

# Inspector General

United States  
Department of Defense



Public Works Operations  
at U.S. Army Garrison-Yongsan, Korea

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## Acronyms and Abbreviations

BOM	Bill of Materials
CCK	U.S. Army Contracting Command-Korea
COR	Contracting Officer's Representative
DO	Delivery Order
DPW	Directorate of Public Works, U.S. Army Garrison-Yongsan
FAR	Federal Acquisition Regulation
GPC	Government Purchase Card
IDIQ	Indefinite-Delivery, Indefinite-Quantity
IGCE	Independent Government Cost Estimate
KRW	Korean Won
MATOC	Multiple Award Task Order Contract
SOP	Standard Operating Procedure
S2K	Supply 2000 System



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
400 ARMY NAVY DRIVE  
ARLINGTON, VIRGINIA 22202-4704

May 4, 2010

MEMORANDUM FOR COMMANDER, UNITED STATES FORCES KOREA  
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Public Works Operations at U.S. Army Garrison-Yongsan, Korea  
(Report No. D-2010-057)

We are providing this report for information and use. We considered management comments on a draft of this report in preparing the final report.

Management comments generally conformed to the requirements of DOD Directive 7650.3; therefore, we do not require any additional comments.

We appreciate the courtesies extended to the staff. Please direct questions to me at (703) 604-8866 (DSN 312-664-8866).

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

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





# Results in Brief: Public Works Operations at U.S. Army Garrison-Yongsan, Korea

## What We Did

We determined whether controls were in place and working as intended for the U.S. Army Garrison-Yongsan Directorate of Public Works (DPW) to provide goods and services to its customers in the most effective and efficient manner. We examined DPW contract actions of \$5.9 million, purchases from the Prime Vendor of \$1 million, and Government purchase card transactions of \$393,000.

## What We Found

DPW-Yongsan had established controls to reduce some of the risks found during prior audits at other DPWs in Korea. However, additional internal controls over operations needed improvements.

- DPW did not estimate requirements for indefinite-delivery, indefinite-quantity contract solicitations on a reasonable basis.
- DPW did not exercise delivery orders to achieve maximum effectiveness and efficiency, which resulted in questionable costs of up to \$924,000, including \$79,851 in overpayments to contractors to be recovered.
- DPW's heavy reliance on the prime vendor for purchases of supplies resulted in expenditures of \$347,467 (53 percent) more than the fair market value for a sample of 64 purchases.
- DPW did not properly document Government purchase card transactions, ensure separation of duties, avoid third-party vendors, or obtain property book officer approval when required.
- DPW did not always update real property records or obtain as-built drawings from contractors on completion of work.

In providing contracting support, the U.S. Army Contracting Command-Korea did not determine unbalanced pricing or price reasonableness in accordance with the Federal Acquisition Regulation. As a result, the current general repair contract cost \$219,192 (41 percent) more than the second lowest offer for the first 11 delivery orders.

See Appendix B, Summary of Potential Monetary Benefits, for the estimated benefits of \$569,851.

## What We Recommend

DPW should:

- Eliminate unneeded contract line items and maintain documentation for estimated item quantities for future contracts.
- Ensure description of work on delivery orders is internally consistent, contract actions are well documented, and inspections are complete and comprehensive; use the most cost-effective method for performing required tasks; and use realistic and consistent criteria for including or measuring incidental costs.
- Establish procedures and controls to ensure purchases from the prime vendor are cost-effective, and use alternative sources if practical when more economical.
- Re-emphasize and enforce requirements for using Government purchase cards.
- Ensure that real property records are updated completely and timely on completion of projects.
- Recover overpayments of \$79,851 from contractors.

The U.S. Army Contracting Command-Korea should award a new general building repair contract, begin evaluating price reasonableness for specific contract line items, reject contract bids with unbalanced pricing, and make oversight checklists for Government purchase cards more complete.

## Management Comments and Our Response

Management generally agreed with our recommendations and provided responsive comments indicating actions taken or planned to implement the audit recommendations. Management also agreed with our potential monetary benefits. Please see the recommendations table on the back of this page.

## Recommendations Table

Management	No Additional Comments Required
Commander, U.S. Army Contracting Command-Korea	A.1, A.2, and D.2
Director of Public Works, U.S. Army Garrison-Yongsan, Korea	A.1, A.3, B.1, B.2, C, D.1, and E.1-E.3

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# Introduction

## Objectives

The objective was to determine whether controls were in place and working as intended for the Directorate of Public Works at U.S. Army Garrison-Yongsan (DPW) to provide goods and services to its customers in the most effective and efficient manner. Specifically, we evaluated DPW operations and associated procurement support by the U.S. Army Contracting Command-Korea to determine whether contract requirements were valid and accurately stated, the most effective and efficient means for procurement were used, supplies and services purchased were received, and applicable procurement policies and regulations were followed. See Appendix A for a discussion of the scope and methodology and prior coverage related to the objectives.

## Background

DPW is a subordinate unit of the U.S. Army Installation Management Command-Korea Region. DPW supports facilities in Area II: Yongsan and the surrounding area, such as Camp Market, Camp Tango, and K-16. The Installation Management Command-Korea Region also operates three other Directorates of Public Works at the Army garrisons at Red Cloud (Area I), Humphreys (Area III), and Daegu (Area IV). DPW support includes construction, repair, and maintenance of facilities and infrastructure; environmental management, and fire prevention and response. Real property of Area II reported in March 2009 included 1,400 facilities and infrastructure totaling about 10 million square feet at 13 installations.

DPW has six divisions: Engineering Services, Environmental, Business Operations and Integration, Operations and Maintenance, Master Planning, and Housing. As of February 2009, DPW was authorized 40 Army civilians and 388 Korean nationals; it had 24 Army civilians and 416 Korean nationals employed and 92 Korean Support Corps personnel as a support force.

DPW expended \$78.4 million in FY 2008, which included \$30.9 million for utilities, \$28.5 million for contracts, \$12.3 million for supplies and equipment, and \$6.7 million for labor and related expenses. Our audit focused on construction-related (upgrade, renovation, and maintenance) indefinite-delivery, indefinite-quantity (IDIQ) contracts and multiple-award task order contracts (MATOCs) managed by DPW, which amounted to \$5.6 million for FY 2008. Our audit also focused on supplies purchased from the prime vendor and purchases made with Government purchase cards (\$2.6 million during FY 2008). See Appendix A for a more detailed discussion of Scope and Methodology.

### ***Indefinite-Delivery, Indefinite-Quantity Contracts***

An IDIQ contract is a delivery order (DO) contract awarded for an indefinite quantity of supplies or services within stated limits for a fixed period. The Government issues a DO to place an order for a specific requirement. The Government uses an IDIQ contract when the quantity and delivery of supplies or services cannot be predetermined.

Therefore, the Government does not procure any supplies and services at the time of contract award but states a minimum or maximum quantity it will procure during the contract period. Quantities may be stated in units or as dollar values. During the audit period, DPW was using IDIQ contracts awarded for the repair and upgrade of general buildings; family housing repair, upgrade, and turnover maintenance; pavement; roofing; painting; fencing; and demolition.

### ***Multiple-Award Task Order Contract***

A MATOC is a task order contract awarded to multiple contractors from a single solicitation for the same or similar supplies or services. The Government issues a task order to acquire performance of tasks during the period of the contract, and each contractor competes for the task order issued. Therefore, a MATOC promotes a competitive environment even after contract award. Federal Acquisition Regulation (FAR) 16.505 (b) requires agencies to provide all awardees fair opportunity to be considered for each order exceeding \$3,000 issued under MATOCs. The Government can take advantage of the benefits of competition to obtain lower prices, better quality, reduced time from requirements identification to award, and improved contract performance in satisfying customer requirements. DPW had 12 MATOCs for performance throughout Korea during the audit period.

### ***U.S. Army Contracting Command-Korea***

The 411<sup>th</sup> Contracting Support Brigade, U.S. Army Contracting Command-Korea (CCK), is the executive agent responsible for providing acquisition services to the United States Forces Korea, including centralized local purchasing, contracting support, and contract administration. CCK provided contracting support for DPW to acquire supplies, services, and construction.<sup>1</sup> Specifically, CCK awarded MATOC and IDIQ contracts and issued task orders or DOs against the contracts for specific jobs. CCK provided contract administrative services to ensure effective execution of contracts, task orders, and DOs. CCK also provided training for DPW contracting officer's representatives (CORs), who were usually inspectors.

### ***Prior Audits of the Directorate of Public Works in Korea***

The U.S. Army Audit Agency audited DPW operations in Area I (North of Seoul) during 2004 and 2005 and published two reports (see Prior Coverage in Appendix A) with significant findings showing widespread abuse: about \$6 million in overstated requirements, actual and potential overpayments of contracts, and noncompliance with standard acquisition procedures. These findings were directly related to a lack of effective oversight of IDIQ contracts, Government purchase cards (GPCs), and the Prime Vendor Program. The Internal Review and Audit Compliance Office of the United States Forces Korea also performed several reviews and provided assistance to the Major Procurement Fraud Unit of the Army Criminal Investigation Command, which found serious internal control deficiencies indicating fraud, waste, and abuse. As a result of the

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<sup>1</sup> The Far East District of the U.S. Army Corps of Engineers also does extensive contracting for large construction and renovation projects in Korea.

audits, reviews, and investigations, several Government employees and contractors were indicted for criminal conduct, and the Government debarred several contractors.

Our audit did not identify the large overpayments or overstated requirements found in previous audits because management was taking actions to correct many of the internal control weaknesses found in prior audits and reviews. However, this audit confirms the continued need for vigilance and supervision of DPW operations to reduce the potential for fraud, waste, and abuse and ensure the Government is obtaining the best value for funds expended.

## **Review of Internal Controls**

DOD Instruction 5010.40, “Managers’ Internal Control (MIC) Program Procedures,” January 4, 2006, requires DOD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. DPW procures significant amounts of supplies, services, and construction for its customers. However, DPW’s internal controls are not sufficient to ensure that Government needs are met in the most cost-effective way and that the Government receives what it pays for.

DPW needs to strengthen procedures and controls over the procurement process while promoting due diligence and adequate supervision. Specifically, DPW should strengthen controls over the process of establishing requirements, selecting the procurement method and source of supply, and overseeing work performance to optimize its operations in the best interest of the Government. Additionally, DPW needs to improve documentation and ensure compliance with guidance. Implementing Recommendations B.1, C, D.1, E.1, and E.2 will improve DPW internal controls. DPW took action during our audit to have the contract for roofing modified to reduce the cost of scaffolding. This control could provide a monetary benefit of up to \$490,000 as shown in Appendix B. We will provide a copy of the report to the senior official responsible for internal controls in the U.S. Army Installation Management Command-Korea Region.

## **Finding A. Contracting Requirements and Procedures for Indefinite-Delivery, Indefinite-Quantity Contracts**

Requirements estimates that DPW established for IDIQ contract solicitations were not reasonable or supported. DPW did not have a sound basis for estimating the quantity of contract line items or requiring U.S.-origin materials. Additionally, price analysis that CCK conducted for contract award was not adequate. CCK awarded the contract based on the total contract price without determining whether pricing was balanced as required by the FAR, relying on only one method for determining the reasonableness of the contract price although unbalanced pricing called for further analysis. These deficiencies occurred because DPW did not assess contract requirements based on historical use and because the excessive number of contract line items hindered CCK from effectively evaluating the contract price in accordance with the FAR. As a result, the Government was not obtaining the best value for its contracting efforts, as demonstrated by the current IDIQ contract for repair and upgrade of general buildings, which cost DPW about \$219,192 (41 percent) more than the second lowest offer for the first 11 DOs issued from January through March 2009.

### **IDIQ Contract Overview**

DPW has used an IDIQ contract to accomplish many general building repairs, upgrades, and maintenance (General Repair Contract) for its customers. The Government spent \$6.3 million on the previous General Repair Contract during the 4 1/2-year period ending in March 2008. On January 14, 2009, CCK awarded the current IDIQ contract (W91QVN-09-D-0004) for a maximum of \$12.4 million to cover the base year plus 4 option years. The contract contains 1,925 tasks, which have specific contract line item numbers assigned. (We will refer to these tasks as “line items” in this report.) The line items include a description of the work to be done, such as installing, replacing, removing, or reinstalling specific items, as well as quantities of materials needed to do each task. Contractors competing for the contract provided their unit price for each line item and the aggregated price for the estimated quantity provided by DPW. CCK awarded the contract to the company that provided the lowest total price. The Government paid the contractor for completion of DOs under the contract, which identified specific tasks (line items) to be performed for each DO. As of March 31, 2009, DPW had issued 11 DOs totaling \$537,674 under the General Repair Contract.

### **Requirements Estimates**

DPW prepared requirements estimates for contract solicitation. Estimates included line items and the estimated quantity of each line item needed. Certain line items also showed that the contractors must use U.S.-origin materials. However, DPW did not always have a sound basis for estimating quantities for line items or requiring use of U.S.-origin materials.

### ***Number of Line Items***

The current General Repair Contract had 1,925 line items. The large number of line items hindered DPW estimators from estimating the costs of each line item based on market research or on any other rational basis. The estimator responsible for cost estimates admitted that it was not feasible for him to conduct market research for such a large number of line items. Therefore, he established cost estimates for the majority of line items using the previous cost estimates adjusted for inflation. CCK personnel also stated that the large number of line items hindered the contracting officer from conducting detailed evaluations of contract pricing for source selection or price reasonableness. DPW should review historical and estimated future line items and delete line items not expected to be used, to facilitate contract proposal evaluation so that CCK can obtain the most cost-effective contract.

### ***Estimated Quantities for Each Line Item***

Unrealistic estimates of the quantities to be used for each line item also hindered DPW and CCK from obtaining the most cost-effective General Repair Contract. DPW often estimated the same quantities for various line items regardless of the historical or expected usage, adversely affecting source selection. For example, the contractor was able to provide the lowest overall price and be selected to perform the IDIQ contract by offering unrealistically low prices on items that presumably would not be used, as illustrated below.

- DPW estimated it would need 10 each of 7 different sizes (ranging from 10 to 100 tons) of air-cooled condensing units. However, the contractor provided a realistic price only for the 40-ton unit at \$7,812. The unit prices shown for the other six sizes were from \$.85 to \$3.45, which were totally unrealistic. The total independent Government cost estimate (IGCE) for the seven line items was \$1.4 million, while the contractor price for all these was only \$78,219.
- DPW estimated the contractor would need to replace 10 each of 7 types of air-handling units from 10 to 100 tons at a total cost of \$2 million for 70 units. However, the contractor, presumably not expecting to have to replace any of these units, showed a total of only \$121 for replacing all 70 units.

