



SCHEMATIC DESIGN PHASE ENGINEERING REPORT

VOLUME 1 - REPORT

Oklahoma City Water Utilities Trust
Utilities Operations Center
Project SM-0296-2
601 N Pennsylvania Avenue
Oklahoma City, OK 73107

July 21, 2022



HALFF

THE HALFF TEAM



HALFF ASSOCIATES, INC.
Project Management
Architecture & Engineering



MILES ARCHITECTURE
Lab - Architecture
Construction Services Support



WHITE & ASSOCIATES, LLC
Cost Estimating



THE OKLAHOMA CITY WATER UTILITIES TRUST

PRELIMINARY REPORT SERVICES - TASK 1B
ENGINEERING REPORT

Project No. SM-0296-2
Utilities Operations Center
601 N Pennsylvania Avenue, Oklahoma City, OK 73107

Prepared by:
Halff Associates, Inc.
1111 N Lee Avenue, Suite 400
Oklahoma City, OK 73103


Architect/Engineer



Recommended for Receipt


Crystal Kowalik, P.E., Engineering Manager


Chris Browning, General Manager


Eric J. Wenger, P.E., City Engineer

RECEIVED by the Trustees and signed by the Chairman of the Oklahoma City Water Utilities Trust this 22nd day of November, 20 22.

ATTEST:


Secretary




CHAIRMAN

Concurred by the Council and signed by the Mayor of the City of Oklahoma City this 6th day of December, 20 22.


City Clerk




Mayor

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Summary

The Utilities Operations Center is the future site for field operations for the Oklahoma City Water Utilities Trust (OCWUT) with a vision to consolidate Water and Wastewater resources and operations in a single central location. The Center will be the central location for Line Maintenance Division, Water Quality Division, Wastewater Quality Division, Fleet Maintenance, Water Quality Environmental Lab Section, Utility Customer Service Field Operations Section, Utilities Administration Financial Operations Warehouse Section, and Utilities Administration Training and Talent Development Section.

The site layout and design of the buildings and facilities are based on the program information developed by the OCWUT and Halff teams during the Site Development. The 63-acre site is comprised of 31.2-acres for the Utilities Operations Center and 1.6 acres for the west employee parking lot expansion. The remaining acres will continue to be operational and or reserved for future improvements.

The Utilities Operations Center project includes 145,467 SF of new and or renovated buildings to support 428 personnel. The parking will consist of 454 employee parking spaces, 140 standard crew vehicle parking, 277 oversize pull through parking and 79 visitor parking spaces. The key elements of the project include:

- **Site Development** – Development of the 31.2-acres to support the Utilities Operations Center buildings and facilities. The site includes 109 parking spaces added to the existing employee parking, parking for vehicles adjacent to the buildings, new NAPA Storage at the existing Fleet Maintenance Building, and new site utilities including sewer, storm water, electrical, water, and other utilities. The Site Development also includes the construction of new storage area as outlined below:
 - **Bulk Material Storage** – 3,500 SF with 6 bays including 1 bay that is 25' wide x 35' long and 5 bays that are 15' wide x 35' long, for the storage of granular materials such as rock, sand, asphalt, topsoil, and other similar materials plus a manhole storage area.
 - **Material Storage Racks** – 1,500 SF with 4 racks that are 15' wide x 100' long, the height of the racks will be addressed in the 60% design package.
- **Operations Building** – 81,425 SF building that includes administrative staff areas, crew working areas, locker rooms, 3,350 SF of training rooms that also function as a severe weather shelter, a 16,519 SF warehouse, and an 8,586 SF meter shop.
- **Shops Building** – 11,840 SF building contains shops and support spaces for vehicle and equipment repair.
- **Vehicle Storage Building** – Two 11,431 SF buildings totaling 22,862 SF of space to store vehicles and equipment from inclement weather conditions.
- **Fuel Island** – Six fuel aisles containing eight dispensers, three for regular fuel, three for diesel fuel and two DEF that are fed from one 500-gallon DEF tank, and two 12,000-gallon underground fuel tanks.
- **Wash Building** – 9,772 SF building with two open wash bays for heavy equipment / fleet trucks and three standard size open wash bays plus an enclosed equipment bay.
- **Water Quality Lab** – 19,568 SF of renovated and building addition consisting of an 8,279 SF renovation of the 1923-era Water Filtration Plant for offices and support space, a 2,246 SF addition of a three-story circulation core, a 2,542 SF addition and 2,206 SF of partial renovation to the existing Filter Gallery to serve as a laboratory plus a 4,295 SF of renovation to the existing lower level Filter Gallery to accommodate mechanical equipment.

