



November 15, 2022

Questions and Answers Report



Mayor Steve Adler

Council Member Natasha Harper-Madison, District 1

Council Member Vanessa Fuentes, District 2

Council Member Sabino "Pio" Renteria, District 3

Council Member Josè "Chito" Vela, District 4

Council Member Ann Kitchen, District 5

Council Member Mackenzie Kelly, District 6

Council Member Leslie Pool, District 7

Council Member Paige Ellis, District 8

Council Member Kathie Tovo, District 9

Council Member Alison Alter, District 10

The City Council Questions and Answers Report was derived from a need to provide City Council Members an opportunity to solicit clarifying information from City Departments as it relates to requests for council action. After a City Council Regular Meeting agenda has been published, Council Members will have the opportunity to ask questions of departments via the City Manager's Agenda Office. This process continues until 5:00 p.m. the Tuesday before the Council meeting. The final report is distributed at noon to City Council the Wednesday before the council meeting.

QUESTIONS FROM COUNCIL

Item #12: Authorize negotiation and execution of a Job Order Assignment with Jamail & Smith Construction, LP, one of the City's Facilities Improvement Job Order Contractors, for the Rosewood-Zaragosa Neighborhood Center Heating, Ventilation, and Air Conditioning System Repairs project for a total amount not to exceed \$960,000. [Note: This contract will be awarded in compliance with City Code Chapter 2-9A (Minority Owned and Women Owned Business Enterprise Procurement Program). MBE/WBE participation goals will be established prior to the issuance of this job order assignment].

COUNCIL MEMBER FUENTES'S OFFICE

- 1. Please provide a copy of the 2020 study that cited facilities needing critical repairs to its heating, ventilation, and air conditioning (HVAC) system.*
Please see attached.

Item #20: Authorize negotiation and execution of three contracts for solid waste consultant services with Burns & McDonnell Engineering Company, Inc., Newgen Strategies and Solutions, LLC, and Risa Weinberger & Associates, each for a term of five years in an amount not to exceed \$500,000, divided among the contractors. [Note: This solicitation was reviewed for subcontracting opportunities in accordance with City Code Chapter 2-9C, (Minority Owned and Women Owned Business Enterprise Procurement Program.) For the services required for this solicitation, there were no subcontracting opportunities; therefore, no subcontracting goals were established].

MAYOR PRO TEM ALTER'S OFFICE

- 1. Please provide additional details regarding the contemplated scope of work that these consultants will perform as it relates to workforce planning.*

The projects the consultants may be used for on these contracts may include: review of cost of service and billing methodology applicable to the Central Business District customer base; consultation and research to provide transfer station expertise including permitting, citing, and construction; and assistance with research for and development of new approaches (e.g., education campaigns, incentives, etc.) to increase participation in citywide waste and recycling programs; performing research and benchmarking with other municipalities across the state and country and to come up with innovative; and developing creative ideas for meeting the department's operational and administrative workforce needs.

Item #21: Authorize negotiation and execution of two multi-term contracts with Transworld Systems Inc. and I C System Inc. for collection services for delinquent utility accounts each for up to five years for total contract amounts not to exceed \$3,000,000, divided between the contractors. [Note: This solicitation was reviewed for subcontracting opportunities in accordance with City Code Chapter 2-9C (Minority Owned and Women Owned Business Enterprise Procurement Program.) For the services required for this solicitation, there were insufficient subcontracting opportunities; therefore, no subcontracting goals were established].

MAYOR PRO TEM ALTER'S OFFICE

1. *What is the total amount of current delinquent and aged inactive customer utility debt? Based on previous trends, how much delinquent and aged inactive customer utility debt do we anticipate to collect with these contracts?*

Current delinquent debt (also called - active debt aged over 30 days) is related to active utility accounts. For October 2022, active debt aged over 30 days (for all COA Utilities) is \$41 million. The entire portfolio of inactive debt is \$151 million - this includes aged debt already placed with current collection agencies. "Aged inactive utility debt", and what is being referenced in these contracts, is only inactive debt - the customers who owe this money are no longer active COA Utility customers.

Historically (the last 5 years) we saw collection trends for aged inactive customer utility debt between 10-20% and expect to collect a similar percentage with these contracts. These contracts do not handle active/delinquent utility debt.

Item #38: Authorize negotiation and execution of Amendment No. 2 to the agreement with Lock Arms for Life to provide a safe gun storage campaign, to extend the term to September 30, 2023 and add funding in an amount not to exceed \$180,000, for a revised total agreement amount not to exceed \$360,000.

COUNCIL MEMBER KELLY'S OFFICE

1. *What is the success of the program? How many locks have been given away since the start of the program?*

Below you will find the year 1 outcomes/outputs for the Lock Arms for life agreement, of which breaks down the success of the program.

- Gun Lock Distribution and education
 - 1201 cable locks
 - 98-gun boxes
 - 17 events attended
- Safe Gun Storage Campaign: Lock Arms for Life put together a first of its kind collaboration launched during SXSW to help educate people about safe gun storage

and prevent gun-related injuries and deaths in the city of Austin. A series of billboards and bus ads were placed throughout the city

- Funded/supported by
 - Texas Department of Public Safety
 - Austin Police Department
 - APH Office of Violence Prevention
 - Travis County District Attorney Office
 - Texas Gun Sense
- Creation of safeguntoagesaveslives.org where residents can learn more about Safe Gun Storage and request a free gun lock
- Billboard Results
 - Locations:
 - Congress and Slaughter Lane
 - Highway 183 and Spicewood Springs Road
 - Lamar and Koenig Lane
 - Highway 71 and Highway 290
 - Burnet Road and Koenig Lane
 - Impressions: Planned: 3,995,309 Actual: 5,091,457 Bonus Impressions: 1,096,148
- Capita Metro Bus Ads
 - 125 inside cards + 25 bonus placements
 - 10 queens (side of bus) + 2 bonus placements
 - 25 bus backs
 - **Total Estimated Impressions: 1.67 million**



Council Question and Answer

Related To

Item #12

Meeting Date

November 15, 2022

Additional Answer Information

Item #12: Authorize negotiation and execution of a Job Order Assignment with Jamail & Smith Construction, LP, one of the City's Facilities Improvement Job Order Contractors, for the Rosewood-Zaragosa Neighborhood Center Heating, Ventilation, and Air Conditioning System Repairs project for a total amount not to exceed \$960,000. [Note: This contract will be awarded in compliance with City Code Chapter 2-9A (Minority Owned and Women Owned Business Enterprise Procurement Program). MBE/WBE participation goals will be established prior to the issuance of this job order assignment].

COUNCIL MEMBER FUENTES'S OFFICE

1. *Please provide a copy of the 2020 study that cited facilities needing critical repairs to its heating, ventilation, and air conditioning (HVAC) system.*

Please see attached.



**FACILITY HVAC ASSESSMENT REPORT - DRAFT
VOLUME 1 OF 1**

FOR

Austin Public Health

Stanley Consultants

6836 Austin Center Blvd Ste 350, Austin, Texas

512-427-3600

Texas Firm Registration No. F-174

Date: 07/14/2020

Respectfully submitted,
Stanley Consultants, Inc.

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**THIS DOCUMENT IS RELEASED ON 07/14/2020 FOR THE PURPOSE OF REVIEW.
IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.**


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Section 1

Introduction

General Overview

Stanley Consultants (Stanley) was retained by the City of Austin (COA) – Austin Public Health (APH) to perform an assessment of the heating, ventilating, and air-conditioning (HVAC) systems in the following buildings:

Building	Address	GSF
St. John's Neighborhood Annex (A.K. Black Clinic Building)	928 Blackson Ave.	4,200
Rosewood Zaragoza Neighborhood Center	2800 Webberville Rd.	17,128
East Austin Neighborhood Center including Community Care	211 Comal St.	7,750
Blackland Neighborhood Center	2005 Salina St.	3,447
Clarksville Health Center	1000 Toyath St.	3,500
South Austin Neighborhood Center	2508 Durwood St.	18,651
Far South WIC	405 W. Stassney Lane	4,750
Hauke House	403 East 15th St.	738
Betty Dunkerley Public Health Campus, Building B	7201 Levander Loop	2,190
Betty Dunkerley Public Health Campus, Building D	7201 Levander Loop	350
Betty Dunkerley Public Health Campus, Office of the Vital Records Building C	7201 Levander Loop	7,448
Betty Dunkerley Public Health Campus, Building E	7201 Levander Loop	12,403
Betty Dunkerley Public Health Campus, Building H	7201 Levander Loop	10,016
Montopolis Neighborhood Center	1416 Montopolis Dr.	2,840

Objective

The objective of this assessment was to perform the necessary evaluations to survey and document currently installed conditions of the HVAC systems, identify system deficiencies, and recommend HVAC system improvements. The following is a list of key tasks performed as part of this assessment:

- Review, update, and obtain agreement on the COA standard to be met for new construction and major renovation or replacement of HVAC systems. If COA standard is not available, Stanley Consultants will recommend the HVAC system.
- Document the existing HVAC system type, condition, efficiency, age, and remaining useful life.
- Identify HVAC system deficiencies considering current system performance, maintenance requirements, operations efficiency, inadequate design, and any other deficiencies observed.
- Prioritize the HVAC system components where modification or replacement is warranted.
- Develop an Opinion of Probable Construction Cost for HVAC system improvements including engineering, testing and balancing, and retro-commissioning costs necessary to implement the recommended system improvements.
- The assessments of Stanley Consultants and its subconsultants offered general HVAC assessments for each building, summary recommendations, and opinions of probable construction costs (OPCCs). Utilizing the results from these efforts, APH will prioritize the assessment items to establish a targeted Project scope of work for future design and construction projects.

City of Austin Building Technical Codes

The City of Austin's Building Technical Codes (Chapter 25-12) contains regulations for Building, Electrical, Mechanical, Plumbing, Fire Protection, Property Maintenance, Residential, and Solar Energy. The City of Austin adopted the following Codes with local amendments for each Code applicable to this commercial project.

1. 2015 International Building Code,
2. 2015 International Energy Code,
3. 2015 International Fire Code,
4. 2015 Uniform Mechanical Code,
5. 2015 Uniform Plumbing Code,
6. 2017 National Electrical Code.

Statement of Limitations

In preparation of this report, Stanley Consultants, Inc. (Stanley) has relied upon information provided by Austin Public Health and operators of the respective facilities. While there is no reason to believe that the information provided is inaccurate or incomplete in any material respect, Stanley has not independently verified such information and cannot guarantee or warranty its accuracy or completeness.

Stanley's estimates, analyses, and recommendations contained in this report are based on professional experience, qualifications, and judgment. Stanley has no control over weather; cost and availability of labor, material, and equipment; labor productivity; energy or commodity pricing; demand or usage; population demographics; market conditions; changes in technology; and other economic or political factors affecting such estimates, analyses, and recommendations.

Therefore, Stanley makes no guarantee or warranty (actual, expressed, or implied) that actual results will not vary, perhaps significantly, from the estimates, analyses, and recommendations contained herein.

This report is for the sole use, possession, and benefit of Austin Public Health. Any use or reliance on the contents, information, conclusions, or opinions expressed herein by any other party or for any other use is strictly prohibited and is at that party's sole risk. Stanley assumes no responsibility or liability for any unauthorized use.

Section 2

A.K. Black Clinic

General Building Information

- A. Address: 928 Blackson Ave, Austin, Texas
- B. Use: Healthcare / Family Medicine Clinic.
- C. Gross Area: 4,200 SF
- D. Age: 34 years.

Description

A. K. Black Clinic is a single-story building originally constructed in 1986. The building is used as a neighborhood healthcare and family medicine clinic providing services such as general health exams, and maternity care.

Existing System Observations and Assessments

The following summarize our site observations and opinions of equipment conditions.

Mechanical HVAC Systems

1. Building Heating, Ventilation, and Cooling (HVAC) is provided by three residential-type Direct Expansion (DX) split system Air Handling Units (AHU) manufactured in 2004. AHU's are in an attic mezzanine accessed via a drop-down ladder in Corridor 113. Associated condensing units are in an enclosed mechanical yard exterior to the building. Industry expected equipment service life for residential DX split system AHUs is 15 years. The AHUs have been in service for 16 years and are beyond their life expectancy. There appears to be areas of rust developing on the AHU casings as well as biological growth at the unit seams. The AHUs are controlled by wall-mounted Honeywell programmable thermostats.