We also noted unrealistic quantities for various line items in a proposed contract to be used by the DPW Housing Division for maintenance and repair of family housing units. For example, review of DOs under the Family Housing IDIQ contract (W91QVN-04-D-0023), set to expire at the end of FY 2009, showed that DPW always requested two coats of paint for both exterior and interior painting. However, the bidding schedule sent to prospective contractors showed that DPW estimated that contractors would be required to paint 40,000 square meters (for interior) and 20,000 square meters (for exterior) with one coat of paint. According to the bidding schedule, only half that quantity would be required for two coats of interior and exterior painting. DPW personnel in the Housing Division stated they did not have a basis for these figures but used information that was shown on the previous Family Housing IDIQ contract negotiated more than 4 years ago.

## ***Requirements for U.S.-Origin Materials***

DPW required use of U.S.-origin materials for certain line items; however, it did not always have a sound basis for the requirement. For example, DPW prepared an IGCE for a new IDIQ contract for repair and maintenance of family housing. The IGCE that DPW prepared for the contract solicitation required all 22 line items for various paints to be of U.S.-origin materials. Discussion with the DPW estimator who prepared the IGCE disclosed that he did not have a valid basis for this decision. The current IDIQ contract for repair and maintenance of family housing units did not require use of U.S.-origin paints, and discussion with painters indicated that they used Korean-made paints. Requiring the use of U.S.-origin materials, when not needed, could cause the contractor to unnecessarily increase the price for the contract.

DPW could reduce the efforts required for CCK to evaluate contract proposals by furnishing more reasonable estimates for contract requirements. Additionally, DPW could prevent potential increases in contract price by requiring use of U.S.-origin materials only when needed. DPW should reassess the items and quantities required to fulfill the recurring requirements for repairs and maintenance.

## **Analysis of Pricing**

The source selection process to award the current General Repair Contract was not adequate to provide goods and services in the most cost-effective manner. As a result, the contract cost DPW about \$219,192 (41 percent) more than the second lowest offer for the first 11 DOs issued from January through March 2009. Four other competitors' prices were also lower than the contract for the 11 DOs. CCK awarded the General Repair Contract to the lowest priced, technically acceptable offer. CCK determined the lowest price based on the total contract price for the estimated quantities of 1,925 line items. We compared prices of the contract and eight competing offers, determined to be technically acceptable by CCK, for the 11 DOs issued from the contract award through March 31, 2009. As shown in Table 1, five of the eight unsuccessful offers would have met the requirements at a lower cost to the Government than that of the contractor CCK selected.

**Table 1. Comparison of Prices on IDIQ Contract With Unsuccessful Offers**

Offer	Total Price	11 DOs		
		Total	Difference	
Winning Contract	\$2,478,767	\$537,674	Amount	Percent Less
2nd lowest offer	2,656,465	318,482	\$219,192	41
3rd lowest offer	2,787,043	524,855	12,819	2
4th lowest offer	2,911,891	488,849	48,825	9
5th lowest offer	3,214,211	530,703	6,971	1
6th lowest offer	3,570,477	522,430	15,244	3

## **Balance**

The winning contractor provided the lowest aggregated price, even though many of its prices for specific line items were higher than competing offers, for two major reasons. The contractor provided unreasonable, unbalanced pricing, and the quantities of line items estimated by DPW without a sound basis exacerbated the effect of unbalanced pricing on the total contract price.

The contract showed nominal prices for the line items that presumably would be used less, if at all. For example, the contractor prices were extremely low for “installing” new walls, doors, ceilings, windows, and doors—so low that the contractor would default if all DOs required only installing the various items. However, the contractor priced “replacing” the same items much higher (presumably because most of the work to be done involved replacing rather than installing). We identified 112 instances in which “replacing” would cost the Government more than “installing” by at least 1,000 percent. Many of the contractor’s prices were ridiculously low on installation as shown in Table 2.<sup>2</sup>

**Table 2. Comparison of Installation and Replacement Prices**

Item	Installation	Replacement	Difference	
			Amount	Percent Higher
Bored type lockset for office door	\$ .15	\$ 189.00	\$188.85	125,900
Vanity cabinet, 700 millimeters (mm) wide by 490 mm deep by 760 mm high with marble top	7.05	845.74	838.69	11,896
Metal urinal baffle	1.58	413.10	411.52	26,045
Asphalt strip shingle and 2-ply asphalt felt	0.24	66.00	65.76	27,400
Hood for wall cabinet, high-glossy finish	0.85	316.24	315.39	37,105
Radiator, 300 mm deep by 600 mm high with wooden cover	0.06	88.58	88.52	147,533

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<sup>2</sup> The contractor’s prices are always shown in Korean won (KRW) in contracts. In this report we usually use KRW when comparing prices from different contracts because of large fluctuations in the exchange rate during the audit period. However, we use U.S. dollars when comparing prices in the same contract (as shown in Table 2) to make it easier for the reader to understand.

Another pattern of unbalanced pricing used by the contractor to obtain the lowest aggregated price on his proposal was to provide higher prices for certain items and unreasonably low prices for similar items that presumably would not be used or would be used rarely. Examples of unbalanced pricing include the following.

- The contractor priced line items for replacing a ceiling-mounted air-conditioning unit to cool 534 square feet at \$2,934.13, but priced a larger air-conditioning unit rated to cool 712 square feet at only \$31.85.
- The contractor priced line items for replacing 12.5-millimeter-thick gypsum wallboard at \$21.22 per square meter, but replacing a 13-millimeter-thick, water-resistant (which would be expected to cost more) gypsum wallboard at only \$0.10 per square meter.

FAR 15.404-1(g) states that unbalanced pricing exists when the price of one or more contract line items is significantly over- or understated, regardless of an acceptable total evaluated price. The FAR further states that unbalanced pricing may increase performance risk and could result in payment of unreasonably high prices. “The greatest risks associated with unbalanced pricing occur when . . . the evaluated price is the aggregate of estimated quantities to be ordered under separate line items of an IDIQ contract.” Therefore, all offers with separately priced line items or sub-line items must be analyzed to determine whether the prices are balanced. As noted, CCK awarded the IDIQ contract based on the aggregated contract price although pricing for line items was significantly unbalanced.

### ***Price Reasonableness***

CCK also used ineffective methods to determine price reasonableness. FAR 15.404-19 provides seven analytical techniques to determine price reasonableness. Among the seven techniques, comparison of proposed prices received in response to the solicitation and comparison of proposed prices with the IGCE were the two analytical techniques that CCK used in determining price reasonableness of the IDIQ contract.

According to the contract file, CCK compared the total prices proposed in the lowest offer with those in the second and third lowest offers, as well as with the IGCE. The comparison showed that the lowest offer was 11.3 percent<sup>3</sup> of the IGCE, and disparities between the lowest and second lowest proposals and between the second and third lowest proposals were 7 and 5 percentage points, respectively. Based on the small disparities among the three proposed prices, CCK determined that proposed prices were competitive and that pricing was fair and reasonable.

However, the disparity between the contract price and the IGCE appeared too large to support price reasonableness. Further, our comparison of line items between the current

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<sup>3</sup> The contractors’ proposals were significantly lower than the IGCE because all contractors proposed unrealistically low prices for some items that they (presumably) did not expect to have to perform, as discussed in the report.



and previous General Repair contracts, which the FAR lists as one of the preferred analytical techniques, showed significant changes in price. From the line items included in the 11 DOs, we identified 163 line items that the previous General Repair Contract also included. Of the 163 line items, 55 showed significant price increases, at least 50 percent. Table 3 shows some examples of significant price increases when comparing items from the current and previous General Repair contracts.

**Table 3. Comparison of Selected Line Items From Previous and Current General Repair Contracts**

Contract Line Item	Unit	Cost in Korean Won (KRW)		Price Increase	
		Previous Contract	Current Contract	Amount	Percent
Prepare metal or concrete surface for painting	Square Feet	KRW155	KRW412	KRW257	166
Provide scaffolding, including lamp, stairs and handrail installation and removal	Square Feet	515	4,645	4,130	802
Replace junction box, 4 square inches	Each	6,570	30,005	23,435	357
Replace toggle switch cover or receptacles cover, 2 inches by 4 inches	Each	975	9,586	8,611	883
Replace incandescent lamp bulb, 100-watt maximum	Each	1,851	11,444	9,593	518
Remove/reinstall existing lighting fixture	Each	3,085	100,797	97,712	3,167
Remove and reinstall heating fixtures	Each	43,565	216,819	173,254	398
Replace 25 millimeter by 100 millimeter wood baseboard	Linear Foot	765	3,102	2,337	305
Replace soap dish (stainless or ceramic)	Each	6,947	36,176	29,229	421

\*DPW used a budget rate of KWR1151/US\$ for FY 2007 and KRW1025.7/US\$ for FY 2008.

In contrast, several line items from the current General Repair Contract used for the first 11 DOs were also significantly less than the previous General Repair Contract. A few examples of unrealistically low pricing by the current IDIQ contractor are shown in Table 2.

Another method that could be helpful in evaluating price reasonableness would be to compare prices on other existing IDIQ contracts with prices proposed for new contracts. For example, comparison of the IDIQ contract used for family housing maintenance and repair with the current General Repair Contract showed:

- \$0.81 per square foot for replacing gypsum board for the walls or ceiling. The General Repair Contract charged \$1.97 and \$2.22 per square foot to replace gypsum board for the wall and ceiling, respectively.
- \$0.34 per square foot to apply two coats of latex paint. The General Repair Contract charged \$0.81 per square foot to apply two coats of interior latex paint.

We do not consider a comparison of total proposed prices by CCK to be the most effective method to determine price reasonableness because the contractor used unbalanced pricing, the IGCE showed unsupported estimated quantities, and the current General Repair Contract had significantly higher prices than the previous General Repair Contract.

## **Management Actions to Obtain Value for Funds Expended**

At the beginning of the audit, DPW managers told us that they were frustrated with using the current General Repair Contract because they knew prices for many line items were unreasonable. The Director of the Business Operations and Integration Division at DPW told us that he had instructed his estimators to use lower priced line items, if practical, when preparing DOs. However, as shown in Table 1, efforts by DPW personnel to find line items that met the requirements of work to be done at a reasonable price did not result in a cheaper price than the prices of competitors who were not awarded the contract. Because the contractor used unreasonably low prices for many items, it may be possible for the Government to obtain reasonable prices on future DOs. However, it will require a significant amount of effort by personnel carefully reviewing each statement of work (SOW), which normally includes multiple line items, and selecting alternative items to ensure a more reasonable total price for a DO. However, we do not think such effort would continue for an extended period of time. DPW should prepare a revised IGCE with realistic prices and quantities, and CCK should obtain a new contract based on a line-item analysis to avoid unbalanced prices and perform market research to the extent practical to ensure that contract prices are reasonable.

## **Conclusion**

DPW and CCK procedures for preparing contract estimates and evaluating contract proposals for IDIQ contracts did not result in the best prices for the Government. If DPW and CCK are able to work together to implement the recommendations in this finding, the Government should be able to reduce future contract costs and put such funds to better use.

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

**A.1. We recommend that the Commander, U.S. Army Contracting Command-Korea, and the Director of Public Works, U.S. Army Garrison -Yongsan:**

**a. Not exercise the option to renew the current General Repair Contract (W91QVN-09-D-0004).**

**b. Work together on market research, reviewing similar contract line items on other contracts and on prior contracts to evaluate price reasonableness for new, indefinite-delivery, indefinite-quantity contracts.**

### ***U.S. Army Expeditionary Contracting Command Comments***

The Executive Deputy to the Commanding General, U.S. Army Materiel Command generally agreed in comments provided on behalf of the Commander, U.S. Army Contracting Command-Korea. The U.S. Army Contracting Command-Korea will not exercise the option to renew the current General Repair Contract. However, instead of awarding a new contract as recommended, the U.S. Army Contracting Command-Korea will utilize an existing Multiple Award Task Order Contract to meet the needs of general repair projects. The Executive Deputy also noted that Recommendation A.1.b. is only one tool that can be used in determining price reasonableness.

### ***U.S. Army Installation Management Command Comments***

The Commander, U.S. Army Installation Management Command agreed and DPW plans to prepare a new General Repair IDIQ contract for award in the summer of 2010.

**A.2. We recommend that the Commander, U.S. Army Contracting Command-Korea:**

**a. Evaluate the reasonableness of prices for specific contract line items when awarding new, indefinite-delivery, indefinite-quantity contracts rather than awarding contracts based on the total price.**

### ***U.S. Army Expeditionary Contracting Command Comments***

In comments provided on behalf of the U.S. Army Contracting Command-Korea, the Executive Deputy to the Commanding General, U.S. Army Materiel Command agreed that a price evaluation for all contract line items should have occurred to determine the existence of unbalanced pricing. The U.S. Army Contracting Command-Korea now has a Cost and Price Analyst and has instructed contracting officers to use this analyst in evaluating pricing of contract line items.

**b. State in future contract solicitations that significant unbalanced pricing for individual contract line items *may* cause the offers to be rejected.**

### ***U.S. Army Expeditionary Contracting Command Comments***

The Executive Deputy to the Commanding General, U.S. Army Materiel Command agreed, and the required language is now incorporated in contract solicitations.

c. **Obtain a new General Repair indefinite-delivery, indefinite-quantity contract using the most effective procedures to ensure prices are balanced and reasonable.**

### ***U.S. Army Expeditionary Contracting Command Comments***

The Executive Deputy to the Commanding General, U.S. Army Materiel Command stated that CCK does not intend to exercise the option to extend the General Repair contract. There is a MATOC already in place for construction projects that can meet the needs of general building repair projects.

**A.3. We recommend that the Director of Public Works, U.S. Army Garrison-Yongsan, carefully review contract line items and the estimated quantities of each item in proposed indefinite-delivery, indefinite-quantity contracts, delete line items not expected to be used, and maintain supporting documentation for both the estimated quantities of line items and the necessity for U.S.-origin materials to be included in such contracts.**

### ***U.S. Army Installation Management Command Comments***

The Commander, U.S. Army Installation Management Command agreed and stated that DPW will reduce the number of contract line items in the new solicitation and maintain supporting documentation for both the estimated quantities of line items and the necessity for U. S.-origin material in future IDIQ contracts.

### ***Our Response***

The comments are responsive, and the proposed actions meet the intent of the recommendations.

## **Finding B. Execution of Contracts**

DPW could perform its mission of maintenance, repair, and construction more effectively and efficiently by making improvements in establishing contract requirements, overseeing and using contracts, and documenting and inspecting contractual performance. As a result of the deficiencies found, we identified cost reductions of up to \$924,000 that may have been achieved.

### **DPW Use of Contracts to Perform Its Mission**

To perform its mission of repair, renovation, and maintenance of facilities and infrastructure for its customers, DPW uses a combination of contractor and in-house employees. DPW employees normally focus on minor repairs and maintenance, while contractors perform larger construction, renovation, and repair projects. For contracted work, DPW usually uses a general repair IDIQ contract for projects that involve more than one type of work and a family housing IDIQ contract for renovation, maintenance, and repairs of family housing units. DPW also uses four<sup>4</sup> major IDIQ contracts for specific types of work—pavement, roofing, painting, and fencing. Additionally, DPW uses MATOCs for larger projects that also require the contractor to provide some architectural or design work.