Detailed descriptions for each of the projects above are included the Section One - Basis of Design.

Construction will be phased to allow the existing facilities to remain in operation while the new site development, buildings and facilities are under construction. Demolition of the existing treatment facilities is included in the Early Site Package Demolition contract and will be completed prior to the start of any new construction. The Utilities Operations Center will be constructed in two Phases, Phase 1 is the south portion of the site and Phase 2 is the north portion of the site. The Operations Building and Parking, Water Quality Lab and Parking, Main Entry Drive, South Entry Drive and Employee Parking Expansion with associated site development are anticipated to be constructed as Phase 1. Construction of this Phase is estimated to take 425 calendar days from start of construction to occupancy. Once these buildings are completed and occupied, construction of Phase 2 will begin. Initial construction for Phase 2 will include the Shops Building and Fuel Island with related site development followed by demolition of the existing Shops building and Fuel Station. Construction of the Vehicle Storage Buildings, Wash Building, Storage Racks and related site development will start as soon as demolition of the existing Shops Building and Fuel Station are completed. Construction of Phase 2 is estimated to take an additional 305 calendar days from start of construction to occupancy.

The construction market has seen huge materials cost increases and materials shortages, as well as increases in labor costs across all trades since the middle of 2020. The Associated General Contractor (AGC) organization indexes show that construction costs increased 30% from April 2020 to November 2021. Engineering News Records' (ENR) is projecting that the annual construction costs for 2022 will increase a total of 14.7% over the previous 30% for 2020..

During development of the 30% Schematic Design there have been changes and expansions to the overall project scope that will enhance the operational efficiency and functionality of the center. Those changes and expansions resulted in an additional 22,743 SF of building space to the project. That additional square footage coupled with the construction cost increases described above have resulted in an increase to the overall project from \$31.2M to \$55.7M. The Construction Cost Estimate Summary below in Fig. 1 indicates the estimated construction costs for the scope outlined in this Schematic Design Engineering Report.

Utilities Operations Center Construction Cost Estimate Summary			
Scope of Work	Gross Square Feet	Cost per Gross Square Feet	Estimated Construction Costs
Early Site Package Demolition (ESPD)	NA	NA	\$ 8,311,092
Site Development	NA	NA	\$ 9,548,029
Operations Building	81,425	\$ 267	\$ 21,775,188
Shops Building *	11,840	\$ 296	\$ 3,499,478
Vehicle Storage (2 Buildings - 11,431 SF each)	22,862	\$ 178	\$ 4,066,443
Fuel Island	NA	NA	\$ 2,134,610
Wash Building	9,772	\$ 364	\$ 3,561,402
Water Quality Lab	19,568	\$ 412	\$ 8,068,227
Design Contingency - 5%			\$ 3,048,223
Totals	145,467		\$ 64,012,692
Totals (less ESPD)	NA	NA	\$ 55,701,600
* The square foot costs for the Shops Building is higher than the square foot costs for the Operations Building due to the amount of utilities and service equipment and cranes required for the Shops Building, plus the costs of these are spread over less square feet resulting in a higher square foot cost.			

Fig. 1 Utilities Operations Center Construction Cost Estimate Summary Engineering Report