup> Century EdSpecs as the best choice in the business case model. None of the work session reports identified a list of all alternatives that highlighted the benefits and drawbacks, any associated risks, and additional findings or observations for the new EdSpecs because 21<sup>st</sup> Century was the only alternative considered. DoDEA officials should have listed more than one alternative to traditional EdSpecs by providing rationale, justification, and supporting information for each recommendation. Ultimately, the DoDEA business case model should have provided a final recommendation to move forward with 21<sup>st</sup> Century EdSpecs based on why this alternative was the best design option.

Although the Director, DoDEA, prepared a business case model through the above process, the model did not include all of the critical requirements of a DoD business case analysis. The SECDEF wanted costs considered in decision-making. DoDEA officials need to complete a BCA with all the key components required by guidance so DoD officials can make informed decisions on new initiatives.

## SECDEF Guidance Not Correctly Applied to the 21<sup>st</sup> Century EdSpecs

DoDEA officials incorrectly determined that the process to develop 21<sup>st</sup> Century EdSpecs and the cost estimates prepared for individual MILCON projects were sufficient to meet

*DoDEA officials initially stated the SECDEF guidance did not apply to the 21<sup>st</sup> Century school initiative.*

the SECDEF guidance. DoDEA officials provided various explanations on the applicability of SECDEF guidance for preparing a BCA. DoDEA officials initially stated the SECDEF guidance did not apply to the 21<sup>st</sup> Century school initiative. The

Chief of Facilities, DoDEA, stated that planning for the 21<sup>st</sup> Century Schools began in November 2010, before the December 27, 2010, SECDEF memorandum on “Consideration of Costs in DoD Decision-Making.” In response to our concern of moving forward without a BCA, the Director, DoDEA, initially stated that the memorandum did not apply to the DoDEA MILCON projects. Then, the Director, DoDEA, stated that the “informed process utilized in our development of Education Facilities Specifications for 21<sup>st</sup> Century Schools meets the Secretary of Defense intent of a BCA.”

In addition, DoDEA officials incorrectly decided that cost estimates prepared for individual MILCON projects met the requirement of the SECDEF guidance. A DoDEA official stated that because they did not intend to change the budgeted amounts for the FY 2012 projects, a cost analysis of the project was not necessary. The DoDEA official also stated that the FY 2014 MILCON project cost estimates would incorporate the 21<sup>st</sup> Century EdSpecs, and would meet the intent of the SECDEF’s guidance for a cost estimate. However, the SECDEF guidance requires that the program or initiative come with a cost estimate, allowing the agency to know the cost of the program before it begins.

A BCA and cost estimate would have helped “to ensure that costs are routinely considered in decision-making throughout the Department.” DoDEA officials need to follow the SECDEF guidance and complete a BCA and cost estimate that meets the requirements of the Assistant Secretary of Defense for Logistics and Materiel Readiness guidance, for the 21<sup>st</sup> Century initiative. Further, the Principal Deputy Under Secretary of Defense for Personnel and Readiness needs to review the BCA to ensure it meets the Assistant Secretary’s guidance.

## **Changing to 21<sup>st</sup> Century EdSpecs Will Increase Construction Costs**

DoDEA officials do not know the full impact on the school building’s size or cost for incorporating 21<sup>st</sup> Century EdSpecs into the FY 2012 projects. For example, the Vicenza High School project showed that building schools to 21<sup>st</sup> Century EdSpecs will cost more and will require additional square footage. The design architect for Vicenza High School determined that the 21<sup>st</sup> Century EdSpecs requires 130,000 square feet and would not fit into the scope of the congressionally approved square footage of 117,788 square feet. The design architect found that the project, originally funded at approximately \$41.8 million, will need additional funding of \$11.6 to \$13.9 million, depending on the option chosen to meet 21<sup>st</sup> Century EdSpecs.

