OFFICE OF INSPECTOR GENERAL
City of Chicago

Joseph M. Ferguson
Inspector General

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REPORT OF INSPECTOR GENERAL'S INVESTIGATION

To: Rosemarie S. Andolino
Commissioner, Chicago Department of Aviation

From: Joseph M. Ferguson
Inspector General

RE:: I.G. Case # 09-1351

Date: April 26, 2012

Following an investigation, the Inspector General's Office (IGO) identified lapses in the contract process underlying the Chicago Department of Aviation's (CDA) construction of a sidewalk at O'Hare International Airport between Higgins Road and the Aviation Administration Building on Patton Road between January and April 2007. These lapses, similar to those identified in IG Case No. 07-0893 involving the construction of an employee break area around the same time, likewise resulted in the expenditure of substantially more funds than were reasonably warranted. In CDA's September 1, 2010 response to IG Case No. 07-0893, CDA acknowledged deficiencies in the contracting process and set forth new protocols that re-enforced contract review and approval authority at the executive-level which, going forward, should have increased the likelihood that contract improprieties would be discovered and addressed. Given CDA's recent steps to improving the construction contract process, and the fact that many of the primary decision makers associated with the Patton Road project are no longer with the City, the IGO does not make any recommendation for disciplinary action.

Rather, the IGO calls on CDA to assess the effectiveness of these new initiatives, and identify any potential concerns arising after using them for more than 18 months. In doing so, we ask that the CDA provide the following information:

- CDA's current procurement and contract management policies, procedures, and approval mechanisms in place to ensure that all expenditures and use of CDA contracts are cost effective, legitimate and appropriate. Note any changes made in response to IG Case No. 07-0893;
- Any and all instances of variation from those policies, procedures, and approval mechanisms since September 1, 2010;

- Designation of those individuals currently responsible for CDA procurements and contracts and a description of their responsibilities;
- Agendas and minutes from the CDA Capital Improvement Program "roundtable" meetings; and
- Any additional information regarding CDA contracting that CDA believes is relevant to the public report.

This Report does not reveal the identities of any specific individuals involved in this investigation either as subjects or witnesses and provides only that level of detail deemed necessary to inform ongoing concerns. Similarly, this Report is not intended and should not be construed as a finding of misconduct against any individual or contractor.

The IGO intends to issue this as a public report, and we will include a copy of the CDA's response if received prior to May 10, 2012. The IGO contact for this investigation is Deputy Inspector General Theodor J. Hengesbach, who can be reached at 773-478-0071 or thengesbach@chicagoinspectorgeneral.org if you have any questions or would like to discuss this matter.

SUMMARY REPORT
Inspector General's Office Case # 09-1351
April 26, 2012

This report provides a summary and analysis of the evidence obtained during an IGO investigation. Relevant documents have been appended to this report.

I. INTRODUCTION

The IGO has concluded an investigation that uncovered lapses in the contract process underlying the Chicago Department of Aviation's (CDA) construction of a sidewalk at O'Hare International Airport (O'Hare) between Higgins Road and the Aviation Administration Building (AAB) on Patton Road between January and April 2007.[1] These lapses, similar to those identified in IG Case No. 07-0893 involving the construction of an employee break area around the same time, likewise resulted in the expenditure of substantially more funds than were reasonably warranted.

On September 1, 2010, in response to the IGO summary report in IG Case No. 07-0893, CDA provided an outline of improved contract protocols for construction projects. Among the new reforms, CDA described a "roundtable" process during which Capital Improvement Program (CIP) projects would be discussed by all interested employees on a weekly basis. Interested parties were to include CDA employees, Department of Procurement Services (DPS) employees, Law Department personnel and CDA's project manager/construction manager for CIP projects. In addition, CDA's General Counsel was tasked with managing the CDA Contracts Division, which conducts regular meetings with Law and DPS, as well as with all "users" of contracts to discuss all pending contract and procurement issues and concerns. Finally, CDA indicated that the Commissioner would hold regular meetings with senior and executive staff to discuss the necessity and propriety of all construction projects and issues affecting CDA.

This Report does not recommend any disciplinary action for City employees or contractors.[2] Instead, the IGO intends to issue this Report publicly and requests that CDA provide information about its contract oversight process which will prevent such lapses in the future and ensure that projects are undertaken and completed as efficiently and economically as possible. Therefore, included in its response, the CDA is requested to provide the following information:

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[1] On April 22, 2009, the City Council approved the appointment of Rosemarie Andolino as Commissioner of a department created by the merging of the Department of Aviation and the O'Hare Modernization Program, and began a process of consolidation to form the Chicago Department of Aviation (CDA). Although the events relevant to this case took place prior to the merging of these two departments, this report refers to the department carrying out the functions of the City's aviation program as CDA.

