Update July 29, 2021

City of Chicago
Prompt Invoice Payment Initiative
Report of the Prompt Payment Working Group

Mayor Lori Lightfoot

June 2021

Department of Finance
Department of Procurement Services

City of Chicago Prompt Invoice Payment Initiative
Report of the Prompt Payment Working Group (PPWG)

Background

The City of Chicago is committed to paying all vendors in an efficient and timely manner. The prompt payment of City invoices can expedite the payment of workers, ensure ongoing progress on City projects, and enhance the ability of small, mid-size, minority, and women-owned businesses to participate in City projects to a greater degree. Toward these goals, in 2021, Mayor Lightfoot formed a multi-departmental **Prompt Payment Working Group** (PPWG) tasked with analyzing current payment processes and developing recommendations to streamline and accelerate payments to City contractors, without compromising the integrity of the invoice validation and approval process.

Introduction

To further the work of the PPWG, the City's Department of Finance (DOF) and Department of Procurement Services (DPS) launched a review of the invoice payment processes of the City's four major infrastructure departments; namely: The Department of Assets, Information, and Services (AIS); Chicago Department of Aviation (CDA or Aviation); Chicago Department of Transportation (CDOT); and the Chicago Department of Water Management (DWM) (collectively referred to throughout this report as "the departments").

The prompt payment of contractors requires efficiencies at each stage of the overall payment process that includes the time it takes for the contractor to submit a proper and complete invoice, the time to validate and approve that invoice, and the time to issue payment. This Report focuses on the first two stages: the contractor's submission of a complete proper invoice and invoice validation and approval.

The DOF asked each department to submit invoices from at least five construction contracts for the 6-month service period beginning September 2020 through March 2021. The departments submitted 173 total invoices that were subsequently analyzed and used to compare the departments' invoice approval processes for this review.[1] The length of time it took to validate the invoices ranged from 7 to 106 days. As discussed in this report, the considerable range usually depicts the rigor of the invoice validation and approval process dictated by the complexity of the project, number of subcontractors, contract type/pricing structure, etc. With those factors in mind, the PPWG review looked for redundancies and unnecessary or excessive steps that increase processing times and delays in payment.

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[1] All documents submitted by the four departments were accumulated in a collective set of spreadsheets maintained by DOF and discussed throughout this Report.

In addition to the 173 invoices, each department submitted a workflow chart of their respective invoice payment processes, as they understood them to be, including the number of steps in the process, the approximate number of days to complete each step, and the total number of days to pay an invoice. The workflow charts were used as a benchmark to compare the departments' anticipated turnaround times and the actual turnaround times based on the 173 invoices. A 60-day time frame for processing an invoice payment was used as an additional benchmark. Although an Ordinance passed by City Council in 1987[2] exempts the City from the State of Illinois Prompt Payment Act,[3] most procurement contracts require the City to *process an invoice payment* within 60 calendar days,[4] unless the contract is funded by a grant and the grantor specifies otherwise. This requirement may be adjusted on a contract-by-contract basis, upon the approval of the Comptroller's Office.

The Prompt Payment review showed there are some steps in the payment process, outside the departments' control, that may lead to delays. For example, Aviation, DWM, and CDOT have State and/or federally funded contracts that contain extra steps and levels of review and regulation that can extend the overall process. Moreover, contractors may inadvertently delay the payment process by either waiting or failing to submit all documentation required by the departments to support the invoice. That process, and alleviating some of the burdens in that process, was discussed and analyzed in this review. Specifically, each department requires contractors to submit an invoice packet including the entire checklist of items ostensibly required to validate the invoice. The PPWG studied each department's invoice packet checklist to see if all the required documents are reasonable and necessary or if some are redundant and optional.

Counting, analyzing, and ultimately reducing the number of signatures and approvals in the life cycle of an invoice, was also scrutinized during the Prompt Payment review. To that end, the PPWG collected the total number of signatures required for paying an invoice from each of the departments.

During its review, the PPWG observed a differential in processing turnaround times depending on whether the contract payments are based on time and materials or lump sum, with the latter

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[2] *See* City of Chicago Exempted from Local Government Prompt Payment Act, Journal of Proceedings of the City Council, July 29, 1987, page 2533.

[3] *See 50 ILCS 505 et al.*

[4] For example, DPS indicates that language requiring the City to process invoice payments within 60 calendar days is included in competitive bid solicitations that become the procurement contract upon award. Moreover, this requirement is often negotiated in contracts for projects, services, and materials procured through other methods (e.g., RFP, RFQ, etc.). Since the 60-day time frame is not an across-the-board requirement, Departments will be reminded to defer to the individual contract language. The City should consider adopting a uniform policy that defines the word "days" (i.e., calendar days or business days) and identifies precisely when the 60-day period starts (e.g., upon the City's receipt of a proper and complete invoice).

having a faster review process. One department, CDA, discussed a contract mechanism that converts payments from time and materials to lump sum upon reaching certain milestones during the construction project, thus, streamlining the invoice payment process at certain junctures.

Other mechanisms discussed more fully below are the advance payments to vendors to cover start-up and mobilization costs and the use of a third-party administrator to validate invoices and disburse payments to contractors, subcontractors, and suppliers.

An additional observation, and benefit of this review, is that in many instances, the internal parties with a role in the life of an invoice – from preparation, to submission, to review/audit, to payment – were called upon to discuss their individual functions and pain points, and to analyze the process collectively. That led to conversations, ideas, and insights from and among city employees involved in the payment process regarding how to create a more efficient system. That gives rise to the suggestion that the full team meet at least semi-annually, in addition to the other tracking recommended in the Report.

This Report details the PPWG's analysis and recommendations to make the invoice payment process faster and more efficient. Given the multiple steps and people involved in the payment process, this Report also recommends the City develop a way to continually monitor the payment of invoices on a consistent basis to keep them moving along, including a dashboard to track invoice payment turnaround in real time.

In sum, and as set forth in detail, the PPWG makes a series of recommendations in this Report that could reduce the time it takes to pay City invoices by, on average, half in many cases, with a goal of paying all invoices within 30 days.

PPWG Report Structure

This Report contains the following sections:

I.   Analysis of the invoice documentation submitted by the four departments as well as the departmental workflow charts – contained in the spreadsheets.
II.   Comparison of the invoice processing steps among the departments
III.   Input from Contractor Representatives
IV.   Observations and Recommendations. (Bottlenecks Identified; Good Practices to Borrow)
V.   Innovations
        Conclusion

     Appendix. (Contains e.g., invoice checklists, pre-construction packages, electronic invoice payment instructions, workflow charts.)

I. **Analysis of individual documents given to the PPWG by each of the departments**

Section I of the Report is a detailed analysis of the 173 invoices broken down by department. The following chart briefly summarizes some of the key indicators from the audit, all relating to the length of time it took the departments to process their invoices. The chart includes the number of steps in the process and the number of days to complete each step, both according to the actual invoices submitted, and as compared to the department's respective workflow charts.

Summary of Key Indicators from Section I

Depts	# of invoices submitted to PPWG	# Steps per invoices	# Days to pay invoices	# Steps per Workflow Charts	# Days to pay per Workflow Charts	# Invoices paid over 30 days
DWM	66	8	7-70	7	20	10
AIS	49	9	29-95	7	25	30
Aviation (CDA)	27	14	7-69	14	16-52	5
CDOT	31	6-17	16-106	9-17	*Not provided*	18

The remainder of Section I discusses in detail the contracts and invoices audited, steps that took the longest, and a table that graphs the invoice turnaround times of each department.

1. **<u>AIS</u>**

- AIS chose 6 contracts: Spreadsheets contain invoices from 4 vendors that completed work on those contracts.

- Names of contractors and contract numbers: Leopardo Co., Inc. (29743) and (29744); FH Paschen (29742) and (29745); Wight & Co., (32980); Public Safety & Community Builders (99900).

- Number of invoices submitted: **66** total invoices.

- Date range of invoices: October 2020 - March 2021.[5]

- Number of invoices per contract:

  - Leopardo Co., Inc. (29743): October (2), November (6), December (3), February (5), March (8)
  - Leopardo Co., Inc (29744): October (3), November (4), February (3), March
  - FH Paschen (29742): October (5), November (2), December (5), January (4), and February (5)
  - FH Paschen (29745): January (3) and March (1)
  - Wight & Co., (32980): October (1) and November (1)
  - Public Safety & Community Builders (99900): December (2), February (1), and March (1)

Some contracts did not generate an invoice for each month based on the variation in activity pursuant to the contracts.

- Number of steps in payment process per the invoice documents submitted in the spreadsheets: **8**. (2 steps outside AIS's control)
- Number of days per step: Range of "**0" to 65**.[6]

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[5] AIS provided invoices starting in October through March 2021 because there were insufficient invoices to submit for Sept 2020. We think this is a sufficient sample. The three other departments in the Prompt Payment pilot submitted invoices from Sept 2020 through February or March 2021.

[6] AIS accomplished same day turnaround as it relates to various steps and recorded those as "0" days. However, during this review, AIS and the City Comptroller's office discussed recording same day turnaround times as 1 day rather than 0 going forward, to more accurately reflect the overall time to complete an invoice payment.