Figure 1 – AHU-1 (typical of all 3 AHUs)

2. The AHU's provide heat to the building by natural gas fired furnaces. Raw (unconditioned, ambient temperature) outdoor air is provided to the building by air direct ducted to the return side of the AHU's. Residential AHUs are not designed to condition raw outdoor air and should not be used for that application.
3. The condensing units were manufactured in 2004. Industry expected equipment service life for residential DX split system AHUs and their associated condensing units is 15 – 20 years. The condensing units are 16 years old and are beyond their life expectancy. Areas of rust have developed on the condensing unit casings and the refrigerant pipe insulation has begun to deteriorate. Some of the insulation has fallen off the refrigerant piping.

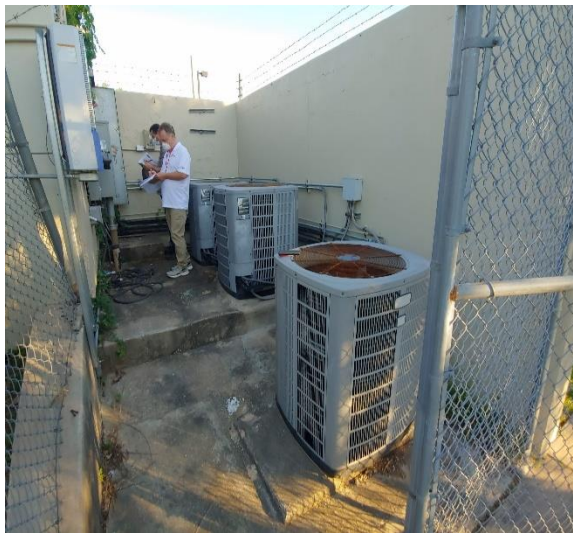


Figure 2 – Condensing Units in Mechanical Yard

4. Building ductwork was observed to be uninsulated. Ductwork exterior and interior was observed to be developing biological growth due to condensation, which adversely affects indoor environmental quality and occupant health.



Figure 3 – Typical Ductwork with biological growth.

5. Air devices in the occupied spaces were observed to be stained with dirt and corroded. In addition, it appears some of the diffusers have some biological growth indicating humidity issues within the building.



Figure 4: Typical Rusty Air Device with Suspected Microbial Growth

6. The building HVAC system is monitored through a Johnson Controls system. The control system age could not be determined. However, APH maintenance staff reported issues with the control system during the project scope meeting.

Electrical Systems

1. The main electrical service is fed from Austin Energy 12.47kV distribution to a pole mounted single phase 100kVA transformer and then transitions underground to a 400A, 120/240V single phase electrical service. The main service is a 400A panelboard “MS-1” with associated metering (Figure 5). The existing exterior condensing units are served from three 40A/2P breakers in the existing General Electric type NLAB panelboard “MS-1”. The panelboard and most of the existing circuit breakers are roughly 34 years old and are beyond their life expectancy. Some of the existing branch breakers have been replaced however the main and sub-feed breakers are original. There are signs of rust on the enclosure. Typically outdoor environments will accelerate the degrading of panelboards and more importantly the associated breakers. There are signs of rodents entering the panelboard (Figure 6) which can also accelerate electrical failure such as rodents causing arcing across phases or chewing on electrical conductors and causing a failure. There are only 2 spare single pole spaces in the existing panelboard. No arc flash or short circuit labels were posted on any of the panelboards as required per NFPA 70E.



Figure 5 – Main Electrical Service in Mechanical yard.



Figure 6 – Panelboard “MS-1” Nameplate & Debris

2. Existing General Electric type NLAB panelboard “A” 225A single phase three wire. The panelboard is in attic/mezzanine electrical room. Attic access located in Corridor 113 by way of an attic ladder and stairs. The panelboard is fed from a 150A/2P breaker in panelboard “MS-1” (Figure 7). The panelboard serves the three air handling units #1, #2, and #3 with 20A/1P breakers. There is no spare capacity in the existing panelboard. The panelboard is roughly 34 years old and is beyond useful life expectancy.



Figure 7 – Panelboard “MS-1” sub-feed breaker to Panelboard “A”.



Figure 8 – Panelboard “A”.

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants’ site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

The entire HVAC system is beyond useful life and in poor condition. As such, we recommend replacement of the entire HVAC system and HVAC control system. Specific items for consideration during a detailed design project should include:

1. Replace AHU-1, AHU-2, AHU-3, and their associated condensing units. Replace all duct systems and air devices (grilles, registers, & diffusers) and replace other appurtenances.
2. Provide an Energy Recovery Ventilator (ERV) to pre-condition the outdoor air before it enters the AHU mixing box.
3. Provide a building pressure monitoring and control system to maintain a positive building pressure of at least 0.05 in wg.
4. Provide an air sterilization device such as UV-C lamps or bipolar ionization systems.
5. Provide a minimum MERV 13 air filter at each AHU.
6. Replace the HVAC control system.

Electrical Systems

The entire Electrical system is in poor condition and beyond useful life. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the HVAC and control system replacement. Specific items for consideration during a detailed design project should include:

1. Provide new main panelboard “MS-1” and disconnects for associated condensing units CU-1, CU-2, and CU-3.
2. Provide new panelboard “A” and new disconnects for associated air handling units AHU-1, AHU-2, and AHU-3.
3. Provide short circuit and arc flash hazard assessment study.
4. Provide arc flash labels at all panelboards per NFPA 70E requirement.
5. Provide new surge protective devices at panelboards to protect new HVAC system components.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants’ and their sub-consultants’ opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor’s methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous material (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 20 wks	4,200	SF	\$ 0.50	\$ 2,100.00
Final cleanup, at end of job	4,200	SF	\$ 1.00	\$ 4,200.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	6	MTHS	\$ 350.00	\$ 2,100.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	24	WKS	\$ 75.00	\$ 1,800.00
Office Trailer - 20'x8'	6	MTHS	\$ 500.00	\$ 3,000.00
Dumpster, 20 CY, 1 dump / week	24	WKS	\$ 500.00	\$ 12,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	24	WKS	\$ 125.00	\$ 3,000.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
			GENERAL TOTAL	\$29,900
ARCHITECTURAL				
Selected demolish: gyp board ceilings	500	SF	\$ 1.00	\$ 500.00
1/2" gypsum board ceiling, floated, taped, painted	500	SF	\$ 2.50	\$ 1,250.00
Selected demolish: 2x2 acoustical ceiling tiles	500	SF	\$ 1.00	\$ 500.00
2x2 acoustical tile ceiling w/ suspension system	500	SF	\$ 3.75	\$ 1,875.00
			ARCHITECTURAL TOTAL	\$4,125
MECHANICAL				
Demolish ductwork system & air terminal devices	4,200	SF	\$ 1.25	\$ 5,250.00
Demolish 5-ton DX cooling air handling unit	3	EA	\$ 750.00	\$ 2,250.00
Demolish 5-ton DX air-cooled condenser & refrigerant piping	3	EA	\$ 1,250.00	\$ 3,750.00
Demolish HVAC control system cabinet	1	EA	\$ 1,500.00	\$ 1,500.00
Demolish programmable thermostat	3	EA	\$ 100.00	\$ 300.00
Ductwork system, galv steel & air terminal devices	4,200	SF	\$ 4.00	\$ 16,800.00
Air-handling unit, 5 ton DX cooling coil, 100 MBH gas-fired furnace, 2000 cfm	3	EA	\$ 7,000.00	\$ 21,000.00
Air-cooled DX condenser & refrigerant piping, 5-ton	3	EA	\$ 5,000.00	\$ 15,000.00
Energy recovery ventilator, 500 cfm	1	EA	\$ 6,000.00	\$ 6,000.00
Air filter - MERV 13, 20"x20"x2"	3	EA	\$ 125.00	\$ 375.00
Bipolar ionization system for each AHU	3	EA	\$ 5,000.00	\$ 15,000.00
HVAC DDC control system	1	LS	\$ 8,400.00	\$ 8,400.00
Testing, Adjusting, & Balancing	4,200	SF	\$ 1.00	\$ 4,200.00
HVAC Commissioning	4,200	SF	\$ 1.00	\$ 4,200.00
			MECHANICAL TOTAL	\$104,025
ELECTRICAL				
Demolish existing 400A 120/240V single phase Panelboard "MS-1"	1	EA	\$ 250.00	\$ 250.00
Demolish existing 60A/2P NEMA 3R Disconnects to CU-1, CU-2, CU-3	3	EA	\$ 125.00	\$ 375.00
Demolish existing 225A 120/240V single phase Panelboard "A"	1	EA	\$ 250.00	\$ 250.00
Demolish existing 20A/1P Disconnects to AHU-1, AHU-2, AHU-3	3	EA	\$ 175.00	\$ 525.00
New 400A 120/240V single phase Panelboard "MS-1" w/ conduit & wire	1	EA	\$ 3,595.00	\$ 3,595.00
Circuit Tracing existing branch circuits	4,200	SF	\$ 1.00	\$ 4,200.00
New 60A/2P NEMA 3R Disconnects to CU-1, CU-2, CU-3 w/ conduit & wire	3	EA	\$ 500.00	\$ 1,500.00
New 225A 120/240V single phase Panelboard "A" w/ conduit & wire	1	EA	\$ 3,000.00	\$ 3,000.00
New 20A/1P NEMA 1 Disconnects to AHU-1, AHU-2, AHU-3 w/ conduit & wire	3	EA	\$ 700.00	\$ 2,100.00
Short-circuit/ Arc Flash Study	4,200	SF	\$ 1.50	\$ 6,300.00
			ELECTRICAL TOTAL	\$22,095
			SUBTOTAL	\$160,145
			UNDEVELOPED DESIGN COSTS (30%)	\$ 48,044
			PHASED CONSTRUCTION (3%)	\$ 6,246
			BONDS (0.7%)	\$ 1,457
			PERMITS (3%)	\$ 6,246
			MOBILIZATION (8%)	\$ 16,655
			TOTAL	\$238,792
			PROBABLE CONSTRUCTION COST USE	\$ 239,000.00

Rosewood Zaragoza Neighborhood Center

General Building Information

- A. Address: 2800 Webberville Road, Austin, Texas
- B. Use: Administrative with Gymnasium, childcare, and examination rooms.
- C. Gross Area: 17,128 SF
- D. Age: 46 years.

Description

Rosewood Zaragoza Neighborhood Center is a 1-story building originally constructed in 1974. The building usage is primarily administrative.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) system consists of an air-cooled chiller (with remote condensing unit) to produce chilled water. Heating water is produced by a natural gas fired boiler. Chilled water and heating water serve six roof mounted Air Handling Units (AHU).
2. The air-cooled chiller has dual compressors with a total capacity of 70 nominal tons. The air-cooled chiller appears to be building original, which is 46 years of service. The chiller shows deficiencies as follows: corrosion, oil leaks, torn insulation and subsequent condensation formation. Industry expected equipment service life for reciprocating air-cooled chillers is 20 years. The chiller has exceeded useful life expectancy.



Figure 1 – Chiller

The remote condensing unit is located on the roof of the mechanical room. It was observed with noticeable rust on the casing and fan shrouds.



Figure 2 – Chiller Condensing Unit - Corrosion

3. Chilled water is transported by two base-mounted, end-suction pumps. The pumps were observed to be in poor condition with large amounts of corrosion and rust on the base and around the pump body. Date information was not found on the pump nameplates, but industry expected equipment service life for base-mounted, end-suction pumps is 20 years.



Figure 3 – Chilled water pumps

4. The heating water boiler was replaced in 2019 following a catastrophic boiler failure. The boiler is natural gas-fired and has a rating of 1,000 MBh. The boiler appears in good condition and is well within the industry expected equipment service life of 30 years for water tube boilers. The boiler has an integral 1/3 HP primary pump that was observed to be noisy, possibly experiencing premature failure.
5. Heating water is transported by two, base-mounted, end-suction pumps. The pumps were observed to be in poor condition with large amounts of corrosion and rust on the base and around the pump body. Date information was not found on the pump nameplates, but industry expected equipment service life for base-mounted, end-suction pumps is 20 years.



