FORM GEN. 160 (Rev. 11-02)

Agenda Item No. 8

CITY OF LOS ANGELES
INTERDEPARTMENTAL CORRESPONDENCE

Date: February 25, 2021

To: Municipal Facilities Committee

From: Steven Fierce, AIA
Principal Architect/Municipal Facilities Program Manager
Bureau of Engineering

Arthur Sales, CISSP
Information Systems Manager II
Enterprise Systems & Operations Services
Information Technology Agency

Subject: **CITY HALL EAST (CHE) ITA SERVER ROOM UPGRADE PROJECT UPDATE – CLOSE OUT PROJECT AT PHASE I AND RESCOPE OF PHASE II AND PHASE III, COMMITTEE MEETING, FEBRUARY 25, 2021**

It is recommended that the MFC:

1. **Approve the BOE and ITA recommendations to close out the CHE ITA Sever Room Upgrade project at Phase I;**
2. **Approve the BOE and ITA recommendations to rescope and redesign the remaining construction work in the CHE ITA Server Room Upgrade – Phase II (Project No. G1172) and report back with a project budget and schedule.**
3. **Approve the revised Phase I project schedule completion date of September 30, 2021.**
4. **Approve the Phase I project closeout cost of $340,000.**

Updates are in bold

Councilmember Kevin de León, CD14

Background	**The scope for this project was initiated in 2014 in conjunction with the overall City Hall East (CHE) and City Hall South (CHS) Electrical and Mechanical infrastructure upgrades.** **On April 2, 2014, IBI produced a report recommending improvements to the HVAC infrastructure of ITA Server Room, including the installation of new chiller plant.** **Soon after, ITA requested a complete upgrade of the server room, including the relocation of the existing servers to an adjacent space after being renovated.** **On February 25, 2016, the Municipal Facilities Committee approved a construction budget of $8.96 million for the ITA server room upgrade project.** **On June 8, 2017, a Notice of Award was issued to the Construction Forces Division of the Department of General Services (GSD/CFD), for an amount of $5,870,681.** **In the MFC report dated May 31, 2018, the BOE reported that there were delays and additional costs incurred due to the data center migration being carried out by ITA, added scope for ITA staff office relocation, hazardous material abatement, modification for additional ADA upgrades, and other unforeseen construction conditions. The project completion date for all work through Phase III was revised to June 3, 2020.** **Upon completing roughly 90% of Phase 1, the project was placed on hold due to funding availability and the need to rescope the project to meet the revised needs of the client.**
Scope	**As part of the CHE and CHS building system upgrade, the CHE ITA Server Room Upgrade (Project G895/W.O. E1907855) is intended to upgrade the electrical and cooling system of the existing ITA Server Room with the highest energy efficiency standards, and to increase reliability and safety of the computer servers. The enlarged server space and staff working area will ensure uninterrupted full-time (24/7) operation year-round. The project called for three phases of construction due to ITA operation constraints.** **Phase I** **Phase I of the CHE ITA Server Room Upgrade includes the expansion of the server room and office space, ADA upgrades, installation of a new independent chiller plant, new computer room air conditioning (CRAC) units in the Phase I server room and communication room, modifications to the fire alarm and pre-action fire sprinkler system, and various upgrades to related mechanical and electrical infrastructure.**

Phase II and Phase III

The original Phase II & Phase III scope of work included reconfiguring the remainder of the floor area to accommodate the additional server rooms and staff office space. Improvements also included a new raised floor system, computer server racks, CRAC units and modifications to the existing electrical and HVAC systems.

Since the inception of the data center upgrade project, several technologies have advanced that allowed ITA to descope Phase II and Phase III of the data center upgrade.

1. **Cloud hosting: Adoption of cloud hosting by the City results in less applications, systems, and servers needed in the data center.**
2. **High-performance servers: Utilizing energy-efficient, high-density, more compact servers enables the City to run server virtualization with high power efficiency and less space requirements.**
3. **Virtualization: This new technology enables the City to host hundreds of systems including database servers on a few machines.**

The revised client demands translated to a data center requiring less space than originally planned, but triggered some conflicts with the recently installed HVAC system and new chiller plant. Although currently offline, the recently installed chiller plant will be utilized in the re-scoped Phase II.