### **General Repair Contract**

In the 17 months ended February 2009, DPW completed or scheduled for completion 169 DOs totaling \$3 million under contract DABP01-03-D-0060 (previous General Repair Contract) for the repair and upgrade of general buildings. We selected for review the 31 DOs costing more than \$35,000 each, which totaled \$1.4 million, and found areas where DPW could have improved procedures for establishing requirements, documenting contractor performance, and verifying work performed, which may have reduced costs by up to \$114,228.

### ***Delivery Order Requirements***

Estimators in the DPW Business Operations and Integration Division were responsible for preparing the SOW and associated drawings of work to be performed for each DO. Estimators were also responsible for selecting line items from the awarded IDIQ contract and determining quantities of each line item to purchase. However, estimators were not always consistent or accurate in establishing requirements for DOs to serve their customers.

### **Uniformity in Contract Documents**

Estimators did not always accurately define requirements. We found that 19 of 31 DOs showed discrepancies between the requirements stated in the SOW and the drawings and line items. In most cases, we were unable to determine the specific dollar effect of these

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<sup>4</sup> DPW also uses an IDIQ contract for demolition of buildings, but the contractor had only three small DOs during the 17 months ended February 2009, and we omitted this IDIQ contract from our review.

discrepancies, or the effect is shown in other sections of this finding. However, the following are discrepancies that identified potential overpayments.

- The SOW for DO 403 stated 475 square feet of floor tiles needed to be replaced, but the line item for floor tiles showed 667 square feet. Potential overpayments are included in “Ceramic Floor and Wall Tiles,” below.
- DO 382 included a line item to purchase four vanity cabinets, but the SOW stated that the customer would provide them. The Government potentially overpaid \$2,918.
- DO 349 contained line items for installing and reinstalling insulation for the same ceiling. The excess cost was \$1,068.

### **Ceramic Floor and Wall Tiles**

Of the 31 DOs, 19 included renovation of toilets, showers, and a swimming pool at a cost of \$223,151 for installation of the tile. CCK modified the contract at DPW’s request to include U.S.-origin tiles at a significantly higher cost than the tiles in the original contract, as shown in Table 4.

**Table 4. Cost Comparison of U.S. and Korean Tile**

Type of Tile	Cost per Square Foot		Percent Increase
	Original Contract, Korean Tile	Modified Contract, U.S. Tile	
Floor	KRW7,204	KRW12,414	72
Wall	7,342	11,415	55

According to DPW personnel and the contract file, the original tile did not meet Army Technical Standards 9310.2.1.1 and 9310.2.1.3. However, no one was able to explain, and there was no documentation to show, how those specific standards were not met. Of the 19 DOs audited, 13 included the higher priced U.S.-origin tiles. The remaining six DOs used Korean tiles; however, two of the six DOs used different types of Korean tiles costing 11-13 percent higher than the tile in Table 4. If DPW had requested the tile shown in the original contract for the DOs audited, it could have reduced costs from \$223,151 to \$161,097, a reduction of \$62,054 (28 percent). Tile not meeting required standards should not be used merely because it is more economical. However, as shown above, some DOs continued to use Korean tiles, and the Family Housing IDIQ contract did not require U.S. tile. This suggests that the modification may not have been needed or the more expensive tile was used more than necessary.

In addition, the Government overpaid the contractor by at least \$1,000 each for 9 of the 19 DOs because the contractor installed fewer tiles than required by the DOs. Our measurements of actual tiles in the toilets and showers showed shortages totaling

approximately \$27,700 for the nine DOs. DPW should ensure the contractor is not overpaid for the work performed. When significant discrepancies occur, DPW should request that the DOs be modified. We also noted during our site verification that all of the toilets and showers had wall tiles installed up to the ceiling. It is understandable to install wall tiles to the ceiling for showers. However, we do not consider it cost-effective to always install wall tiles in toilets, especially when it cost 7 to 10 times as much as replacing the walls with water-proof gypsum board and paint.

## Incidental Costs

Estimators were inconsistent in including incidental costs for ceiling replacement and wall painting. An estimator stated that some estimators added scaffolding and surface preparation as separate line items from main tasks such as ceiling replacement and wall painting, while others viewed them as an integral part of such main tasks and did not include separate line items for the incidental tasks. The estimators did not maintain documentation for the basis of these decisions. For example, DO 349 included scaffolding requirements costing \$6,700 (presumably to install a ceiling) for eight times the square footage of the ceiling. However, another DO prepared by the same estimator included scaffolding that would cover only 23 percent of the ceiling. Estimates for surface preparation for painting ranged from 25 percent to more than 100 percent of the surface to be painted.

## Inspection of Contract Performance

Inspectors in the Engineering Services Division were responsible for monitoring contract performance, including conducting the final inspection before acceptance. They were also responsible for certifying performance before payments were made. However, inspectors did not always ensure that the Government received the services and supplies for which it paid, as illustrated in the following bullets.

- **Nonperformance.** We did not perform a 100-percent inspection of work required for the 31 DOs selected. However, during our measurement of latrine floors and walls, we physically verified some items that could be counted or measured. As a result, we found that the contractors did not install a few items required in the DOs, as shown in Table 5.

**Table 5. Items Not Installed**

Item	Quantity	Cost
Vanity cabinet	11 units	\$8,024
Door closer	15 units	1,418
Mirror	48 square feet	483
Glass pane	244 square feet	8,130
Card key lock set	4 units	1,307
Miscellaneous other items	27 units	1,126
<b>Total</b>		<b>\$20,488</b>

- **Nonconformance.** Some line items required use of U.S.-origin materials. However, we found a few local materials being substituted for items specified in the DOs. The item most frequently substituted was Korean-made lock sets. However, we were not able to assess the impact of substitutions on costs or performance.

The COR for the General Repair Contract stated that DPW conducted inspections before acceptance of completed DOs and invited representatives from various DPW branches such as real property, carpentry, electrical, and plumbing, as appropriate. Unless these personnel provided comments, the COR normally accepted the work without qualification. The COR maintained documentation for the final inspection for all 31 DOs audited. However, none of the documentation listed any of the discrepancies we found or indicated that any type of deficiency was found. In February 2009, soon after the audit of DPW began, DPW issued guidance requiring the COR to maintain a roster of personnel attending final inspections. After we provided the list of items not installed (Table 5) to the COR, he explained that the contractor had substituted other items for some of the missing items. However, he did not maintain documentation regarding such substitutions.

## **Family Housing Contract**

DPW issued or completed 660 DOs totaling \$3.64 million for the 17-month period ending February 2009 for the Family Housing Repair, Upgrade, and Turnover Maintenance IDIQ Contract W91QVN-04-D-0023 (Family Housing Contract). During the audit, we focused on the 101 DOs associated with painting and roofing, which cost \$805,830. We found that DPW could have saved up to \$433,703—\$371,315 by using the painting IDIQ contract for interior and exterior painting, and up to \$62,388 by more carefully reviewing DOs related to roofing. CCK awarded a new Family Housing Contract to begin in October 2009. Any potential monetary benefits will be based on new prices, the amount of work required, and the readiness and ability of DPW to implement audit recommendations.

### ***Delivery Orders for Painting***

DPW completed 87 DOs for painting the exterior and interior of family housing units during the 17 months ended February 2009 at a cost of \$596,309. DPW could have reduced costs by up to \$371,315 by using a less costly existing contract.

### **Exterior Painting**

DPW used the Family Housing Contract to paint 74 family housing units or duplexes at a cost of \$171,067. If DPW had used the painting IDIQ contract to paint the exterior of these housing units, we estimate the cost would have been \$63,251 for a total cost reduction of \$107,816. The estimated savings was based on large differences in the costs for line items as shown in Table 6.



**Table 6. Comparison of Line Item Costs**

Description of Work	Cost per Square Foot	
	Family Housing Contract	Painting Contract
2 coats of exterior paint	KRW378	KRW176
Scaffolding	2,106	113
Surface preparation	101	34

DPW personnel stated that they had not considered using the IDIQ painting contract because it was much easier to use the Family Housing Contract for all related work on family housing units. However, exterior painting does not have to be done only during the short time a housing unit is vacant. The savings could have been even larger if some of the square footage of surface preparation included in the DOs was not needed.

### Interior Painting

DPW used the Family Housing Contract to paint the interior of 115 units at a cost of \$425,242. If DPW had used the painting IDIQ contract to paint those units, the estimated cost would have been as low as \$161,743, for a total cost reduction of \$263,499 (a 62-percent reduction). DPW personnel stated that they did not consider using the painting contractor because of the logistical problems from having two contractors in a family housing unit at the same time performing painting, routine repair, turnover maintenance, and cleaning. We agree that the logistical problems would be difficult to deal with because of the need to move a new occupant in quickly, and that use of an additional contractor may not be practical in many instances. However, the significance of the potential cost reduction suggests that DPW should at least consider use of a less costly method of painting on occasion.

Our audit of the DOs for interior painting also showed a need for closer scrutiny of the line items used. For example, when preparing DOs for interior painting of family housing units, DPW personnel could choose from several line items in the Family Housing Contract, as shown in Table 7.

**Table 7. Contract Costs for Using Various Line Items**

Line Item	Description	Cost per Square Foot	Excess Cost From Using Generic Line Item	
			Amount	Percent
402000	Paint, oil, 2 coats	KRW391	KRW66	17
402001	Paint, latex, 2 coats	331	126	38
402003	Paint, enamel, 2 coats	350	107	31
402005	Paint, acrylic emulsion, 2 coats	366	91	25
402007 (Generic)	Paint, interior, 2 coats	457	Not applicable	

DPW personnel always used line item 402007, which cost KRW457 per square foot for painting. They explained that they used this line item because the contractor used more than one type of paint on different rooms of the housing units, and DPW had not calculated the square footage necessary for each type of paint. However, Table 7 shows that line item 402007 (a generic line item) used paint that cost from 17 to 38 percent more than paint from the other line items. DPW could have reduced the \$425,000 spent on the DOs completed during the 17 months ended February 2009 by between \$80,000 and \$110,000 by using the correct line items. A “generic” line item should not be used in future DOs unless it is cost-effective.

### **Surface Preparation for Painting**

DPW personnel also normally included from 27 percent (for interior) to 30 percent (for exterior) of the square footage to be painted as needing surface preparation, at a cost of about \$32,410. They stated that they based the percentage on experience, but did not have any documentation to support this figure. The COR told us that he did not plan to continue paying separately for normal interior surface preparation because the DPW usually repaints housing units approximately every 2 years, and any minor surface preparation should be included in the cost of painting. He also suggested that the line item for most painting should include normal surface preparation. DPW should use a separate line item for surface preparation only in extraordinary circumstances, and base such costs on some type of documentary evidence.

### ***Delivery Orders for Roofing***

DPW issued 14 DOs under the Family Housing Contract to replace roofs from FY 2008 through February 2009 at a cost of \$209,521. At the time of our audit, the contractor had completed the work for 4 of the 14 DOs. We noted the following areas where potential savings of \$16,219 may have been achieved for work completed and \$46,169 may be achieved for work not started at the time of our initial review.

- All DOs showed replacing 100 percent of the plywood sheathing under the new asphalt roofing. We do not know how much plywood needed to be replaced or was replaced for the four completed DOs. The DPW Chief of the Facility Structure Branch stated that, based on his experience, 15 to 25 percent of the plywood needs to be replaced when installing a new roof. (We recognize that some roofs may need up to 100 percent new plywood under the new shingles.) If only 25 percent of the plywood sheathing was needed, the Government obligated \$53,007 more than necessary for these DOs.
- All DOs showed separate costs for removing and replacing the plywood sheathing. The cost of removing the plywood should be included in the cost of replacing the plywood because replacing indicates that the existing plywood will be removed. As a result, the Government unnecessarily spent \$1,055 for the 4 completed DOs and obligated another \$2,631 for the remaining 10 DOs.

- DPW personnel at the Housing Division did not maintain documentation to show the basis for the square footage of the roofs to be replaced. Of the 14 DOs, 13 showed 2,600 square feet of roofing to be replaced for each housing unit. However, according to the DPW Building and Facility List, the square footage of three of the units was at least 10 percent less than that of the other units. If the roofing surface was proportional to the square footage of each unit, the DPW could have reduced the cost of these three DOs by an estimated \$5,695.

In July 2009, we informed DPW of the potential unnecessary costs for the 10 DOs issued, but not started. However, DPW did not modify the DOs to reduce potential unnecessary costs. DPW personnel informed us in October 2009 that the contractor had completed 5 of the 10 pending DOs without modification. DPW was canceling the remaining five DOs.

## Pavement Contract

DPW spent \$1.1 million on 20 DOs for contract W91QVN-07-D-0031 (Pavement Contract) for replacing or constructing pavement and related items for the 17 months ended February 2009. Our audit of the six largest DOs totaling \$1.0 million showed that DPW overpaid for work performed and that the cost charged for debris removal was questionable.

### Overpayments

DPW overpaid \$68,750 for five of the six DOs as shown in Table 8.

**Table 8. Overpayment for Pavement Contract**

DO	Total Amount Paid	Overpayment	
		Amount	Percent
1	\$325,999	None	Not applicable
2	120,597	\$31,923	26.5
14	254,854	1,253	0.5
18	87,318	13,358	15.3
19	95,074	10,252	10.8
20	118,927	11,964	10.1
<b>Total</b>	<b>\$1,002,769</b>	<b>\$68,750</b>	

We calculated the overpayments based on our measurements of the actual square footage of asphalt pavement and concrete curbs constructed. Of the estimated overpayment for DO 2, \$23,729 resulted from a modification that deleted a portion of the original area to be repaved, but did not reduce the amount of debris to be removed. When we brought this discrepancy to the attention of DPW personnel, they began action to recover the overpayment based on the error in the modified DO. However, they changed the basis of their estimates for debris removal as shown in the original DO to reduce the amount the contractor should repay.

Final inspection procedures did not include measurement of the area paved, and accordingly missed the discrepancies we discovered. DPW should establish procedures to measure areas constructed as part of its inspection to ensure the Government receives the services and material paid for. In addition, DPW should request CCK to recover overpayments of \$67,497 (\$68,750 minus \$1,253) for the four DOs that have overpayments of at least 10 percent.

### ***Debris Removal***

The cost of debris removal resulting from installing and replacing pavement and doing related construction was \$636,729, which is 63.5 percent of the total cost of the six DOs audited. The debris normally contained pavement, sub-base for the pavement (consisting of gravel), concrete curbs, and soil if new pavement was being installed. DPW estimators prepared the pavement DOs to include removal of debris based on the expected amount of pavement and associated components that needed excavation. The estimators often added approximately 35 percent to the estimated amount of debris because the debris was not as firmly packed after the contractor excavated it from the ground.