- Number of items required by AIS in the invoice packet: **19**. Source: AIS checklist. <u>See</u> Appendix.

Total number of days by range to process invoices submitted into the spreadsheets: fastest 7 days, and the longest 70 days

- ➢ 1 invoice was processed after 60 days.
- ➢ 10 invoices were processed between 31 to 60 days.
- ➢ 57 invoices were processed within 30 days.

The steps that took the longest:

- "AEC Project Manager Reviews and Approves the Invoice" (1 day - 65 days)

The total number of signatures required to approve an invoice for payment per AIS: 3 signatures for invoices under $50k; 6 for invoices over $50k.

Other documents submitted by AIS:

- Invoice packet and checklist: **18** items. <u>See</u> Appendix
- Sample full invoice from Leopardo Co., Inc (29744) from Sept 2020.
- Materials on how to submit an invoice online. <u>See</u> Appendix.
- **AIS Workflow chart**: Invoice workflow chart that appears to reflect the department's understanding of the (a) steps and (b) length of time per step in the invoice payment process. The AIS workflow chart represents a total of **20 days** to process an invoice and **7 steps**.
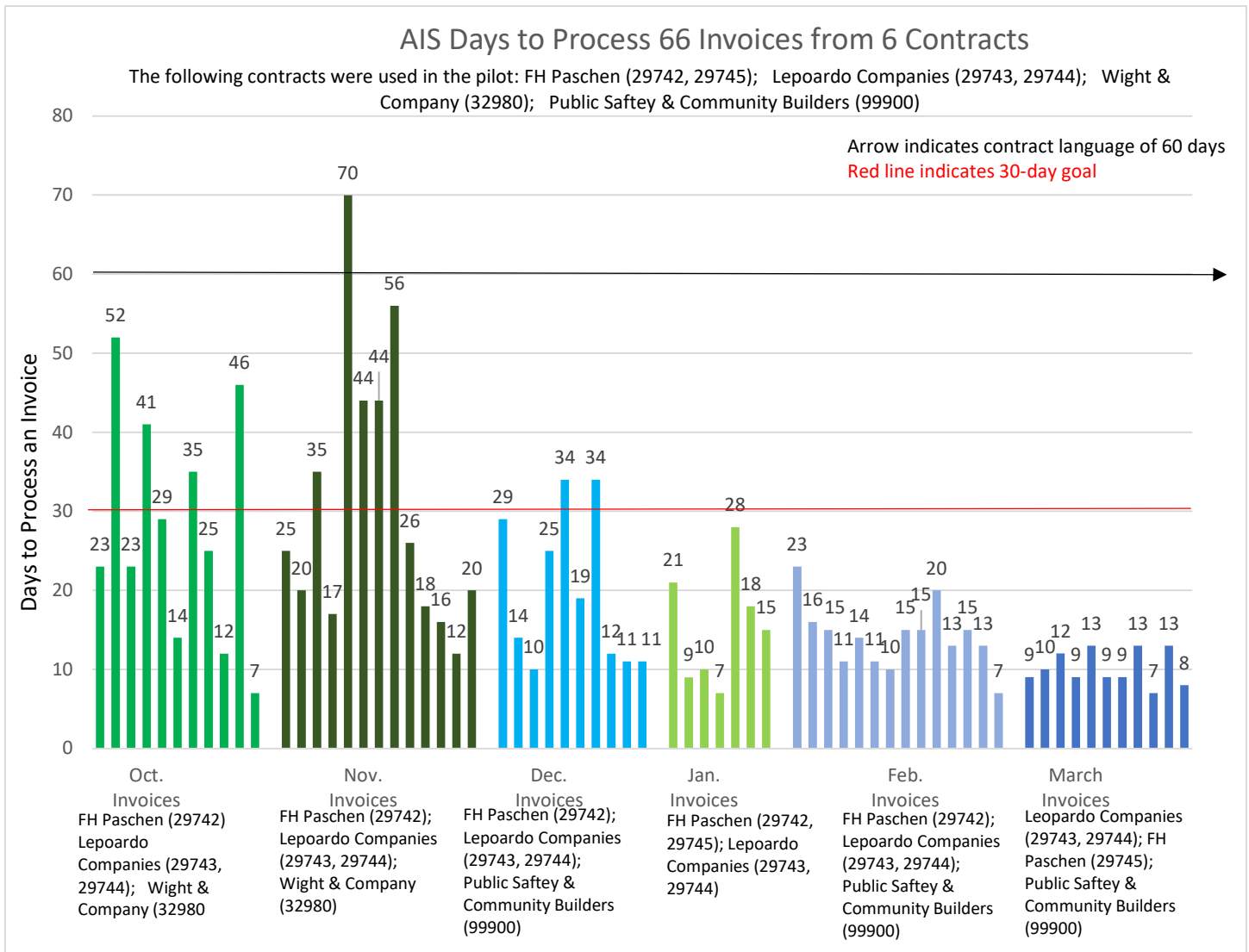
Notes/Comments/findings:

- AIS receives invoices by email and uses excel to track the documents sent by vendor. Once the invoice is ready to be paid, AIS submits the invoice to DOF by uploading it into FMPS (Financial Management and Purchasing Systems). AIS maintains vendor information on iSupplier, an Oracle module within FMPS that structures all vendor communication through a secure internet portal, including purchase orders, invoices, payment status, etc.

- AIS filled a position in January 2021 with an employee who helps regulate and address issues with the payment of invoices. The PPWG noted that turnaround times for payments relating to the invoices reviewed have been somewhat reduced in since AIS filled that position.

- As a result of this pilot, AIS has inquired about implementing an online system to increase transparency for all parties on the status of invoices within the workflow system. Significantly, DOF's Paperless Invoice Initiative includes the potential citywide

adoption of digital vendor invoicing through the existing portal where parties may reliably track their invoice throughout the payment process, from start to finish.

- AIS's <u>workflow chart</u> estimates a total of **20 days** to complete **7 steps** to process an invoice, compared to the analysis of the invoice documents in the spreadsheets that reveal an actual range of **7 to 70 days** to complete an **8- step** process. The workflow chart includes steps outside AIS control but does not estimate the number of days to complete the steps, (i.e., "Vendor invoice submitted to AIS Finance;" and "Vendor paid via EFT or check by DOF)."

The following table summarizes the turnaround times for processing all AIS invoices submitted for review and includes 60 and 30-day benchmarks.

2. **CDA**

AIS Days to Process 66 Invoices from 6 Contracts

The following contracts were used in the pilot: FH Paschen (29742, 29745); Lepoardo Companies (29743, 29744); Wight & Company (32980); Public Saftey & Community Builders (99900)

Arrow indicates contract language of 60 days
Red line indicates 30-day goal

- CDA chose 4 contracts: Spreadsheets contain invoices from 5 vendors that completed work on those contracts.

- Names of contractors and contract numbers: Aecom Hunt (98447), Turner Paschen (98065), Studio Ord (101451), Austin Power Partners (96319), WSP (30370-27).

- Number of invoices submitted: **49 total** invoices.

- Date range of invoices: September 2020-Feb 2021.

- Number of invoices per contract:

  - Aecom Hunt (98447): Sept '20 – Feb '21 (varies 1 or 2 invoices per month)
  - Turner Paschen (98065): Sept '20 – Feb '21 (2 per month)
  - Studio Ord (101451): Sept '20 – Feb '21 (2 per month)
  - Austin Power Partners (96319): Sept '20 – Feb '21 (2 per month)
  - WSP (30370-27): Sept '20 – Feb '21 (1 per month)

- Number of steps in payment process per the documents submitted in spreadsheets: **9.** (2 steps beyond CDA control).
- Number of days per step: Range of **1 to 49**.

Total number of days by range to process invoices submitted into the spreadsheets: shortest 29 days, longest 95 days.

  - 16 invoices were processed after 60 days.
  - 30 invoices were processed between 31 to 60 days.
  - 3 invoices were processed within 30 days.
  - 0 invoices are still in progress.

The steps that took the longest:

- CDA Division verifies services/goods and funding (min 5 days, up to 30 days)
- CDA Auditor analyzes invoice (min 2 days, up to 49 days)
- Dept of Finance issues payment (min 7 days, up to 15 days) (outside CDA's control)
- Vendor Submits Invoice to CDA Finance (min 3 days, up to 34) (outside CDA's control)

The total number of signatures required to approve an invoice for payment: 11 signatures for contracts under $50k; 13 signatures for contracts over $50k.

Other documents submitted by CDA:

- 3 sets of invoice checklists (CDA's invoice packet requirements vary based on the type of contract**.** All requirements are in the Appendix.)
    a. CMR Construction contracts: **18** items. Source: 50/50 Construction Payment Checklist
    b. Professional service contracts: **16** items. Source: Professional Service Invoice Procedures/Requirements and Voucher of Professional Service Form.
    c. Construction contracts procured though DPS: **12** items. Source: Construction Payment Checklist.
    d. Sample full invoice from Aecom Hunt (Oct 2020)

- **<u>Aviation Workflow Chart</u>**: Aviation also submitted one workflow chart that appears to reflect the department's understanding of the (a) steps and (b) length of time to complete each step in the invoice payment process. The Aviation workflow chart represents a total of **25 days** to process an invoice with **7 general step categories.**

Notes/Comments/findings:

- CDA uses FMS (Financial Management System) to receive and process invoices that are uploaded by vendors for review and approval using the vendor's portal. The FMS system currently sends an alert via email when there is an action to be taken. Additional reminder emails built into the system help to ensure the recipient takes the necessary action more quickly. CDA uses FMPS to send the invoices to DOF.

