



- **Board of Directors**
Engineering, Operations, and Technology Committee

9/10/2024 Board Meeting

7-1

Subject

Authorize an agreement with IDS Group Inc. in an amount not to exceed \$400,000 for design services to rehabilitate the heating, ventilation, and air conditioning system at Metropolitan Headquarters Building; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The heating, ventilating, and air conditioning (HVAC) system at Metropolitan Headquarters Building includes a centralized cooling system which provides cool air through a system that includes chillers, air-handling units, cooling towers, air disinfection system, and associated mechanical, electrical, and control systems. After 26 years of continuous operation, the three existing chillers and other HVAC system components throughout the building have reached the end of their useful life and require replacement.

This action authorizes an agreement with IDS Group Inc. in an amount not to exceed \$400,000 to provide design services for the rehabilitation of the HVAC system at Metropolitan Headquarters Building. See **Attachment 1** for the Allocation of Funds and **Attachment 2** for the Location Map.

Proposed Action(s)/Recommendation(s) and Options

Staff Recommendation: Option #1

Option #1

Authorize an agreement with IDS Group Inc. in an amount not to exceed \$400,000 for preliminary design to rehabilitate the HVAC system at Metropolitan Headquarters Building.

Fiscal Impact: Expenditure of \$790,000 in capital funds will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option will enhance reliability and efficiency of the HVAC system at the Headquarters Building and will provide greater system flexibility, resiliency, energy, and water savings.

Option #2

Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: Under this option, staff would continue to operate the Headquarters Building's HVAC system in its current condition and inspect and perform localized equipment repairs as required.

This approach would lead to further deterioration of critical components of the system and potentially building-wide outages of the cooling system.

Alternatives Considered

Alternatives considered to complete the preliminary design of the HVAC system rehabilitation at the Metropolitan Headquarters Building included assessing the availability and capability of in-house Metropolitan staff to complete this work. Metropolitan's staffing strategy for utilizing consultants and in-house Metropolitan

staff has been: (1) to assess current work assignments for in-house staff to determine the potential availability of staff to conduct this work; and (2) utilize consultants for long-term rehabilitation projects when resource needs exceed available in-house staffing or require specialized technical expertise.

Staff has determined that specialized technical expertise is required to complete the preliminary design for the rehabilitation of the Headquarters HVAC system at Metropolitan Headquarters. Metropolitan staff does not routinely perform detailed design of this equipment. After assessing the current workload for in-house staff, the relative priority of this project, and the specialized technical expertise required, staff recommends the use of a professional services agreement to complete the subject project. This approach will allow for the completion of not only this project, but also other budgeted capital projects within their current schedules and ensure that the work is conducted in the most efficient manner possible.

Applicable Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

Related Board Action(s)/Future Action(s)

By Minute Item 53318, dated July 11, 2023, the Board awarded a contract for the repair of the HVAC Chiller #2 at Metropolitan Headquarters Building.

By Minute Item 53598, dated April 9, 2024, the Board appropriated a total of \$636.5 million for projects identified in the CIP for Fiscal Years 2024/2025 and 2025/2026.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is exempt from CEQA because it involves only feasibility or planning studies for possible future actions which the Board has not approved, adopted, or funded. (Public Resources Code Section 21080.21; State CEQA Guidelines Section 15262.)

CEQA determination for Option #2:

None required

Details and Background

Background

Metropolitan Headquarters Building is a 522,682 square-foot, concrete-frame structure with a 12-story high-rise tower attached to a five-story wing. The building houses up to 850 Metropolitan staff and provides meeting space for the Board of Directors and members of the public. The business functions located in this building are critical for maintaining the continuity of Metropolitan's day-to-day operations.

The building has an HVAC system that uses a chiller plant to circulate chilled water to cool the building. The HVAC equipment and the chiller plant were installed during the original building construction and have been in operation for over 26 years. The central chiller plant is in a dedicated chiller room on the building's top floor. Three 450-ton water-cooled, centrifugal chillers with variable frequency drives provide cooling for the building.

Cool air is distributed through 29 custom air-handling units distributed within the 12 stories of the building. Air-handling units feature return and supply air connections, a single supply air fan, chilled water-cooling coil, and chilled water control valves. The units are also equipped with a UV-C light filtration system downstream of the cooling coils, which was installed in 2022.