DPW paid KRW43,802 per cubic meter during 2008 for debris removal in accordance with the line item in the Pavement Contract, which was relatively high compared with amounts in other contracts. For example, the cost for disposal in the IDIQ contract established primarily for building demolition (W91QVN-06-D-6014) was KRW11,610 to KRW15,076 per cubic meter. A service contract (W91QVN-05-D-0043) used by DPW for disposal of its concrete, asphalt, tile, soil, and other construction-related debris was KRW36,210 per cubic meter. However, DPW personnel determined it was not practical to use other contractors to haul away pavement debris because of problems in coordinating the work between two contractors.

Because the cost of debris removal was so significant—63.5 percent of the total cost of the DOs audited—DPW should establish procedures to measure the debris actually removed and make appropriate adjustments when paying the contractor if the actual amount is significantly different than what is shown in the DO. One way to accomplish this would be to keep a tally of the number of dump trucks hauling away debris from the construction site. The Chief of the Roads and Grounds Branch in DPW required his personnel to keep a tally of the number of dump trucks removing debris for the disposal service contract that he administered. As a result, DPW paid the contractor based on the number of cubic meters (filled dump trucks) actually removed. In negotiating future contracts for pavement and related work, DPW should require prospective offerors to incorporate the cost of debris removal in the line item price for installing and replacing pavement and sidewalks.

### **Roofing Contract**

During the 17 months ended February 2009, DPW issued or completed 27 DOs totaling \$664,533 under contract W91QVN-07-D-0035 (Roofing Contract). However, DPW personnel did not always effectively use the Roofing Contract to obtain and document the

best value for the Government. We found about \$276,082 in questionable costs for roofing DOs, which may have been avoided, including \$12,354 in work paid for but not installed. DPW stated that the contractor has tentatively agreed to return the excess funds for the work not performed.

### ***Types of Roofing Repairs***

DPW estimators preparing the scope of work for DOs did not always use the most effective and economical method for repairing roofs. Of the 27 DOs, 12 involved repair of asphalt shingle roofs.<sup>5</sup> However, rather than reroofing buildings that had existing shingles, DPW estimators preparing the DOs required the contractor to cover the roofs for 4 of the 12 DOs with a special acrylic fluid and reinforcing fabric (manufactured by Hydro-Stop Inc.<sup>6</sup>), which cost \$37,543 (140 percent) more than completely replacing all of the plywood and asphalt shingles. For example, DPW paid \$22,598 to completely recover one roof with Hydro-Stop materials. However, if the contractor had completely replaced the existing asphalt shingles and plywood on the roof, the cost would have been only \$9,408.

According to the Chief of the Facility Structure Branch at DPW, who supervised roofing projects performed by DPW employees, reroofing with new asphalt shingles would normally last longer than using Hydro-Stop materials, which provide a temporary fix. The DPW estimator who prepared the scope of work for the DOs could not provide a valid reason for using the more expensive line items on the IDIQ contract. It appeared that the higher priced items were used to allow the contractor to make a greater profit (because the contractor had bid an unrealistically low price for installing asphalt shingles).

### ***Use of Plywood Under Asphalt Shingles***

DPW issued nine DOs to reroof buildings with new asphalt shingles. Seven of these DOs included replacing at least all of the plywood under the shingles. Three of the seven DOs included a requirement to install two layers of plywood under the shingles. DPW modified one of the three DOs to completely delete the replacement of asphalt shingles on one roof. However, the modification did not delete the requirement for plywood to be installed under the shingles. As a result, DPW paid \$7,661 for work that the contractor did not do. When we brought this error to DPW personnel's attention, they began taking action to recover the funds.

When asphalt shingles are replaced, some of the plywood under the shingles must also be replaced if it is deteriorated. We do not know the actual amount of plywood replaced because new shingles covered the plywood. However, it is probable that some of the plywood did not need to be replaced with one—much less with two—layers of plywood.

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<sup>5</sup> Some of the DOs were for repairing roofs that did not have asphalt shingles. In such cases, it may have been appropriate to use Hydro-Stop materials.

<sup>6</sup> The IDIQ contractor used a commercial product manufactured by Hydro-Stop Inc.

Physical inspection of two buildings included in DOs that required the contractor to replace existing plywood with two layers of new plywood showed the contractor did not remove the existing plywood and installed only one layer of new plywood. The contractor has tentatively agreed to return the excess funds, which originally amounted to \$4,693, for this work not performed.

Neither the personnel preparing the DOs nor the COR maintained documentation to show the amount of plywood that needed to be replaced or was replaced. The Chief of the Facilities Structure Branch stated that DPW usually replaces approximately 15 to 25 percent of the plywood when reroofing buildings with DPW personnel. DPW could have saved an additional \$7,979 if only 25 percent of the plywood needed to be replaced for the remaining DOs. DPW personnel preparing a DO do not know the extent of plywood that will require replacement, but they could modify the DO when the actual amount is significantly different from the estimate. If large amounts of plywood must be replaced, DPW personnel should require documentation to support the expenditure.

### ***Contract Line Item for “Scaffolding”***

DPW spent \$309,000 (46.5 percent) of the cost of the 27 DOs for “scaffolding” used primarily for fall protection for roofing work. The cost of the scaffolding for this contract was KRW2,050 per square foot, much higher than the IGCE of KRW1,258 per square foot in the existing General Repair Contract. The IDIQ contract for painting had a line item priced at KRW113 per square foot for scaffolding.

Government safety standards require the use of fall protection devices to ensure the safety of personnel working on roofs. However, scaffolding, which includes a platform that a worker stands on, is more elaborate than fall protection, which is more of a guard rail. Therefore, the cost to install scaffolding, shown in Figure 1, exceeds the cost to install fall protection (Figure 2). After we brought this problem to management’s attention, they were able to modify the Roofing Contract to significantly reduce the price of scaffolding and the price of fall protection (single scaffolding) to KRW1,280 per square foot and KRW551 per square foot, respectively. If the Roofing Contract had used these prices when the contract began, the Government could have reduced costs by an estimated \$208,663. We commend DPW for promptly obtaining a modification to the roofing contract. Based on review of the type of work the contractor performed for the 27 completed DOs, we estimate the Government could put funds of up to \$490,000 to better use for the remaining 3 years of this IDIQ contract.<sup>7</sup>

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<sup>7</sup> This amount is based on the maximum of \$2 million shown in the contract for the final 3 option years. The IDIQ contract did not have a minimum amount of work.

**Figure 1. Scaffolding Around a Building    Figure 2. Fall Protection for Roof Work**



### ***Use of Waterproofing***

DO 6 included a line item for applying 4,120 square feet of “water repellent coating on concrete and masonry wall” at a cost of \$11,454. However, the building mentioned in the DO did not have concrete or masonry walls. Visual inspection of the building showed that a 2-foot strip of water proofing had been installed on the metal seam between the first and second floors. The 2-foot strip was about 10 percent of the total wall square footage of the building. The COR stated (and we observed) that the contractor had repainted all of the exterior walls. The cost of painting the 4,120-square foot exterior using the IDIQ contract for painting would have been as low as \$766. Thus, the Government may have spent \$9,543 more than necessary for this work (\$11,454 minus \$766 for repainting and \$1,145 for the 10 percent of wall covered with waterproofing). The estimator or COR could have detected this problem by careful review of the work to be performed when preparing the DO or inspecting performance of the work as it occurred.

### ***Use of Government Personnel for Roofing Projects***

A new Chief of the Facility Structure Branch arrived in Korea in January 2009. After noticing that his staff, which is normally responsible for maintenance and minor repairs, could be more effectively utilized, he started using his staff for reroofing buildings. As of July 2009, the staff had completed installing new asphalt shingle roofs on 11 buildings. We commend the effective use of Government personnel rather than contractors when Government personnel are not utilized to the maximum extent or use of in-house resources costs less.

### ***Painting Contract***

For the 17 months ended February 2009, DPW expended \$392,346 for painting and related work for DOs issued or completed under contract W91QVN-06-D-6031 (Painting Contract). It appeared that the Government was usually obtaining good value for funds expended using the Painting Contract. However, we found DPW did not document the basis for the use of more expensive paints or the amount of surface preparation needed.

### ***Use of More Expensive Painting Contract Line Items Numbers***

The original contract as issued in August 2006 showed line items for painting two coats of interior or exterior latex and acrylic paints at a cost of KRW175 to KRW180 per square foot as shown in Table 9.

**Table 9. Contractual Costs for Painting**

<b>Line Item</b>	<b>Description</b>	<b>Cost per Square Foot</b>
<b>Original Contract</b>		
0001AD	Paint exterior concrete, stucco, masonry, and wood surfaces with 2 coats of MPI*-10 exterior latex paint	KRW176
†0001AE	Paint exterior metal surfaces with 2 coats of MPI*-110 exterior high- performance acrylic paint	180
0001AG	Paint interior wall and ceiling surfaces with two coats of MPI*-54 interior latex paint	175
<b>Modified Contract</b>		
†0001AT	Paint exterior metal and wooden surfaces with 2 coats of MPI*-9 alkyd paint	847
†0001AU	Paint interior metal and wood surfaces with 2 coats of MPI*-47 alkyd paint	841
0002AV	Paint wooden surface with 2 coats of varnish and stain	560

\*Master Painters Institute (MPI) provides identifying numbers for different types of paint.

†U.S.-origin paint.

The cost for applying these paints from the modified contract was three to five times as much as the paint in the original contract. However, our review of the cost of the new paints in the modified contract showed the cost of the paint itself was not significantly different.

Most of the DOs did not require the contractor to paint a large percentage of the areas with the paints specified in the contract modification. Review of 21 DOs costing at least \$5,000 each showed use of the more expensive paints on only about 7 percent of total surface. However, DPW personnel who prepared the DOs, which showed the type and quantity of paint to be used, disclosed that they did not maintain documentation to support when the contract should use the more expensive paint. We did not try to calculate the amount of potential savings had the DOs not called for the more expensive paint in the modified contract. However, the following three examples suggest possible savings existed.



- DO 51 required the entire interior of a building to be painted with interior alkyd paint (line item 0001AU, at a cost of \$15,091) instead of latex paint, which the contract priced at about one-fifth of the cost. Personnel who prepared the DO could not provide a valid reason why they used this line item for painting the entire building.
- DO 57 required the contractor to paint about 17 percent of the total square footage using exterior alkyd paint, which cost KRW847 per square foot, while the remaining exterior was painted with high-performance acrylic costing KRW180 per square foot. However, the individual who prepared the requirement for use of alkyd paint for 1,420 square feet was unable to provide a reason why he selected this paint.
- DO 30 modified DO 15 by requiring 8,000 square feet to be painted with exterior paint (line item 0001AT) at a cost of KRW847 per square foot (total cost of \$5,887). However, DO 30 did not show any additional surfaces to be painted, and did not decrease the quantity of exterior paint shown in the original DO.

DPW personnel should maintain better documentation showing why more expensive paints are used, especially when the cost is more than four times the alternative.

### ***Surface Preparation***

When preparing DOs for the Painting Contract, DPW personnel normally assumed that 100 percent of the area, regardless of the type of surface to be painted (exterior or interior), would need surface preparation, which required a separate line item, before the paint could be applied. However, DPW personnel did not have a basis for this assumption. Other DPW personnel preparing DOs for the Family Housing Contract normally use 27 percent and 30 percent for surface preparation for painting interior and exterior surfaces, respectively. DPW personnel responsible for painting done by Government personnel stated that, although the amount of surface preparation varies according to site conditions, it is usually less than 30 percent. If only 30 percent of the surfaces required surface preparation for the 21 DOs reviewed, the Government overpaid the contractor by an estimated \$21,858. In addition to surface preparation, DPW personnel added a line item for sandblasting some surfaces (which cost about 13 times the cost of normal surface preparation) in 5 of the 21 DOs that we reviewed, for a total cost of about \$12,700.

The cost of surface preparation in the Painting Contract was only KRW34 per square foot (4 to 19 percent of the cost of applying various paints). However, if DPW personnel routinely and arbitrarily require 100-percent surface preparation, costs could significantly increase when another contract is used. For example, DPW personnel continued to routinely show 100-percent surface preparation for the existing General Repair Contract (which included painting and surface preparation line items). This contract charged KRW412 per square foot for surface preparation of concrete or metal—12 times as much as the cost in the Painting Contract. DPW personnel should maintain documentation for

the amount of surface preparation needed rather than routinely assume that 100 percent of the surface needs surface preparation.

## Fencing Contract

DPW spent \$419,120 under contract W91QVN-06-D-6006 (Fencing Contract) on fence-related 19 DOs for the 17 months ended February 2009. We judgmentally selected five DOs totaling \$313,549, which showed overpayments of \$9,773 as shown in Table 10. We calculated estimated overpayments to the contractor by comparing the actual length and height of the fences with the requirements stated in the DOs. Total overpayments for the five DOs were not significant—only about a 3-percent discrepancy between contract requirements and actual performance by the contractor.

**Table 10. Overpayment for Fencing Contract**

DO	Total Amount Paid	Overpayment
2	\$179,315	\$6,699
9	48,336	2,534
21	66,127	0
26	12,556	636
31	7,215	(96)
<b>Total</b>	<b>\$313,549</b>	<b>\$9,773</b>

All DOs included documentation showing that the COR conducted final inspections. However, the final inspection did not include a measurement of the fence. DPW may have avoided discrepancies in the Fencing Contract if personnel preparing the DOs had exercised greater care in stating the requirements and if personnel inspecting the completed projects had verified that the Government received what it paid for.

## Multiple-Award Task Order Contracts

DPW had 12 MATOCs to use for facility upgrades and construction throughout Korea. During the 17 months ended February 2009, DPW carried out 58 task orders totaling \$5.6 million. We selected and audited a task order from each of seven contracts having transactions over \$100,000 for obvious discrepancies that could be seen without removing completed construction. For all seven task orders, our site verification disclosed a few minor discrepancies between work required and performed, indicating a need for more thorough site inspections. The most significant discrepancies were the following.

- A task order required replacing four concrete pads under new boilers and heaters installed. The contractor did not replace the existing concrete pads because DPW decided doing so was not necessary. However, DPW did not modify the task order to reduce the price.

- The SOW for one task order required the removal of approximately 115 square meters of concrete slab. However, measurement of the area showed that the contractor needed to remove only 68 square meters. The SOW also required 80 square meters of concrete sidewalk to be built, but the area of the finished sidewalk was only 68 square meters. In both cases, DPW overstated the requirements but did not notice the deficiencies when inspecting the work.

We did not find other deficiencies in the MATOC process except for a few indications that site inspections should be more thorough. Accordingly, we geared our audit efforts to the IDIQ contracts, which showed more systematic or repetitive control weaknesses.

## Conclusion

The problems found during the audit were not as significant as those found in other areas of Korea during prior audits of DPW operations. However, there is a continued need for vigilance to ensure the effectiveness and efficiency of operations. The audit identified areas in all of the major IDIQ contracts where the Government could have reduced costs and improved operations. As a result, DPW may have incurred as much as \$924,000 (rounded to the nearest thousand) in unnecessary costs as shown in Table 11.