- Some invoice processing delays are due to the additional requirements in federal or State funded contracts, including FAA contracts, that take extra time and inherently lengthen the payment process. For example, all FAA invoices must be reviewed and paid by a trustee bank instead of DOF. In addition, Change Orders (CO) on a federal or State funded projects require CDA to rely on external parties to complete the necessary steps and approvals. CDA must properly define the scope of the CO and negotiate a firm fixed price that is fair and equitable. An FAA specialist verifies CDA's due diligence and that the proposed CO is authorized under the contract. Notwithstanding this process, the City typically pays the invoices derived from a CO while the full State/federal CO approval is pending, provided that the City's internal approvals are complete. This allows payment to vendors and progress on the projects while the City awaits reimbursement from the State/federal funding source upon final approval of the CO.

- Aviation's <u>workflow</u> chart estimates a total of **25 days to complete 7 general step** categories to process an invoice, compared to the analysis of the actual invoice documents in the spreadsheets that show a range of **29 to 95 days to complete 9 steps**. The difference between the 9 steps represented in the spreadsheets and the 7 steps on

the workflow chart is attributed to steps outside CDA's their control and omitted on their workflow chart, ("vendor submits invoice to CDA Finance," and "Dept of Finance issues payment").

- Some CDA contractor invoices include dozens of subcontractor invoices (i.e., as many as 45 subs), each requiring the contractor to assemble time sheets, among other items. Consequently, CDA and the PPWG discussed the technique of splitting invoices into parts that are processed on a rolling basis. Although this technique generates additional invoices, they are less extensive.

- CDA discussed the longer review process required for a time and materials-based invoice compared to a lump sum invoice that does not required the scrutiny of individual line items. CDA discussed a practice of converting a contract with payments based on time and materials a contract with lump sum payments after pre-determined contract milestones are reached. In appropriate circumstances, this practice can be expedited with contract language that anticipates and authorizes the conversion. While a lump sum invoice is more expeditious, it should always be accompanied by the right level of checks and balances.

- CDA also expressed the view that too many signatures were required to approve an invoice for payment. Solutions were explored, including the possibility of limiting the number of non-auditor signatures.

The following table summarizes the turnaround times for processing all Aviation invoices submitted for review.

Aviation: Days to Process 49 Invoices from 5 Contracts

The following contracts were used in the pilot: AECOM Hunt (98447) Turner Paschen (98065); Austin Power Partners (96319); Studio Ord (101451); WSP (30370-27)
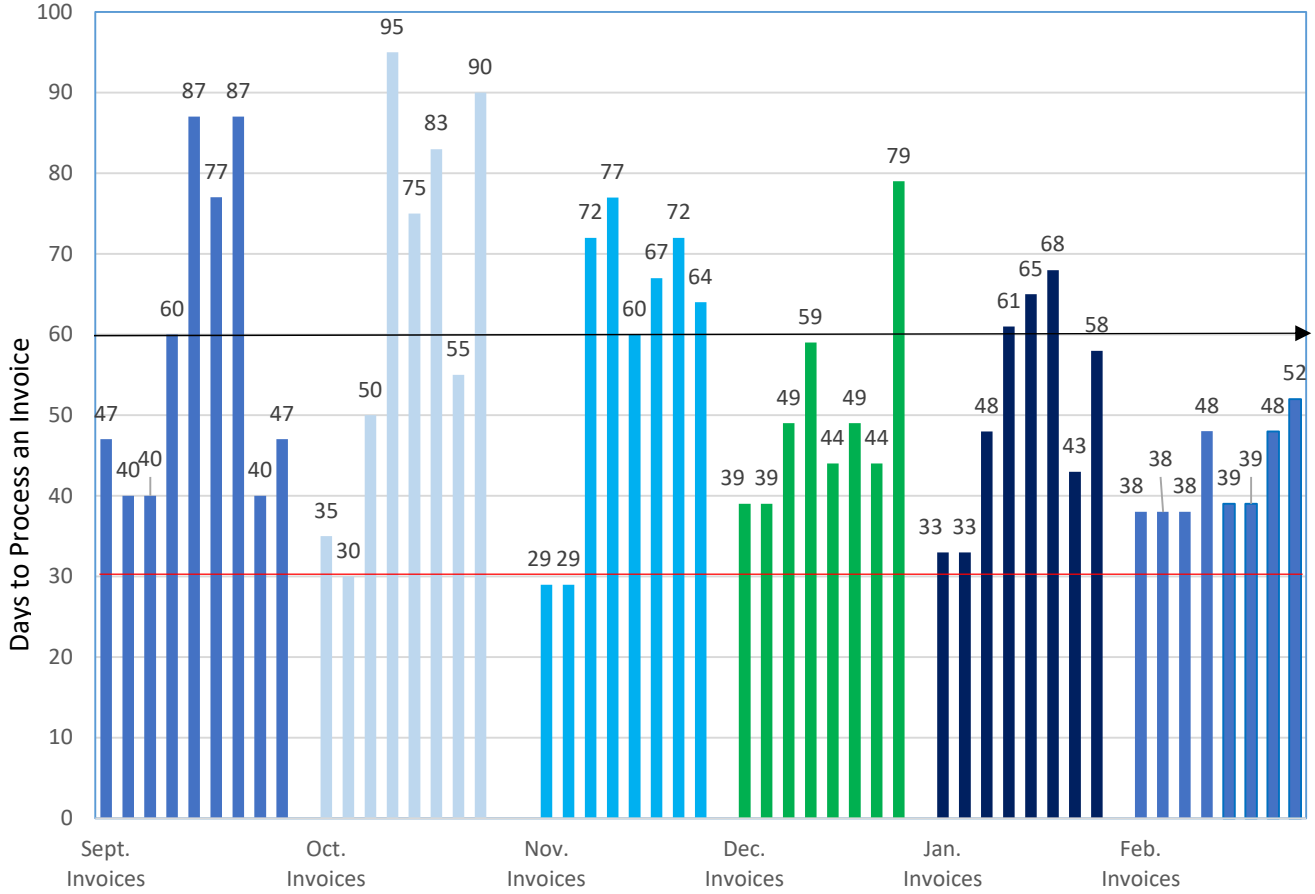
Arrow indicates contract language of 60 days
Red line indicates 30-day goal

3. **CDOT**

- CDOT chose 6 contracts: Spreadsheets contain invoices from 3 vendors that completed work on those contracts.

- Names of contractors and contract numbers: Aldridge Electric Co. (96175, Project B-0-425); Aldridge Electric Co. (96175, Project B-0-440); Bigane Paving Co (58083, 58086 and 110194); S&J Construction (110583).

- Number of invoices in excel: Total **27** invoices. (Smallest sample of invoices of the 4 depts in the pilot)

- Number of invoices per contract; date range of invoices: Sept 2020-April 2021 (with some variation). Details:

  - Aldridge Electric Co. (96175, Project B-0-425): December (2)
  - Aldridge Electric Co. (96175, Project B-0-440): December (1)
  - Bigane Paving Co (58083): September (1), October (1), November (1), December (2), January (2), February (2), March (1)
  - Bigane Paving Co (58086): September (1), October (1), November (1)
  - Bigane Paving Co (110194): September (1), October (1), November (1), December (1), January (1), February 12)
  - S&J Construction (110583): September (1), October (1), November (2), December (1),

- Number of steps in payment process: **14** per the invoice documents in the spreadsheets.
- Number of days per step: Range of **1 to 34**. (4 steps outside CDOT's control.)
- Number of items required by CDOT in the invoice packet: **11**. Source: CDOT packet checklist.

Total number of days to process an invoice per the spreadsheets: shortest 7 days, longest 69 days

  - There were 2 invoices processed after 60 days.
  - 6 invoices were processed between 31 to 60 days.
  - 17 invoices were processed within 30 days.
  - 1 invoice is in progress (Bigane 110583, Feb '21)

The steps that took the longest:

- "AP Assigns Voucher Number in FMPS and Requests PV Report (Next Day Printout). Updating Voucher Number in ADT (Tracking)" (min 1, max 34) (This step is not within CDOT's control.)
- "Resident Engineer Submits the Progress Estimate which is Logged in the R&E Database" (min 1, max 12)
- "Engineer Prepares the Payment Package and gives it to Clerk" (min 1, max 12)
- "Contractor Provides Waivers and Status Reports" (min 1, max 16)
- "Contractor Agrees with Content of Package (Quantity & Amount)" (min 1, max 16)
- "Department of Finance issues payment" (min 2, max 17) (This step is not within CDOT's control.)