After 26 years of continuous operation, the system has become increasingly difficult to maintain due to obsolete equipment components which require frequent repairs. Chillers and associated equipment typically have a lifespan of approximately 25 years. The central plant's efficiency and reliability decrease yearly due to equipment

age and proprietary electronic components, which are no longer supported or available. An assessment of the condition of the HVAC system performed by staff in early 2023 concluded that the chillers and critical support equipment associated with the HVAC system have reached the end of their useful life and require replacement. In addition, the refrigerant used by the building's existing cooling equipment is being phased out by the U. S. Environmental Protection Agency and will soon become cost-prohibitive and impractical to obtain.

In recent years, Metropolitan staff conducted a comprehensive study evaluation of the Headquarters HVAC system based on the current building layout, intended usage, review of original historical contract documents, and cooling load analyses while also considering energy efficiency, maintenance requirements, reliability, and integration with existing infrastructure. The study determined that upgrading the chiller plant and total refurbishment of the air-handling units, fluid coolers, and associated mechanical, electrical, and control systems will provide a reliable and energy-efficient HVAC system for the next 25 years. Staff also investigated the availability of rebates from the energy provider and found that there are currently no rebates available; however, as part of preliminary design, staff will investigate whether rebates are available for selected equipment. Staff recommends proceeding with preliminary design to rehabilitate the Headquarters HVAC system, including upgrades to the chiller plant and total refurbishment of the air-handling units, fluid coolers, and associated mechanical, electrical, and control systems. Staff recommends that the preliminary design be conducted by a specialized consultant under a new professional services agreement, which is the subject of this action.

Headquarters HVAC System Rehabilitation – Preliminary Design

Planned improvements to the HVAC system include replacing the three chillers and air-handling units. Field investigations will also be conducted to confirm whether other HVAC components, including the control system, need to be replaced.

Planned activities to complete preliminary design include: (1) detailed field inspections of existing equipment; (2) evaluation of industry standards and characteristics of recommended assemblies and replacement equipment; (3) preparation of an installation sequencing plan to maintain the headquarters in operation during replacement of the equipment; (4) preparation of preliminary design drawings and three-dimensional models; (5) initiation of permitting activities; (6) development of construction cost estimates and schedules; and (7) preparation of a preliminary design report. These activities will be performed by IDS Group Inc. as discussed below. Metropolitan staff will perform overall project management, conduct surveys, provide technical oversight, and review the consultant's work.

A total of \$790,000 is required for this work. Allocated funds include \$400,000 for preliminary design activities by IDS Group Inc. under a new agreement as described below. Other allocated funds for professional services include \$60,000 for value engineering and environmental services, which specialty firms will perform under contracts planned to be executed under the General Manager's Administrative Code authority. Allocated funds for Metropolitan staff activities include \$147,000 for design services described above; \$113,000 for project management, environmental support, and project controls; and \$70,000 for remaining budget. **Attachment 1** provides the allocation of the required funds. The total estimated cost to complete this project, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from \$17 million to \$19 million.

Engineering Services (IDS Group Inc.) – New Agreement

IDS Group Inc. is recommended to complete preliminary design for the rehabilitation of the HVAC system equipment at Metropolitan Headquarters, as described above. IDS Group Inc. was selected through a competitive process under Request for Proposals No. 1361. IDS Group Inc. was selected for this project based on its staff qualifications, experience in the design of similar projects, and technical approach and methodology.

This action authorizes an agreement with IDS Group Inc for a not-to-exceed amount of \$400,000 to provide engineering services to complete preliminary design for the rehabilitation of the Headquarters HVAC system, including upgrades to the chiller plant and total refurbishment of the air-handling units, fluid coolers, and associated mechanical, electrical and control systems. For this agreement, Metropolitan has established a

Small Business Enterprise (SBE) participation level of 25 percent. IDS Group is a certified SBE firm and thus achieves 100 percent SBE participation.

Project Milestone

August 2025 – Completion of preliminary design for the HVAC system rehabilitation



Mai M. Hattar
Interim Manager/Chief Engineer
Engineering Services

8/19/2024
Date



Deven Upadhyay
Interim General Manager

8/27/2024
Date

Attachment 1 – Allocation of Funds

Attachment 2 – Location Map

Ref# es12695931

Allocation of Funds for Headquarters HVAC System Rehabilitation

	Current Board Action (Sep. 2024)
Labor	
Studies & Investigations	\$ 147,000
Final Design	-
Owner Costs (Program mgmt., envir. support)	113,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
IDS Group Inc.	400,000
Value Engineering	40,000
Environmental Services	20,000
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	70,000
Total	<u><u>\$ 790,000</u></u>

The total amount expended to date to rehabilitate the Headquarters HVAC system is approximately \$286,000. The total estimated cost to complete this project, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from \$17 million to \$19 million.

Distribution System