**Table 11. Summary of Costs Incurred That May Have Been Avoided**

<b>Contract</b>	<b>Costs Incurred That May Have Been Avoided</b>
General Repair	\$114,228
Family Housing	433,703
Pavement	68,750
Roofing	276,082
Painting	21,858
Fencing	9,773
<b>Total</b>	<b>\$924,394</b>

Most of the potential overpayments or unnecessary costs were related to savings that could have been realized if DPW had used alternate contracts, materials, or more carefully reviewed requirements. We do not recommend efforts to recover possible shortages from the General Repair Contract because it has expired, and potential minor shortages for other IDIQ contracts were not significant relative to the total amounts of the DOs audited. However, DPW should attempt to recover \$79,851—\$67,497<sup>8</sup> in calculated shortages from the Pavement Contract and the \$12,354 from the Roofing Contract for work not performed.

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<sup>8</sup> Korean contractors are paid in Korean Won. Therefore, the amount of funds that may be recovered will be more or less than these amounts based on the exchange rate of the Korean Won when funds are recovered.

In addition, DPW should establish standard procedures and controls to ensure contract requirements are accurate, consistent, and cost-effective; conduct thorough inspections for compliance with contract requirements; and provide better documentation of contractual actions and actual work performed.

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

**B. We recommend that the Director of Public Works, U.S. Army Garrison-Yongsan:**

**1. Establish procedures, controls, and increased supervision of contracts to accomplish the following.**

**a. Ensure that the statement of work and related drawings of work required agree with the contract line item numbers for delivery orders issued.**

**b. Require complete supporting documentation for the need to issue contract modifications.**

**c. Use realistic and consistent criteria for including incidental costs such as scaffolding and surface preparation, and ensure that abnormal situations are well documented.**

**d. Require documentation for the estimated amount of plywood that needs to be installed under shingles, and modify delivery orders for significant differences between the estimate and the actual amount installed.**

**e. Use the most cost-effective method (to include use of less costly contracts for similar work) for performing required contractual tasks, when feasible and practical; and document decisions if the most economical contract or contract line items are not used.**

**f. Discontinue using the “generic” contract line item for painting in the Family Housing contract when other contract line items are less costly.**

**g. Establish procedures and controls to measure debris actually removed for contracts such as the Pavement Contract, where costs are significant. In future contracts, incorporate the cost of debris removal in the price of the contract line items for installing or replacing pavement and sidewalks.**

**h. Require personnel inspecting the completed contracts to verify that the contractor has installed the items or quantities called for in delivery orders when conducting the final inspection.**

**i. Require personnel preparing delivery orders that include surface preparation to base and document their decision on physical inspection of the site to be painted. Discontinue the practice of assuming that all areas to be painted require 100-percent surface preparation and that surface preparation requires a separate line item.**

### ***U.S. Army Installation Management Command Comments***

The Commander, U.S. Army Installation Management Command agreed and DPW will incorporate the recommendations into its standard operating procedures, strictly enforce their adherence in all operations, and continually educate its work force.

**2. Initiate actions to recover the \$67,497 in overpayments from contract W91QVN-07-D-0031 (Pavement Contract) and \$12,354 from contract W91QVN-07-D-0035 (Roofing Contract).**

### ***U.S. Army Installation Management Command Comments***

The Commander, U.S. Army Installation Management Command agreed and DPW has initiated actions to recover the \$67,497 in overpayments from the Pavement Contract. Further DPW now has established procedures requiring the COR to measure the final pavement thickness and area before final payment is made. As a result of this, DPW has also recovered an additional \$107,922 from the pavement contractor for other delivery orders. (These DOs were completed after February 2009, and were not included in the scope of our audit.) DPW also reviewed the Roofing Contract and has recovered \$13,332 from the roofing contractor.

The Commander also agreed with the estimate of \$490,000 in potential monetary benefits discussed in the report.

### ***Our Response***

The Army comments are responsive, and the proposed actions meet the intent of the recommendations.

## Finding C. Use of the Prime Vendor

DPW's heavy reliance on the prime vendor to acquire local supplies and materials did not result in the best prices. DPW procured \$3.1 million of supplies and materials from the prime vendor during the 17 months ended February 2009. A cost comparison of 64 sample items costing a total of \$1 million demonstrated that DPW could have saved up to \$347,467 if it had procured the items from other sources. DPW usually accepted the prime vendor's prices without determining whether they were reasonable because DPW thought that the prime vendor contract had been competed under the FAR and that DPW was not required to search for additional quotes. As a result, DPW did not always obtain the best value when purchasing supplies and materials.

### Purchase of Supplies and Materials

DPW used four methods to purchase supplies and materials (supplies) for construction, maintenance, and repair from FY 2007 through February 2009 as shown in Table 12.

**Table 12. Total DPW Supply Acquisition**

Source of Procurement	FY 2007	FY 2008	FY 2009 Through February	Total
Prime vendor	\$2,008,008	\$2,244,930	\$842,695	<b>\$5,095,633</b>
GPC	154,320	314,885	78,358	<b>547,563</b>
PRWeb	831,930	430,654	185,228	<b>1,447,813</b>
Standard Army Retail Supply System	193,424	355,686	101,213	<b>650,323</b>
<b>Total</b>	<b>\$3,187,682</b>	<b>\$3,346,155</b>	<b>\$1,207,494</b>	<b>\$7,741,331</b>

Source: U.S. Army Installation Management Command-Korea Region, Directorate for Resource Management

DPW did not have written criteria mandating the use of a certain method for procuring supplies. However, DPW usually used the prime vendor or GPC to purchase local items when it had an urgent need or a high priority and in many other situations. DPW used PRWeb<sup>9</sup> when purchasing local supplies through existing contracts. Use of PRWeb to purchase supplies and items normally required a contracting lead time of at least 20 days. If the items were not urgently needed, DPW sometimes used the Standard Army Retail Supply System to purchase supplies from the United States. As shown in Table 12, DPW used the prime vendor for the majority of its purchases. From FY 2007 through February 2009, DPW purchased more than \$5 million from the prime vendor, or about 66 percent of the total purchases of \$7.7 million.

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<sup>9</sup> PRWeb is a Web-based purchase request and commitment submittal system, a direct paperless acquisition channel between customers and contracting offices. PRWeb allows DPW to purchase local supplies and materials through existing agreements or normal acquisition contracts administered by CCK.

## ***Prime Vendor Program***

The Defense Logistics Agency created the Prime Vendor Program to permit various organizations to purchase items directly from one vendor without a requirement to obtain additional quotes. The goal of the Prime Vendor Program is to provide logistical support at reasonable prices to meet customer requirements when needed. The Defense Logistics Agency awarded a Maintenance, Repair, and Operations Prime Vendor Contract to Universal Sodexho in March 2005 for Korea, and DPW was using this contract at the time of our audit as its prime vendor. The scope of work under the contract includes total logistics support, maintenance, repair, and operations requirements for military installations and Federal activities in Korea.

In January 2007, the U.S. Army Installation Management Command-Korea Region, DPW's parent organization, implemented a Supply Operations Reform initiative to realign the supply and procurement functions to reduce existing inventories to a minimum and adapt a just-in-time supply concept. DPW used the prime vendor as a major source for acquiring supplies in implementing the just-in-time supply concept, reducing the amount of supplies it needed to stock in DPW warehouses. The prime vendor stocks supplies in a warehouse in Korea and provides DPW with supplies when ordered. DPW has become increasingly dependent on the prime vendor to obtain material since DPW implemented Supply Operations Reform. Purchases from the prime vendor increased from 63 percent of total supply purchases in FY 2007 to 70 percent in the first 5 months of FY 2009.

## ***Supply Acquisition Process***

Personnel in the Estimation Branch of the Business Operations and Integration Division at DPW prepare a bill of materials (BOM),<sup>10</sup> which lists all the required items to complete a particular work order. The DPW scheduler then provides the BOM to the DPW Supply and Storage Branch (Supply Branch), which reviews the BOM and checks the availability of the on-hand stock. If the item is stocked, supply personnel issue it to the DPW shop that will perform the maintenance or repair. If the item is not available, the Supply Branch determines the method of acquisition among the four methods previously discussed and purchases the item. When received, the Supply Branch issues the items to the DPW maintenance and repair shops to complete the work order.

## ***Reasonableness of Prime Vendor Prices***

DPW's use of the prime vendor did not always achieve the best price for the Government because DPW lacked effective management procedures and controls for reviewing price reasonableness. DPW purchased \$3.1 million in supplies from the prime vendor for the 17 months ended February 2009. The prime vendor procured \$2 million of these items from Korea, and procured the remaining \$1.1 million from the United States. We judgmentally selected 64 sample items with a high unit price, high total purchase cost, or high purchase frequency. Our judgmental sample of 64 line items procured locally by the

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<sup>10</sup> BOM is an aggregate total of materials needed to accomplish a single project or needed to issue materials to complete multiple service orders.

prime vendor at a total cost of \$1,002,376 showed that DPW did not achieve the best price for the Government. The prices charged by the prime vendor for the sample items ranged from 5 percent lower to 1,261 percent higher than the cost of purchasing the items from other sources. Using the quantities purchased for the sample line items selected, we estimate DPW paid 53 percent more than if it had purchased the items from other sources, for a potential savings of \$347,467.

## **Management Controls Over Prime Vendor Purchases**

A lack of effective procedures and controls for reviewing price reasonableness caused DPW to pay more than necessary for many items purchased from the prime vendor. Three major factors contributed to DPW's not obtaining the most reasonable prices for items purchased: DPW management thought the prime vendor's prices had been negotiated and that price analysis was not required; the Estimation Branch did not provide accurate estimates; and the Supply Branch did not make concerted efforts to obtain the most reasonable price.

### ***Management View***

DPW management stated that DPW used the prime vendor even if the cost was higher because of the convenience of having the supplies readily available without incurring a huge warehouse cost. Managers believed that the high premium price had been negotiated and that they should normally use the prime vendor's prices without question. DPW management stated that other acquisition methods were too complex and administratively inconvenient to use because they require more paperwork. This view contributed to the lack of effective procedures and controls to ensure that DPW acquired supplies at the best prices.

DPW management believed that the use of the just-in-time concept, which included using the prime vendor to acquire supplies quickly, would eventually save significant costs related to stocking large quantities of supplies in DPW warehouses. The brochure published by the prime vendor stated that it could provide the most efficient and timely delivery. However, the delivery time did not always meet its published standards. An internal study conducted by the Supply Branch showed that the average prime vendor delivery time for items purchased locally was 38.6 days from October 2008 through January 2009, which significantly exceeded the maximum local delivery time of 14 days stated in the prime vendor brochure.

### ***Estimation Branch: Accuracy of Cost Estimates***

The estimators at DPW did not always provide accurate cost estimates. There was no detailed standard operating procedure (SOP) describing how to make cost estimates when preparing the BOM. The estimators normally used the Supply 2000 System<sup>11</sup> (S2K) for estimating the cost of items for a BOM. The unit costs in the S2K are updated with the current acquisition cost on the receipt of the purchased item. Because the prime

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<sup>11</sup> The S2K is a Web-based supply management software that allows estimators to search for the required material in the established supply stock database.



vendor was a major supply acquisition source, a majority of prices in the system would show the prime vendor's prices rather than the fair market value.

The S2K system administrator for Korea stated that the S2K was originally set up to allow only the supply technicians to update the unit cost to maintain consistent controls. If the estimators need to correct unit cost, they must contact the Supply Branch to update the unit cost in S2K. However, the Estimation Branch chief stated that personnel rarely requested the Supply Branch to correct the cost. Estimators normally used the costs shown in S2K to prepare the estimates. Table 13 shows examples of items with BOM estimates that were significantly higher than the fair market values.

**Table 13. Examples of BOM Estimates Significantly Higher Than Fair Market Value**

Description	Job Order Number	BOM Estimate	Fair Market Value	Percent by Which BOM Estimate Exceeded Fair Market Value
Copper tube pipe 1 inch X 21 feet	AOB000118J	\$85.51	\$42.20	103
Conduit pipe ½ inch X 3.6 meters	ABC000049J	\$11.42	\$5.80	97
Portland cement 40 kilogram bag	DAN000708J	\$8.22	\$4.13	99
Air-conditioner unit, 10 ton	AOB000118J	\$5,646.75	\$3,178.38	78
Air-conditioner unit, split wall mount type	ABC000049J	\$1,561.21	\$886.00	76
Gate valve bronze, 2 inch	DAN000708J	\$64.15	\$41.97	53
Air-conditioner unit, wall mount type	AAP060598J	\$2,555.95	\$1,434.00	78
Fan coil unit	AAP030348J	\$512.86	\$284.50	80
Air-conditioner unit, split floor mount type	AAP060608J	\$1,600.92	\$789.67	103
Transformer 500 kilovolt amps	AAP120107J	\$19,117.61	\$7,334.35	161
Air-conditioner unit, 5 ton	AAP060578J	\$3,962.89	\$1,386.90	186
Pre-insulation elbow pipe, 2 inch, 90 degree	AAP030298J	\$579.23	\$193.37	200

Department of the Army Pamphlet 415-3, "Economic Analysis: Description and Methods," August 1992, defines good estimates as those for which accuracy is within about 10 percent of the actual cost. Also, the pamphlet emphasizes that cost estimates must be made with care and full knowledge of their limitations.

Army Regulation 420-18, "Facilities Engineering Materials, Equipment, and Relocatable Building Management," January 3, 1992, indicates that the BOM is an essential document for the material coordination functions. The regulation requires BOMs to be as complete as possible to facilitate supply actions and consider adequate funding prior to

submission to the supply branch. Department of the Army Pamphlet 420-06, "Directorate of Public Works Resource Management System," May 15, 1997, emphasizes the accuracy of the initial estimate because the initial estimate is all that a reimbursable customer<sup>12</sup> is willing to pay once the work is approved and funded. Establishing accurate price estimates is important, especially for reimbursable work, because DPW reimbursable customers provided a significant amount of the DPW workload. For example, during FY 2008, DPW received \$500,362 for its reimbursement work orders completed for the customers.

FAR 15.404-1 (b)(2) indicates that the Government may use various price analysis techniques and procedures to ensure a fair and reasonable price. One such technique includes comparison of proposed prices with the prices obtained through market research to come up with an IGCE. The BOM that the estimators prepared could not function as an IGCE because the BOM came from S2K unit costs that were not based on fair market values.

### ***Supply Branch: Efforts to Obtain the Best Price***

The DPW Supply Branch made little effort to acquire items from the prime vendor at the most reasonable prices. Specifically, the branch did not actively review the reasonableness of the prime vendor prices and sometimes decided to purchase despite a high premium on the prime vendor products.

An interim Supply Branch SOP indicates that all the initial quotes received from the prime vendor need to be reviewed for pricing. Also, the interim SOP requires the Chief or Deputy of the Supply Branch to approve each order before the order is placed with the prime vendor. However, there was no clear guidance on how to review the price reasonableness in the branch. The branch chief stated that he made random checks of the ordered items, but he was not able to ensure the price reasonableness of all the items purchased. The deputy branch chief stated that the branch was aware of the prime vendor's high premium, but decided to purchase from the prime vendor because it was convenient and guaranteed shorter delivery time than other acquisition methods. Table 14 shows some examples for which the price paid to the prime vendor significantly exceeded the fair market value.