### ***DoDEA Defined 21<sup>st</sup> Century EdSpecs After Submitting Programmed Amounts for FY 2012 Projects to Congress***

DoDEA submitted the DD Form 1391 budget requests for the FY 2012 projects in February 2011. Congress approved those budget requests in Public Law 112-81, “The National Defense Authorization Act for Fiscal Year 2012,” section 2401, “Authorized Defense Agencies Construction and Land Acquisition Projects,” December 31, 2011. The Director, DoDEA, stated that, “DoDEA would use any and all 21<sup>st</sup> Century [EdSpecs] that could be afforded, that is ‘within the existing programmed amounts.’ ” However, DoDEA did not determine whether the 21<sup>st</sup> Century EdSpecs could be incorporated into the FY 2012 approved budgets, which were based on the different EdSpecs.

*DoDEA did not determine whether the 21<sup>st</sup> Century EdSpecs could be incorporated into the FY 2012 approved budgets...*

### ***Challenge to Fully Incorporate 21<sup>st</sup> Century EdSpecs Into Congressionally Approved Programmed Amounts***

A design architect and an educational planning firm identified challenges with incorporating 21<sup>st</sup> Century EdSpecs into Vicenza High School, a FY 2012 project. The design architect and planning firm prepared a cost analysis report for Vicenza High School based on the decision to incorporate the 21<sup>st</sup> Century EdSpecs. The report was provided to DoDEA officials and the DoD construction agent. In the report, the design architect noted “that one of the significant challenges regarding space utilization and space allocation in this project are the result of the fact that this project received

congressional approval prior to the development of new 21 Century Educational Facility Specifications by DoDEA...” As a result, reductions to school areas would need to be made in order to remain within the congressionally approved square footage. The design architect also noted in the report that fully incorporating the 21<sup>st</sup> Century EdSpecs to all school areas would result in a total square footage of 130,000 square feet. However, the congressionally approved square footage for the new Vicenza High School was 117,788 square feet.

The report identified design options for incorporating the 21<sup>st</sup> Century EdSpecs into the current scope of the school. The design architect proposed two options. Both options were within the congressionally approved square footage; however, the options differ on sizing of the common and neighborhood areas and include shared usage of some spaces. The design architect found that for either option the project would need additional funding of \$11.6 to \$13.9 million depending on the option chosen. Table 6 shows the congressionally approved scope of Vicenza High School and the potential square footages, estimated costs, and additional funding requirements for the two design options.

**Table 6. Vicenza High School Options Cost Analysis**

<b>DD Form 1391</b>		<b>Option I</b>		<b>Additional Funding Needed</b>	
<b>Square Footage</b>	<b>Programmed Amount (in millions)</b>	<b>Square Footage</b>	<b>Estimated Cost (in millions)</b>	<b>Amount (in millions)</b>	<b>Percentage</b>
117,788	\$41,864	117,788	\$55,783	\$13,919	33
<b>DD Form 1391</b>		<b>Option II</b>		<b>Additional Funding Needed</b>	
<b>Square Footage</b>	<b>Programmed Amount (in millions)</b>	<b>Square Footage</b>	<b>Estimated Cost (in millions)</b>	<b>Amount (in millions)</b>	<b>Percentage</b>
117,788	\$41,864	111,419	\$53,486	\$11,622	28

The Chief of Logistics, DoDEA, stated that they would request reprogramming to cover any additional funding requirements at Vicenza High School. However, section 2853, title 10, United States Code states that the costs authorized for a MILCON project may be increased or decreased by no more than 25 percent of the appropriated amount, if the SECDEF determines that such revised costs is required for the sole purpose of meeting variations in costs and that such variations in costs could not have reasonably been anticipated at the time the project was originally approved by Congress. DoD Financial Management Regulation, volume 3, chapter 7, “Reprogramming of Military Construction and Family Housing Appropriated Funds,” March 2011, also states that congressional approval is required for cost increases exceeding 25 percent of the reprogramming base or \$2 million, whichever is less for MILCON projects. While DoDEA may have the funds to cover the additional funding needed for Vicenza High School, officials may need to receive approval from Congress before the funds can be reprogrammed. Further, DoDEA officials did not perform the analysis to determine the costs to incorporate

21<sup>st</sup> Century EdSpecs into the other FY 2012 projects before making the decision to move forward.