The total number of signatures required to approve an invoice for payment: 8

Other documents submitted by CDOT:

- Deck on how to submit an invoice online. See Appendix.
- Preconstruction package with instructions to vendors about how to do business with CDOT. See Appendix.
- Standard Operating Procedure and flowchart with steps and days to complete each step to issue contract modifications. See Appendix.
- Sample payment package for Bigane Paving Co (110194)

CDOT Workflow Chart: Reflects the department's understanding of the (a) steps and (b) length of time per step in the invoice payment process. The CDOT workflow chart represents a **minimum of 16 days and maximum of 52 "working"** days, to process an invoice under **14 general step categories**.
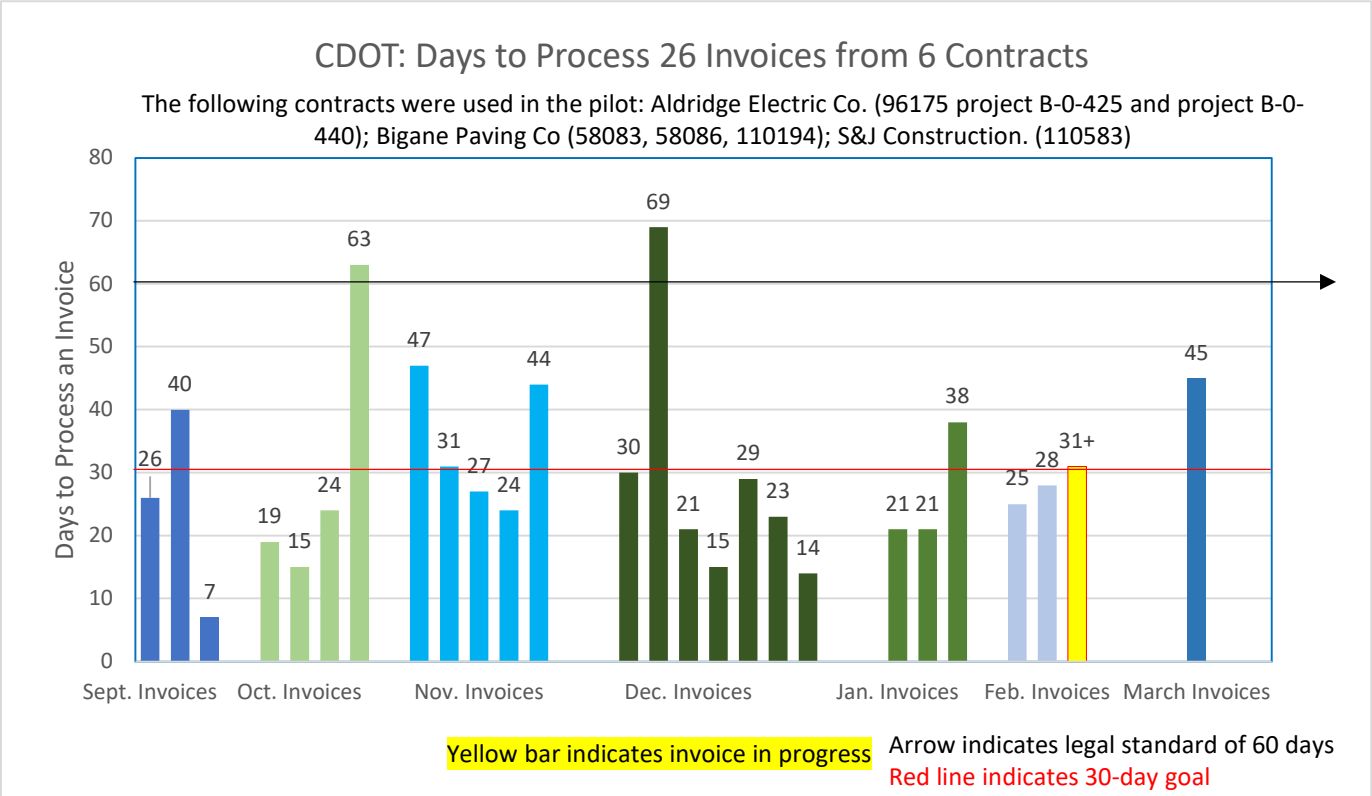
Notes/Comments/findings:

- CDOT uses Microsoft SharePoint to receive and process invoices. Vendors upload invoices directly into the system. CDOT uses FMPS to send approved invoices to DOF for payment.

  - CDOT's workflow chart reflects a range of **16 to 52** working days under **14** general step categories for processing an invoice; compared to the analysis of the spreadsheets showing invoice processing times ranging from 8 **to 57** days, using 14 steps. CDOT should study this differential.

  - Given some of CDOT's contracts are federally funded, there are specific requirements unique to the payment of CDOT invoices that can take extra time and lengthen the payment process. For example, CDOT is, on occasion, engaged in projects funded by the Federal Highway Administration (FHWA) with funds originating from US DOT. The federal funding for such contracts is passed through

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the Illinois Dept of Transportation, (IDOT), to the City. The city pays the contractors and is subsequently reimbursed by IDOT for allowable project costs that are accompanied by the supporting documentation required in the agreement.

- All federally funded contacts require a City/State agreement that must include the project budget. A corresponding City Ordinance is promulgated that permits CDOT to spend City funds on that contract, pending reimbursement from IDOT. If CDOT has a project modification that will exceed the agreed-upon budget, the City must seek authorization to increase the budget and submit the UIGA form that triggers the modification of the underlying city/state agreement. This scenario, while infrequent, can take up to a year. For this reason, the City builds contingency funds into the budget to avoid this protracted process. Again, the City pays the contractors for the work performed following the City's internal approval processes, i.e., involving DPS, OMB, DOF, when moving forward with a sizeable modification akin to change orders.

These scenarios represent ways that CDOT moves projects along, and pays invoices in connection therewith, while also engaging with State and federal processes.

The following table summarizes the turnaround times for processing all CDOT invoices submitted for review.

CDOT: Days to Process 26 Invoices from 6 Contracts

The following contracts were used in the pilot: Aldridge Electric Co. (96175 project B-0-425 and project B-0-440); Bigane Paving Co (58083, 58086, 110194); S&J Construction. (110583)

Yellow bar indicates invoice in progress
Arrow indicates legal standard of 60 days
Red line indicates 30-day goal

4. **DWM**

- DWM chose 6 contracts: Spreadsheets contain invoices from 6 vendors that completed work on those contracts.

- Names of contractors and contract numbers: IHC Construction (81226); Kenny Construction (37810); Sumit Construction Co. (103736); Benchmark Construction Co. (127552); CTR (27207); Granite Inliner, LLC (132516)

- Number of invoices in excel: **31** total invoices

- Number of invoices per contract; date range of invoices: Sept 2020-March 2021. Details:

  - IHC Construction (81226) September (1), October (1), November (1), December (1), Jan (1), Feb (1), March (1)
  - Kenny Construction (37810) September (1), November (1), December (1)
  - Sumit Construction Co. (103736) September (1), October (1), November (1), December (1), Jan (1), Feb (1), March (1)
  - Benchmark Construction Co. (127552) September (1), October (1), March (1)
  - Benchmark Construction Co (135877): March (1)
  - CTR (27207) September (1), October (1), November (1), December (1), Jan (1), Feb (1), March (1)
  - Granite Inliner, LLC (132516) Jan (1), Feb (1), March (1)

- Number of steps in the invoice validation and approval process: DWM shared 4 different types of invoices, with steps ranging from **8 to 15 steps** (per spreadsheets).[1]

- Number of days per step for the 4 types of DWM contracts: Range of **"0 "to 51** days per step.[7]

- Number of items required by DWM in the invoice packet: **23**. Source: DWM packet checklist.

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[1] DWM submitted four different sets of steps for 4 different types of contracts: construction, sewer, restoration, and consulting. Thus, analysis of the spreadsheets illustrates a range in the number of steps depending on the type of contract.

[7] Like AIS, DWM also uses "0" for recording a step that is done with a same day turnaround.

Total number of days to validation and approval the invoice per the spreadsheets: shortest 16 days, longest 106 days.

- ➢ 4 invoices processed after 60 days.
- ➢ 18 invoices were processed between 31 to 60 days.
- ➢ 8 invoices processed within 30 days.
- ➢ 0 invoices are in progress

The steps that took the longest:

- • "Contractor Prepares Invoice" (min 0, max 51) (This step not within DWM's control.)
- • "Dept of Finance issues payment" (min 0, max 29) (This step not within DWM's control.)
- • "Fiscal Review" (min 1, max 38)
- • "CTR Creates Invoice" (min 15, max 42) (This step not within DWM's control.)
- • "Chief Water Engineer Reviews" (min 0, max 18)
- • "Project Manager Review (min 0, max 17)

The total number of signatures required to validate and approve an invoice for payment: 6. Source: Documents received from DWM representatives.

DWM Workflow Chart and Screenshot: DWM has 4 workflow charts that do *not* indicate the total number of anticipated ***days*** to complete each step (unlike the workflow charts from the other 3 departments in the Prompt Payment pilot). Number of *steps* on workflow charts is 9 to 17.