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<sup>12</sup> A customer that reimburses the organization performing the work.

**Table 14. Prime Vendor Purchases That Exceeded Fair Market Value**

Description	Prime Vendor Stock No.	Purchase Quantity	Prime Vendor Price/Unit*	Fair Market Value/Unit	Percent Over
Aluminum sliding door set	909917	1	\$3,070.94	\$225.63	1,261
Metal sheet 4 feet X 8 feet	72939	439	23.15	5.28	338
Domestic hot water tank	910684	1	2,932.66	1,054.83	178
Air conditioner, 6 ton	910709	1	7,331.65	2,867.13	156
Sodium fluoride, 25 kilogram	73147	100	\$78.01	32.47	140
Aluminum sulfate, 25 kilogram	73146	2000	9.58	\$4.12	133
White latex paint, 5 gallon	906202	86	128.64	56.77	127
Light fixture 2 feet X 4 feet	72523	239	167.38	76.43	119
Copper tube pipe 1-1/2 inch X 21 feet	73913	46	141.98	70.77	101
Light fixture, 2 inches X 4 inches	74568	53	156.05	81.03	93
Electricity and magnetism, A-50	907850	2	16,352.02	8,574.00	91
Metal floor plate	74071	53	183.65	96.86	90
Pre-insulation pipe, 2 feet X 6 meters	910634	24	459.49	\$246.92	86
Air compressor, 30 ton	904699	1	13,844.47	7,467.06	85
Fan coil unit	75758	19	733.99	413.30	78

\*The unit price charged by the prime vendor was the average price charged if more than one item was purchased multiple times.

## Conclusion

This audit did not include the Prime Vendor Program, the contractor's sources of supplies for sale to DPW, or administration of the contract.<sup>13</sup> Also, we did not audit DPW's implementation of the just-in-time supply concept, which significantly reduced the amount of stock that DPW maintained. Therefore, we are not recommending that DPW discontinue using the prime vendor as a significant source of supplies. Use of the prime vendor can save time and reduce the administrative workload required by contracting personnel. However, the audit has shown that DPW could save considerable funds by seeking alternative sources for procurement. DPW should establish and enforce SOPs for the Estimation Branch and Supply Branch that ensure the Government obtains reasonable prices when purchasing supplies and material. DPW should increase the use of alternative sources of supply for high-dollar-value items or items frequently purchased when feasible and practical if significant savings will be realized.

<sup>13</sup> However, as a result of the audit we initiated an audit of the Maintenance, Repair, and Operations Prime Vendor contract in Korea [Project D2009-D000LZ-0130.000].

Future savings cannot be determined and will fluctuate based on fluctuations in the Korean Won, prices charged by the prime vendor, the availability of items through other local merchants, and DPW's ability to estimate future needs far enough in advance to use other sources of acquisition. However, the high cost of using the prime vendor for many items shows a need for continual evaluation of price reasonableness and the use of other methods of procurement, such as blanket purchase agreements<sup>14</sup> for items that are purchased frequently and expanded use of the GPC, with proper controls to ensure that the Government obtains the best value.

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

**C. We recommend that the Director of Public Works, U.S. Army Garrison-Yongsan, establish and enforce standard operating procedures for the Estimation Branch and the Supply Branch that ensure the Government obtains reasonable prices when purchasing supplies and materials. The procedures should include the following information:**

- **specific criteria for when the branches should obtain pricing from sources other than the prime vendor to determine price reasonableness;**
- **detailed instructions for the Estimation Branch to obtain and develop accurate estimates of the fair market value for supplies and materials needed in bills of materials, and notification of the Supply and Storage Branch to update incorrect unit costs in the Supply 2000 System;**
- **guidance on when and how to use sources of procurement other than the prime vendor, such as Government purchase cards and other contracting vehicles available; and**
- **a requirement to periodically evaluate the reasonableness of costs in the Supply 2000 System and to document the results.**

### ***U.S. Army Installation Management Command Comments***

The Commander, U.S. Army Installation Management Command agreed and stated that DPW has implemented the recommended changes into its supply and estimating SOPs to screen high-value and large quantity-orders, and publish a new SOP with this information by April 2010.

### ***Our Response***

The Army comments are responsive, and no further comments are required.

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<sup>14</sup> A blanket purchase agreement is a simplified method of filling anticipated repetitive needs for small quantities of supplies and services by establishing charge accounts with vendors to furnish supplies or services that might be ordered from time to time. These agreements are designed to reduce administrative costs by eliminating the need for issuing individual purchase documents.

## Finding D. Use of Government Purchase Cards

GPC cardholders did not always maintain adequate supporting documentation for purchases, ensure proper separation of duties, avoid use of third-party vendors, or obtain approval from property book officers for certain nonexpendable items. These deficiencies occurred because the cardholders were not following established guidance, and available guidance was not sufficient. If the deficiencies are corrected, the Government will have increased assurance that it is purchasing necessary items at the most economical prices.

### Audit of Government Purchase Card Purchases

Several years ago DPW reduced the use of GPCs as a major source of procurement because of widespread abuse. DPW used GPCs to purchase emergency or high-priority items. At the time of our audit, there were nine GPC cardholders within DPW, and all but one were allowed to purchase a maximum of \$8,000 per month. CCK had published an extensive SOP in August 2005 regarding the use of GPCs (CCK SOP), and DPW published supplemental instructions to the SOP.

DPW spent \$393,243 on 408 GPC purchases made by 9 cardholders during the 17 months ending February 2009, which accounted for 8.6 percent of total purchases of supplies during that period. We judgmentally selected for further review 40 purchases valued at \$69,235 that indicated potential deficiencies may exist. We found 40 deficiencies related to 33 of the 40 GPC purchases as shown in Table 15.

**Table 15. Deficiencies Found in GPC Purchases**

<b>Insufficient Documentation</b>	<b>Lack of Separation of Duties</b>	<b>Use of Third-Party Vendors</b>	<b>Property Book Officer Review and Approval</b>
13	7	10	10

### Documentation of Government Purchase Card Purchases

Although the majority of GPC purchases audited had adequate documentation, 13 GPC purchase documents did not provide detailed descriptions of the items or services purchased or how price reasonableness was determined. Examples follow.

- A cardholder purchased a waxing service valued at \$1,975, but the documents did not include any description of the waxing service or a justifiable need for the service.

- A cardholder purchased two portable latrines totaling \$2,307. However, the documentation included did not describe how price reasonableness was determined. The total cost of these items through another source was \$956.

FAR Subpart 4.8, “Government Contract Files,” states that purchase documentation must be sufficient to constitute a complete history of the acquisition transaction to support the actions taken and provide a basis for the decision.

The CCK SOP states that cardholders are required to ensure that prices paid are “fair and reasonable.” It describes various ways to document price reasonableness. Generally a fixed price in a retail store or a published catalog price can be considered as meeting the requirement for price reasonableness. Also, the purchase of items or services that are not commercial or “off-the-shelf” items requires additional documentation describing how price reasonableness was determined.

The DPW GPC supplemental guidance describes the minimum documents required for GPC purchases. However, it does not have detailed instructions and examples. Providing detailed instructions on how to describe items purchased and determining price reasonableness would provide a better basis for the GPC purchases. Without detailed written documentation as required by the FAR and the CCK SOP, there is no assurance that the price is reasonable or that the purchase meets a legitimate Government need.

### ***Separation of Duties***

The CCK SOP prohibits cardholders from requesting items that they purchase. The three fundamental steps in the GPC procurement are identification (requesting), purchase, and receipt. The GPC holder is only allowed to purchase items. The requester and receiver must be someone other than the cardholder who makes the purchase. The audit found seven purchases where the cardholders were also the requesters of the items purchased. Two examples follow.

- A cardholder purchased generator repair parts for \$1,858 and signed as the requester and receiver.
- A cardholder who purchased a fan coil unit for \$1,000 signed as the requester and receiver.

The separation of duties is a mandatory GPC control to maintain the integrity of the system and minimize the risk to the Government.

### ***Use of Third-Party Vendors***

Both the CCK SOP and the DPW GPC supplemental guidance state that cardholders should avoid the use of “middle-man contractors” or “third-person vendors” (third-party vendors) to purchase from merchants who are not able to accept the GPC. Cardholders and approving officials should actively seek regular dealers. The audit found 10 GPC purchases where cardholders purchased items from third-party vendors who acquired the items or services from the original vendor. For example, a cardholder purchased a

network distribution terminal including installation from a third-party vendor. However, the third-party vendor paid another vendor for the item and required installation. Another cardholder paid a third-party vendor for the rental of a pump truck to replace a sidewalk, but the third-party vendor rented the truck from the original vendor. The requester of the rental service stated that DPW used the third-party vendor because the vendor was able to accept the GPC and that use of that vendor saved time and effort required to find the regular service provider. Use of a third-party vendor can add to the cost of purchases because payments to such a vendor would be expected to include an extra profit margin for the vendor.

### ***Property Book Officer Review and Approval***

The CCK SOP states that property book accountability is required for nonexpendable items having a unit price of \$300 or more. Items with a unit price less than \$300 may require property book accountability if they are classified as highly pilferable or of a sensitive nature. In addition, U.S. Army Garrison-Yongsan Command Policy Letter 4-5, “GPC Program,” September 14, 2007, requires the cardholder to obtain approval from the appropriate Property Book Officer, who must verify whether the desired item is already on hand and whether the item will require accountability. The DPW supplemental instruction also includes a reminder of this requirement in its Management Control Checklist for cardholder review. The audit found 10 GPC purchases for which the cardholder did not obtain the required review and approval by the Property Book Officer. For example, one cardholder purchased a water pump for \$2,232, and another cardholder purchased a heat exchanger for \$2,803 without obtaining the required approvals.

Obtaining review and approval by the Property Book Officer is an important GPC control to prevent duplicate purchases of items already on hand and possible fraud or abuse, as well as to ensure appropriate property accountability.

### **Oversight of Government Purchase Card Purchases**

U.S. Army Garrison-Yongsan Command Policy Letter 4-5 requires its Directorate of Logistics, a subordinate unit of the U.S. Army Installation Management Command-Korea Region, to develop, publish, and implement internal GPC requirements and procedures. Also, the letter requires the Directorate of Logistics to conduct semiannual GPC inspections for organizations within the Garrison, using the checklist included in the CCK SOP. However, the GPC inspector at the Directorate of Logistics stated that the past GPC inspections did not identify the four deficiencies discussed in our report because the GPC review checklist in the CCK SOP did not specifically address these areas. Revising the checklist to specifically cover these four areas would help ensure that future GPC inspections would effectively identify deficiencies and prevent them from recurring.

### **Conclusion**

The audit identified deficiencies that need to be corrected to reinforce DPW management controls on the use of GPC. These deficiencies occurred because the cardholder and approving officer did not fully comply with the GPC SOP and its related policies and

regulations, and the inspection checklist did not cover the specific requirements. Even though the GPC accounted for only a small portion of DPW's total supply acquisitions, these deficiencies need to be corrected and prevented so that DPW can use the GPC more effectively and frequently as an alternative supply acquisition method.

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

**D.1. We recommend that the Director of Public Works, U.S. Army Garrison-Yongsan:**

**a. Revise the “Director of Public Works Government Purchase Card Standard Operating Procedures Supplemental” instruction to explain how to describe the item or service purchased and determine price reasonableness.**

**b. Re-emphasize through supplemental training or other means to both cardholders and approving officials the requirements for use and approval of purchases made with Government purchase cards and the actions to be taken if guidance is not followed.**

### ***U.S. Army Installation Management Command Comments***

The Commander, U.S. Army Installation Management Command agreed and stated that DPW will revise its supplement to the GPC SOP by April 2010.

**D.2. We recommend that the Commander, U.S. Army Contracting Command-Korea, revise the “Commander’s Quarterly Review Checklist for USFK [United States Forces Korea] GPC Program” (Attachment 10 to the Standing Operating Procedure for USFK, August 10, 2005) to include specific questions related to sufficient Government purchase card documentation, separation of duties, third-party vendors, and property book officer review and approval of required purchases.**

### ***U.S. Army Expeditionary Contracting Command Comments***

The Executive Deputy to the Commanding General, U.S. Army Materiel Command agreed in comments provided on behalf of CCK. CCK will revise the Government Purchase Card Standard Operating Procedures by March 31, 2010, to include recommended questions in the Commander Quarterly Review Check List.

### ***Our Response***

All comments are responsive, and no further comments are required.



## **Finding E. Documentation of Contractual Work Performed**

DPW did not update the real property records at the completion of contractual work. A review of 47 completed projects costing at least \$25,000 each showed that for 45 projects DPW did not prepare a DD Form 1354, "Transfer and Acceptance of Military Real Property," to enter real property-related transactions in the Integrated Facilities System. In addition, DPW did not have as-built drawings for 33 of the 47 completed projects. These deficiencies occurred because DPW did not have adequate procedures and controls to ensure that its personnel obtained, prepared, and submitted the required documentation. Additionally, IDIQ contracts needed to be clearer on the requirements for as-built drawings. As a result, real property records were not accurate, current, or complete.

### **Real Property Record Requirements**

Department of the Army Pamphlet 405-45, "Real Property Inventory Management," September 15, 2000, designated DPW to be accountable for the installation's real property. Army Regulation 735-5, "Policies and Procedures for Property Accountability," February 28, 2005, requires the real property accountable officer to maintain property records showing the changes in real property records, which include DD Forms 1354 and project drawings, which will be kept for the life of the facility.

DPW maintained real property records in the Integrated Facilities System. This is a standard Army multicommand system made up of three functional subsystems: Assets Accounting, Facility Engineering Management, and Real Property Maintenance Activities. The system records and reports an inventory of installation facilities, conditions, statistical data, and a history of maintenance and operational costs related to these facilities. Also, the system includes a database for reporting installation-level operation and maintenance requirements and actual expenditures for the operation and maintenance of Army real property. The Integrated Facilities System also generates and provides financial reports of Army real property to the Defense Property Accounting System. The DPW Real Property Branch was responsible for updating the real property records in the Integrated Facilities System.

### **Updating Real Property Records**

Review of the 47 projects, which cost at least \$25,000 each and were completed under the General Repair Contract and MATOCs from March 2008 through February 28, 2009, at a cost of \$3.3 million, showed that the DPW Real Property Branch did not have DD Forms 1354 for 45 of the 47 projects. According to the Real Property Branch Chief, the Inspection Branch should prepare a DD Form 1354 for all projects completed by contract, whether the projects involved architectural, mechanical, electrical, or civic work. Responsible CORs admitted that they did not always prepare DD Forms 1354 because doing so involved extensive paperwork, which was time consuming. Nonetheless, they stated that they provided most of the missing DD Forms 1354 to the

Real Property Branch. However, there was no audit trail available for us to verify statements from either branch.