[2] References to City contractors and contracts in this Report are made for the purposes of providing context to the reader and should not be interpreted as implying improper conduct.

- CDA's current procurement and contract management policies, procedures, and approval mechanisms in place to ensure that all expenditures and use of CDA contracts are cost effective, legitimate and appropriate. Note any changes made in response to IG Case No. 07-0893;
- Any and all instances of variation from those policies, procedures, and approval mechanisms since September 1, 2010;
- Designation of those individuals currently responsible for CDA procurements and contracts and a description of their responsibilities;
- Agendas and minutes from the CDA Capital Improvement Program "roundtable" meetings; and
- Any additional information regarding CDA contracting that CDA believes is relevant to the public report.

II. SUMMARY OF INVESTIGATION

A. Documents

1. PO 11382 – Chicago Department of Aviation Contract for Airside Concrete Maintenance

On March 8, 2006, following a competitive bidding process, the City awarded Rossi Contractors, Inc. a contract to provide "Airside Concrete Maintenance on Ramps and Roads, Repair and Replace Panels, Sidewalk, Curb and Gutter at Chicago Airport System," Specification No. 36308, Purchase Order No. 11382. With an original award amount of up to $96,232,800.00 and a modified end date of February 29, 2012, the scope of the contract directs that, "The Contractor will furnish labor, materials, and barricades for partial and full-depth removal and replacement of broken concrete pavements, related appurtenant items and/or base materials on ramps, taxiways, runways, and roads where directed at Chicago O'Hare and Midway International Airports ..."[3] The contract specifications provide detailed line items regarding materials, construction procedures, methods of measurement, and formulations for payment. Rossi's line item prices, as well as the City's estimated line item quantities and usage, are also detailed.

The contract additionally provides that, "All work under this Contract is at the Airside in restricted areas at O'Hare and Midway International Airports."[4] PO 11382 defines the term "airside" as referring to "those areas of an airport that are beyond the Terminals, buildings, and gates where aircraft operate. Access to Airside requires a person/vehicle to pass through a security checkpoint. The Airside is also known as Aircraft Operations Area (AOA)."[5]

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[3] PO 11382 at Paragraph 14.1 (Scope).

[4] PO 11382 at Paragraph 3.8. *See also* PO 11382 Section 3.31(C)(15) (stating "all the work under this contract is in restricted areas).

[5] PO 11382 at Definitions (Section 1).

(a) All Purpose Requisition Form (APRF) No. 59469[6]

By contract, all CDA construction projects require an approved and completed APRF form prior to beginning any work by the CDA contractor. An APRF is electronically generated in CDA's Finance Management System (FMS) and is circulated for approval through the appropriate sections within CDA.[7] After all approvals are received, a notice to proceed is generated and submitted to the contractor. An invoice from the vendor is submitted by the contractor after the work is completed, which initiates the payment process.

In this case, APRF No. 59469, dated January 22, 2007, details six line items to be executed for the installation of a sidewalk, curb, and gutter along Patton Road from Higgins Road to the AAB at a total cost of $191,860.00.[8] The project's stated purpose was to "provide a sidewalk to employees to walk from the Higgins Road bus stop to the [AAB]", as well as "provide positive drainage along Patton Road." Four senior-level CDA employees are listed as responsible for reviewing and approving various aspects of the APRF. After completion of the project, Rossi submitted a final invoice (No. 339046), dated April 23, 2007, listing $191,830.00 as the cost of the completed Patton Road sidewalk project.[9]

2. PO 11587 – Department of Transportation Contract for Residential Concrete and Miscellaneous Asphalt Work

On April 12, 2006, the City awarded Seven-D Construction Co. (Seven-D) a contract for residential concrete and miscellaneous asphalt work in a portion of the City designated as Area 1. The contract describes Area 1 as encompassing Wards 45 and 41, the latter containing the grounds of O'Hare International Airport. With an original award amount of up to $6,455,920.15 and a modified end date of December 31, 2009, the scope of the contract contemplates the construction, removal or repair of sidewalks within the awarded area.[10] Like Rossi's contract for airside concrete maintenance, the contract specifications for PO 11587 provide detailed line items regarding materials, construction procedures, methods of measurement, and formulations for payment. Seven-D's line item prices, as well as the City's estimated line item quantities and usage, are also detailed.

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[6] A copy of APRF No. 59469 is available in Appendix A.