Figure 4 – Heating Water Pumps

6. Chilled and heating water piping in the mechanical room was observed to be in generally good condition with a few select locations of biological growth (from openings in the insulation and subsequent condensation formation).
7. An Andover control cabinet located in the mechanical room receives control points from items in the mechanical room. It appears that remote access to the control system is not possible with the current equipment. Roof mounted AHU's each have a Schneider Electric control panel for receiving control points from the AHU. Each AHU has a single, wall mounted temperature sensor for space control.
8. Airside systems for the facility consist of six constant volume air handling units located on the roof. The air handling units all have chilled water and heating water coils. The AHU's date of manufacture is unknown but can be estimated to be in the early 1990's at the latest, putting the machines age at around 30 years. Industry expected equipment service life for roof mounted AHU's is 15 years. The AHU's exterior and interior were observed with rust. AHU fans appear in poor condition with about half experiencing excessive bearing or winding noise.



Figure 5 – Typical Roof Mounted AHU

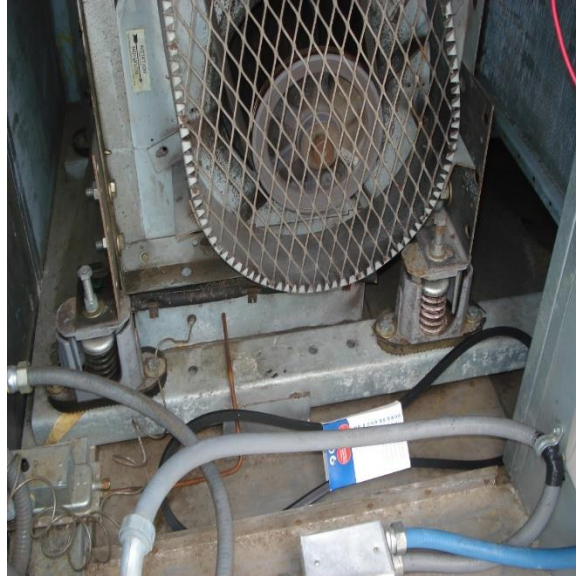


Figure 6 – Typical AHU Fan Section

9. Other roof mounted equipment includes six exhaust fans and two relief fans. The fans appear to be in good working condition.
10. Air devices in the facility were observed to be dirty.



Figure 7 – Typical Air Device

Electrical Systems

1. The main electrical service is fed from Austin Energy's 12.47kV distribution to a pad mounted three phase 500kVA Austin Energy transformer. The secondary main feeder enters through a current transformer enclosure with metering (Figure 8). Panelboard "P1" is a 600A ITE Series 5 480/277V 3 phase 4 wire panelboard located in the main electrical room (Figure 9). This panelboard serves the motor control center "MCC-1" located in the boiler/chiller building with a 300A/3P breaker (Figure 10). Panelboard

“P1” was manufactured in 1974 and is roughly 46 years old. There is no main disconnect on the exterior of the building for emergency personnel.



Figure 8 – Main Electrical Service and Meter



Figure 9 – Main Electrical Room



Figure 10 – Breaker to Motor Control Center “MCC-1”

2. Existing Motor Control Center MCC-1 is a 2 section Siemens Model 95 600A 3 Phase 3 Wire (Figure 11). The MCC serves the hot water pumps HWP No. 1 and HWP No. 2, chilled water pumps CHWP No. 1 and CHWP No. 2, and the chiller CHILLER No. 1. There are signs of an arc flash event inside one of the compartments (Figure 12).



Figure 11 – Motor Control Center MCC-1



Figure 12 – MCC-1 Arc Flash Damage

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants' site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

Stanley Consultants recommends replacement of the following components and systems. Specific items for consideration during a detailed design project should include:

1. Replace the chiller and the associated remote condensing unit.
2. Replace the two chilled water and two heating water pumps along with associated strainers, check valves and isolation valves.
3. Replace the primary pump associated with the heating water boiler along with associated strainers, check valves and isolation valves.
4. Replace the six, roof mounted air handling units. Provide replacement units with Variable Speed Drives (VSD) for the fan motors. Employ a single zone VAV control sequence for energy savings.
5. Provide an air sterilization device such as UV-C lamps or bipolar ionization systems at each new AHU.
6. Provide a minimum MERV 13 air filter at each new AHU.
7. Clean all existing ductwork and air devices utilizing an aerosol biocide.
8. Replace controls system with new building wide controls for service to existing boiler and new chiller, pumps, and AHU's. Provide system with capability to allow remote reporting and control of all equipment.

Electrical Systems

The entire Electrical system is in poor condition and beyond useful life. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the HVAC system and replacement. Specific items for consideration during a detailed design project should include:

1. Provide new 800A/3P/NEMA 3R/SE/600V Main Disconnect on exterior.
2. Provide new 800A3P/NEMA 1/SE/ main Switchboard “P-1” with metering.
3. Provide new 400A panelboard in the boiler/chiller house and new combination motor starters for associated pumps.
4. Provide new surge protective devices at panelboards to protect new HVAC system components.
5. Provide short circuit and arc flash hazard assessment study.
6. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants’ and their sub-consultants’ opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor’s methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous materials (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 20 wks.	17,128	SF	\$ 0.50	\$ 8,564.00
Final cleanup, at end of job	17,128	SF	\$ 1.00	\$ 17,128.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	6	MTHS	\$ 350.00	\$ 2,100.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	24	WKS	\$ 75.00	\$ 1,800.00
Office Trailer - 20'x8'	6	MTHS	\$ 500.00	\$ 3,000.00
Dumpster, 20 CY, 1 dump / week	24	WKS	\$ 500.00	\$ 12,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	24	WKS	\$ 125.00	\$ 3,000.00
50T Crane, truck mounted, rental, daily mob/demo	1	WKS	\$ 4,000.00	\$ 4,000.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
			GENERAL TOTAL	\$53,292
MECHANICAL				
Demolish (70 Ton) air cooled chiller, associated (remote) air cooled condenser (roof mounted), all refrigerant piping and insulation.	1	LS	\$ 5,000.00	\$ 5,000.00
Demolish 5 hp chilled water pumps and associated valves (2 isolation each, 1 check valve each, 1 strainer each)	2	EA	\$ 1,250.00	\$ 2,500.00
Demolish 1-1/2 HP heating water pumps and associated valves (2 isolation each, 1 check valve each, 1 strainer each)	2	EA	\$ 375.00	\$ 750.00
Demolish Roof Mounted AHU-1,3,5 (3,000 CFM; 7.5 Ton Cooling Capacity)	3	EA	\$ 2,625.00	\$ 7,875.00
Demolish Roof Mounted AHU-2,6 (5,000 CFM; 12.5 Ton Cooling Capacity)	2	EA	\$ 3,500.00	\$ 7,000.00
Demolish Roof Mounted AHU-4 (9,000 CFM; 22.5 Ton Cooling Capacity)	1	EA	\$ 6,250.00	\$ 6,250.00
(70 Ton) air cooled chiller, associated (remote) air cooled condenser (roof mounted), all refrigerant piping and insulation.	1	EA	\$ 40,000.00	\$ 40,000.00
5 hp chilled water pumps and associated valves (2 isolation each, 1 check valve each, 1 strainer each)	1	LS	\$ 5,000.00	\$ 5,000.00
1-1/2 HP heating water pumps and associated valves (2 isolation each, 1 check valve each, 1 strainer each)	1	LS	\$ 1,500.00	\$ 1,500.00
Roof Mounted AHU-1,3,5 (3,000 CFM; 7.5 Ton Cooling Capacity)	3	EA	\$ 10,500.00	\$ 31,500.00
Roof Mounted AHU-2,6 (5,000 CFM; 12.5 Ton Cooling Capacity)	2	EA	\$ 14,000.00	\$ 28,000.00
Roof Mounted AHU-4 (9,000 CFM; 22.5 Ton Cooling Capacity)	1	LS	\$ 25,000.00	\$ 25,000.00
Bipolar ionization system for each AHU	6	EA	\$ 5,000.00	\$ 30,000.00
Building Control system (complete, for control of new chiller, new pumps, existing boiler, new AHU's, zone sensors)	1	LS	\$ 17,000.00	\$ 17,000.00
Air filter - MERV 13, 20"x20"x2"	24	EA	\$ 125.00	\$ 3,000.00
Clean building ductwork and air devices - galvanized ductwork with external insulation.	17,128	SF	\$ 0.50	\$ 8,564.00
Testing, Adjusting, & Balancing (hydronic and airside systems)	17,128	SF	\$ 0.50	\$ 8,564.00
HVAC Commissioning	17,128	SF	\$ 0.50	\$ 8,564.00
			MECHANICAL TOTAL	\$236,067
ELECTRICAL				
Demolish existing 800A Panelboard P-1 480/277V 42 Ckt	1	EA	\$ 250.00	\$ 250.00
Demolish existing 600A 2 Section 480V Motor Control Center	2	EA	\$ 250.00	\$ 500.00
Demolish existing 30A/3P/NEMA 3R Disconnect ACCU	1	EA	\$ 125.00	\$ 125.00
Demolish existing pumps & starters Size 0 600V	4	EA	\$ 500.00	\$ 2,000.00
New 800A/3P/NEMA 3R/SE/600V Disconnect w/ conduit & wire	1	EA	\$ 1,600.00	\$ 1,600.00
New 800A SWBD "P-1" 480/277V 42 Ckt MLO w/ SPD w/ 400A/3P Breaker w/ conduit & wire	1	EA	\$ 3,000.00	\$ 3,000.00
Circuit Tracing existing branch circuits	17,128	SF	\$ 1.00	\$ 17,128.00
New 400A Panelboard 480/277V 42 Ckt MCB w/ conduit, wire, & SPD	1	EA	\$ 3,000.00	\$ 3,000.00
Circuit Tracing existing branch circuits	17,128	SF	\$ 1.00	\$ 17,128.00
New combination starters NEMA 1/Size 0/600V	4	EA	\$ 200.00	\$ 800.00
New 30A/3P/NEMA 3R/600V Disconnect to RTU's w/ conduit & wire	3	EA	\$ 800.00	\$ 2,400.00
New 60A/3P/NEMA 3R/600V Disconnect to RTU's w/ conduit & wire	3	EA	\$ 350.00	\$ 1,050.00
Short-circuit/ Arc Flash Study	17,128	SF	\$ 1.00	\$ 17,128.00
			ELECTRICAL TOTAL	\$66,109
			SUBTOTAL	\$355,468
			UNDEVELOPED DESIGN COSTS (30%)	\$ 106,640.40
			PHASED CONSTRUCTION (3%)	\$ 13,863
			BONDS (0.7%)	\$ 3,235
			PERMITS (3%)	\$ 13,863
			MOBILIZATION (8%)	\$ 36,969
			TOTAL	\$ 530,038.33
			PROBABLE CONSTRUCTION COST USE	\$ 530,000.00

East Austin Neighborhood Center

General Building Information

- A. Address: 211 Comal Street, Austin, Texas
- B. Use: Administrative with Gymnasium, childcare, and examination rooms.
- C. Gross Area: 7,750 SF
- D. Age: (unknown).

Description

East Austin Neighborhood Center is a 1-story building. The building is used for administration and examinations.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) system consists of an air-cooled chiller to produce chilled water and a natural gas fired boiler to produce heating water. Chilled water and heating water are utilized at two roof mounted Air Handling Units (AHU).

Primary air from the two AHU's serves medium pressure ductwork upstream of VAV terminal units. The VAV terminal units modulate airflow and modulate integral electric heat as required to meet zone temperatures.

2. Based on observed nameplate data, the following equipment and systems were installed in 2011: chiller, associated piping, chilled water pumps, AHU's, Exhaust fans, ductwork, terminal units, and control system. All of these systems were observed to be in good condition and are within expected equipment useful life expectancy.

3. The natural gas fired boiler and associated heating water pumps have install dates of 1992. The boiler has a listed input of 1,500 MBh. Nameplate data for the heating water pumps was not legible. Industry expected equipment service life for water tube boilers is 25 years. Industry expected equipment service life for pumps is 25 years. Both the pumps and boilers are beyond their life expectancy. The pumps are showing signs of leaking and subsequent rust as indicated in Figure 1.