Failure to prepare DD Form(s) 1354 also constituted noncompliance with local policy. The Commander, U.S. Army Garrison-Yongsan, issued a policy letter on March 10, 2008, prohibiting final payment on contracts until the DD Form 1354 was prepared and transferred to the real property accountable officer. However, the CORs we interviewed stated that they were not aware of this policy. Therefore, they certified the final payment without completing the required DD Form 1354. DPW should ensure that the U.S. Army Garrison-Yongsan policy is properly communicated to and followed by relevant personnel.

## **As-Built Drawings**

Of 47 projects audited, the Real Estate Branch did not have as-built drawings reflecting work performed for 33 projects. As-built drawings provide a technical and historical reference. MATOC contracts clearly stated that the contractor must provide a complete set of as-built drawings before the COR can approve final payment to be released for a project. However, DPW did not enforce the requirement.

Additionally, the Real Property Branch Chief stated that CORs should submit as-built drawings to the Real Property Branch for all completed projects. If the contractor did not make any changes to the original requirements, the contractor could use the original drawings that the Government provided to the contractor and stamp them as the as-built drawings. However, the previous General Repair Contract, for which we reviewed as-built drawings, did not have a provision requiring the contractor to submit as-built drawings. And three of the other IDIQ contracts in use during the audit had wording similar to MATOCs but were unclear on whether the contractor should provide as-built drawings when no changes were made to the original drawings. The CORs for IDIQ contracts stated that contractors often made small changes in work performed without modifying the DOs. In such cases, CORs did not always provide the Real Property Branch with as-built drawings reflecting the changes.

Without the most current drawings of real property, a DPW estimator stated that he had difficulty in coming up with accurate estimates for work needed and in determining whether the requested work should be covered by warranty. Therefore, it is imperative to have controls in place to ensure as-built drawings are prepared, identified, and maintained for completed projects.

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

**E. We recommend that the Director of Public Works, U.S. Army Garrison-Yongsan:**

**1. Establish controls to ensure that the contracting officer's representatives provide the Real Property Branch with as-built drawings before approving the final payment for contract work.**

**2. Require the Inspection Branch to prepare the DD Forms 1354 for completed contractual work, and the Real Estate Branch to promptly enter the necessary information into the Integrated Facilities System.**

**3. Request that the U.S. Army Contracting Command-Korea modify indefinite-delivery, indefinite-quantity contracts to clearly require the contractors to provide appropriate as-built drawings for all delivery orders.**

### ***U.S. Army Installation Management Command Comments***

The Commander, U.S. Installation Management Command agreed and established controls and procedures to ensure that the COR provides the Real Property Branch with required as-built drawings, and that the Inspection Branch prepares required DD Forms 1354 upon completion of contractual work. Also All IDIQ contract executed through CCK now require the contractor to submit "as-built drawings" for any modification to the existing building layout.

### ***Our Response***

The Army comments are responsive, and no further comments are required.

## Appendix A. Scope and Methodology

We conducted this performance audit from February through December 2009 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 interviewed DPW personnel including CORs, estimators, inspectors, engineers, GPC cardholders and their approving officials, and DPW managers other administrative personnel to obtain an understanding of DPW's overall operations, functional responsibilities, requirements for DOs, inspections of completed work, and internal controls. We identified regulations and other guidance relevant to our audit through Internet searches and personal contacts. We conducted preliminary tests and adjusted audit procedural steps to focus on problem areas.

We judgmentally selected samples of DOs for further review from the six IDIQ contracts that DPW used for repair, renovation, upgrades, and maintenance. We selected DOs that were issued, completed, or scheduled for completion during the 17 months ended February 2009. The following table provides additional details concerning the scope of our audit.

**Scope of Audit of IDIQ Contracts**

Contract		Universe		Sample		
Type	Number	DOs	Value (\$ millions)	DOs	Value (\$ millions)	Criteria for Selection
General Repair	DABP01-03-D-0060	169	\$2.953	31	\$1.356	DOs over \$35,000
Family Housing	W91QVN-04-D-0023	660	3.636	101	0.806	DOs associated with painting and roofing
Pavement	W91QVN-07-D-0031	20	1.106	6	1.003	The 6 largest DOs
Roofing	W91QVN-07-D-0035	27	0.665	27	0.665	All DOs
Painting	W91QVN-06-D-6031	42	0.392	21	0.333	All DOs of at least \$5,000
Fencing	W91QVN-06-D-6006	19	0.419	5	0.314	3 largest DOs plus 2 others at random
	<b>Total</b>	<b>937</b>	<b>9.171</b>	<b>191</b>	<b>4.477</b>	

We audited the DPW procurement process and DOs; examined supporting documentation for purchase request packages, which included SOWs, cost estimates, and drawings; and reviewed COR project files, which included inspection records, material submittals, and contract conflict and evaluation reports. In addition, we physically verified whether DPW had received selected supplies and services it paid for. Because the contractor had completed only limited work for the current General Repair Contract, our audit of work performed for general repairs focused on the previous General Repair Contract. Our audit of MATOCs, which totaled \$5.6 million, was limited to seven task orders, totaling \$1.4 million—one for each of the seven contractors that performed work during the audit period.

For the current General Repair Contract, we reviewed the CCK source-selection and price-evaluation process and regulatory guidance and discussed CCK procurement policies and procedures with appropriate personnel from CCK. We also compared the prices charged by the winning bidder for the first 11 DOs, issued by DPW from January through March 2009, with the prices of 8 other technically acceptable bidders that did not win the contract because their bids for the contract had a higher total price.

The DOs, prices shown in line items for the various contracts, and payments to Korean vendors were in Korean Won (KRW). When the report shows U.S. dollar payments and costs, we converted the prices and potential savings into U.S. dollars based on the budget rates shown in the specific DOs. When comparing line items charged by Korean contractors, we normally used the actual prices in Korean Won shown in the DOs.

For the prime vendor purchases, we obtained DPW's prime vendor purchase data on 3,833 local-purchase items totaling \$2 million for the 17 months ended February 2009. In selecting our sample of prime vendor purchases, we sorted the items purchased to obtain items with the highest unit price or highest total purchase amount, and items frequently purchased. We combined the results, eliminated duplicates, and created a list of 64 purchase sample items valued at \$1 million. For these sample items, we examined the BOMs and the S2K reports to determine the accuracy of the estimates.

We conducted market research to obtain the fair market values of sample items. Our market research included contacting local vendors or manufacturers; reviewing the 2008 Korean Monthly Commodity Book published by the Korean Construction Association; and soliciting expertise from DPW estimators and Supply Branch personnel. For currency conversion of local items, we used the average exchange rate for the month that DPW issued the specific orders, using exchange rate data obtained from the 175th Finance Command at United States Forces Korea. Because we judgmentally selected the 64 prime vendor samples, the results cannot be projected to the universe. However, the value of our sample, which was \$1 million, indicates that significant savings could be achieved through use of alternate vendors.

Our audit focused on construction-related (upgrade, renovation, and maintenance) contracts managed by DPW. Therefore, we did not include contracts awarded by the Far East

District of the U.S. Army Corps of Engineers for DPW because DPW's involvement in the procurement process was limited to submitting a request for delivery/task orders and attending the final inspection. The Far East District was responsible for requirements documentation, negotiation, award, and oversight of its contracts. We also did not audit service contracts.

For GPC purchases, we reviewed established controls over GPC use and examined supporting documentation for individual GPC transactions selected for audit. We obtained the 408 GPC purchase records totaling \$393,243 made by the 9 cardholders at DPW for the 17 months ended February 2009. We judgmentally selected a nonstatistical sample of 40 GPC purchases totaling \$69,235 that indicated potential deficiencies.

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

We did not assess the reliability of the computer-processed data because our use of computer-processed data was limited to selecting sample DOs to audit. DPW provided a listing of projects as completed by contracts during our audit period that was an output of an internal tracking system maintained in a Microsoft Excel spreadsheet. However, some transactions in the listing did not fall in the audit scope, and a few transactions were omitted from the listing. Accordingly, we made adjustments to the provided listing to obtain the universe from which we selected judgmental samples to audit. Because we are not projecting the results of our audit to the universe, accuracy or completeness of the listing did not affect our audit findings, conclusions, or recommendations.

## **Prior Coverage**

During the last 5 years, no audits were performed of the U.S. Army Garrison-Yongsan Directorate of Public Works. However, the U.S. Army Audit Agency completed two similar audits in other locations in Korea and also issued a Followup Audit Report for those audits. Army Audit Agency reports are not readily available over the Internet.

### **Army**

Report No. A-2009-0088-FFP, "Followup Audit of Public Works Operations in Korea," April 7, 2009

Report No. A-2006-0194-FFP, "Public Works Requirements Contracts, Area I," August 24, 2006

Report No. A-2005-0068-FFP, "Public Works Operations, Camp Casey," July 20, 2005

## Appendix B. Summary of Potential Monetary Benefits

Recommendations	Type of Benefit*	Amount of Benefit	Account(s)
A.1-A.3 and B.1	Economy and Efficiency and Internal Controls. Maximizes cost avoidance through improved award, execution, and oversight of contracts and delivery orders.	Undeterminable	Various
B.1.h and B.2	Economy and Efficiency. Recovers costs for work not performed.	\$67,497	2172020 2182020
B.1.d and B.2	Economy and Efficiency. Recovers costs for work not performed.	\$4,693	2192020
B.1.d. and B.2	Economy and Efficiency. Recovers costs for work not performed.	\$7,661	9770100.6022
B.1.c	Economy and Efficiency. Uses contract modification that significantly reduced the costs of scaffolding for the Roofing Contract.	\$490,000 <sup>†</sup>	Various
C	Economy and Efficiency. Allows alternate procurement methods if the prime vendor's costs are unreasonable.	Undeterminable	Various
<b>Total</b>		<b>\$569,851</b>	

\*Potential monetary benefits are funds put to better use or questioned costs.

<sup>†</sup>Calculation based on the maximum contract amount of \$2 million for the remaining 3 option years of contract W91QVN-07-D-0035. Cost of scaffolding was 46.5 percent prior to the contract modification (\$930,000) and 22 percent after the modification (-\$440,000):  $930,000 - 440,000 = \$490,000$ .

# U.S. Army Installation Management Command Comments



NOTED  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY INSTALLATION MANAGEMENT COMMAND  
2811 JEFFERSON DAVIS HIGHWAY  
ARLINGTON, VA 22204-2826

IMCG

MEMORANDUM FOR Office of the Inspector General, Department of Defense  
400 Army Navy Drive, Arlington, VA 22202

SUBJECT: Audit of Public Works Operations at U.S. Army Garrison- Yongsan, Korea (Project  
No. D2009-D000JB-0100 000)

1. References

a. DODIG Report, Public Works Operations at U.S. Army Garrison-Yongsan Korea,  
December 8, 2008 (enclosure 1).

b. Memorandum, IMKO-AB-KR, 29 January 2010, subject: SAB (enclosure 2).

2. I have reviewed the findings of subject report addressed to Garrison Yongsan, Korea. The  
actions taken and planned by Yongsan at end 2 address all applicable recommendations made  
by your office. In addition, I would like to emphasize a few key points as related to this audit:

a. The Yongsan Directorate of Public Works (DPW) has taken significant measures  
over the past several years to reduce risks identified in prior audits (2004-2005). The findings in  
this report confirm that the large overpayments or overstatement of requirements as identified in  
prior audits no longer exist and that the Garrison is committed to reducing any potential for  
fraud, waste and abuse.

b. Many of the findings are driven by the contracting process. Corrective measures  
require actions to be taken by both the Garrison DPW and the U.S. Army Contracting Command  
- Korea (CCK). The determination of price reasonableness as performed by the CCK, for  
example, is a critical task in ensuring fair and reasonable contract awards. We will continue to  
work with CCK in a united effort to correct these findings.

3. USAG-Yongsan will continue to ensure the most effective and efficient use of government  
resources by adopting recommendations as outlined in end 2 of this report.

4. My Internal Review POC is [REDACTED]

2 ends

RICK LYNCH  
Lieutenant General, USA  
Commanding





ARMY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
US ARMY INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, US ARMY GARRISON-YONGWON  
UNIT #1223  
APO AF 96356-8333

IMKO-AB-IR


29 January 2010

MEMORANDUM THRU Commander, Installation Management Command - Korea Region,  
ATTN: IMKO-IR [REDACTED]

FOR Commander, US Army Installation Management Command, 2511 Jefferson Davis  
Highway, Arlington, VA 22202-3926

SUBJECT: Command Reply; DoDIO draft report on Public Works Operations at U.S. Army  
Garrison-Yongwon, Korea (Project No. D2009-D000JB-0160.000)

1. This command acknowledges and appreciates the findings associated with the above audit. The Directorate of Public Works reviewed and continues to refine its internal control procedures to provide goods and services in a most reasonable, effective and efficient manner.
2. This office generally concurs with the reported facts, observations and recommendations A.1, A.3, B.1, B.2, C, D.1, and E.1-E.3, except as noted in the attached enclosure.
3. If you have any question regarding this response, [REDACTED]

  
DAVID W. HALL  
COL, FA  
Commanding

Encl 2

**Director, USAG-Yongsan Directorate of Public Works**  
**Command Reply to**  
**DRAFT DoDIG REPORT: Proj. No. D2009-D000JB-0160.000,**  
**Audit of Public Works of Operations at U.S. Army Garrison-Yongsan, Korea**

**FINDING A.** Contracting Requirements and Procedures for Indefinite Delivery, Indefinite-Quantity Contracts (IDIQ)

**SUMMARY:** Requirements estimates that DPW established for IQID contracts solicitations were not reasonable or supported. DPW did not have a sound basis for estimating the quantity of contract line items or requiring U.S.-Origin material. Additionally, price analysis that CCK conducted for contract award was not adequate. As a result, the Government was not obtaining the best value for its contracting efforts, as demonstrated by the current IDIQ contract for repair and upgrade of general buildings, which cost DPW about \$219,192 (41 percent) more than the second lowest offer for the first 11 Dos issued from January through March 2009.

**RECOMMENDATIONS AND COMMAND COMMENTS**

**Recommendation A.1.** We recommend the Commander, U.S. Army Contracting Command-Korea, and the Directorate of Public Works, U.S. Army Garrison-Yongsan;

- a. Not exercise the option to renew the current General Repair Contract (W91QVN-09-D-0004).
- b. Work together on market research, reviewing similar contract line items on other contracts and on prior contracts to evaluate price reasonableness for new, indefinite-delivery, indefinite-quantity contracts.

**Command Comments and Action taken:** Concur. USAG-Y DPW will prepare a new General Repair IDIQ Contract for award of new contract is anticipated to be June or July 2010.

**Recommendation A.3.** We recommend that the Director of Public Works, U.S. Army Garrison-Yongsan, carefully review contract line items and the estimated quantities of each item in proposed indefinite-delivery, indefinite-quantity contracts, delete line items not expected to be used, and maintain supporting documentation for both the estimated quantities of line items and the necessity for U.S.-origin materials to be included in such contracts.