DWM also shared a screenshot of an interactive dashboard that allows users to view invoice information in customized ways. According to DWM, users can view the invoices by program, project, step name, etc. If, for instance, an invoice took unusually long, a user could filter to see which reviewer had the invoice for the longest time.

Notes/Comments/Findings:

- • DWM uses the Orion Construction Management System to collect and organize invoices and project data. Vendors submit payment requests via Orion. The system maintains pertinent data (e.g., task orders, P.O. numbers, dates of service, etc.), and routes the invoice to reviewers for approval. Each reviewer's electronic approval is stored along with backup documentation. Once final approval is complete, DWM Finance accesses Orion to approve invoices, which are then entered into FMPS and sent to DOF.

- • DWM can process invoices of almost a billion dollars per year.

2. Enterprise Asset Management (EAM) is a related electronic system used on the operation side to order commodities that are needed on a day-to-day basis. EAM is not used for construction contracts. The invoice payment process starts with a quote, which is entered into the EAM system to generate a release that is sent to the vendor authorizing the shipment of the commodities quoted. The originator of the order enters the quote into EAM to cycle through the approval process (usually a direct supervisor then a deputy of the bureau). All contracts and commodity codes are in EAM and uploaded manually to FMPS. Once approved by the deputy, the quote is sent to DWM Finance to be entered manually into FMPS by the Purchase Order/Accounts Payable staff. Once the quote is entered, the release number is recorded in EAM for reference and a copy of the release is sent to the vendor and requestor. This whole process is done manually; there is no direct link between FMPS and EAM. DWM does not pay for commodities until they are delivered and received and invoiced.

- Given some of DWM's contracts are federally funded, there are specific requirements unique to the payment of DWM invoices that can take extra time and lengthen the overall payment process. On some occasions, DWM will request a contract modification to a line item that was not part of the original contract. DWM has to submit the modification (PCM), to the Department of Procurement Services for approval. In addition to DPS approval, State approval may also be required if the contract has State or federal funding sources. Thus, once DWM receives DPS approval, the PCM will seek approval from the Illinois Environmental Protection Agency (IEPA), to ensure that the modification qualifies for reimbursement by IEPA, the pass through for the federal funding. This process can add additional days, weeks, or months to the process.

  Moreover, when DWM has a Community Development Block Grant (CDBG) funded project, the City's Office of Budget Management (OBM) is DWM's point of contact with the federal Department of Housing & Urban Development (HUD). The payment of any invoice stemming from a modification has extra steps, i.e., it first goes through OBM, and they interact with HUD for approval.

The following table summarizes the turnaround times for processing all DWM invoices submitted for review.

DWM: Days to Process 30 Invoices from 7 Contracts

The following contracts were used in the pilot: IHC Construction Companies (81226), Kenny Construction (37810), Sumit Construction Co, Inc. (103736), Benchmark Construction Co. (127552, 135877), CTR (27027), Granite Inliner (132516)
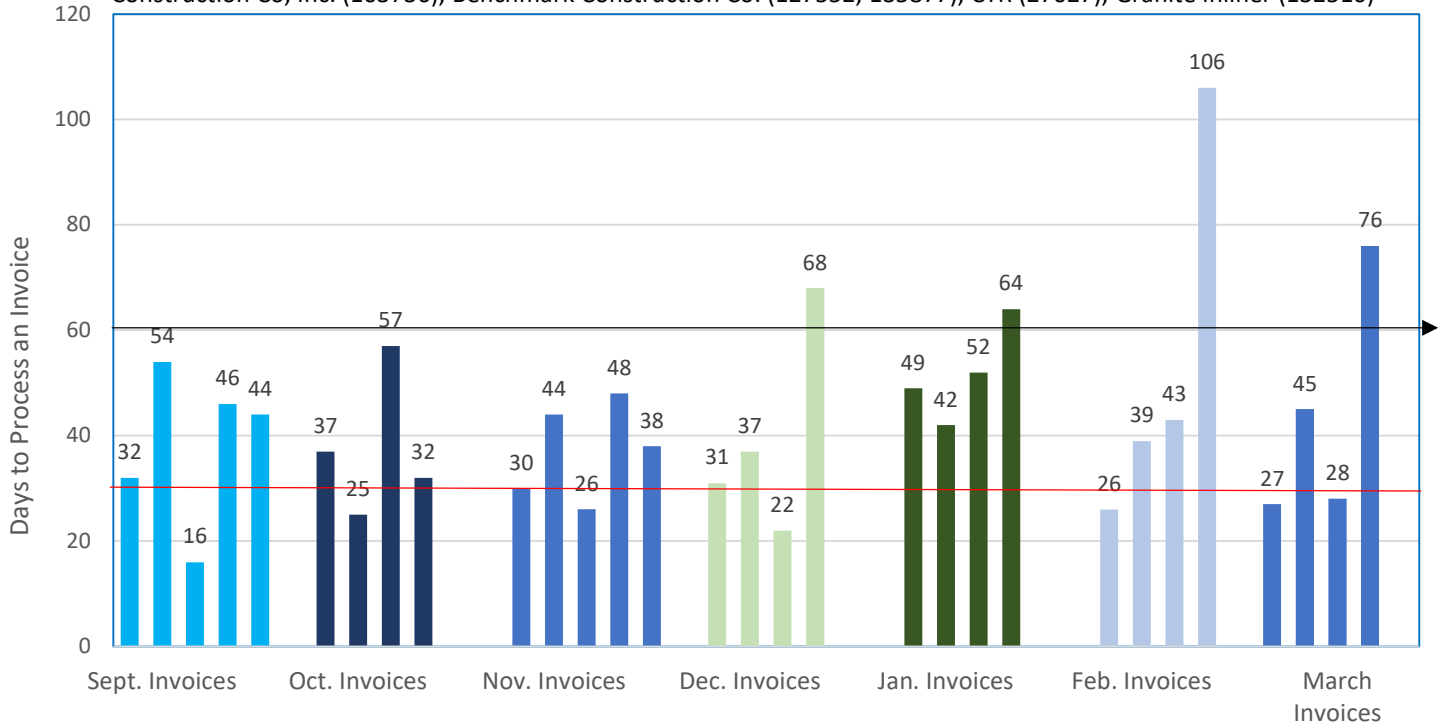
Arrow indicates legal standard of 60 days
Red line indicates 30-day goal

Internal departmental finance unit review

Additionally, every invoice is processed by the internal departmental finance units, and then sent to the DOF for payment. According to the spreadsheets, the 4 internal finance units generally process invoices within: 15 days for CDA; 17 days for CDOT; and 29 days for DWM invoices. No comparable information was indicated on the spreadsheets from AIS. Each departmental finance unit should determine if any reductions in this process are feasible, as the length of time taken on this leg of the invoice processing journey also contributes to the vendor's overall experience.

Final payments by the DOF

Thereafter, according to information provided by the City's Department of Finance, the approved invoices received from the 4 departmental finance units are reviewed and payments are issued by the DOF within 1-3 days, with occasional exceptions.

II. **Overall Invoice Payment Steps - Comparison of all 4 Departments**

Taken from the invoices in the spreadsheets submitted by the departments, the following chart lists and compares the steps taken in the invoice payment process. (Steps in red indicate they are completed outside the department.)

AIS	AVIATION	CDOT	DWM (general construction)
Vendor submits invoice to AIS Finance	Vendor Submits invoice to CDA Finance	Resident Engineer Submits the Progress Estimate which is Logged in the R&E Database	Vendor prepares invoice
Invoice sent to AEC Bureau Receiver	CDA Finance Records invoice in FMS	Tom Warnock Assigns to the Records and Estimates Engineers	Resident Engineer Reviews
AEC Receiver Sends to AEC Project Manager for Review/Approval	CDA Division verifies services/goods and funding	Engineer Prepares the Payment Package and gives it to Clerk	Project Manager Reviews
AEC Project Manager Reviews and Approves the Invoice	CDA Auditor audits invoice	Clerk Faxes or Emails the package to the Contractor	Operations Manager Reviews
AEC Deputy Signs the Invoice	CDA Disbursement Requisition is created for invoice	Contractor Provides Waivers and Status Reports	Budget Cost Reviews
AIS Commissioner signs the invoice	CDA Finance sends to CFO for Signature	Clerk Obtains Signature for Chief R&E Update the Database the Dollar Amount	Coordinating Engineer Reviews
Receipt Created	CDA Finance creates voucher/receipt in FMPS	Send Payment Package to Division of Engineering for Signature	Deputy Commissioner Reviews
Check/EFT Payment Date	CDA Finance sends invoice to Department of Finance	Clerk Receives the Payment Package from Division of Engineering and Updates Database	First Deputy Commissioner Reviews
	Department of Finance issues payment	Payment Package Goes to AP	Fiscal Review
		Contractor Agree with Content of Package (Quantity & Amount)	Prepare for Comptroller
		AP Assigns Voucher Number in FMPS and Requests PV Report (Next Day Printout). Updating Voucher Number in ADT (Tracking)	Dept of Finance issues payment
		AP takes the Voucher Package to Commissioner for Signature	
		After Commissioner's Signature Voucher Package is Returned to AP for Breakdown and Copies Delivers to Comptroller's Office	
		Department of Finance issues payment	

DWM also has steps for paying invoices depending on and particular to the type of project that is the subject of the invoice.