Figure 1 – Heating Water Pump Casing Corrosion

Electrical Systems

1. The main electrical service is fed from Austin Energy's 12.47kV distribution to a pad mounted three phase 300kVA Austin Energy transformer. The secondary main feeder enters through a current transformer enclosure with metering and serves four separate 120/208V three phase electrical services "211A", "211B", "211C", and "211D" (Figure 2). Main service "211A" has a 600A disconnect "HS1" on the exterior of the building. Main service "211B" has an 800A disconnect "DP" on the exterior of the building (Figure 3). Main services "211C" and "211D" have two 200A disconnects on the exterior of the building (Figure 4). Most of the HVAC equipment is served from "211A" and "211B" associated downstream panelboards.



Figure 2 – Main Electrical Services.211A, 211B, 211C, & 211D



Figure 3 – Services 211A and 211B



Figure 4 – Services 211C and 211D

2. The interior mechanical room adjacent to the mechanical yard has associated panelboards “HS1” and “DP”. Panelboard “HS1” is a 600A square D type HCP 120/208V three phase 4 wire panelboard with main circuit breaker (Figure 5). The chiller is served from this panelboard along with associated chilled water and hot water pumps and other miscellaneous loads. Panelboard “DP” is an 800A square D I-Line 120/208V three phase 4 wire panelboard with main circuit breaker (Figure 6). This serves panelboard “P4” which is a 400A Square D type NQ 120/208V three phase 4 wire panelboard (Figure 7). Both of the roof top units “RTU-1” and RTU-2” and associated variable air volume units are fed from this panelboard.
3. The electrical service appears to have been updated with the last ten years. The associated panelboards and disconnects appear to have been update during this time period. The panelboards do not have arc flash or short circuit labels posted on any of the panelboards as required per NFPA 70E.



Figure 5 – Panelboard “HS1”



Figure 8 – Panelboard “DP”.



Figure 8 – Panelboard “P4”.

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants’ site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

Stanley Consultants recommends replacement of the following components and systems. Specific items for consideration during a detailed design project should include:

1. Replace the heating water boiler with a new, high efficiency condensing boiler.
2. Replace the two associated heating water pumps. Replace associated isolation valves, check valves, and strainers.

3. Provide new controls as necessary for new boilers and associated pumps for integration into the existing building control system.
4. Retrofit an air sterilization device such as UV-C lamps or bipolar ionization for each of two AHUs.
5. Retrofit a minimum MERV 13 air filter at each existing AHU.
6. Clean all existing ductwork and air devices utilizing an aerosol biocide.

Electrical Systems

The entire Electrical system appears to be in good condition. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the boiler and associated pumps. Specific items for consideration during a detailed design project should include:

1. Provide new combination motor starters for boiler pumps “BP-1” and “BP-2”.
2. Provide new surge protective devices at panelboards to protect new HVAC system components.
3. Provide short circuit and arc flash hazard assessment study.
4. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants’ and their sub-consultants’ opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor’s methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous materials (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 20 wks.	7,750	SF	\$ 0.50	\$ 3,875.00
Final cleanup, at end of job	7,750	SF	\$ 1.00	\$ 7,750.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	6	MTHS	\$ 350.00	\$ 2,100.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	24	WKS	\$ 75.00	\$ 1,800.00
Office Trailer - 20'x8'	6	MTHS	\$ 500.00	\$ 3,000.00
Dumpster, 20 CY, 1 dump / week	24	WKS	\$ 500.00	\$ 12,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	24	WKS	\$ 125.00	\$ 3,000.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
			GENERAL TOTAL	\$35,225
MECHANICAL				
Demolish natural gas fired (heating water) boiler.	1	EA	\$ 1,750.00	\$ 1,750.00
Demolish boiler flue.	1	LS	\$ 200.00	\$ 200.00
Demolish heating water pumps	2	EA	\$ 650.00	\$ 1,300.00
High efficiency condensing boiler for heating water: 1,500 MBh	1	EA	\$ 7,000.00	\$ 7,000.00
Boiler flue	1	LS	\$ 875.00	\$ 875.00
Heating water pumps: Pipe mounted (vertical inline), 3 HP	3	EA	\$ 2,625.00	\$ 7,875.00
Integrate points of new boiler and heating water pumps into existing DDC control system.	1	LS	\$ 4,000.00	\$ 4,000.00
Retrofit an air sterilization device such as UV-C lamps or bipolar ionization for each of two AHU's. (Est. 7,500 CFM capacity each)	2	EA	\$ 5,000.00	\$ 10,000.00
Air filter - MERV 13, 20"x20"x2"	16	EA	\$ 125.00	\$ 2,000.00
Clean building ductwork and air devices - galvanized ductwork with external insulation.	7,750	SF	\$ 0.50	\$ 3,875.00
			MECHANICAL TOTAL	\$38,875
ELECTRICAL				
Demolish heating water pumps BP-1 & BP-2 and associated starters	2	EA	\$ 350.00	\$ 700.00
New pumps BP-1 & BP-2 w/ Combination Motor Starters 480V Size 0 w/ conduit & wire	2	EA	\$ 1,400.00	\$ 2,800.00
New Surge Protective Device 150kA 3-Phase Grnd Wye 120/208V w/ Disconnect & wire	1	EA	\$ 5,000.00	\$ 5,000.00
Short-circuit/ Arc Flash Study	7,750	SF	\$ 1.50	\$ 11,625.00
			ELECTRICAL TOTAL	\$20,125
			SUBTOTAL	\$ 94,225
			UNDEVELOPED DESIGN COSTS (30%)	\$ 28,268
			BONDS (0.7%)	\$ 857
			PERMITS (3%)	\$ 3,675
			MOBILIZATION (8%)	\$ 9,799
			TOTAL	\$ 136,824
			PROBABLE CONSTRUCTION COST USE	\$ 137,000.00

Blackland Neighborhood Center

General Building Information

- A. Address: 2005 Salina, Austin, Texas
- B. Use: Administrative
- C. Gross Area: 3,447 SF
- D. Age: 36 years.

Description

Blackland Neighborhood Center is a 1-story building originally constructed in 1984. The building is used as administrative space and has three meeting rooms.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is provided by five residential-type Direct Expansion (DX) split system Air Handling Units (AHU). The AHUs are vertical units. AHUs 4 and 5 serve the meeting rooms and are in an interior mechanical closet at the south side of the building.

The remaining three AHUs (1,2, and 3) are in a mechanical room with exterior access located at the northeast corner of the building. AHU-3 and the associated condensing unit have been replaced and indicate a manufacture date of 2001. All other AHUs and associated condensing units are original to the building (1984). Industry expected equipment service life for residential DX split system AHUs is 15 years. All AHUs have been in service for 19-34 years and are beyond their useful life expectancy.



Figure 1 – Typical AHU

Building original AHUs and condensing units were observed with areas of rust developing on equipment casings. Refrigerant pipe insulation was observed to be in poor condition.



Figure 2 – Condensing Units

2. The AHUs provide heat to the building by natural gas fired furnaces. Raw (unconditioned, ambient temperature) outdoor air is provided to the building by air direct ducted to the return side of the AHUs.
3. The AHUs are controlled by wall-mounted Schneider Electric programmable, touch-screen thermostats.

4. Building ductwork was observed to be internally lined and is generally in good condition. Areas of dirty ductwork were observed at the restroom air devices.
5. Air devices in the occupied spaces were observed to be in generally good condition.

Electrical Systems

1. The main electrical service is fed from Austin Energy's 12.47kV distribution to two pole mounted single phase with one 75kVA transformer and one 25kVA transformer. The configuration is an open Hi-Leg Delta configuration providing 120/240V three phase electrical service. The secondary transitions to underground 4" conduit into a wireway located in the fenced electrical yard. We were not able to access due to this area as no keys were available. It is assumed at the wireway there is a 200A exterior disconnect which serves panelboard "Elec-panel-1" located in the mechanical yard. There was also a second panelboard "Elec-panel 2" that appears to be a 100A panelboard. There is also associated metering and current transformer enclosure (Figure 3).



Figure 3 – Main Electrical Service in Electrical yard.

2. Panelboard "Elec-panel-1" is a 225A Cutler Hammer Type PB three phase, 4 wire, 120/240V panel. This panel serves the existing condensing units #1, #2, #3, #4, and #5 with 3 phase breakers to #1, #2, #4, and #5. Condensing unit #3 is served with a 2-pole breaker (Figure 5). The panelboard and most of the existing circuit breakers are roughly 36 years old and are beyond their life expectancy. Some of the existing branch breakers have been replaced. There were signs of rust on the enclosure and the outdoor environment can accelerate the degrading of the panelboard and more importantly the

associated breakers. No arc flash or short circuit labels were posted on any of the panelboards as required per NFPA 70E



Figure 4 – Mechanical yard



Figure 5 – Panelboard “Elec-panel-1” located in Mech yard

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants’ site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

All AHUs and associated condensing units are in poor condition and beyond useful life. Stanley Consultants recommends replacement of the following components and systems. Specific items for consideration during a detailed design project should include:

1. Replace AHU-1, AHU-2, AHU-3, AHU-4, AHU-5 and their associated condensing units.

2. Provide an air sterilization device such as UV-C lamps or bipolar ionization systems at each AHU;
3. Provide MERV 13 filters at each AHU.
4. Clean all existing ductwork and air devices utilizing an aerosol biocide.
5. Install a building control system to allow remote reporting and control of AHU's.

Electrical Systems

The entire Electrical system is in poor condition and beyond useful life. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the HVAC system and replacement. Specific items for consideration during a detailed design project should include:

1. Provide new main 400A/3P/NEMA 3R/SE/600V disconnect to serve as the main disconnecting means for the building.
2. Provide new panelboards "Elec-panel-1" and "Elec-panel-2"
3. Provide new surge protective devices at panelboards to protect new HVAC system components.
4. Provide short circuit and arc flash hazard assessment study.
5. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants' and their sub-consultants' opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor's methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous materials (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 20 wks.	3,447	SF	\$ 0.50	\$ 1,723.50
Final cleanup, at end of job	3,447	SF	\$ 1.00	\$ 3,447.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	6	MTHS	\$ 350.00	\$ 2,100.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	24	WKS	\$ 75.00	\$ 1,800.00
Office Trailer - 20'x8'	6	MTHS	\$ 500.00	\$ 3,000.00
Dumpster, 20 CY, 1 dump / week	24	WKS	\$ 500.00	\$ 12,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	24	WKS	\$ 125.00	\$ 3,000.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
GENERAL TOTAL				\$28,771
MECHANICAL				
Demolish AHU-1,2,3,4,5 and associated condensing unit, refrigerant piping and insulation.	1	LS	\$ 2,500.00	\$ 2,500.00
Demolish natural gas flues associated with AHU-1,2,3 (shared in mechanical room)	1	LS	\$ 300.00	\$ 300.00
Demolish natural gas flues associated with AHU-4,5 (shared in mechanical closet)	1	LS	\$ 200.00	\$ 200.00
AHU-1,2 and associated condensing unit: 3 Ton nominal capacity, natural gas fired heat.	2	EA	\$ 5,750.00	\$ 11,500.00
AHU-3,4,5 and associated condensing unit: 5 Ton nominal capacity, natural gas fired heat.	3	EA	\$ 7,000.00	\$ 21,000.00
Retrofit bipolar ionization system into ductwork for each of AHU-1 and AHU-2 (estimated 1,200 CFM each)	2	EA	\$ 5,000.00	\$ 10,000.00
Retrofit bipolar ionization system into ductwork for each of AHU-3,4,5 (estimated 2,000 CFM each)	2	EA	\$ 6,000.00	\$ 12,000.00
Air filter - MERV 13, 20"x20"x2"	5	EA	\$ 100.00	\$ 500.00
Natural gas flues associated with AHU-1,2,3.	1	LS	\$ 1,200.00	\$ 1,200.00
Natural gas flues associated with AHU-4,5.	1	LS	\$ 800.00	\$ 800.00
Clean building ductwork and air devices - galvanized with external insulation.	3,447	SF	\$ 1.25	\$ 4,308.75
HVAC DDC control system - Provide building control system to allow for remote access.			\$ 7,380.00	\$ 7,380.00
Control panel to receive points from new AHU-1,2,3,4,5.	1	LS		
MECHANICAL TOTAL				\$71,689
ELECTRICAL				
Demolish existing panelboards Elec-1 & Elec-2- 225A/3P 120/240V	2	EA	\$ 500.00	\$ 1,000.00
New 400A/3P/NEMA 3R/SE/SN/600V Disconnect w/ conduit & wire	1	EA	\$ 1,500.00	\$ 1,500.00
New Panels Elec-1 & Elec-2- 225A/3P 120/240V 42 Circuit MLO w/ SPD, Conduit, & Wire	2	EA	\$ 2,500.00	\$ 5,000.00
Circuit Tracing existing branch circuits	3,447	SF	\$ 1.50	\$ 5,170.50
Short-circuit/ Arc Flash Study	3,447	SF	\$ 1.50	\$ 5,170.50
ELECTRICAL TOTAL				\$17,841
SUBTOTAL				\$118,300
UNDEVELOPED DESIGN COSTS (30%)				\$ 35,490.08
PHASED CONSTRUCTION (3%)				\$ 4,614
BONDS (0.7%)				\$ 1,077
PERMITS (3%)				\$ 4,614
MOBILIZATION (8%)				\$ 12,303
TOTAL				\$176,398
PROBABLE CONSTRUCTION COST USE				\$ 176,000.00

Clarksville Health Center

General Building Information

- A. Address: 1000 Toyath Street, Austin, Texas 78703
- B. Use: Refugee clinic
- C. Gross Area: 3,500 SF
- D. Age: 38 years.