[7] In this case, the appropriate sections included Contract Review, Finance, and Facilities.

[8] There appears to be a discrepancy between the Term Line numbers listed in APRF No. 59469 and the corresponding Term Line numbers listed in PO 11382. This discrepancy appears to be merely a clerical error, as the Item Descriptions, Unit Prices, and Units of Measure listed in APRF No. 59469 properly correspond with the Item Descriptions, Unit Prices, and Units of Measure listed in PO 11382.

[9] Although the initial cost estimate in APRF No. 59469 and final project cost listed in Rossi Invoice No. 339046 differ by only $30.00, a number of the line item quantities differ significantly between APRF No. 59469 and Rossi Invoice No. 339046. These variations are addressed in Appendices C and D. A copy of Rossi Invoice No. 59469 is available in Appendix B.

[10] Award amount was later modified, raising the upper limit of the contract an additional $5 million.

3. PO 7119 – Department of Aviation Job Order Contract (JOC) for Renovation of Airport Facilities

JOC is a contracting method in which repair and construction tasks are awarded based on fixed prices listed in a Construction Task Catalog (CTC) developed by the City. Under a competitive bidding system, vendors submit a set of adjustment factors to be applied against the fixed prices listed in the CTC. The JOC effectively acts as a master agreement and, after award, job orders may be issued by the City for individual projects, which provides an efficient means for the City to keep general (or trade) contractors on call.[11] At the time of bidding, the amount of work or projects to be awarded in the JOC is indefinite. The JOC is for a fixed term and has a potential maximum dollar value.

On January 27, 2005, the City awarded Meccor Industries, Ltd. a JOC for the renovation of airport facilities. With an original award amount of up to $18,000,000.00 and a modified end date of February 6, 2008, the initial Request for Qualifications (RFQ), which is incorporated into PO 7119, states, "[A JOC] is awarded to a Contractor for the accomplishment of repair, alteration, modernization, rehabilitation, construction, etc., of infrastructure, buildings, structures, or other real property."[12]

B. Interviews

1. Department of Procurement Services (DPS) Senior Level Employees

In the course of this investigation, the IGO interviewed two senior level DPS employees familiar with the construction procurement process. Both employees independently opined that a landside construction project such as the Patton Road sidewalk construction could have been built using the existing CDOT residential concrete contract.

One of the employees explained that airside concrete projects are typically more expensive than landside projects due to various factors such as higher insurance costs attributable to the greater risks associated with working on the airside and logistics related to accessibility, security, motor truck driver escorts, and limited working hours. The employee speculated that the Patton Road sidewalk concrete work could have been performed for approximately half of the cost had a landside contract been utilized instead of the airside contract. Even if the landside contract were not available, the employee noted that a JOC contract was another reasonable option available to CDA, provided that a JOC contract was in place during the relevant time period.

2. Chicago Department of Transportation (CDOT) Official

A senior-level CDOT employee with concrete contract oversight responsibilities confirmed that construction of the Patton Road sidewalk would have been permissible under the

[11] *See* September 2009 Gordian Group Job Order Contracting Program Presentation. *See also* PO 7119 – Advertisement for Bids, Specification No. 23505, RFQ No. 1122.

[12] PO 7119 – Advertisement for Bids, Specification No. 23505, RFQ No. 1122

scope of work listed in PO 11587. Although the title of the contract appears limited to only residential projects, CDOT interprets the term "Residential Concrete" broadly. The employee saw nothing in the scope of the contract that would have prevented the project from being carried out by Seven-D. CDA would have to ask that the work be performed, as well as provide financing for the project.

The employee provided the IGO estimates suggesting that CDA significantly overpaid for Rossi to carry out a project that should have been relatively inexpensive. The employee's initial estimate based on PO 11587 was $89,457.50 (approximately 53% less than what CDA paid Rossi). The employee also provided a second estimate of $116,600.00 (almost 40% less than what CDA paid Rossi). The difference between the two estimates is because the employee was uncertain whether or not the Patton Road sidewalk project called for a standard or "modified curb." Therefore, in the interest of prudence, the employee generated the second estimate to incorporate costs relative to the more expensive modified curb. The employee's presumption, however, was that APRF No. 59469 (and corresponding line items in PO 11382) did not call for a modified curb, suggesting that the employee's initial estimate may be the most accurate.[13]

3. The Gordian Group, Inc.

At the request of the IGO, a project manager with The Gordian Group, Inc.[14] generated estimates for the construction of the Patton Road sidewalk based on CDA JOC contract referenced as PO 7119, which was in effect between January and April 2007, during the same period that APRF No. 59469 was issued.