**Command Comments and Action taken:** Concur. DPW will reduce the number of contract line items in the new solicitation. DPW will maintain supporting documentation for both the estimated quantities of line items and the necessity for U.S.-origin materials in future IDIQ contract preparation files. DPW has already implemented this recommendation for recent contract modifications to 411th CSD (CCK) and will implement for all future contract actions.

**FINDING B** Execution of Contracts

**SUMMARY:** DPW could perform its mission of maintenance, repair, and construction more effectively and efficiently by making improvements in establishing contract requirements, oversight and use of contract, and documentation and inspection of contractual performance. As a result of the deficiencies found, identified cost reduction of up to \$924,000 that may have been achieved.

**RECOMMENDATIONS AND COMMAND COMMENTS**

**Recommendation B.** We recommend that the Director of Public Works, U.S. Army Garrison-Yongsan accomplish the following:

1. Establish procedures, controls, and increased supervision of contracts to accomplish the following.
  - a. Ensure that the statement of work and related drawings of work required agree with the contract line item numbers for delivery order issued.
  - b. Require complete supporting documentation for the need to issue contract modifications.
  - c. Use realistic and consistent criteria for including incidental costs such as scaffolding and surface preparation, and ensure that abnormal situations are well documented.
  - d. Require documentation for the estimated amount of plywood that needs to be installed under shingles, and modify delivery orders for significant differences between the estimate and the actual amount installed.
  - e. Use the most cost-effective method (to include use of less costly contracts for similar work) for performing required contractual tasks, when feasible and practical; and document decisions if the most economical contract or contract line items are not used.
  - f. Discontinue using the "generic" contract line item for painting in the Family Housing contract when other contract line items are less costly.
  - g. Establish procedures and controls to measure debris actually removed for contracts such as the Pavement Contract, where costs are significant. In future contracts incorporate the cost of debris removal in the price of the contract line items for installing or replacing pavement and sidewalks.
  - h. Require personnel inspecting the completed contracts to verify that the contractor has installed the items or quantities called for in delivery orders when conducting the final inspection.

- i. Require personnel preparing delivery orders that include surface preparation to base and document their decision on physical inspection of the site to be painted. Discontinue the practice of assuming that 100 percent of areas to be painted require a separate line item for surface preparation.

Command Comments and Action Taken: Concur. USAG-Y DPW will implement the recommendations into its standard operating procedures and strictly enforce their adherence in our day-to-day operations with continual workforce education.

Potential Monetary Benefits: DPW spent \$309,000 (46.5 percent) of the cost of the 27 Dos for "scaffolding" used primarily for full protection for roofing work. However, scaffolding, which includes a platform that a worker stand on, is more elaborate than full protection, which is more of a guard rail. Therefore, the cost to install scaffolding exceeds the cost to install full protection.

Based on review of the type of work the contractor performed for 27 completed Dos, we estimate the Government could put funds of up to \$490,000 to better use for the remaining 3 years of this DQ contract (based on the maximum of \$2 million in the contract).

Command Comments and Action Taken: Concur. DPW promptly obtained modification to the roofing contract and concurs with the estimate of future benefits. However, the actual amount will not be known until the end of the 3 year option.

2. Initiate actions to recover the \$67,497 in overpayments from contract W91QVN-07-D-0031 (Pavement Contract) and \$12,354 from contract W91QVN-07-D-0035 (Roofing Contract).

Command Comments and Action Taken: Concur. DPW initiated actions to recover the identified overpayments, at a total of \$67,497. DPW re-measured each pavement delivery order and deducted the differing amount between the estimate and the actual placement. The COR had used the design measurements listed in the delivery order by the estimator and had not measured the final paved areas himself. We have since changed this procedure and the COR now measures the final pavement thickness and area before the final payment is made. As a result, DPW has recovered an additional \$107,922 from the pavement contractor from other delivery orders. DPW also relooked the roofing contract delivery orders and has recovered \$13,332.48 from the roofing contractor.

#### FINDING C: Use of the Prime Vendor

SUMMARY: DPW's heavy reliance on the prime vendor to acquire local supplies and material did not result in the best prices. DPW procured \$3.1 million of supplies and materials from the prime vendor during the 17 months ended February 2009. A cost comparison of 64 sample items costing a total of \$1 million demonstrated that DPW could have saved up to \$347,467 if it had procured the items from other sources. DPW usually accepted the prime vendor's prices without determining whether they were reasonable because DPW thought that the prime vendor contract

had been competed under the FAR and that DPW was not required to search for additional quotes. As a result, DPW did not always obtain the best value when purchasing supplies and materials.

ADDITIONAL FACTS: In a DoD IG statement reference the upcoming Prime Vendor Audit, they state, "DLA (through the Defense Supply Center Philadelphia [DSCP]) negotiated type of IDIQ contract with a commercial firm, as part of the "Maintenance, Repair, and Operations (MRO) Prime Vendor Program. Customers can order directly from the Prime Vendor without obtaining additional quotes from other sources."

#### RECOMMENDATIONS AND COMMAND COMMENTS

Recommendation C: We recommend that the Director of Public Works, U.S. Garrison-Youngs, establish and enforce standard operating procedures for the Estimation Branch and the Supply Branch that ensures the Government obtains reasonable prices when purchasing supplies and materials. The procedures should include the following information:

- specific criteria for when the branches should obtain pricing from sources other than the prime vendor to determine price reasonableness;
- detailed instructions for the Estimation Branch to obtain and develop accurate estimates of the fair market value for supplies and materials needed in bills of material, and notification of the Supply and Storage Branch to update incorrect unit costs in the Supply 2000 System;
- guidance on when and how to use sources of procurement other than the prime vendor, such as Government purchase cards and other contracting vehicles available; and
- a requirement to periodically evaluate the reasonableness of costs in the Supply 2000 System and to document the results.

Command Comments and Action Taken: Concur. Implemented recommended changes into supply and estimating standard operating procedures to screen high values and large quantity orders. Supply and Estimation SOPs will be published NLT 1 April 2010.

#### FINDING D: Use of the Government Purchase Cards

SUMMARY: GPC cardholders did not always maintain adequate supporting documentation for purchase, ensure proper separation of duties, avoid use third-party vendors, or obtain approval from property book officers for certain nonexpendable items. These deficiencies occurred because the cardholders were not following established guidance and available guidance was not sufficient. If the deficiencies are corrected, the Government will have increased assurance that it is purchasing necessary items at the most economical prices.

#### RECOMMENDATIONS AND COMMAND COMMENTS

Recommendation D: We recommend that the Director of Public Works, U.S. Garrison-Youngs:

- a. Revise the "Directorate of Public Works Government Purchase Card Standard Operating Procedures Supplemental" instruction to explain how to describe the item or service purchased and determine price reasonableness.
- b. Re-emphasize through supplemental training or other means to both cardholders and approving officials the requirements for use and approval of purchases made with Government purchase cards and the actions to be taken if guidance is not followed.

Command Comments and Action Taken: Concur. USAID-Y DPW will revise SOP Supplemental and hold supplemental training NLT 1 April 2010.

FINDING E: Documentation of Contractual Work Performed.

SUMMARY: DPW did not update the real property records at the completion of contractual work. A review of 47 completed projects costing at least \$25,000 each showed that for 45 projects DPW did not prepare DD Form(s) 1354 (Transfer and Acceptance of Military Real Property) to enter real property-related transaction in the Integrated Facilities System. In addition, DPW did not have as-built drawings for 33 of the 47 completed projects. These deficiencies occurred because DPW did not have adequate procedures and controls to ensure that its personnel obtained, prepared, and submitted the required documentation. Additionally, IDIQ contracts needed to be clearer on the requirements for as-built drawings. As a result, real property records were not accurate, current or complete.

RECOMMENDATIONS AND COMMAND COMMENTS

Recommendation E: We recommend that the Director of Public Works, U.S. Garrison-Yungsan:

1. Establish controls to ensure that the contracting officer's representatives provide the Real Property Branch with as-built drawings before approving the final payment for contract work.

Command Comments and Action Taken: Concur. Established controls and procedures to ensure that COR provide the Real Property Branch with as-built drawings of contract work on 1 December 2009.

2. Establish controls to require that the Inspection Branch to prepare the DD Form(s) 1354 as required for completed contractual work.

Command Comments and Action Taken: Concur. Established controls and procedures as directed between Construction Inspectors/COR and Real Property Branch to ensure DD Form(s) 1354 are prepared prior to final payment.

3. Request the U.S. Army Contract Command-Korea to modify indefinite-delivery, indefinite-quantity contracts to clearly require the contractors to provide appropriate as-built drawing for all delivery orders.

Command Comments and Action Taken: Concur. All IDIQ contracts through 411th CSB already require the contractor to submit "as-built drawings" for any modification to the existing bldg layout.

# U.S. Army Expeditionary Contracting Command Comments



REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND  
9301 CHAPEK ROAD  
FORT BELVOIR, VA 22060-5527


AMCIR

MEMORANDUM FOR DODIG, ATTN: Mr. Donald A. Bloomer, Room 737, 400 Army Navy Drive, Arlington, VA 22202-4704

SUBJECT: Command Reply to DoDIG Draft Report: Public Works Operations at U.S. Army Garrison- Yongsan, Korea (Project No. D2009-D000JB-0160.000) (D0928).

1. Referenced Memorandum, DoDIG, 8 December 2009, SAB.
2. The U.S. Army Materiel Command (AMC) has reviewed the subject draft report and endorses the U.S. Expeditionary Contracting Command, Army Contracting Command's response to subject report.
3. The AMC point of contact is [REDACTED]

Encl

  
TERESA W. GERTON  
Executive Deputy to the  
Commanding General





DEPARTMENT OF THE ARMY  
HEADQUARTERS, U.S. ARMY EXPEDITIONARY CONTRACTING COMMAND  
9301 CHAPEK ROAD  
FORT BELVOIR, VA 22060-5527

REPLY TO  
ATTENTION OF

JAN 13 2010

CCBC-CG

MEMORANDUM THRU [REDACTED] Executive Director, U.S. Army Contracting  
Command, 9301 Chapek Road, Fort Belvoir, VA 22060

FOR [REDACTED], Acting Executive Deputy to the Commanding General, U.S. Army  
Material Command, 9301 Chapek Road, Fort Belvoir, VA 22060

SUBJECT: Report on Public Works Operations at U.S. Army Garrison-Yongsan, Korea,  
Project D2009-D0000B-016.000.

1. The U.S. Army Expeditionary Contracting Command (ECC) has reviewed the subject draft  
report and concurs with the reported facts, conclusions, and 411<sup>th</sup> Contracting Support Brigade  
comments. Specific comments are enclosed.

2. The ECC point of contact is [REDACTED]

2 Encls

1. Summary of 411<sup>th</sup> CSB's  
Command Response
2. Draft of a Proposed Report

JOSEPH L. BASS  
Brigadier General, USA  
Commanding

**COMMAND REPLY**  
**Department of the Army**  
**Headquarters, U.S. Army Expeditionary Contracting Command**  
**Project No. D2009-DM00JB-016.000**  
**Public Works Operations at U.S. Army Garrison-Yongsan, Korea**

**Additional Facts:** The 411<sup>th</sup> Contracting Support Brigade (CSB) began working with the Area II DPW in November 2009 to resolve the various issues surrounding unbalanced pricing and inadequate government estimates. Both organizations concluded that one of the best courses of action is to find alternative contract vehicles to meet the need of general building repair requirements that normally involve small dollar projects. Currently, there is a Multiple Award Task Order Contract (MATOC) for construction projects that can meet the needs of a general building repair project(s), therefore our intent is not to exercise the option on General Building Repair contracts.

**Recommendations**

**Recommendation A.1:** *"We recommend that the Commander, U.S. Army Contracting Command-Korea, and the Director of Public Works, U.S. Army Garrison -Yongsan:*

- a. Not exercise the option to renew the current General Repair Contract.*
- b. Work together on market research, reviewing similar contract line items on other contracts and on prior contracts to evaluate price reasonableness for new, indefinite delivery, indefinite-quantity contracts."*

**Command Comments.**

A.1 a. 411<sup>th</sup> CSB concurs and will not exercise the option period for W91QVN-09-D-0004.

A.1 b. 411<sup>th</sup> CSB partially concurs because the recommendation is only one tool that can be used in determining price reasonableness. Not all similar General Building Repair requirements would incur the same or similar costs and other factors (e.g. period of performance; adequate competition; geographic location of performance, etc) need to be considered.

**Recommendation A.2:** *"We recommend that the Commander, U.S. Army Contracting Command-Korea:*

- a. Evaluate the reasonableness of prices for specific contract line items when awarding new, indefinite delivery, indefinite-quantity contracts rather than awarding contracts based on the total price.*
- b. State in future contract solicitations that significant unbalanced pricing for individual contract line items may cause the offers to be rejected.*
- c. Obtain a new General Repair indefinite-delivery, indefinite-quantity contract using the most effective procedures to ensure prices are balanced and reasonable."*

**Command Comments.**

A.2-a. 411th CSB partially agrees. The contracting officer must consider the total contract price in determining a fair and reasonable price; however in this ~~instance~~ case we concur that a price evaluation of all sub-CLINS should have occurred to determine the existence of unbalanced pricing and the extent that unbalanced pricing impacts contract performance. Lastly, the 411<sup>th</sup> CSB now has a Cost and Price Analyst in the Compliance, Policy, and Oversight (CP&O) branch and have instructed the contracting officers to use the analyst to evaluate pricing of CLINS and sub-CLINS.

A.2-b. Concur and have incorporated such language.

A.3-c. Currently, there is a Multiple Award Task Order Contract (MATOC) for construction projects that can meet the needs of a general building repair project(s), therefore our intent is not to exercise the option on General Building Repair contracts.

**Recommendation D.2:** *"We recommend that the Commander, U.S. Army Contracting Command-Korea revise the "Commander's Quarterly Review Checklist for USFK [United States Forces Korea] GPC Program" (Attachment 10 to the Standing Operating Procedure for USFK, August 10, 2005) to include specific questions related to sufficient Government purchase card documentation, separation of duties, third-party vendors, and property book officer review and approval of required purchases."*

**Command Comments.** NLT 31 March 2010, the 411<sup>th</sup> CSB will add as recommended the specific questions to the new Commander Quarterly Review Checklist in our revision of the GPC SOP. The issues addressed in the audit report are already addressed in the FMR, Army Regulation, and 411th CSB-K Physical Audit checklist. Further, AR 715-XX and the current 411th CSB-K Brief discuss the above mentioned concerns in detail. Specifically Question 9 - Section 1 Purchase Card Administration in our Physical Audit addresses the GPC documentation concern as does Financial Management Regulation (FMR) Volume 10 Chapter 10, Question 7 Section 3 Management Oversight addresses the separation of duties concern, Question 8 Section 2 - Purchase & Practices address the 3rd Party Vendor Concern, and Question 2 & 10 Section 2 Purchase & Practices address the PRO concern.





# Inspector General Department of Defense