Description

Clarksville Health Center is a single-story building originally constructed in 1982.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is provided by three residential-type Direct Expansion (DX) split system Air Handling Units (AHU) manufactured in 2009. AHUs are in an attic mezzanine accessed via exterior doors in the building rear. Industry expected equipment service life for residential DX split system AHUs is 15 -20 years. The AHUs have been in service for 11 years. The AHUs are in good condition. The AHUs are controlled by wall-mounted Schneider touch-screen programmable thermostats. The AHU DX cooling coils, refrigerant pipe, and insulation were replaced in 2017. Associated condensing units are in an enclosed mechanical yard exterior to the building.



Figure 1 – AHU-2 and AHU-3 (Typical 3 AHUs)



Figure 2 – AHU DX Cooling Coil (Typical 3 AHUs)

2. The AHUs provide heat to the building by natural gas fired furnaces. Raw (unconditioned, ambient temperature) outdoor air is provided to the building by air direct ducted to the return side of the AHUs. Residential AHUs are not designed to condition raw outdoor air and should not be used for that application.

3. The enclosed equipment yard contains three (3) DX condensers, one condensing unit per AHUs, and one (1) natural gas-fired generator. Condensing unit #1, associated with AHU-1, was manufactured in 2017. Condensing unit #2 and condensing unit #3 were manufactured in 1997 and 1996, respectfully. Industry expected equipment service life for residential DX split system AHUs and their associated condensing units is 15 – 20 years. Condensing units #2 and 3 are 23 to 24 years old and are beyond their life expectancy. Areas of rust have developed on the condensing unit casings and the refrigerant pipe insulation has begun to deteriorate. Some of the insulation has fallen off the refrigerant piping.



Figure 3 – DX Condensing Units and Generator

4. Building ductwork was observed to be insulated. Ductwork was observed to be in good condition. Air devices in the occupied spaces were observed to be in good condition.
5. Building occupants reported some rooms and areas are “too hot” or “too cold”. Examples given are the open office area is too hot and the exam rooms are too cold. This typically indicates the duct systems are out of balance.

Electrical Systems

1. The main electrical service is fed from Austin Energy’s 12.47kV distribution to two-pole mounted single phase 25kVA transformers. The configuration is an open Hi-Leg Delta configuration providing 120/240V three phase electrical service. The secondary transitions to underground 4” conduit into a current transformer enclosure and associated metering (Figure 1).



Figure 1 – Main Electrical Service and Meter.

2. The small mezzanine electrical/mechanical room has a wireway which serves two 30A 3 Phase disconnects for condensing units #1 and #2 (Figure 2). Along with the main 200A disconnect to Panelboard “A” (Figure 3). There is no main disconnect readily accessible on the exterior of the building for emergency personnel.



Figure 2 – Wireway in Mezzanine Mech/Elec Rm.



Figure 3 – Disconnect to Panelboard “A”.

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants’ site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

Stanley Consultants recommends replacement of the following components and systems. Specific items for consideration during a detailed design project should include:

1. The AHUs are not at the end of their service life. Replacement is not recommended at this time.
2. The AHUs DX cooling coils are not at the end of their service life. Replacement is not recommended at this time.
3. Condensing units #2 and #3 are beyond their expected service life. Replace DX air-cooled condensing units #2 and #3.
4. Clean all existing ductwork and air devices utilizing an aerosol biocide.
5. Provide an air sterilization device such as UV-C lamps or bipolar ionization systems at each AHU.
6. Provide MERV 13 filters at each AHU.
7. Test, adjust, and balance all the air handling systems.

Electrical Systems

The entire Electrical system is beyond useful life and in poor condition. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the HVAC system and replacement. Specific items for consideration during a detailed design project should include:

1. Provide new 200A/3P/NEMA 3R/SE/600V Disconnect on the exterior of the building.
2. Provide new disconnects for associated condensing units CU-1 and CU-2.
3. Provide new 200A 3 Phase 4 Wire panelboard “A”.
4. Provide new surge protective devices at panelboards to protect new HVAC system components.
5. Provide short circuit and arc flash hazard assessment study.
6. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants’ and their sub-consultants’ opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor’s methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous material (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 12 wks.	3,500	SF	\$ 0.50	\$ 1,750.00
Final cleanup, at end of job	3,500	SF	\$ 1.00	\$ 3,500.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	3	MTHS	\$ 350.00	\$ 1,050.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	12	WKS	\$ 75.00	\$ 900.00
Office Trailer - 20'x8'	3	MTHS	\$ 500.00	\$ 1,500.00
Dumpster, 20 CY, 1 dump / week	12	WKS	\$ 500.00	\$ 6,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	12	WKS	\$ 125.00	\$ 1,500.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
GENERAL TOTAL				\$17,900
MECHANICAL				
Demolish 4-ton DX air-cooled condenser & refrigerant piping	2	EA	\$ 1,125.00	\$ 2,250.00
Air-cooled DX condenser & refrigerant piping, 4-ton	2	EA	\$ 4,500.00	\$ 9,000.00
Bipolar ionization system for each AHU	3	EA	\$ 5,000.00	\$ 15,000.00
Air filter - MERV 13, 20"x20"x2"	3	EA	\$ 125.00	\$ 375.00
Clean building ductwork and air devices - galvanized ductwork with external insulation.	3,500	SF	\$ 0.50	\$ 1,750.00
Testing, Adjusting, & Balancing	3,500	SF	\$ 1.00	\$ 3,500.00
HVAC Commissioning	3,500	SF	\$ 1.00	\$ 3,500.00
MECHANICAL TOTAL				\$35,375
ELECTRICAL				
Demolish existing 200A/3P 600V NEMA 1 Main Disconnect	1	EA	\$ 625.00	\$ 625.00
Demolish existing 30A/1P NEMA 3R Disconnects to CU-2, & CU-3	2	EA	\$ 200.00	\$ 400.00
Demolish existing 200A 120/240V single phase Panelboard "A"	1	EA	\$ 250.00	\$ 250.00
New 200A/3P/SN/SE/NEMA 3R/600V Disconnect w/ Conduit & Wire	1	EA	\$ 1,250.00	\$ 1,250.00
New 200A 120/240V three phase Panelboard 54ckt w/ Conduit, Wire, & SPD	1	EA	\$ 2,500.00	\$ 2,500.00
Circuit Tracing existing branch circuits	3,500	SF	\$ 1.50	\$ 5,250.00
30A/1P NEMA 3R Disconnects to CU-2 & CU-3 w/ Conduit & Wire	2	EA	\$ 800.00	\$ 1,600.00
Short-circuit/ Arc Flash Study	3,500	SF	\$ 1.50	\$ 5,250.00
ELECTRICAL TOTAL				\$17,125
SUBTOTAL				\$ 70,400
UNDEVELOPED DESIGN COSTS (30%)				\$ 21,120
BONDS (0.7%)				\$ 641
PERMITS (3%)				\$ 2,746
MOBILIZATION (8%)				\$ 7,322
TOTAL				\$ 102,228
PROBABLE CONSTRUCTION COST				\$ 102,000

South Austin Neighborhood Center

General Building Information

- A. Address: 2508 Durwood Street, Austin, Texas
- B. Use: WIC clinic.
- C. Gross Area: 18,651 SF
- D. Age: 41 years.

Description

South Austin Neighborhood Center is a single-story building originally constructed in 1979. The building is used as a neighborhood healthcare and family medicine clinic providing services such as general health and WIC.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is provided by nine (9) constant-volume Air Handling Units (AHU) with chilled and heating hot water coils located in attic mechanical room #1. All the AHUs are manufactured by Trane in 1979 and are comprised of the following components: Mixing section, filters, cooling coils, heating coils, and a belt-driven fan section. Each AHU serves a different area of the building. Building occupants report that different areas are either hot or cold and the building does not have a uniform temperature throughout. Industry expected equipment service life for commercial central AHUs is 20 - 25 years. All nine of the AHUs are 41 years old and beyond their useful life.



Figure 1- Typical AHU.

2. The ductwork and air devices (grilles, registers, and diffusers) in the Building are observed to be in poor condition showing areas of rust, dirt, and possible biological growth. All devices are original to the building from 1979. Industry expected equipment service life for grilles, registers and diffusers is 20 - 25 years. All grilles, registers, and diffusers are 41 years old. Industry expected equipment service life for ductwork is 30 years. All ductwork is 41 years old.



Figure 2 – Typical diffuser with rust, dirt and possible biological growth.

3. Heating water is produced by a Patterson-Kelly gas-fired boiler manufactured in 2006. The boiler is in the attic mechanical room with AHUs 1 through 6. The boiler appears to be in fair condition with some areas of rust and wear on the casing. Industry expected equipment service life for a boiler is 25 - 30 years. The boiler is 14 years old and within its useful service life.



Figure 3 – Heating Water Boiler

4. Heating water is circulated to the AHUs by a centrifugal pump located adjacent to the boiler. The pump casing and data tag were corroded and could not be read. Estimated pump size is 70 gpm based on the boiler size. There is evidence of water stains and pump casing leaks. The pump age could not be determined. Industry expected equipment service life for a boiler is 20 years.

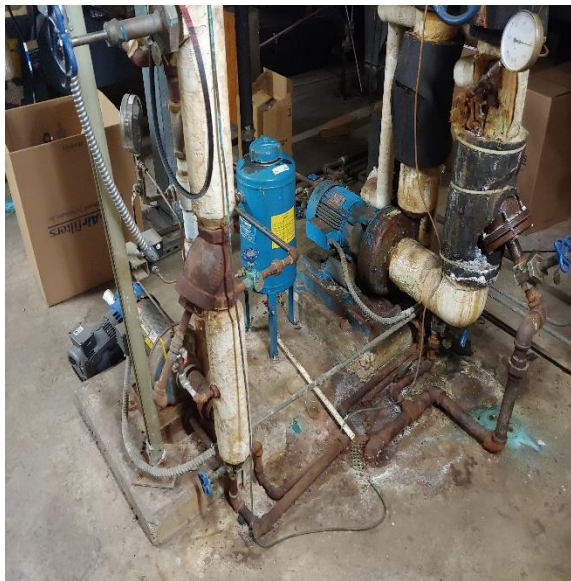


Figure 4 – Heating Water Pump (left) and Chilled Water Pump (right)

5. Chilled water is produced by a Carrier Aquasnap 30-TON air-cooled chiller manufactured in 2005. The chiller is in the exterior mechanical yard. The chiller coils have several areas where the coil fins are bent (light areas in Figure 5) which reduces coil airflow and chiller capacity. Additionally, the coils are coated in dirt / debris (dark areas in Figure 5) which also reduces the chiller capacity. Industry expected equipment service life for an air-cooled is 20 - 25 years. The air-cooled chiller is 15 years old, reaching the end of its service life, and in poor condition.



Figure 5 – Air-Cooled Chiller

6. Chilled water is circulated to the AHUs by a centrifugal pump located adjacent to the heating water pump, see Figure 4. The pump casing and data tag were corroded and could not be read. Estimated pump size is 60 gpm based on the chiller size. There is evidence of water stains and pump casing leaks. The pump age could not be determined. Industry expected equipment service life for a boiler is 20 years.
7. Chilled water piping and heating water piping is covered with fiberglass insulation. The pipe fittings (elbows) have hard mastic covering the insulation which typically indicates possible asbestos insulation. All the insulation is in poor condition and is damaged.