Focus meetings with ITA, the CAO, BOE and GSD determined that Phase I of this project should be closed out, and Phase II should be rescoped due to the changes in City needs, available technology and available funding.

The option to completely abandon the original scope of work for Phase II and III was considered. However, this option is not preferred since the projected savings is not significant, and will result in unresolved design conflicts between the recently installed electrical and mechanical systems installed during Phase I. The Phase II scope has been reduced to focus on solely providing the redundancy needed to protect the City's data and communications infrastructure.

The additional design and construction work to remedy the conflicts with the recently installed HVAC and electrical systems completed in Phase I will incur additional cost as detailed in the budget section of this report.

The revised Phase II scope will ensure all equipment installed in Phase I can run as designed, and includes the general elements noted below.

A. **Mechanical and Plumbing:**

    1. **Provide air conditioning to the existing communication room (C404).**

	2. **Provide air conditioning to the existing server room (C402-A and C402-B).** 3. **Complete the commissioning of the new chiller installed on P3 once all new CRAC units are in place.** **B. Electrical** **1. Incorporate/ complete the design of the Manual Transfer Switch (MTS) connection from Emergency Switchboard (ESW) to the Main Switchboard (MSW) North.** **2. Utilize the existing and new Power Distribution Units (PDUs) to provide branch circuits and redundancy for the equipment in the existing communication room and server room.** **C. Architectural** **1. Repurpose the remainder of the server rooms area into one large space for a future multiple-purpose office/training room (tenant improvement is not included in this project).**
Budget	**<u>Funding History:</u>** • **In 2013-14, $15 million in MICLA were authorized for City Hall East Electrical System Upgrades and P4 Improvements** • **On February 25, 2016, the Municipal Facilities Committee approved a construction budget $8.96 million for the ITA server room upgrade.** • **$1,300,000 was transferred to GSD from 298/50/50PTSR in the 2017-18 First CPR, Item 5 (C.F. 17-0924).** • **$2,691,000 was transferred to GSD in the 2017-18 Third CPR, Item L (C.F. 17-0724-S2);** • **$2,383,000 was transferred to GSD in the 2018-19 Third CPR, Item C (C. F. 18-0829-S2);** • **The actual funds provided to GSD to date is $6,374,000.**

Phase 1 Project Budget Status

Design

The following table listed the approved budget for the design service related to ITA Server Room Upgrade from each TOS:

TOS No.	Award Amount	Total Expenditure	Balance
250	$293, 404.82	$293,404.82	$0
47	$150,000.00	$127,968.82	$22,031.18
Total	$443,404.82	$421,373.64	$22,031.18

Construction

Based on NTP issued to GSD/CFD on 06/08/2017

Original Contract Amount	$5,870,681
Change Orders expended to date	$403,716.8
Revised Contract Amount	$6,274,397.80
Total Appropriations to Date	$6,374,000
Expenditures as of 11/21/2020	$6,274,397.80
Balance	$99,602.20

Phase 1 Project Budget Summary

	Amount Appropriated	Total Expenditure	Balance
Design	$443,404.82	$421,373.64	$22,031.18
Const.	$6,374,000	$6,274,397.80	$99, 602.20
Total	$ 6,817,404.82	$ 6,695,771.44	$121,633.38

Project Cost Estimate to Terminate the Project at Phase I:

Design Costs	$30,000
Construction Costs	$260,00
Construction Contingency	$50,000
Total Cost of Termination	$340,000
Remaining Balance	-$121,633
Projected Shortfall	$218,367