Using PO 7119, the project manager produced six separate estimates. Two estimates were generated using the line items and quantities listed in APRF No. 59469. Two estimates were generated based on Rossi's final invoice (No. 339046) for the project.[15] Two final estimates were generated based the project manager's personally calculated quantities and measurements of the completed sidewalk project on Patton Road.

Under the most conservative of circumstances, the project manager's estimate based on PO 7119 is $49,861.82 less than the amount listed in APRF No. 59469; a difference of almost 26%. More realistically, however, the project manager's estimates are between $88,450.82 and $55,520.65 less than the amount listed in APRF No. 59469; a difference of ranging from approximately 29% to 46%.

[13] A more complete summary of the estimates provided by the CDOT employee is available in Appendix C.

[14] Since 1993, The Gordian Group, Inc., a third party provider of services, software and documents necessary to implement and support JOC programs, has been contracted by the City to assist DPS in the administration of the City's JOC program.

[15] After reviewing APRF No. 59469, Mellon speculated that Rossi Contractors, Inc. was involved in determining the line items and quantities to be included in APRF No. 59469. The Gordian Group, Inc. project manager was unsure why some of the quantities listed in APRF No. 59469 were divergent from the quantities listed in Rossi Contractors, Inc.'s final invoice.

The project manager suggested that the estimate totaling $112,741.09, generated based on the measurements and quantities listed in Rossi's final project invoice, is probably the most accurate project cost under JOC, at the time. This estimate is $79,118.91 less than the amount listed in APRF No. 59469; a difference of approximately 41%.[16]

III. ANALYSIS AND RECOMMENDATIONS

CDA's usage of PO 11382 to construct the Patton Road sidewalk was improper for two reasons. First, just as in IG Case No. 07-0893, alternative, lower-cost contracting options were readily available to CDA at the time. Second, and most importantly, nothing would justify use of the Rossi airside concrete maintenance contract on a landside project.[17]

Although the Patton Road sidewalk project actually took place prior to the construction of the concrete employee break area at issue in IG Case No. 07-0893, both projects were arose from similar circumstances. Both projects involved approvals from most, if not all, of the same CDA representatives; both projects were authorized in spite of the limited scope of the Rossi contract.

However, in the Patton Road project this problem could (and should) have been identified much earlier because, unlike the documents requesting approval for the concrete employee break area in IG Case No. 07-0893, there was no apparent attempt to disguise the nature of the sidewalk project. The description of the project in APRF No. 59469 clearly describes landside concrete work in contravention of the scope of the contract selected for use - PO 11382 (airside concrete work). Despite this obvious red flag, this proposal was purportedly reviewed and approved by no fewer than four CDA employees at various levels. This collective failure resulted in a preventable over-expenditure, and highlights deficiencies in CDA's construction project contracting protocol from development, to contracting, to oversight during that time.

CDA acknowledged these deficiencies and responded to our previous report by outlining an improved construction project protocol. This protocol included a "roundtable" process during which CIP projects would be discussed by all interested employees on a weekly basis. Interested parties were to include CDA employees, DPS employees, Law Department personnel and CDA's project manager/construction manager for CIP projects. In addition, CDA's General Counsel was tasked with managing the CDA Contracts Division, which conducts regular meetings with Law and DPS, as well as with all "users" of contracts to discuss all pending contract and procurement issues and concerns. CDA promised that the Commissioner would hold regular meetings with senior and executive staff to discuss the necessity and propriety of all construction projects and issues affecting CDA.

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[16] A more complete summary of the estimates provided by The Gordian Group, Inc. project manager is available in Appendix D.

[17] In September 2009, at roughly the same time that the IGO initiated this investigation, CDA entered into two contracts with Summit Construction, Inc. (PO 20434, Specification No. 74704) and Takao Nagai Associates, Ltd. (PO 20435, Specification No. 74704) for Landside Concrete Repair and Replacement (Group A) and Rehabilitation of Concrete Structures with Shot Crete Airside and Landside (Group B) for Chicago Airport System.

Given CDA's recent responsiveness to improving the contract construction process, and the fact that many of the primary decision makers associated with the Patton Road project are no longer with the City, we have not recommended any disciplinary action. CDA's protocol set forth in September of 2010 reinforced contract review and approval authority at the executive-level and should have increased the likelihood, going forward, that contract improprieties would be discovered and addressed. More than 18 months have passed since CDA instituted these new protocols, which should have provided ample time to assess their effectiveness, and identify any deficiencies. We have asked CDA to provide details of this new process and a self-assessment of its effectiveness. CDA's response is attached hereto.