Additional DWM Invoice Process Steps:

Sewer invoice	Restoration	Consulting services
RE Starts Sewer Lining Invoice	Contractor Prepares Invoice	CTR Creates Invoice
Planning Reviews Invoice	Restoration Manager Reviews	CTR Program Mangers Reviews
RE Attaches Invoice Report	CTR Financial Team Reviews	CTR Program Director Reviews
Planning Reviews Invoice	Contract Admin Review	DWM Contract Admin Reviews
Contractor Reviews	First Deputy Commissioner Reviews	Chief Water Engineer Reviews
Planning Reviews Contractor Documents	Fiscal Review	Deputy Commissioner Reviews
Budget Cost Reviews	Prepare for Comptroller	First Deputy Commissioner Reviews
CE V Reviews	Dept of Finance issues payment	Fiscal Review
Coordinating Engineer II Reviews		Prepare for Comptrollers
Chief Engineer Reviews		Dept of Finance issues payment
Deputy Commissioner Reviews		
First Deputy Commissioner Reviews		
Fiscal Review		
Prepare for Comptroller		
Dept of Finance issues payment		

III. **Input from Contractor Representatives**

In connection with the PPWG review, input from the contractor community was also solicited, with the overall goal of learning how to improve vendor experience, including the invoice approval and payment process. Representatives of prime contractors, M/WBEs, subcontractors, and trade associations were interviewed, with their feedback summarized below. The representatives interact, variously, with the departments in the PPWG pilot. There were several common takeaways regarding process, technology, and communication, as well as suggestions/possible solutions:

1. All agreed that less paper[8] and more electronic processing would be better.[9]
2. The reduction of the many steps required to approve an invoice would help streamline the overall process.
3. Streamlining communication with the departments would also help expedite invoice approvals and payments. Specifically, identifying one go-to person for each contract from the department would be helpful. When those individual departmental points of contact are in place, they can be very helpful in tracking payments and identifying issues that have delayed processing.
4. It was suggested that perhaps there be an "ombudsman" for each contract, from start to finish. That person could facilitate communication and problem-solving.
5. Many delays in payments result from the change order process.
6. Staff turnover can also contribute to the delayed payments. For example, CDOT was processing invoices well and then lost several staff members that delayed the processing of payments.
7. Some department online systems provide transparency, like CDOT, which is key to understanding the payment process. However, it was noted that some departments, like DWM do not have that capability.
8. Change order approval process is separate from payments and causes delays making the payments. (payments are not a problem). Also, redundancy with incremental lien waiver requirements when funds are withheld anyway as required by State statute extends delays.

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[8] One experienced contractor suggested that historically M/WBEs may have been challenged by electronic invoicing and payments but that no longer seems to be the case. If there were any City requirements for "wet signatures," it was suggested that the City could provide a solution by modifying the law or rule, like the action taken by the State when it moved to paperless invoice approvals.

[9] Positive comments were made about CDA and CDOT using electronic systems, Orion, and SharePoint, and specifically, that SharePoint keeps all invoices and subsequent documents relating to that invoice in one place.

9. Final payment and close-out process has increased delays due to the 5% withholding until close-out. When close-out gets delayed, the 5% is hostage for work already performed months/years prior.

From the viewpoint of a building trade association representative, the following additional observations were made:

1. The first payment from the city was usually done well, but delays occurred when there were change orders and during close-out. Delayed contract close-out and final payments also cause financial problems for contractors and sub-contractors. Many primes can go to the bank to secure money to hold them over, but many subs cannot.[10]

2. A caution was made regarding any possible diminution in holding sub-contractors accountable. An example was cited of IDOT providing mobilization payments directly to subs, with   subs failing to complete the work on time, not completing the work at all, or declaring bankruptcy. This resulted in project completion delays, extra costs to the contractor and to the State. Thus, any streamlining reforms that reduce the contractor's leverage over the sub could generate issues.

From the vantage point of another MBE, the representative said:

1. With respect to receiving payments, interaction with the city has worked well with a good process in place when the deadlines for submitting documentation were met. On occasion, as a prime or sub, they did not know whether to expect a paper check or an EFT, which is important to ensure the payment was received and recorded accurately. However, the vendor experienced no delays with receipt of payment from the city.

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[10] It was acknowledged that some delays are caused by subs who do not complete their required paperwork.

IV.   **Observations and Recommendations**

The departments each seem to collaboratively embrace the goal of reducing the turnaround time to pay invoices. The departments know excess steps and delays create more work. Chronically slow payments can disrupt the ability of vendors to operate and can even become barriers to participating in City procurement projects and contracts. Moreover, with respect to the PPWG's review, the City selected the bigger infrastructure departments. If the City can move the needle by reducing steps and turnround times with these four departments, it will achieve a significant improvement, and other departments can follow suit.

Not all of the sample invoices submitted for review were paid late; many were paid within a reasonable time frame. The observations and recommendations in this Report address the inconsistencies, and more significant delays in validating and approving invoices for payment. The fastest payment in this sample was 7 days, the lengthiest was 106 days, with several invoices pending payment that are months in the processing.

Valid reasons for the lengthier turnaround times such as steps needed from vendors, State, and federal regulations, were also identified and included in this Report.

Many of the observations below were corroborated by the contractor representatives who provided input to the PPWG, and many of the recommendations have their experiences in mind.

As part of this review, the PPWG reviewed source materials that included numerous invoices paid by the four City departments, invoice checklists, invoice packages, workflow documents; and conducted interviews of City employees, received extensive input from the DOF, and spoke to contractor representatives. Specifically, the PPWG reviewed 27 invoices from CDOT, 31 from DWM, 49 from CDA and 66 from AIS.

The following are observations made, good practices to copy, bottlenecks identified, and recommendations:

- **Business days vs calendar days.** The workflow charts provided by the departments reflect their respective understanding of the (a) steps and (b) length of time per step in the invoice validation and approval process. In addition, in discussions with departmental representatives, there was a lack of clarity and variation within and among the agency representatives in their understanding as to whether steps were being measured on a calendar or business day basis. This important benchmark must be settled upon and clarified since it is a key to calculating the number of days it takes to pay an invoice. We recommend a review of this business vs calendar day issue to include DOL. Unless there is inconsistency

with any standard contract terms, agreements or regulation, we recommend that a business day rule be applied by each department.[11]

- **Recording steps as "0" days.** Counting the total number of days to validate and approve an invoice was a main part of the PPWG's exercise. To that end, this review revealed that several of the departments accomplish same day turnaround of one or more steps in the invoice payment process which they record as "0" day steps in their workflow charts. The result is that the turnaround times measured in this Report are artificially lower to a degree by virtue of the use of "0" day counts for steps by the departments. During this review, there were discussions with the departments and the Controller's Office about recording same-day turnaround times as 1 day rather than 0 going forward, to more accurately reflect the overall time to complete an invoice payment. Eliminating "0" day steps is a rule that should be applied consistently across the board.

Number of signatures required to approve an invoice for payment.

The Report discusses the overall payment process as encompassing the time the contractor submits a proper invoice through the time the DOF issues payment. The overall process, in fact, inherently includes two inter-related processes. First, the external signatures required to validate the invoice, e.g., the contractor and sub-contractor must sign documents in the invoice package. The second, entails the internal process required to validate the invoice submitted for payment, including internal signatures. Efficiencies in both are critical in making timely payments to contractors.

- Discussions about the number of signatures in the invoice approval process being too high and causing a bottleneck, took place with each of the departments. The PPWG determined that each department can reduce them, e.g., by looking at the number of auditor vs. non-auditor signatures; or by creating or increasing dollar amount thresholds for some signatures, for example, as at CDA where more signatures are required for contracts over $50k. A signature/approval reduction by each of the departments can and should be done as it relates to redundant/extra/too many signoffs, to expedite the payment process. However, it should not be done in a way that undermines a substantive set of reviews prior to payment.
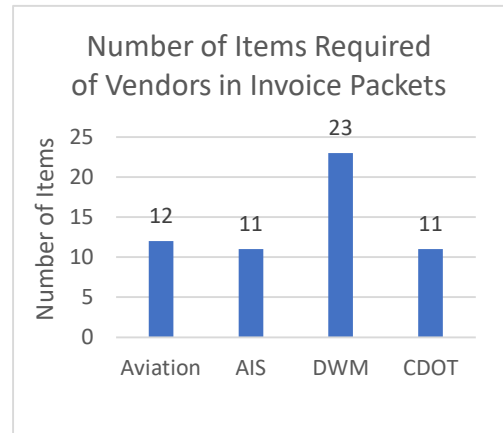
  The number of signatures required for the entire invoice validation and approval process and the subset of signatures required to simply validate the invoice for payment explains the varying numbers received from the departments. In any event, the universal view among the departments that fewer signatures would expedite and make invoice approval a less burdensome process for all, the PPWG recommends that each department recommend for

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[11] As a point of reference and not requirement, Federal Acquisition Regulation 2.101, and the Illinois Procurement Code 30 ILCS 500/15-45, state that the word "day" means calendar day, unless otherwise specified.

elimination one or more of its signature requirements within 30 days of issuance of this Report. They should each do so without compromising a substantive review and approval and any adherence to special requirements. The PPWG believes this reduction is possible based on the constructive self-analysis of the departments during this review.[12]

Number and types of documents required to support an invoice.   The documentation required from vendors to support and validate an invoice has the potential to elongate the invoice payment process. The four departments were asked to submit the checklist of items they require vendors to include in their invoice package submissions. The checklists ranged from 11 to 17 items. Two departments submitted invoice "checklists" (AIS and Aviation), and two had the functional equivalent of checklists (CDOT and DWM use a "pre-construction package," which contains a list of required documentation like a checklist).