	Project Cost Estimate for Rescoped Phase II **Construction Costs** **$ 0.90M~ $1.1M** **Construction Contingency (±20%)** **$ 0.18M~ $0.22M** **Design Cost** **$ 0.14M~ $0.15M** **Design Contingency (+20%)** **$0.02M~ $0.03M** **Sub Total** **$1.25M ~ $1.50M** **Escalation (5% x 1 Year)** **$0.06M ~ $0.08M** **Total Phase II** **$1.31M ~ $1.58M**
Schedule	Phase I Phase — Original Dates — Revised Dates NTP to GSD 10/03/2017 10/03/2017 10/03/2017 10/03/2017 Construction 10/04/2017 06/03/2020 10/04/2017 06/03/2020 Post Construction 06/04/2020 11/04/2020 **06/04/2020 09/30/2021** **Phase II (Revised scope)** **Phase — Date** **Predesign 08/01/2020 06/30/2021** **Design 06/30/2021 12/29/2021** **Bid and Award 12/29/2021 06/30/2022** **Construction 06/30/2022 12/29/2022** **Post Construction 12/29/2022 06/29/2023**
Status	**Construction Status:** **Phase I was substantially completed in June 2020. Several punch list items remain such as the fire alarm acceptance testing and commissioning of the HVAC system and Chiller Plant on P3. LADBS final inspection has yet to be completed. Plans are being modified to segment the Permit set for Phase I, which will allow for final inspection.** **Construction activity for the Phase II and III are on hold since June 2020 pending the funding availability and the completion of data migration in progress by ITA.** **Some large equipment and construction materials (such as CRAC units, doors, electrical panels, pipes, conduits, etc.) have already been purchased for the Phase II and Phase III with the intention to save money and procurement time. This equipment is currently stored in the City's warehouse, and would need to be utilized to provide the cooling redundancy needed in the server and communications rooms.**

	Data Center Migration Status: **As previously mentioned, the data center migration is 60% complete; however, this task will not progress as fast as originally expected. Currently, ITA is targeting to complete 80% by the end of year 2021.** **The remaining 20% of servers, consisting of several critical systems managed by ITA and LAPD, proved to be very complex and cannot be disrupted to relocate. A small portion of the remaining servers include units near their end-of-life cycle and those that are not rack mountable; both of which will remain until replacement is required.** **Phase I - Closeout:** **Since Phase II and Phase III have been on hold from June 2020, many aspects of construction are left unfinished and require protection.** **Phase I needs to be closed out to reduce any additional post-construction expenditures and remove potential work site hazards. Closing out this phase, and rescoping Phase II, will also provide ITA the extended time needed to complete the data center migration. The following actions shall be executed in order to close out Phase I.** **1. Stop all the construction work for Phase II and Phase III;** **2. Store all previously purchased equipment including four (4) CRAC units in a well-protected unboxed condition;** **3. Incorporate/ complete the circuiting design for the server racks in the new communication room.** **4. Provide a soffit to cover the dropped cable tray and restore/repair the missing/damaged ceiling and flooring tiles in the construction area;** **5. Remove or cap all temporary electrical and mechanical work that is pending completion in Phase II and III;** **6. Coordinate closeout procedures with the LADBS inspection; Remove the construction barrier and clean up the construction area; and,** **7. Closeout the Project at Phase I and turn over the facility to ITA.**
Attachment	**Attachment 01: IBI Task Order History - TOS No. 250 and TOS No. 47**

SF/NM/OA/SZ/
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Attachment 01

Detailed Description of TOS No. 250 and TOS No. 47

Board Report Date	TOS No.	Original Award Amount
01/22/2014	250	$489,104

Scope: CHE electrical system improvement study and the CHS energy efficiency improvement and mechanical system upgrade study.

Board Report Date	TOSA No.1	Revised Award Amount
12/17/2014	250 (revised)	$850,000

Scope: Design services related to the upgrade of the existing ITA server room for an amount of $360,896 for a revised contract amount of $850,000.

Total Award Amount of TOS 250	$850,000.00
Total Expenditure of TOS 250	$782,508.82
Balance of TOS 250 (Transferred to TOS No. 47)	$67,491.18

Board Report Date	TOS No.	Original Award Amount
12/19/2018	47	$67,491.18

Note: On December 19, 2018, the Board authorized the design services for ITA server room that were not completed prior to expiration of the original contract C-114049 from the 2008 List $67,491.18 to be issued as work under a sole source TOS No. 47 under contract C-124701.

Board Report Date	TOSA No.1	Revised Award Amount
02/03/2020	47(revised)	$150,000

Scope: Design Fees Related to the ITA swing space buildout in an amount of $68,697, and a contingency of 13,813.82, for a revised contract amount of $150,000

Total Design Fees for ITA Server Room Project	$443,387.18