Appendix A

Page 1 of 2	CITY OF CHICAGO ALL PURPOSE REQUISITION FORM	APRF NO. 59469
		DEPT USE 1: kc / DEPT USE 2:

DATE	SECTION	BUREAU	SHIP CODE	SHIP TO:	DATE NEEDED	PO/RX NUMBER	PV NUMBER
01/22/2007	FC03	85	221	CHICAGO DEPT OF AVIATION ATTN:		078501816	

TERM LINE	COMMODITY CODE	DESCRIBE AND JUSTIFY GOODS OR SERVICES ITEM DESCRIPTION	CATALOG NAME/#	CATALOG DATE	CATALOG PAGE	CATALOG ITEM/PART #	UNIT PRICE	UNIT OF MEASURE	QUANTITY	TOTAL PRICE
41	91319341 35	CURB AND GUTTER CONSTRUCTION, REMOVAL AND REPLACEMENT AT CHICAGO - COMBINATION CURB AND GUTTER					$35.00	LINEAR FOOT	1,410.00	$49,350.00
43	91347681 70	SIDEWALK, PORTLAND CEMENT CONCRETE. THIS WORK SHALL CONSIST OF - 5 INCH PCC SIDEWALK					$15.00	SQUARE FOOT	7,020.00	$105,300.00
45	91347621 60	RAMPS, PCC, AT O'HARE AND MIDWAY AIRPORTS - 8 INCH PCC RAMP					$25.00	SQUARE FOOT	676.00	$16,900.00
59	65831201 26	PIPE, SEWER, CLAY, VITRIFIED - EXTRA STRONG VITRIFIED CLAY PIPE, 8 INCH					$35.00	LINEAR FOOT	66.00	$2,310.00
67	91360321 15	CATCH BASIN INSTALLATION, PRECAST CONCRETE - PRECAST CONCRETE CATCH BASIN/MANHOLE INSTALLATION					$3,500.00	EACH	4.00	$14,000.00
69	91360470 50	MANHOLES, ADJUSTMENT AND REPAIR OF. THIS WORK SHALL INCLUDE EXISTING - PRECAST CONCRETE INLET/CATCH BASIN/MANHOLE TO BE ADJUSTED					$2,000.00	EACH	2.00	$4,000.00

NEW TA OR CONTRACT	SOLE SOURCE	FOR FINANCE OFFICE USE ONLY	
		CONTRACT REVIEW	FINANCE DIRECTOR
PURCHASE ORDER X	CONTRACT AMENDMENT	[redacted] Approved 1/23/07	[redacted] Approved 1/24/07
DIRECT VOUCHER	EMERGENCY REQUEST	CAPITAL FIN DIRECTOR	FMPS APPROVAL DATE
7 DAY BID	REJECTED BY	Pending	

VENDOR INFORMATION

Company Name: ROSSI CONTRACTORS, INC.

Address: 201 W LAKE ST

NORTHLAKE, IL 60164

Vendor Code: 1033386 A

Rep/Phone: 773 287-7545

INVOICE NUMBERS

CONTACT INFORMATION

Name [redacted]

Address

Phone

SECTION MANAGER

Name [redacted]

Phone

Status Approved 1/22/07

DEPUTY

Name [redacted]

Phone

Status Approved 1/22/07

CIRCLE COPY TYPE: ORIGINAL BUREAU/DIVISION FINANCE DIVISION FILE

Page 2 of 2

CITY OF CHICAGO ALL PURPOSE REQUISITION FORM

APRF NO.	59469
DEPT USE 1	DEPT USE 2
kc	

DATE	SECTION	BUREAU	SHIP CODE	SHIP TO:	DATE NEEDED	PO/RX NUMBER	PV NUMBER
01/22/2007	FC03	85	221	CHICAGO DEPT OF AVIATION ATTN:		078501816	

BRIEF DESCRIPTION: Fund/0161 Installation of Sidewalk and Curb and Gutter along Patton Rd.
Higgins Rd to Building 4
Provide Sidewalk for employees to walk from Higgins Rd bus stop to Building - 4. and Provide positive Drainage along Patton Rd.