Number of Items Required of Vendors in Invoice Packets

Department	Number of Items
Aviation	12
AIS	11
DWM	23
CDOT	11

The checklists and "pre-con" packages had some common items, and others unique to each department. The requirements vary depending on the type of contract. For example, common items requested by departments included project details and identifiers, variously: the contract, project, invoice, release, and purchase order numbers; project date range; vendor information (with some slight differences between departments).   Moreover, Aviation, CDOT and DWM requires certified payrolls and subcontractor payment certifications for MBE/WBE/DBEs (AIS does not collected this information). DPS collects COIs and certified payrolls for contracts. All departments require lien waivers. DWM, CDOT, and Aviation all require certificates of insurance and other insurance materials (AIS does not collect this information).

There are also a variety of items that appear to be department specific. For example, requesting a pay estimate status form (Aviation), asking for the balance left to complete (AIS), and submission of the construction schedule (DWM). To the extent that not all of the departments are asking for these items, they should consider doing so.

As with other steps in the process, each of the departments should be required to reduce where possible the number of items needed for the invoice or "pre-con" package. DWM had the largest number of items on their checklist, which should be analyzed in particular.

- **Differential between actual number of days to validate and approve invoices based on the documents in the spreadsheets vs. the number of days targeted on the departmental**

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[12] Some of the signatures also require notarization. The notary requirements are not included in this analysis.

workflow process charts. The PPWG found inconsistencies between the target range of days needed to complete an invoice as reflected on the departmental workflow charts, and the actual number of days to approve the invoice. These differentials show departments are not aware of or adhering to their understanding of their validation and approval processes. For example:

- o **CDOT's** workflow chart reflects a target range of **16 to 52** working days and 14 steps for processing an invoice; compared to the analysis of the spreadsheets that show processing an invoice took between **8 to 57** days, with 14 steps in the process. **CDOT should study this differential**.
- o **AIS's** workflow chart reflects a target of **20** working days with 7 steps for processing an invoice; compared to the analysis of the spreadsheets that shows processing an invoice took between 7 **to 70** days, with 8 steps in the process. **AIS should study this differential**.
- o **Aviation's** workflow chart reflects a total of **25 days** with 7 steps for processing an invoice; compared to the analysis of the spreadsheets that show processing of invoices ranged from **29 to 95 days** with 9 steps in the process. (Aviation did not include steps outside their control on their workflow chart, i.e., "vendor submits invoice to CDA Finance," and "Dept of Finance issues payment"). **Aviation should study the differential of days to complete an invoice.**
- o **DWM** workflow charts**:** DWM has 4 workflow charts, but they **do not** contain the total number of **days per step** (unlike the workflow charts from the other departments). The number of steps reflected on the DWM workflow charts range from 9 to 17.

Moreover, **none** of the workflow charts from any of the 4 departments identify where and the **number of signatures required** in the approval process**.**   In sum, as it relates to the departmental workflow charts, there is a greater need for accuracy and complete information including signatures given they are important benchmarks for the invoice approval process.

- **The internal and external flow of invoice documentation.** How vendors submit their invoice package materials to the departments impacts the fluidity of the overall process. Notably, vendors may submit invoices to each department by mail or by electronic means via the Orion Management System for DWM, Microsoft SharePoint for CDOT, and FMS for CDA. AIS is the only department without a particular system to receive invoices and wishes to explore software options to facilitate greater efficiencies. Currently, AIS receives digital invoices through email and tracks them on excel. All departments upload approved invoices to FMPS for payment.   All departments should have a system for processing electronically.

Additional task reminder emails to be built into and issued by the FMS system were discussed during the PPWG review with CDA, so that needed actions could be taken more quickly. The feasibility of that should be studied as this could be an additional useful tool for CDA to avoid languishing items.

As part of this review, the PPWG learned that iSupplier, the existing Oracle module within FMPS, structures all vendor communication through a secure internet-based portal that provides registered users with 24/7 access to up-to-date information on purchase orders, billing disputes, payment status, etc. iSupplier can also track invoices from start to finish and identify bottlenecks is the invoice approval process, an attractive feature for the Vendor Workforce. As of now, only some departments use parts of iSupplier. However, the module has the capacity to become the main system used by all departments. Since all vendors are currently required to submit their DPS bids through iSupplier and are likely familiar with this portal, departments should be encouraged to explore this option to help homogenize systems and procedures.

Good practices for departments to share/borrow:

- **Splitting invoices with multiple subcontractors to speed up the overall payment process.** One or more of the departments process invoices that consist of dozens of subcontractor invoices, each requiring the assembly of time sheets, among other documents. Thus, submitting this type of invoice to a department for approval is inherently a multi-step, time-consuming process for the contractor. The CDA discussed that at times it splits invoices into parts so payment can process on a rolling basis. That would require more, but less extensive, invoices to process with faster tranches of invoice payments. All departments should consider this where possible.

- **Lump sum vs time and materials invoices.** All departments discussed the causes of extended invoice review processes. One observation highlighted the longer review needed to process a *time and materials*-based invoice, as compared to a *lump sum* invoice. Payments on a lump sum contract requires a lower level of analysis because individual line items do not require the same scrutiny. Of note, CDA discussed a practice of converting payments from a time and materials to lump sum after certain contract milestones are reached.   Where appropriate, the conversion should be anticipated and authorized in the contract to avoid the sometimes-lengthy contract modification process. This conversion mechanism for payments should be more fully explored for use in contracts. A lump sum invoice is more expeditious but should always be accompanied by the right level of checks and balances.

- **Filling relevant vacancies**. AIS filled a position earlier this year with an experienced employee who was tasked with addressing invoice payment issues. That internal additional regulation has brought preliminary improvements to the AIS validation and approval turnaround process.   In this report, AIS has shared details about the new invoice oversight and management responsibilities undertaken that have been helpful and can share further details with sister departments. Another department discussed their unfilled vacancy in the invoice payable area, and the need to spread those duties among several employees. Departments

should make effort to fill vacancies relating to and impacting the invoice payment process. Where that is not possible, departments should redeploy sufficient coverage to knowledgeable personnel.

- **Using technology to help track the docket of ongoing invoices**. In addition to sufficient staffing and good oversight, the City departments can and should use technology to track the large volume of invoice activity on their dockets. DWM has a dashboard that allows users to view invoices by program, project, etc. In cases where an invoice takes unusually long to process, DWM reported that the dashboard can filtered to see which reviewer had the invoice for the longest time. This is a best practice, and it is recommended each department implement a dashboard for tracking invoices in real time and maintaining turnaround time data**.**

- **Proactive strategies for avoiding delays in State/federally funded contracts**. Several good practices were drawn from discussions with the 3 departments that have federally funded contracts that also involve dealings with the State. For example, CDOT builds some reasonable level of contingency funds into the budget at the inception of such projects because the modification process can be protracted. Even where modifications are required, the City pays the contractors so the work can continue, (following the City's careful internal approval processes), while the pending State/federal modification approval process moves forward. Lastly, CDOT meets with officials from IDOT on a regular monthly basis to review pending matters, including the status of approvals and funding of ongoing construction projects. Such regular meetings with State counterparts facilitate moving projects along and solidify an understanding of what is needed.

V.   **Innovations**

The following innovations recommended by DOF are ripe for consideration to help streamline and speed up payments to vendors, reduce redundancies and move the City toward a more sustainable expeditious process.

Advance Payments to Vendors to Cover Start-Up and Mobilization Costs

In anticipation of performance under the contract, the Municipal Code of Chicago authorizes the City to make advance payments to assist contractors, suppliers, and service providers with the cash flow required to cover initial expenses including start-up and mobilization costs, among other things. Chicago, Ill., Mun. Code §2-92-245, §2-92-460(g). The city may also make advance payments to contractors on behalf of MWBE subcontractors for a construction project, that vary in type, size, and flexibility §2-92-710(h). In addition to satisfying immediate needs and interests, advance payments remove a significant barrier faced by entities with limited access to affordable capital and may help improve vendor diversity and the pool of vendors that bid on City

procurements. One example of advance payment is referred to as the 50/50 Payment Program. In 2020, Aviation reinstated the 50/50 Payment Program for Construction Manager at Risk (CMR) invoicing. The 50/50 Payment Program provides expedited cash flow to CMRs, their subcontractors, and their suppliers through an initial 50% payment while pay application documentation is developed and approved. Monthly invoices over $1,000,000 are eligible for the 50/50 Payment Program.