According to the 21<sup>st</sup> Century EdSpecs, the congressionally approved square footage for Vicenza High School was substantially less than the square footage needed for a full 21<sup>st</sup> Century School. Reductions to school areas would be needed to fit within the congressionally approved square footage. Table 7 details the square footage for selected 21<sup>st</sup> Century school areas and square footage reductions, from 12 to 71 percent, required by the two options for Vicenza High School.

**Table 7. Vicenza High School Square Footage Analysis**

<b>School Area</b>	<b>Full 21<sup>st</sup> Century Square Footage</b>	<b>Option I Square Footage</b>	<b>Percentage Increase or (Decrease)</b>	<b>Option II Square Footage</b>	<b>Percentage Increase or (Decrease)</b>
<b>Gymnasium</b>	15,200	13,050	(14)	13,050	(14)
<b>Learning Impaired-Severe</b>	1,600	800	(50)	800	(50)
<b>Music and Performance</b>	5,475	4,825	(12)	4,375	(20)
<b>Neighborhood*</b>	29,800	25,000	(16)	22,600	(24)
<b>Occupational / Physical Therapy</b>	1,400	400	(71)	400	(71)

\* See page 4 for definition.

## **Conclusion**

DoDEA officials did not conduct sufficient planning to determine whether to proceed with the 21<sup>st</sup> Century School initiative. The SECDEF required DoD Components to consider the costs and benefits for every new proposal or initiative. However, DoDEA officials did not perform a complete BCA to conclude whether the 21<sup>st</sup> Century EdSpecs was the best alternative to the prior EdSpecs. Further, DoDEA did not prepare a cost estimate to determine the feasibility of changing from the 2010 EdSpecs to 21<sup>st</sup> Century EdSpecs. The SECDEF directed DoD Components to routinely consider costs when making decisions about new initiatives because of the changing fiscal environment. As a result of not completing a BCA for the 21<sup>st</sup> Century initiative, DoDEA officials do not know the full impact of the 21<sup>st</sup> Century EdSpecs on construction costs. One of the FY 2012 MILCON projects in Europe, Vicenza High School, was projected to need over 27 percent in additional funding to incorporate 21<sup>st</sup> Century EdSpecs, in addition to the \$41.8 million already programmed. DoDEA officials have not reached the point to determine whether the remaining schools will need additional funding. DoDEA officials do not know what the changes will cost DoD.

## **Management Comments on the Finding and Our Response**

The Principal Deputy Assistant Secretary of Defense for Readiness and Force Management, responding for the Principal Deputy Under Secretary of Defense for Personnel and Readiness, and the Director, DoDEA, provided the following comments on the finding. For the complete text of these comments, see the Management Comments section of this report.

### ***Principal Deputy Assistant Secretary of Defense for Readiness and Force Management Comments***

The Principal Deputy Assistant Secretary of Defense for Readiness and Force Management stated there was a factual error in the Results in Brief. The Principal Deputy Assistant Secretary disagreed that the budget shortfall for Vicenza High School was the result of applying the new 21<sup>st</sup> Century EdSpecs and specified that a \$10 million shortfall did occur, but was the result of the DoD construction agent's (USACE) undervalued cost estimation for Vicenza High School. The Principal Deputy Assistant Secretary also stated that DoDEA would construct the school within the 117,788 square feet authorized by Congress.

### ***Our Response***

We disagree that there was a factual error pertaining to the budget shortfall for Vicenza High School; however, we adjusted the Results in Brief to clarify the budget shortfall discussed in the report. We also coordinated and discussed the Vicenza High School project with the respective DoD construction agents (USACE and the Naval Facilities Engineering Command). While USACE conducted the initial planning for Vicenza High School, the Naval Facilities Engineering Command is responsible for building the school.