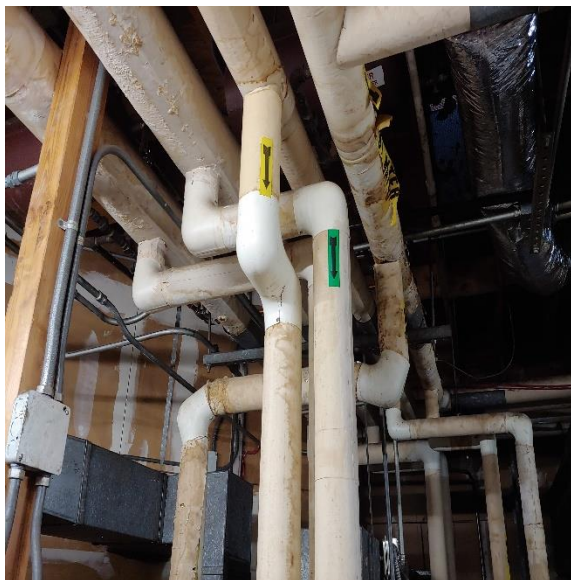


Figure 6 – Typical Pipe Insulation.

8. A Schneider Electric Andover Continuum building control system is in place for service of all equipment installed in 2011 and is in good condition. Industry expected equipment service life for a control system is 20 years.



Figure 7 – Typical Controls Cabinet.

Electrical Systems

1. The main electrical service is fed from Austin Energy's 12.47kV distribution to pole mounted three single phase 75kVA transformers and then transitions to underground to 800A, 120/208V three phase 4 wire electrical service (Figure 8).



Figure 8 – Main Electrical Service CT enclosure and meter.

2. The interior electrical room has associated panelboards and motor control center. Main panelboard “MDP” is an 800A square D I-Line 120/208V three phase 4 wire panelboard with main lug only (Figure 9). The existing exterior air-cooled chiller is served from a 350A/3P breaker which is oversized for the 250A chiller. Motor control

center “MSC2” is an 100A Square D I-Line type HCM 120/208V three phase 4 wire panelboard (Figure 10). The motor control center has associated NEMA size 0 starters that serve the AHUs 1 thru 9 and chilled and hot water pumps. These panelboards appear to be original to the building and are roughly 40 years old and beyond their useful life expectancy. The dead front of the motor control center was missing so the possibility of rodents entering the motor control center is highly likely. This can cause electrical failures by way of rodents causing arcing across phases or chewing on electrical conductors and causing a failure. There is currently no main disconnect on the exterior of the building which does not meet the COA electrical requirements and is intended for the use of first responders and emergency personnel. No arc flash or short circuit labels were posted on any of the panelboards as required per NFPA 70E.



Figure 9 – Main Distribution Panel “MDP”.



Figure 10 – Motor Control Center “MSC2”

3. The AHUs 1 thru 9 are in the mezzanine area along with the associated chilled and hot water pumps (Figures 11 and 12). The disconnect switches are 30A, 3 phase disconnects that are original to the building and beyond useful life.



Figure 11 – Air Handling Unit disconnect switches



Figure 12 – Hot and Chilled Water Pumps disconnect switches

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants' site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

All AHUs are in poor condition and beyond their useful service life. Stanley Consultants recommends replacement of all the constant-volume AHU equipment and replacement of other ancillary systems (ductwork, piping, pumps,) and system improvements as follows:

1. Replace all nine (9) AHUs and their associated ductwork systems with single-zone variable air volume (VAV) AHUs with chilled water and heating water coils.
2. Replace all chilled water piping, heating water piping, and both pumps.

3. Provide an air-cleaning device such as UV-C lamps or bipolar ionization systems at each AHU.
4. Provide a minimum MERV 13 air filter at each AHU.
5. Replace the 30-ton air-cooled chiller in kind.
6. Connect new equipment to the existing control system.

Electrical Systems

The entire electrical system is in poor condition and beyond its useful service life. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the HVAC system and replacement. Specific items for consideration during a detailed design project should include:

1. Provide new 800A/3P/NEMA 3R/SE/600V main disconnect on the exterior of the building.
2. Provide new 2 section 800A main panelboard “MDP”.
3. Provide new 30A combination motor starters for chilled water and hot water pumps.
4. Provide new 30A disconnects for associated air handling units AH-1 thru AH-9.
5. Provide new surge protective devices at panelboards to protect new HVAC system components.
6. Provide new 400A/3P/NEMA 3R/600V disconnect to serve 30-ton Air-Cooled Chiller.
7. Provide short circuit and arc flash hazard assessment study.
8. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants’ and their sub-consultants’ opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor’s methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous material (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const,52 wks	18,651	SF	\$ 0.50	\$ 9,325.50
Final cleanup, at end of job	18,651	SF	\$ 1.00	\$ 18,651.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	12	MTHS	\$ 350.00	\$ 4,200.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	52	WKS	\$ 75.00	\$ 3,900.00
Office Trailer - 20'x8'	12	MTHS	\$ 500.00	\$ 6,000.00
Dumpster, 20 CY, 1 dump / week	52	WKS	\$ 500.00	\$ 26,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	52	WKS	\$ 125.00	\$ 6,500.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
			GENERAL TOTAL	\$76,277
ARCHITECTURAL				
Selected demolish: gyp board ceilings	1,000	SF	\$ 1.00	\$ 1,000.00
1/2" gypsum board ceiling, floated, taped, painted	1,000	SF	\$ 2.50	\$ 2,500.00
Selected demolish: 2x2 acoustical ceiling tiles	1,000	SF	\$ 1.00	\$ 1,000.00
2x2 acoustical tile ceiling w/ suspension system	1,000	SF	\$ 3.75	\$ 3,750.00
			ARCHITECTURAL TOTAL	\$8,250
MECHANICAL				
Demolish air handling units, 2,500 cfm, chilled water coil, heating water coil	9	EA	\$ 1,750.00	\$ 15,750.00
Demolish ductwork system & air terminal devices	18,651	SF	\$ 1.00	\$ 18,651.00
Demolish 30-ton air-cooled chiller	1	EA	\$ 5,000.00	\$ 5,000.00
Demolish chilled water & heating water 4" black steel sch 40 piping, 2" insulation	500	LF	\$ 4.50	\$ 2,250.00
Demolish base-mounted end suction pumps, 1.5 HP	2	EA	\$ 1,750.00	\$ 3,500.00
Air-cooled Chiller, 30-ton	1	EA	\$ 31,250.00	\$ 31,250.00
Galvanized steel ductwork system & air terminal devices	18,651	SF	\$ 4.00	\$ 74,604.00
Variable Air Volume AHU, 2,500 CFM, chilled water coil & heating water coil	9	EA	\$ 7,000.00	\$ 63,000.00
4" black steel pipe, sch 40 with 2" insulation & alumn. Jacket	500	LF	\$ 18.00	\$ 9,000.00
Base-mounted end-suction pump, 1.5 hp	2	EA	\$ 1,500.00	\$ 3,000.00
Air filter - MERV 13, 20"x20"x2"	18	EA	\$ 125.00	\$ 2,250.00
Bipolar ionization system for each AHU	9	EA	\$ 5,000.00	\$ 45,000.00
HVAC DDC control system	1	LS	\$ 12,000.00	\$ 12,000.00
Testing, Adjusting, & Balancing	18,651	SF	\$ 0.75	\$ 13,988.25
HVAC Commissioning	18,651	SF	\$ 0.75	\$ 13,988.25
			MECHANICAL TOTAL	\$313,232
ELECTRICAL				
Demolish existing 800A/3P 600V NEMA 3R Main Disconnect	1	EA	\$ 500.00	\$ 500.00
Demolish existing 30A/3P NEMA 3R Disconnects	9	EA	\$ 125.00	\$ 1,125.00
Demolish existing 800A 120/208V three phase, 2 section Panelboard "MDP"	1	EA	\$ 200.00	\$ 200.00
Demolish 350A/3P NEMA 3R Disconnect	1	EA	\$ 375.00	\$ 375.00
New 800A/3P/NEMA 3R/600V Disconnect w/ conduit, wire, & SPD	1	EA	\$ 4,375.00	\$ 4,375.00
New 800A 120/208V three phase, 2 section Panelboard "MDP" w/ conduit, wire, & SPD	1	EA	\$ 7,000.00	\$ 7,000.00
Circuit Tracing existing branch circuits	18,651	SF	\$ 0.50	\$ 9,325.50
New 30A/3P/NEMA 1/600V Disconnects w/ conduit & wire	9	EA	\$ 800.00	\$ 7,200.00
New 400A/3P/NEMA 3R/600V Disconnect w/ conduit & wire	1	EA	\$ 1,500.00	\$ 1,500.00
New 30A/3P/Size 1/600V Combination motor starter w/ conduit & wire to CHWP & HWP	2	EA	\$ 2,500.00	\$ 5,000.00
Short-circuit/ Arc Flash Study	18,651	SF	\$ 1.00	\$ 18,651.00
			ELECTRICAL TOTAL	\$55,252
			SUBTOTAL	\$ 453,010
			UNDEVELOPED DESIGN COSTS (30%)	\$ 135,903
			PHASED CONSTRUCTION (3%)	\$ 17,667
			BONDS (0.7%)	\$ 4,122
			PERMITS (3%)	\$ 17,667
			MOBILIZATION (4%)	\$ 23,556
			TOTAL	\$ 651,926
			PROBABLE CONSTRUCTION COST	\$ 652,000.00

Far South WIC

General Building Information

- A. Address: 405 W. Stassney Lane, Austin, Texas
- B. Use: Neighborhood clinic.
- C. Gross Area: 4,750 SF
- D. Age: 35 years.

Description

Far South WIC is a single-story building originally constructed in 1983. The building is used to provide the neighborhood with healthcare including exams and WIC services.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is provided by three residential-type Direct Expansion (DX) split system Air Handling Units (AHUs) manufactured in 2000 (AHU #1) and 2013 (AHU #2 and AHU #3). AHUs are in mechanical closets accessed via a lockable double door from the corridors. Associated condensing units are in two enclosed mechanical yards, exterior to the building. Industry expected equipment service life for residential DX split system AHUs is 15 years. The AHUs #2 and #3 have been in service for 7 years and are within their service life. AHU #1 has been in service for 20 years and is beyond its expected service life. Overall, the AHUs are in good condition. The AHUs are controlled by wall-mounted programmable thermostats. No monitoring control system was observed.



Figure 1 – AHUs #2 and #3.



Figure 2 – AHU #1 and Mechanical Closet.

2. The AHUs provide heat to the building by natural gas fired furnaces. Raw (unconditioned, ambient temperature) outdoor air is provided to the building by air direct ducted to the return side of the AHUs. Residential AHUs are not designed to condition raw outdoor air and should not be used for that application.
3. Condensing unit #1 was manufactured in 2013 and serves AHU #1. Condensing unit #2 was manufactured in 2000 and serves AHU #2 and AHU #3. Industry expected equipment service life for residential DX split system condensing units is 15 – 20 years. The condensing unit #1 is 7 years old and is within its useful life expectancy. Condensing unit #2 is 20 years old and beyond its useful life expectancy.



Figure 3 – Condensing Unit #1



Figure 4 – Condensing Unit #2

Electrical Systems

1. The main electrical service is fed from Austin Energy's 12.47kV distribution to two pole-mounted transformers, one single phase 50kVA transformer and one 25kVA transformer. The configuration is an Hi-Leg Open Delta providing 120/240V three phase electrical service. The secondary transitions to underground 3" conduit into a wireway located in the fenced electrical yard. The main disconnect is a 200A exterior disconnect that is served from the wireway which serves panelboard "Panel L" located inside the building (Figure 1). There is meter base and associated disconnects that serve condensing units CU-1 and CU-2 inside the fenced area (Figures 5 and 6).



Figure 5 – Main Disconnect in Mechanical yard.



Figure 6 – Main Electrical Service and Disconnects.

2. Existing Panelboard “L” appears to be a 200A GE 3 Phase 4 Wire panelboard which feeds “Panel P”. There were no keys available to access the panelboard (Figure 7).



Figure 7 – Panelboard “L”

3. Existing Panelboard P is a 100A GE 3 Phase 4 Wire panelboard which serves condensing units “CU-1” and “CU-2” with 40A/3P breaker and 50A/3P breaker (Figure 8).