Recommendation: DOF, DPS, and DOL should assess the overall impact, costs, and benefits of making advance payments to determine whether the practice incorporates risk mitigation techniques and whether it should expand to include additional vendors and contracts. The assessment should:

- Identify for whom, to what extent, and in what circumstances an advance payment is currently made.
- Determine if, and under what circumstances, an advance payment increases the City's risk of loss and identify practices to mitigate those risks. For example, if a contractor or subcontractor receives an advance and subsequently becomes insolvent, or otherwise defaults, without completing work equivalent to the advance, can a surety be discharged of its obligations under a performance bond on the grounds that the advance constitutes an overpayment? If the answer is yes, should DOF obtain the prior consent of the surety before making an advance?
- Identify the objective criteria and methodologies to determine when and to whom an advance payment is made and the corresponding amount to ensure the payments are allocated in a consistent, logical, and equitable manner.

The Use of a Third-Party Administrator to Issue Contractor Payments

Construction funds control and disbursement management is the process by which a third-party ("TPA") manages the schedule, paperwork, and record of how and when funds are distributed to contractors, subcontractors, and equipment and materials suppliers on a construction project. The TPA is used in conjunction with, or as an alternative to, a performance and payment bond. The overarching goal is to mitigate risks of defaults and liens due to the mismanagement of funds, ensure timely and faster payments to sub-contractors and suppliers, track change orders, and make ongoing payments for scheduled, verified milestones. Full TPA services typically costs between 0.75-1.0% of the contract, up to a certain amount. Single services (i.e., disbursement only) are usually charged at a flat rate.

The solicitation for procurements that will utilize a TPA typically state that the contractor shall enter into a Disbursement Control Agreement with a specified TPA that includes the various terms detailed in the solicitation. The contractor would agree to execute a simple, irrevocable directive instructing the City to send or wire project payments directly to the project bank account that is opened in the contractor's name and federal ID number, with the TPA as the account signature authority. The City would wire contract funds to that bank account. When a payment is sought, the contractor submits an invoice package for reimbursement or direct

payment to subcontractors. The TPA reviews and validates the invoice package and disburses payment to the contractor and subcontractors. This method of payment ensures that subcontractors are paid timely and avoids issues relating to the City's direct payment to subcontractors, such as privity of contract, potential liability to an insolvent contractor, etc.

Recommendation: DOF should partner with other departments to explore the viability, costs, and benefits of procuring a third-party construction funds control and disbursement administrator for high-priority construction projects.

<u>**Procure-to Pay Efficiencies Through Paperless Initiatives**</u>

DOF is building and piloting the infrastructure to achieve greater end-to-end ("procure-to-pay") efficiencies for vendor payments through paperless invoicing, processing, and payment through the existing iSupplier Portal, an Oracle module within FMPS. iSupplier has been used for years by DOF to receive and pay delegate agency vouchers using a "two-way match to P.O." verification process. iSupplier has since become a central component of the DPS e-Procurement initiative and is the web-based portal through which all vendors are required to submit their bids.

- **Paperless Vendor Payment**: Leveraging iSupplier's expanded and <u>required</u> use, DOF recently launched its Paperless Vendor Payment Initiative. The initiative pays the non-construction invoices of participating CDA and CDOT vendors via EFT/ACH or the new Vendor Payment Card instead of a paper check, significantly expediting the vendor's receipt of payment.

- **Paperless Vendor Invoicing**: An invoice validation process using a "three-way match to receipt" was the initial DPS directive years ago, with all contracts starting as three-way match at the system level. However, user departments subsequently determined that three-way match is incompatible with some functions and departments. Consequently, "exceptions" were created to move a contract from three-way to two-way match. Delegate agencies and most construction contracts fall within the exceptions. Moving forward, all prospective contracts will default to three-way match with limited, pre-approved exceptions (i.e., delegate agencies). Existing contracts may move from the exceptions list to three-way match at the vendor's request. By December 31, 2026, all contracts on the exception list, including contracts awarded on or before December 31, 2021 will be moved to three-way match.

Recommendation: DOF should continue its collaboration with the departments and its IT vendor to identify and remove barriers to this broad use of iSupplier and will pilot the Paperless Invoice Initiative in the coming months. To complete the iSupplier programming necessary to implement the Paperless Invoice Initiative, the City's IT consultant will need the names of the specific individuals that must approve department invoices. Thus, the department workflow charts should include the names and roles of these individuals. It would be helpful if departments also

identified the individual's function in verifying the accuracy of the invoice and that the work and materials are authorized under the contract (e.g., verifies the invoiced item is authorized and was received or performed in accordance with the contract terms, the invoiced price is the agreed upon price, negotiated discounts are included, etc.). Redundant and non-essential signatures should be eliminated.

The collective efficiencies generated by paperless vendor payments and invoicing should accelerate the payment process sufficient to support a negotiated 2% discount for net 30-60 instead of net 90-120 on commodity, professional services, work services, and vehicle/heavy equipment contracts that are not federally let or otherwise grant-funded. The initiatives are expected to result in direct and indirect savings (i.e., labor, materials, and storage), less errors, and enhanced risk mitigation and transparency.

- Note: iSupplier will provide the ability to track an invoice from the date it is uploaded by the vendor until payment is issued by DOF. This will allow departments to more readily identify and remedy bottlenecks.

Notably, during the conversations with contractor representatives, they indicated that it would be constructive to continue to include them in the dialogue about implementing changes and innovations to the invoice payment system.

Conclusions

Recommendations Support Setting New 30-Day Payment Goal
Need for Tracking in Real Time, Compliance
Innovations
Training
Phase 2 Analysis for the PPWG

In sum, the review by the PPWG showed that there are several improvements that the departments can implement to make the invoice payment process more efficient. The extensive review and findings by the PPWG support the recommendation of establishing new goal that would make the standard practice for paying invoices within a **maximum of 30 business days** consistently across all City departments, absent exceptional circumstances. Tracking compliance, is vital. A central dashboard would facilitate this tracking, or in the alternative, a central review of departmental dashboards would improve compliance and help with troubleshooting. A tracking process could be implemented in conjunction with the new 30-day requirement and adjusted if/where needed as the PPWG is aware of the internal and external complexities the departments face. An additional incentive to making the payment system more expeditious is the opportunity to negotiate a post-award, 2% discount on certain invoices paid within 30 days.

First, this review showed that the departments can/should reduce the number of days they take to complete each step. As a starting point, the department should review, among others, the "steps that took the longest" highlighted in Section II of this Report for each department.

Additionally, the departments can *carefully* consider ways to reduce the number of signatures/approvals required to process an invoice. As a starting point, this Report breaks down the number of internal departmental signatures needed to process an invoice for payment within the 4 departments – and it ranges from 6 signatures for DWM; 10 for Aviation and CDOT; and 20 for AIS. Departments may have a reason for each of these signatures, but especially where there are higher numbers of signatures, they should be freshly scrutinized by the departments and City. Moreover, departments could create or increase dollar amount signature thresholds, (see, e.g., AIS section II), and eliminate or collapse the number of non-auditor (and if possible, auditor) signatures.

The departments should submit their own proposals to reduce the number of signatures and days per step, merging steps where possible, within 30 business days of the issuance of this Report.

Each department should update its respective workflow chart(s) to reflect the steps and timeframe benchmarked and expected by each department (and vendor) as it relates to the payment of invoices. Those workflow charts should be used in training personnel who are part of the invoice payment process

Next, the departments can also alleviate the burden on vendors by reducing the number of items required in the invoice or pre-construction packages. Some of the information required is vital, but some may be redundant. The departments should conduct a fresh review of the invoice checklists and packages and identify whether there are items that can be eliminated. A proposal from each department as to how to reduce the invoice or "pre-con" checklists and package requirements should be submitted within 30 business days of the issuance of this Report.

All proposals for alterations and reductions to the process should be reviewed by the Law Department. The DOF and PPWG should continue to work closely with the 4 departments to implement the recommendations for streamlining.

A study of several highlighted innovations could create greater momentum and transparency in the overall payment process including advancing payments to vendors to cover certain costs, use of third-party administrators, and paperless systems to ease mobility among all the internal and external actors who touch the payment process.

Finally, training of departmental personnel involved in the payment process on new and existing procedures and turnaround times/requirements should be conducted. The training should include a review of the updated departmental workflow charts that contain an accurate number of steps, the maximum number of days to complete each step, and the signatures required. Thereafter, refresher training, e.g., annually, to include the year's data as it relates to the number

of invoices paid, turnaround times, bottlenecks that took place, etc., supported by the suggested dashboards, could proactively keep this busy, complex process on a better track.

The City should also offer training to the Vendor Workforce to educate them on new and existing procedure and expectations relating to turnaround times, vendor requirements, ways they can track the progress of invoices, etc.

The invoice payment process is so inextricably linked to other aspects of the contracting process that a second set of issues could be analyzed by the PPWG. For example, the PPWG could next address several issues pertaining to the payment of invoices, including, the time it takes to process a change order, bottlenecks in the close out process, special procedures for handling the extra steps in contracts with federal and/or State funds. On a related matter, a contractor representative asked the PPWG to examine the process for obtaining certain permits from the City critical to construction projects.