As discussed in the finding, a design architect provided the Naval Facilities Engineering Command with a Cost Analysis Report that addressed challenges with incorporating 21<sup>st</sup> Century EdSpecs for the Vicenza High School project. The design architect proposed two design options for incorporating the 21<sup>st</sup> Century EdSpecs into the congressionally-approved square footage of 117,788. However, the design architect found that either option would require additional funding of approximately \$11.6 to \$13.9 million. In summary, the Cost Analysis Report provided to the Naval Facilities Engineering Command identified the budget shortfall discussed in this report.

## **Recommendations, Management Comments, and Our Response**

**B.1. We recommend that the Director, DoD Education Activity, complete a business case analysis that considers alternatives, includes a cost estimate during the assessment of mission and business impacts, and identify why the alternative chosen was the best choice, as identified in the Assistant Secretary of Defense for Logistics and Materiel Readiness guidance, and obtain approval before moving forward with FY 2012 through FY 2016 projects.**

## ***Principal Deputy Assistant Secretary of Defense for Readiness and Force Management Comments***

The Principal Deputy Assistant Secretary of Defense for Readiness and Force Management, responding for the Director, DoDEA, partially agreed and stated that there was confusion on whether the Secretary of Defense Memorandum, “Consideration of Costs in DoD Decision-Making,” issued December 27, 2010, applied to the DoDEA MILCON initiative. The Principal Deputy Assistant Secretary stated that our finding prompted clarification that the SECDEF guidance was applicable for the 21<sup>st</sup> Century school initiative. The Principal Deputy Assistant Secretary also stated, “...that although the DoD Business Case Analysis (BCA) model was not used, DoDEA’s deliberate process was intended to result in an adequate analysis.” He further stated that DoDEA briefed the new EdSpecs to the former Principal Deputy Under Secretary of Defense for Personnel and Readiness, MILCON subcommittees, and other DoD leadership.

The Principal Deputy Assistant Secretary stated that DoDEA would not conduct a BCA on the FY 2012 program because the application of 21<sup>st</sup> Century EdSpecs did not result in any cost increases to date, and it would delay the FY 2012 MILCON projects. However, he also stated that the Director, DoDEA, would prepare a BCA in accordance with the SECDEF guidance and obtain approval for the FY 2013 MILCON projects and beyond.

### ***Our Response***

While the Principal Deputy Assistant Secretary of Defense partially agreed with the recommendation, his comments were nonresponsive. The Principal Deputy Assistant Secretary acknowledged that the SECDEF guidance was applicable for the 21<sup>st</sup> Century school initiative; however, he also stated that the Director, DoDEA, would prepare a BCA for the respective fiscal year MILCON projects. As discussed in our finding, DoDEA officials should prepare a BCA and cost estimate for the 21<sup>st</sup> Century initiative, and not the individual projects. The fundamental shift from traditional to 21<sup>st</sup> Century EdSpecs requires a BCA and cost estimate.

In January 2012, the Director, DoDEA, provided us a business case model used to adapt and define 21<sup>st</sup> Century EdSpecs. The model, discussed in the finding, included four phases. The Director, DoDEA, concluded, “[t]his process, with supporting documentation, in DoDEA’s estimation, represents a well thought-out, deliberate, business case analysis.” Although DoDEA briefed several stakeholders on the new specifications, DoDEA did not provide adequate evidence supporting alternatives and costs associated with the change from traditional to 21<sup>st</sup> Century EdSpecs.

We request that the Director, DoDEA, reconsider her position and provide further comments that include a timeframe for completing corrective actions.