Figure 8 – Panelboard “P”

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants’ site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

The majority of the mechanical HVAC system is within its useful service life. Stanley Consultants recommends replacement of the following HVAC system(s) or specific HVAC component(s) as follows:

1. Replace AHU-1, and its associated thermostat.

2. Replace Condensing Unit #2 and its associated refrigerant piping.
3. Consider providing an air sterilization device such as UV-C lamps or bipolar ionization systems at all AHUs.
4. Provide a minimum MERV 13 air filter in each AHU.
5. Clean all existing ductwork and air devices utilizing an aerosol biocide.
6. Provide a HVAC control system to facilitate remote monitoring and control.

Electrical Systems

The entire electrical system is in poor condition and beyond its useful service life. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the HVAC system and replacement. Specific items for consideration during a detailed design project should include:

1. Provide new 200A main panelboard “P” and disconnects for associated condensing unit CU-2.
2. Provide new 100A panelboard “L” and disconnects for associated air handling unit AHU-1.
3. Provide new surge protective devices at panelboards to protect new HVAC system components.
4. Provide short circuit and arc flash hazard assessment study.
5. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants’ and their sub-consultants’ opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor’s methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous materials (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 12 wks.	4,750	SF	\$ 0.50	\$ 2,375.00
Final cleanup, at end of job	4,750	SF	\$ 1.00	\$ 4,750.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	3	MTHS	\$ 350.00	\$ 1,050.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	12	WKS	\$ 75.00	\$ 900.00
Office Trailer - 20'x8'	3	MTHS	\$ 500.00	\$ 1,500.00
Dumpster, 20 CY, 1 dump / week	12	WKS	\$ 500.00	\$ 6,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	12	WKS	\$ 125.00	\$ 1,500.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
GENERAL TOTAL				\$19,775
MECHANICAL				
Demolish 5-ton DX cooling air handling unit	1	EA	\$ 750.00	\$ 750.00
Demolish 7.5-ton DX air-cooled condenser & refrigerant piping	1	EA	\$ 1,250.00	\$ 1,250.00
Demolish programmable thermostat	1	EA	\$ 100.00	\$ 100.00
Air-handling unit, 5 ton DX cooling coil, 100 MBH gas-fired furnace, 2000 cfm	1	EA	\$ 7,000.00	\$ 7,000.00
Air-cooled DX condenser & refrigerant piping, 7.5-ton	1	EA	\$ 5,200.00	\$ 5,200.00
Bipolar ionization system for each AHU	3	EA	\$ 5,000.00	\$ 15,000.00
Air filter - MERV 13, 20"x20"x2"	3	EA	\$ 125.00	\$ 375.00
Clean building ductwork and air devices - galvanized ductwork with external ins	4,750	SF	\$ 0.50	\$ 2,375.00
HVAC DDC control system	1	LS	\$ 8,400.00	\$ 8,400.00
Testing, Adjusting, & Balancing	4,750	SF	\$ 1.00	\$ 4,750.00
HVAC Commissioning	4,750	SF	\$ 1.00	\$ 4,750.00
MECHANICAL TOTAL				\$49,950
ELECTRICAL				
Demolish existing 200A 120/240V three phase Panelboard "P"	1	EA	\$ 250.00	\$ 250.00
Demolish existing 40A/2P NEMA 3R Disconnects to CU-1, CU-2,	2	EA	\$ 125.00	\$ 250.00
Demolish existing 100A 120/240V three phase Panelboard "A"	1	EA	\$ 750.00	\$ 750.00
New 200A 120/240V three phase Panelboard "P" w/ conduit, wire, & SPD	1	EA	\$ 2,900.00	\$ 2,900.00
Circuit Tracing existing branch circuits	4,750	SF	\$ 1.50	\$ 7,125.00
New 40A/2P NEMA 3R Disconnects to CU-1, CU-2 w/ conduit & wire	2	EA	\$ 500.00	\$ 1,000.00
New 100A 120/240V three phase Panelboard "L" w/ conduit, wire, & SPD	1	EA	\$ 3,000.00	\$ 3,000.00
Circuit Tracing existing branch circuits	1	LS	\$ 500.00	\$ 500.00
Short-circuit/ Arc Flash Study	4,750	SF	\$ 1.50	\$ 7,125.00
ELECTRICAL TOTAL				\$22,900
SUBTOTAL				\$ 92,625
UNDEVELOPED DESIGN COSTS (30%)				\$ 27,788
BONDS (0.7%)				\$ 843
PERMITS (3%)				\$ 3,612
MOBILIZATION (8%)				\$ 9,633
TOTAL				\$ 134,501
PROBABLE CONSTRUCTION COST USE				\$ 135,000.00

Hauke House

General Building Information

- A. Address: 403 E. 15th Street, Austin, Texas
- B. Use: Ronald McDonald House Administrative Office
- C. Gross Area: 738 SF
- D. Age: 160 years.

Description

Hauke House is a single-story building originally constructed in 1860. The building is used to as a Ronald McDonald House administrative office.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is provided by one residential-type Direct Expansion (DX) heat pump system Air Handling Unit (AHU) manufactured in 1993 (AHU #1). AHU #1 is in a mechanical closet accessed via the corridor. Associated condensing unit is in behind the building. Heating is provided by way of electric heat strips in the air handling unit. Industry expected equipment service life for residential DX heat pumps system AHUs is 15 years. AHU #1 has been in service for 27 years and is beyond its expected service life. The AHU is controlled by wall-mounted programmable thermostats. No monitoring control system was observed.



Figure 1 – AHU #1 in Mechanical Closet.

2. Condensing unit #1 was manufactured in 1993 and serves AHU #1. Industry expected equipment service life for residential DX split system condensing units is 15 – 20 years. The condensing unit #1 is 27 years old and is beyond its useful life.



Figure 2 – Condensing Unit #1.

Electrical Systems

1. The main electrical service is fed from Austin Energy's 12.47kV distribution to a pole mounted three single phase 25kVA transformer and then transitions to underground to a 100A, 120/208V three phase electrical service exterior to the building (Figure 3). The main panelboard is a 200A GE 120/208V 3 Phase 4 Wire panelboard with associated metering (Figure 4). The existing electric heat strips in the air handling unit and interior panelboard are fed from this panelboard. The panelboard and most of the

existing circuit breakers are roughly 34 years old and are beyond their life expectancy. Some of the existing branch breakers have been replaced however the panelboard is not clearly visible for emergency personnel. No arc flash or short circuit labels were posted on any of the panelboards as required per NFPA 70E.



Figure 3 – Main Electrical Service in Courtyard.



Figure 4 – Main Panelboard in Courtyard.

2. The interior panelboard is a 200A GE load center 120/208V 3 Phase 4 Wire panelboard. There is a 20A/3P breaker that serves the condensing unit on the exterior of the building (Figure 5). No arc flash or short circuit labels were posted on any of the panelboards as required per NFPA 70E.



Figure 5 – Interior Panelboard.

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants' site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

Much of the mechanical HVAC system is beyond its useful service life. Stanley Consultants recommends replacement of the following HVAC system(s) and/or specific HVAC component(s).

1. Replace AHU-1, and its associated thermostat.
2. Replace Condensing Unit #1 and its associated refrigerant piping.
3. Provide an air cleaning device such as UV-C lamps or bipolar ionization systems at all AHUs.
4. Provide a HVAC control system to facilitate remote monitoring and control.
5. Provide a minimum MERV 13 air filter in each AHU.
6. Clean all existing ductwork and air devices utilizing an aerosol biocide.

Electrical Systems

The entire electrical system is in poor condition and beyond its useful service life. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the HVAC system and replacement. Specific items for consideration during a detailed design project should include:

1. Provide new 200A/3P/NEMA 3R/SE/600V Main disconnect in a readily accessible location.
2. Provide new interior 200A panelboard "A" and new disconnects for associated air handling unit and condensing unit.

3. Provide new surge protective devices at disconnect and panelboard to protect new HVAC system components.
4. Provide short circuit and arc flash hazard assessment study.
5. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants' and their sub-consultants' opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor's methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous material (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 12 wks	738	SF	\$ 0.50	\$ 369.00
Final cleanup, at end of job	738	SF	\$ 1.00	\$ 738.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	3	MTHS	\$ 350.00	\$ 1,050.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	12	WKS	\$ 75.00	\$ 900.00
Office Trailer - 20'x8'	3	MTHS	\$ 500.00	\$ 1,500.00
Dumpster, 20 CY, 1 dump / week	12	WKS	\$ 500.00	\$ 6,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	12	WKS	\$ 125.00	\$ 1,500.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
GENERAL TOTAL				\$13,757
MECHANICAL				
Demolish 4-ton DX heat pump air handling unit	1	EA	\$ 750.00	\$ 750.00
Demolish 4-ton DX air-cooled heat pump condenser & refrigerant piping	1	EA	\$ 1,250.00	\$ 1,250.00
Demolish programmable thermostat	1	EA	\$ 100.00	\$ 100.00
Heat Pump Air-handling unit, 4 ton DX cooling coil, 2000 cfm	1	EA	\$ 6,000.00	\$ 6,000.00
Air-cooled DX condenser heat pump & refrigerant piping, 4-ton	1	EA	\$ 4,500.00	\$ 4,500.00
Bipolar ionization system for each AHU	1	EA	\$ 5,000.00	\$ 5,000.00
HVAC DDC control system	1	LS	\$ 10,000.00	\$ 10,000.00
Clean building ductwork and air devices - galvanized with external insulation.	738	SF	\$ 1.25	\$ 922.50
Testing, Adjusting, & Balancing	738	SF	\$ 1.00	\$ 738.00
HVAC Commissioning	738	SF	\$ 1.00	\$ 738.00
MECHANICAL TOTAL				\$29,999
ELECTRICAL				
Demolish existing 200A 120/240V three phase Panelboard	1	EA	\$ 250.00	\$ 250.00
Demolish existing 20A/2P NEMA 3R Disconnects to AHU-1, CU-1	2	EA	\$ 125.00	\$ 250.00
Demolish existing 100A 120/240V three phase Panelboard	1	EA	\$ 250.00	\$ 250.00
New 200A/3P/NEMA 3R/SE/600V Disconnect w/ conduit, wire, & SPD	1	EA	\$ 3,000.00	\$ 3,000.00
New 20A/2P NEMA 3R Disconnects to AHU-1 & CU-1 w/ conduit & wire	2	EA	\$ 500.00	\$ 1,000.00
New 200A 120/208V three phase Panelboard w/ conduit, wire, & SPD	1	EA	\$ 700.00	\$ 700.00
Circuit Tracing existing branch circuits	738	SF	\$ 3.00	\$ 2,214.00
Short-circuit/ Arc Flash Study	738	SF	\$ 3.00	\$ 2,214.00
ELECTRICAL TOTAL				\$9,878
SUBTOTAL				\$ 53,633.50
UNDEVELOPED DESIGN COSTS (30%)				\$ 16,090.05
BONDS (0.7%)				\$ 488
PERMITS (3%)				\$ 2,092
MOBILIZATION (8%)				\$ 5,578
TOTAL				\$ 77,881.21
PROBABLE CONSTRUCTION COST USE				\$ 78,000.00

Betty Dunkerley Public Health Campus Bldg B

General Building Information

- A. Address: Building B on the HHSD Administrative Campus, 7201 Levander Loop, Austin, Texas.
- B. Use: Administrative
- C. Gross Area: 2,190 SF
- D. Age: (unknown)

Description

Building B is a 1-story administrative building of residential style construction.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is provided by two residential-type Direct Expansion (DX) split system Air Handling Units (AHU), three Direct Expansion (DX) 'Mini-Split' systems, and one Direct Expansion (DX) thru-wall system. All DX equipment is observed to utilize R-22 refrigerant. The primary building HVAC system is an American Standard Direct Expansion (DX) split system of approximately 3.5 nominal Ton capacity. The nameplate indicates a manufacture date of May 2003. Heat is provided by a 15-kW duct heater. Corrosion is observed on the AHU casing. The associated condensing unit is located exterior to the building. Areas of rust have developed on the condensing unit casings and the refrigerant pipe insulation has begun to deteriorate. Industry expected equipment service life for residential DX split system AHUs is 15 years. The AHU and condensing unit have been in service for 17 years and is beyond its useful service life.