JUSTIFICATION: Installation of Sidewalk, Curb and Gutter along Patton Rd.
Higgins Rd to Building 4

CHECK OR COMPLETE ALL THAT APPLY

BFYR	LINE	FUND	DEPT	ORGN	APPR	OBJT	DOA PROJECT	FMPS PROJECT	DOLLAR AMT
2006	2921	999	999	9999	9999	9999			$191,860.00

GRAND TOTAL (ALL PAGES) $191,860.00

PARTICIPATING PO #
11382

TASK ORDER/PROPOSAL #

NEW TA OR CONTRACT	SOLE SOURCE	FOR FINANCE OFFICE USE ONLY	
		CONTRACT REVIEW	FINANCE DIRECTOR
PURCHASE ORDER X	CONTRACT AMENDMENT	[redacted] Approved 1/23/07	[redacted] Approved 1/24/07
DIRECT VOUCHER	EMERGENCY REQUEST	CAPITAL FIN. DIRECTOR	FMPS APPROVAL DATE
7 DAY BID	REJECTED BY	Pending	

VENDOR INFORMATION

Company Name: ROSSI CONTRACTORS, INC.
Address: 201 W LAKE ST
NORTHLAKE, IL 60164
Vendor Code: 1033386 A
Rep/Phone: 773 287-7545

INVOICE NUMBERS

CONTACT INFORMATION
Name [redacted]
Address
Phone

SECTION MANAGER
Name [redacted]
Phone
Status Approved 1/22/07

DEPUTY
Name [redacted]
Phone
Status Approved 1/22/07

CIRCLE COPY TYPE: ORIGINAL BUREAU/DIVISION FINANCE DIVISION FILE

Appendix B

ROSSI CONTRACTORS, INC.

201 W. LAKE ST. • NORTHLAKE, IL 60164
773-287-7545 • FAX 708-562-1965

INVOICE #339046

TO: CHICAGO DEPARTMENT OF AVIATION
FACILITIES MANAGEMENT
H & R BUILDING, O'HARE
P.O. BOX 66142
CHICAGO, IL 60666
ATTN: [redacted]

DATE: April 23, 2007

RE: AIRSIDE CONCRETE MAINTENANCE ON RAMPS AND ROADS, REPAIR AND REPLACE PANELS, SIDEWALK, CURB AND GUTTER
SPECIFICATION #36308
RE: MISCELLANEOUS CONCRETE WORK BY HIGGINS & PATTON DRIVE

PROPOSAL #4069 SUBORDER #068503936
INVOICE #339046 PURCHASE ORDER #11382 - RELEASE #47
VENDOR #1033386 A CONTRACT #11382

LINE #	COMMODITY	UNIT	QTY	RATE	CHARGE
0027	913 64 64 161 REPLACEMENT OF BASE MATERIAL WITH CA-6	CY	150.00	40.00	N/C
0041	913 19 34 135 COMBINATION CURB & GUTTER	LF	1,300.00	35.00	45,500.00
0043	913 47 68 170 5 INCH PCC SIDEWALK	SF	7,450.00	15.00	111,750.00
0045	913 47 62 160 8 INCH PCC RAMP	SF	393.00	25.00	9,825.00
0047	912 44 87 250 EXCAVATION, UNCLASSIFIED	CY	200.00	40.00	N/C
0059	658 31 20 126 EXTRA STRONG VITRIFIED CLAY PIPE, 8 INCH	LF	193.00	35.00	6,755.00

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INVOICE #339046 PURCHASE ORDER #11382 - RELEASE #47
VENDOR #1033386 A CONTRACT #11382

LINE #	COMMODITY	UNIT	QTY	RATE	CHARGE
0067	913 60 32 115 PRECAST CONCRETE CATCH BASIN INSTALLATION	EA	4.00	3,500.00	14,000.00
0069	913 60 47 050 PRECAST CONCRETE MANHOLE TO BE ADJUSTED	EA	2.00	2,000.00	4,000.00
0112	890 30 98 100 MANHOLE CASTINGS	LB	2,000.00	8.00	N/C

TOTAL AMOUNT DUE
INVOICE #339046 **$191,830.00**

6/5/07 [redacted]

CITY OF CHICAGO
DEPT. OF AVIATION
Contract No. 11382
Suborder No. #47/68503936
Approved [redacted] 5/31/07
Date
6-4-07
Date

DEPARTMENT OF AVIATION FINANCE
2007 JUN -8 AM 11:15

I HEREBY CERTIFY THAT THE INVOICE(S) HAVE NOT BEEN PREVIOUSLY VOUCHERED, THAT THE SUBCONTRACTOR PAYMENT CERTIFICATION IS INCLUDED WITH THE INVOICE, THAT THE GOODS OR SERVICES INDICATED WERE RECEIVED AND THAT [redacted] GER HAS VERIFIED OR WHICH PAYMENT IN THE CONTRACT CONTRACT.