**B.2. We recommend that the Principal Deputy Under Secretary of Defense for Personnel and Readiness review and approve, or disapprove, the DoD Education Activity military construction plan, and specifically, the business case analysis and cost estimate prepared in support of changing school requirements from traditional**

**to 21<sup>st</sup> Century Education Facilities Specifications. The Principal Deputy should ensure that the business case analysis considers alternatives, includes a cost estimate during the assessment of mission and business impacts, and identifies why the alternative chosen was the best choice, as identified in the Assistant Secretary of Defense for Logistics and Materiel Readiness guidance.**

### ***Principal Deputy Assistant Secretary of Defense for Readiness and Force Management Comments***

The Principal Deputy Assistant Secretary of Defense for Readiness and Force Management, responding for the Principal Deputy Under Secretary of Defense for Personnel and Readiness, agreed and stated that the review and approval process will start with the FY 2013 MILCON projects.

### ***Our Response***

While the Principal Deputy Assistant Secretary of Defense agreed, his comments were only partially responsive. He stated that the review and approval process would start with FY 2013 MILCON projects. However, we recommended the Principal Deputy Under Secretary of Defense for Personnel and Readiness review and approve or disapprove, the DoDEA BCA and cost estimate prepared to support the initiative of changing school requirements from traditional to 21st Century EdSpecs, not individual MILCON projects.

As discussed in the finding, DoDEA did not fully consider the benefits and drawbacks of proposed alternatives compared to the traditional EdSpecs and did not complete a cost estimate to determine the mission and business impacts for building to the 21st Century EdSpecs. The DoDEA analysis did not make a recommendation or provide support for selecting 21st Century EdSpecs as the best alternative.

We request that the Principal Deputy Under Secretary of Defense for Personnel and Readiness, provide additional comments that address actions included in Recommendation B.2, and include a timeframe for completing corrective actions.

## Appendix. Scope and Methodology

We conducted this performance audit from August 2011 through August 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We did not validate the accuracy of the USACE-Europe PDRs for the FY 2012 MILCON projects because USACE-Europe based their costs on traditional EdSpecs. However, DoDEA officials changed the FY 2012 school requirements to 21<sup>st</sup> Century EdSpecs. Therefore, the costs developed by USACE-Europe did not reflect the costs for schools that will actually be built. In addition, we did not address the objective to review the Military Service standards because DoDEA established standards for schools. As required by Public Law 112-81, the Wetzell Elementary School project is on hold until the SECDEF certifies that that Baumholder, Germany is an enduring location.

We reviewed three DoDEA reports to Congress: “Report on Condition of Schools Under Jurisdiction of [DoDEA],” March 2008; “Report to Congress on [DoDEA] Military Construction Program,” October 2009; and “Report to Congress on the [DoDEA] Design Process and Procedures to Provide Outstanding Schools,” September 2010 for background on the DoDEA MILCON program and condition of DoDEA schools in Europe. We reviewed Resource Management Decision 700 on MILCON to replace/modernize schools for funding data related to the \$3.7 billion multiyear DoDEA MILCON program.

We reviewed documentation for the six active FY 2012 DoDEA MILCON projects, valued at \$248.5 million, for constructing or renovating schools in Europe. We did not review the Alconbury High School project, in the United Kingdom, because DoDEA deferred the project to a future fiscal year at the request of a Service. Specifically, we reviewed DoDDS-E initial space requirements, staffing, and project cost documents; USACE-Europe planning documents and PDRs; and the DoDEA MILCON Project DD Forms 1390, 1391 and 1391c published in the FY 2012 Office of Secretary of Defense Justification Book. In addition, we reviewed three versions of DoDEA EdSpecs: Version 2.1, October 2007; Version 3.0, June 2010; and the 21<sup>st</sup> Century Schools, October 2011.

We reviewed DoD 1342.6-M, August 1995, to determine current DoDEA officials’ responsibilities for MILCON projects. We reviewed the Unified Facilities Criteria “DoD Facilities Pricing Guide for FY 2010” to attempt to corroborate DoDEA officials’ reasoning for the variance between USACE-Europe primary facility unit costs and those found in the DD Forms 1391. We reviewed the “DoDEA Facilities Management Guide DD Form 1391 Planning and Preparation Version 1.0,” April 18, 2011, for guidance on developing cost estimates and the “DoDEA Facilities Management Guide for Parametric Design Instruction Version 1.0,” December 7, 2011.

For the six projects, we compared the DD Form 1391 student population projections to information we obtained from U.S. Army Europe and U.S. Air Forces in Europe force structure plans to determine reasonableness of the student population projections used to determine the proposed school size. We visited the Smith and Wetzel Elementary Schools in Baumholder, Germany, under U.S. Army Garrison – Baumholder, to validate additional information in the DD Form 1391 prepared for the proposed combined elementary school. For the Vicenza High School project, we reviewed the Naval Facilities Engineering Command “New Vicenza High School Cost Analysis Report,” February 6, 2012, submitted by the project design architect. We compared the square footage found in the proposed design layout against the square footage specified using full 21<sup>st</sup> Century School EdSpecs to determine any modifications necessary to keep the Vicenza High School project within the scope found on the DD Form 1391.

To evaluate DoDEA officials’ management of the 21<sup>st</sup> Century Schools initiative, we reviewed the SECDEF efficiency statement from August 9, 2010 and two SECDEF memorandums: “Department of Defense Efficiency Initiatives,” August 16, 2010, and “Consideration of Costs in DoD Decision-Making,” December 27, 2010. The memorandums outline the requirement for determining the cost for new programs and initiatives. We reviewed the draft guidance “DoD Product Support Business Case Analysis Guidebook,” November 16, 2010, from the DoD Cost Guidance Portal cited in the December 27, 2010 SECDEF memorandum, to determine critical components necessary for sound decision-making. We reviewed the three DoDEA Work Session reports that the Director, DoDEA stated, were part of the DoDEA business case model. We also reviewed the DoDEA Design Center baseline program documents which show a possible way for 21<sup>st</sup> Century School EdSpecs to be incorporated within the DD Form 1391 square footage scope for FY 2012 projects. We then analyzed the process DoDEA officials’ followed in light of the cited guidance.

We interviewed DoDDS-E officials responsible for preparing the DD Forms; USACE-Europe officials responsible for creating the Project Definition Reports, cost estimates, and working with design contractors; a Naval Facilities Engineering Command Atlantic official responsible for working with the design contractor for the Vicenza High School project; and DoDEA officials responsible for development of the 21<sup>st</sup> Century EdSpecs.

## **Use of Computer-Processed Data**

We did not use computer-processed data to perform this audit.

## **Prior Coverage**

No prior coverage has been conducted on the DoDEA requirements development process for military construction contracts in Europe during the last 5 years.

# Assistant Secretary of Defense for Readiness and Force Management Comments

Final Report  
Reference



READINESS AND FORCE  
MANAGEMENT

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
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WASHINGTON, D.C. 20301-4000

31 AUG 12

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL

SUBJECT: Department of Defense Office of Inspector General Draft Report: DoD Education Activity Needed Better Planning for Military Construction Projects (Project No. D2011-D000LD-0265.000)

This responds to your request for comments on four recommendations in the subject draft report. As the Principal Deputy Assistant Secretary of Defense (Readiness and Force Management), Performing the Duties of the Assistant Secretary of Defense (Readiness and Force Management), I have been delegated the authority to respond to the draft report and issue guidance to the Director, Department of Defense Education Activity (DoDEA). My responses below are keyed to your recommendations.

Recommendation A.1. We recommend that the Principal Deputy Under Secretary of Defense for Personnel and Readiness require the Director, DoDEA, to use the construction agents' costs, as required in the DoD Manual 1342.6-M, "Administrative and Logistic Responsibilities for DoD Dependents Schools," for developing construction requirements or provide documentation and approved rationale and methodology for deviating from policy.