6-7-07
[redacted] ATE
6/8/07

Original

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Appendix C

The senior-level CDOT employee reviewed APRF No. 59469, as well as Rossi's final invoice in the amount of $191,860.00.00 (No. 339046), and developed a comparable estimate for the Patton Road sidewalk based on the schedule of prices listed in PO 11587. The employee provided the following comparison of prices:

All Purpose Requisition Form No. 59469				
Commodity Code	Description	Unit Price	Quantity	Total Price
9131934135	Curb and gutter construction, removal and replacement at Chicago - combination curb and gutter	$35.00	1410	$49,350.00
9134768170	Sidewalk, Portland Cement Concrete this work shall consist of - 5 inch PCC sidewalk	$15.00	7020	$105,300.00
9134762160	Ramps, PCC, at O'Hare and Midway Airports - 8 inch PCC ramp	$25.00	676	$16,900.00
6583120126	Pipe, sewer, clay, vitrified - Extra strong vitrified clay pipe, 8 inch	$35.00	66	$2,310.00
9136032115	Catch basin installation precast concrete - precast concrete catch basin/manhole installation	$3,500.00	4	$14,000.00
9136047050	Manholes, adjustment and repair of. This work shall include existing - precast concrete inlet/catch basin/manhole to be adjusted	$2,000.00	2	$4,000.00
				$191,860.00

Chicago Department of Transportation Estimate Based on PO 11587				
Commodity Code	Description	Unit Price	Quantity	Total Price
44000500	Combination curb and gutter removal	$4.84	1410	$6,824.40
XX104800	Combination curb and gutter, Type B-V.12	$15.95	1410	$22,489.50
42400200	Portland Cement Concrete sidewalk 5 inch	$5.17	7020	$36,293.40
42400460	Portland Cement Concrete sidewalk 8 inch, special	$7.70	676	$5,205.20
No Listed Code	Storm sewers, Type 2, 8" (ESCP)	$110.00	66	$7,260.00
No Listed Code	Catch basins, Type A, specials, 4'-diameter, Type 1 frame, open lid	$2,750.00	4	$11,000.00
Z0017400	Drainage & utility structures to be adjusted	$192.50	2	$385.00
				$89,457.50

Regarding Commodity Code XX104800, the employee presumed that the corresponding line item in PO 11382 (Commodity Code 9131934135) did not include a "modified" curb. Although unlikely, if the corresponding line item in PO 11382 did refer to a modified curb, the IGO should substitute the following line item from PO 11587:

Chicago Department of Transportation Estimate Based on PO 11587				
Commodity Code	Description	Unit Price	Quantity	Total Price
44000500	Combination curb and gutter removal	$4.84	1410	$6,824.40
No Listed Code	Combination curb and gutter, Type B-V.12 (modified)	$35.20	1410	$49,632.00
42400200	Portland Cement Concrete sidewalk 5 inch	$5.17	7020	$36,293.40
42400460	Portland Cement Concrete sidewalk 8 inch, special	$7.70	676	$5,205.20
No Listed Code	Storm sewers, Type 2, 8" (ESCP)	$110.00	66	$7,260.00
No Listed Code	Catch basins, Type A, specials, 4'-diameter, Type 1 frame, open lid	$2,750.00	4	$11,000.00
Z0017400	Drainage & utility structures to be adjusted	$192.50	2	$385.00
				$116,600.00

The employee indicated that, although none of the information listed in the final Rossi invoice (No. 339046) alters the estimates that he provided the IGO, the employee did have some outstanding concerns regarding the invoice. For example, the employee suspected that a number of the line items listed were rounded, rather than exact, quantities. The employee speculated that actual measurements of the finished sidewalk may reveal quantities different than those listed in the invoice.

Appendix D

The Gordian Group, Inc. project manager documented any assumptions or presumptions made in the course of developing the estimates. The following charts provide a brief breakdown of costs related to each estimate:[18]

1a - JOC Estimate for Demolition & Install of Patton Road Sidewalk - Based on APRF No. 59469 Prior to Construction	
Description	Price
Curb & Gutter, Removal and Replacement	$32,834.35
Sidewalk, 5" PCC, Removal and Replacement	$65,412.68
ADA Ramp (Based on Old ADA Spec)	$4,240.11
Vitrified Clay Pipe, Extra Strength, 8"	$3,348.85
Catch Basin Install, Precast Concrete	$20,596.43
Manholes, Adjustment and Repair	$2,241.34
Equipment Mobilization	$422.01
Traffic Protection	$7,243.57
	$136,339.35

1b - JOC Estimate for Install of Patton Road Sidewalk - Based on APRF No. 59469 Prior to Construction	
Description	Price
Curb & Gutter, Removal and Replacement	$26,217.41
Sidewalk, 5" PCC, Removal and Replacement	$43,462.55
ADA Ramp (Based on Old ADA Spec)	$4,240.11
Vitrified Clay Pipe, Extra Strength, 8"	$3,348.85
Catch Basin Install, Precast Concrete	$20,596.43
Manholes, Adjustment and Repair	$2,241.34
Equipment Mobilization	$422.01
Traffic Protection	$7,243.57
	$107,772.28

[18] Any discrepancy between line prices and the proposal total is due to rounding in the complete JOC estimates.

2a - JOC Estimate for Demolition & Install of Patton Road Sidewalk - Based on Rossi Invoice No. 339046 After Construction	
Description	Price
Curb & Gutter, Removal and Replacement	$30,234.62
Sidewalk, 5" PCC, Removal and Replacement	$68,794.37
ADA Ramp (Based on Old ADA Spec)	$2,600.75
Vitrified Clay Pipe, Extra Strength, 8"	$9,865.07
Catch Basin Install, Precast Concrete	$20,596.43
Manholes, Adjustment and Repair	$2,241.34
Equipment Mobilization	$422.01
Traffic Protection	$7,243.57
	$141,998.18

2b - JOC Estimate for Install of Patton Road Sidewalk - Based on Rossi Invoice No. 339046 After Construction	
Description	Price
Curb & Gutter, Removal and Replacement	$24,271.40
Sidewalk, 5" PCC, Removal and Replacement	$45,500.50
ADA Ramp (Based on Old ADA Spec)	$2,600.75
Vitrified Clay Pipe, Extra Strength, 8"	$9,865.07
Catch Basin Install, Precast Concrete	$20,596.43
Manholes, Adjustment and Repair	$2,241.34
Equipment Mobilization	$422.01
Traffic Protection	$7,243.57
	$112,741.09

3a - JOC Estimate for Demolition & Install of Patton Road Sidewalk - Based on Gordian Measured Quantities After Construction	
Description	Price
Curb & Gutter, Removal and Replacement	$26,540.35
Sidewalk, 5" PCC, Removal and Replacement	$59,972.16
ADA Ramp (Based on Old ADA Spec)	$4,158.94
Vitrified Clay Pipe, Extra Strength, 8"	$9,865.07
Catch Basin Install, Precast Concrete	$20,596.43
Manholes, Adjustment and Repair	$2,241.34
Equipment Mobilization	$422.01
Traffic Protection	$7,243.57
	$131,039.88

3b - JOC Estimate for Install of Patton Road Sidewalk - Based on Gordian Measured Quantities After Construction	
Description	Price
Curb & Gutter, Removal and Replacement	$21,211.16
Sidewalk, 5" PCC, Removal and Replacement	$37,670.64
ADA Ramp (Based on Old ADA Spec)	$4,158.95
Vitrified Clay Pipe, Extra Strength, 8"	$9,865.07
Catch Basin Install, Precast Concrete	$20,596.43
Manholes, Adjustment and Repair	$2,241.34
Equipment Mobilization	$422.01
Traffic Protection	$7,243.57
	$103,409.18

Because it was unclear from the available documents whether Rossi demolished and removed an existing sidewalk in order to install the new Patton Road sidewalk, the project manager developed an "a" and "b" estimate (with "a" representing both removal of an old sidewalk and install of a new sidewalk, and "b" representing only installation of a new sidewalk).

The project manager originally believed that Rossi installed current ADA compliant ramps. However, after visiting the project site it was clear that "old ADA ramps" had been installed. For various reasons, the current ADA compliant ramps are much more expensive than the old ramps and, since PO 7119 only contained current ADA compliant ramp items, the project manager had to reference an older 2007 CDA Construction Task Catalog to price the old ADA ramps for all six estimates.

The project manager suggested that, if there was no existing sidewalk and the scope of work included only installation of a new sidewalk, estimate 2b ($112,741.09), generated based on the measurements and quantities listed in Rossi's final project invoice, is probably the most accurate project cost under JOC at the time. The project manager's measurements of the project site fell within approximately 5%, a difference of approximately 397 square feet, of the measurements listed in Rossi's final invoice.[19]

[19] The difference depends on division of total square footage between the ADA ramps and the sidewalk. Rossi listed 7,450 square feet of Sidewalk and 393 square feet of ADA ramp, for a total of 7,843 square feet. The Gordian Group, Inc. project manager measured a total of 6,726 square feet of sidewalk and 730 square feet of ADA ramp, for a total of 7,456 square feet.