Response A.1. Agree with comment. As briefly stated on page 12 of the draft report, the Director, DoDEA, issued "DoDEA Facilities Management Guide - DD Form 1391 Planning and Preparation," Version 1.0, April 18, 2011, and "DoDEA Facilities Management Guide - Parametric Design Charrette (Code 3) Instruction," Version 1.0, December 7, 2011, to improve the cost estimation process. The Director, DoDEA, had identified a problem with the cost estimation process four months prior to your notification of the audit. These Facilities Management Guides have been received favorably by the Department's construction agents. I urge you to give this finding fair treatment in your written report. I recommend that you add the comments on page 12 to the "Results in Brief," section of your report.

Recommendation A.2. We recommend the Director, DoDEA, coordinate with the respective construction agents when changes occur during military construction planning to minimize impact to the projects.

Response A.2. Agree. DoDEA has developed a Program Management Plan that outlines the respective construction agent and DoDEA personnel responsibilities and approvals when any changes are made during the project planning and construction process. This Plan is currently in coordination within DoDEA and with the construction agents. The Director, DoDEA, expects to sign the Program Management Plan by the end of September 2012.

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Response

Recommendation B.1. We recommend the Director, DoDEA, complete a business case analysis that considers alternatives, includes a cost estimate during the assessment of mission and business impacts, and identifies why the alternative chosen was the best choice, as identified in the Assistant Secretary of Defense for Logistics and Materiel Readiness guidance, and obtain approval before moving forward with Fiscal Year (FY) 2012-2016 projects.

Response B.1. Partially agree. There was confusion about whether the DoDEA Military Construction (MILCON) initiative would be covered by the Secretary of Defense Memorandum of December 27, 2010, Subject: Consideration of Costs in DoD Decision-Making. Your finding prompted clarification that initiatives such as the adoption of revised DoDEA education facilities specifications are covered by the guidance. I want to emphasize that although the DoD Business Case Analysis (BCA) model was not used, DoDEA's deliberate process was intended to result in an adequate analysis. The new specifications were briefed to the former Principal Deputy Under Secretary of Defense (Personnel and Readiness), the MILCON subcommittees for all of the defense congressional committees, and Department leadership. Further, the Director, DoDEA, directed that the new education facilities specifications will not increase the costs of the FY 2011- 2016 projects.

To date, no cost increase has resulted from the application of the revised education facilities specification. It is not feasible to conduct a BCA on the FY 2012 program without delaying the MILCON projects. Since there are no cost increases, the Director, DoDEA will not conduct a BCA on the FY 2012 projects. However, the Director, DoDEA, will conduct a BCA using the appropriate guidance and obtain my approval before moving forward with the FY 2013 projects. Once the BCA has been completed and approved, it will be applied for all future MILCON projects.

Recommendation B.2. We recommend that the Principal Deputy Under Secretary of Defense for Personnel and Readiness review and approve, or disapprove, the DoDEA military construction plan, and specifically, the business case analysis and cost estimate prepared in support of changing school requirements for traditional to 21<sup>st</sup> Century Education Facilities Specification. The Principal Deputy should ensure that the business case analysis considers alternatives, includes a cost estimate during the assessment of mission and business impacts, and identifies why the alternative chosen was the best choice, as identified in the Assistant Secretary of Defense for Logistics and Materiel Readiness guidance.

Response B.2. Agree. This review and approval process will start with the FY 2013 projects.

Finally, I want to correct an error of fact. The "Results in Brief" section of the draft report states that the Vicenza High School Project shortfall was the result of the application of the new DoDEA 21<sup>st</sup> Century Education Facilities Specifications. On the contrary, the \$10 million shortfall resulted from undervalued cost estimation by the Construction Agent (Corps of Engineers). The Vicenza High School will be constructed within the 117,788 square feet authorized by Congress.

Results in Brief -  
Revised Sentence

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We appreciate the opportunity to comment on the draft report. My point of contact is [REDACTED] may be reached by [REDACTED] or [REDACTED]



Frederick E. Vollrath  
Principal Deputy Assistant Secretary of Defense  
(Readiness and Force Management)  
Performing the Duties of the Assistant  
Secretary of Defense (Readiness and Force  
Management)



# Inspector General Department of Defense