Figure 1 – ‘American Standard’ AHU

2. Air distribution associated with the aforementioned American Standard unit is by mostly exposed ductwork with sidewall air devices. The ductwork and air devices appear to be in good working condition with no notable deficiencies.
3. A secondary building HVAC system is as follows: Addison Direct Expansion (DX) split system of approximately 6 nominal Ton capacity. The nameplate indicates a manufacture date of October 2003. Heat is provided by a separate duct heater of unknown capacity. The associated condensing unit is located exterior to the building. Areas of rust have developed on the condensing unit casings and the refrigerant pipe insulation has begun to deteriorate. Industry expected equipment service life for residential DX split system AHUs is 15 years. The AHU and condensing unit have been in service for 17 years and is beyond life expectancy. It was observed that this AHU system was disabled at the outdoor condensing unit disconnect.



Figure 2 – AHU condensing unit (typical of 2)

4. Air distribution associated with the Addison unit is by underfloor ductwork directing air to floor mounted air devices. The air devices appear to be in good working condition with no notable deficiencies.
5. Three Direct Expansion (DX) ‘Mini-Split’ heat pump systems serve the south end of the building. They each have around 1 nominal Ton cooling capacity and 12,000 BTU/h heating capacity. Associated condensing units are located outside. Both indoor units, condensing units, and associated refrigerant piping and insulation appear to be beyond their life expectancy. A thru-wall DX unit serves a server room adjacent to the mechanical room. It also appears to be beyond life expectancy.



Figure 3 – Mini-Split condensing unit (typical of 3)

6. The American Standard AHU is controlled by a wall-mounted programmable thermostat. The 'mini-split' systems are controlled by integral thermostats with remote controls. The building does utilize a building-wide control system and is not connected to a campus control or monitoring system. It was noted that the building was experiencing control problems at the time of observation with the American Standard AHU operating in heating mode with an elevated observed space temperature.

Electrical Systems

1. The main electrical service is fed from building D Main Distribution Panel "MDP" circuit 8, 10, 12 with a 200A/3 pole breaker. The main panelboard in the building "HD" 250A, 480/277V SIEMENS 3 Phase, 4 Wire Panelboard (Figure 4). The panelboard was manufactured in 2003 and is 17 years old and appears in good condition. No arc flash labels were present as required per NFPA 70E.



Figure 4 – Panelboard "HD"

2. The downstream 120/208V, 3 Phase, 4 Wire Panelboard "LD" SIEMENS type P1 250A with 150A/3 pole main breaker (Figure 5). The panel is fed from a 45kVA transformer and serves various loads and the DX condensing unit and the three mini splits. The panel was also manufactured in 2003 and appears to be in good condition. No arc flash labels were present as required per NFPA 70E.



Figure 5 – Panelboard “LD”

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants’ site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

All DX equipment is in poor condition and beyond its useful service life. Stanley Consultants recommends replacement of all the DX HVAC equipment and replacement of other ancillary systems or system improvements as follows:

1. Replace both AHU’s and their associated condensing units. Consider replacing with a single AHU for service to the length of the building, including portions now served by mini-split systems. While the overhead ductwork and associated air devices are in good condition, it is recommended that they be replaced and sized appropriately for service to the entire building (thus eliminating the (3) mini-split systems serving the south end of the building). It should be considered to remove the underfloor ductwork and associated air devices.
2. Provide an Energy Recovery Ventilator (ERV) to pre-condition the outdoor air before it enters the AHU mixing box.
3. Provide a building pressure monitoring and control system to maintain a positive building pressure of at least 0.05 in wg.
4. Provide an air sterilization device such as UV-C lamps or bipolar ionization systems;
5. Provide a minimum MERV 13 air filter at each new AHU.
6. Provide new DX Mini-Split unit to cool server room.
7. Provide a Direct Digital Control system for service to all new HVAC equipment. Enable control through a campus control system.

Electrical Systems

The entire electrical system appears to be in good condition. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the HVAC recommendation. Specific items for consideration during a detailed design project should include:

1. Provide new disconnects to associated HVAC equipment.
2. Provide new surge protective devices at panelboards to protect new HVAC system components.
3. Provide short circuit and arc flash hazard assessment study.
4. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants' and their sub-consultants' opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor's methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous material (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 20 wks	2,190	SF	\$ 0.50	\$ 1,095.00
Final cleanup, at end of job	2,190	SF	\$ 1.00	\$ 2,190.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	6	MTHS	\$ 350.00	\$ 2,100.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	24	WKS	\$ 75.00	\$ 1,800.00
Office Trailer - 20'x8'	6	MTHS	\$ 500.00	\$ 3,000.00
Dumpster, 20 CY, 1 dump / week	24	WKS	\$ 500.00	\$ 12,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	24	WKS	\$ 125.00	\$ 3,000.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
			GENERAL TOTAL	\$26,885
ARCHITECTURAL				
Selected demolish: gyp board ceilings	500	SF	\$ 1.00	\$ 500.00
1/2" gypsum board ceiling, floated, taped, painted	500	SF	\$ 2.50	\$ 1,250.00
Selected demolish: 2x2 acoustical ceiling tiles	500	SF	\$ 1.00	\$ 500.00
2x2 acoustical tile ceiling w/ suspension system	500	SF	\$ 3.75	\$ 1,875.00
			ARCHITECTURAL TOTAL	\$4,125
MECHANICAL				
Demolish ductwork system & air terminal devices	2,190	SF	\$ 1.25	\$ 2,737.50
Demolish underfloor ductwork system & air terminal devices	2,190	SF	\$ 1.50	\$ 3,285.00
Demolish both AHU's and associated condensing units, refrigerant piping and insulation.	2	EA	\$ 2,500.00	\$ 5,000.00
Demolish mini-split and associated condensing unit, refrigerant piping and insulation.	3	EA	\$ 1,500.00	\$ 4,500.00
Demolish DX thru wall unit (that cools server room)	1	EA	\$ 1,500.00	\$ 1,500.00
AHU and associated condensing unit: 7.5 Ton nominal capacity, electric heat, integral duct ionization system	1	EA	\$ 10,500.00	\$ 10,500.00
Ductwork system, galvanized steel & air terminal devices	2,190	SF	\$ 4.00	\$ 8,760.00
DX Mini-Split system to cool server room. 1.5 Ton capacity.	1	EA	\$ 7,875.00	\$ 7,875.00
Energy Recovery Ventilator - 250 CFM	1	EA	\$ 3,500.00	\$ 3,500.00
Bipolar ionization system for each AHU	2	EA	\$ 5,000.00	\$ 10,000.00
Air filter - MERV 13, 20"x20"x2"	4	EA	\$ 125.00	\$ 500.00
HVAC DDC control system - control panel to receive points from new AHU and mini-split. Integrate into campus controls.	1	LS	\$ 7,380.00	\$ 7,380.00
			MECHANICAL TOTAL	\$65,538
ELECTRICAL				
Demolish AHU's 30A/3P NEMA 1 Disconnects	2	EA	\$ 200.00	\$ 400.00
Demolish CU's 30A/3P NEMA 3R Disconnects	2	EA	\$ 175.00	\$ 350.00
Demolish DX 30A/3P NEMA 3R Disconnects	1	EA	\$ 175.00	\$ 175.00
New CU 60A/3P NEMA 3R Disconnect w/ conduit & wire	1	EA	\$ 500.00	\$ 500.00
New Mini-Split 30A/3P NEMA 3R Disconnect w/ conduit & wire	1	EA	\$ 350.00	\$ 350.00
Short-circuit/ Arc Flash Study	2,190	SF	\$ 1.50	\$ 3,285.00
			ELECTRICAL TOTAL	\$5,060
			SUBTOTAL	\$ 101,608
			UNDEVELOPED DESIGN COSTS (30%)	\$ 30,482
			PHASED CONSTRUCTION (3%)	\$ 3,963
			BONDS (0.7%)	\$ 925
			PERMITS (3%)	\$ 3,963
			MOBILIZATION (8%)	\$ 10,567
			TOTAL	\$ 151,507
			PROBABLE CONSTRUCTION COST USE	\$ 152,000

Betty Dunkerley Public Health Campus Bldg D

General Building Information

- A. Address: Building D on the HHSD Administrative Campus, 7201 Levander Loop, Austin, Texas.
- B. Use: Utility plant for service to adjacent buildings E and C.
- C. Gross Area: 350 SF (estimated)
- D. Age: (unknown)

Description

Building D is a 1-story utility building used to provide chilled water and heating water to adjacent Buildings E and C.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is provided by Chilled water by way of one (1) air cooled chiller of 60 nominal Ton capacity. It is located outdoors in a connected equipment yard just west of Building D. The chiller paint finishes are showing signs of wear including internal components such as compressors. Exterior chilled water piping is clad in aluminum jacket and is observed with dents.
2. Based on the prevailing age of equipment observed, all equipment and supporting infrastructure (such as chilled water and heating water piping) appear to have been installed in 2003.



Figure 1 – Air Cooled Chiller and Exterior Piping

3. Chilled water is distributed by (2) end suction pumps with 3 HP motors. Pump motors are observed to be in good condition. Corrosion and signs of leaking are observed on the pump casings.
4. Heating hot water is produced by (4) natural gas fired boilers. Boilers are rated at 199,000 BTU/h each and each have a concentric type combination vent/flue. The boilers appear in good cosmetic condition.
5. Heating hot water is distributed by (2) end suction pumps with capacity as follows: 50 GPM, 42 ft. hd., 1-1/2 HP motor. Pump motors are observed to be in good condition. Corrosion and signs of leaking are observed on pump casings and associated strainers and valves.



Figure 2 – Typical Pump with Corrosion

6. Chilled and heating hot water piping and associated insulation was observed to be in fair condition. The underside of some horizontal pipe mains were observed with signs of water damage and subsequent biological growth indicating the vapor barrier has been breached.



Figure 3 – Biological Growth and Water Damage on Pipe Insulation

7. The building HVAC system additionally contains one (1) heating water unit heater and one (1) in-line ventilation fan. The unit heater is observed with significant corrosion at pipe connections to unit. The fan appears to be in fair condition with no major deficiencies observed.



Figure 4 – Unit Heater with Corrosion at Pipe Connection

Electrical Systems

1. The main electrical service is fed from Austin Energy's 12.47kV distribution to a pad mounted three phase 500kVA transformer. The service then transitions underground and feeds a CT enclosure with associated metering. The main distribution panel "MDP" is an 800A, 480/277V Cutler-Hammer 3 Phase, 4 Wire (Figure 5).



Figure 5 – Main Distribution Panel “MDP”

2. Panelboard "MDP" serves the associated buildings A, B, C, and D. The panelboard is approximately 17 years old and has signs of rust and age due to exposure to the elements (Figure 6). No arc flash labels were present as required per NFPA 70E.



Figure 6 – Panelboard “MDP”

3. The main electrical service inside the mechanical building is fed from Main Distribution Panel "MDP" circuits 1, 3, 5 with a 200A/3 pole breaker. The main panelboard "HC" SIEMENS 225A type PRL2A 480/277V 3 Phase 4 Wire panelboard (Figure 7). The panel serves the Chiller with a 200A/3P breaker which is oversized

per the Chiller nameplate. The nameplate recommends a maximum over current device of a 150A/3P breaker. The panelboard also serves two chilled water pumps CHWP-1 and CHWP-2 and two hot water pumps HWP-1 and HWP-2. The panelboard was manufactured in 2003 and is 17 years old and has signs of rust and age due to exposure to the elements. No arc flash labels were present as required per NFPA 70E.



Figure 7 – Panelboards “HC” and “LC”

4. The downstream 120/208V 3 Phase 4 Wire Panelboard “LC” SIEMENS type PRL1a 100A with 60A/3 pole main breaker (Figure 8). The panel is fed from a 15kVA transformer and serves various loads and the chiller controls. The panel was also manufactured in 2003 and has signs of rust and age due to harsh conditions. No arc flash labels were present as required per NFPA 70E.



Figure 8 – Panelboard “LC”

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants' site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

Stanley Consultants recommends HVAC system improvements as follows:

1. Chiller and Boilers are not at end of life. Industry expected equipment service life for a chiller is 17 of 23 years (74%); and boilers are 17 of 24 years (71%). Replacement is not recommended at this time.
2. Pumps (both chilled water and heating water) are 17 years old and are near industry expected service life of 20 years. This, in conjunction with observed condition, deems the pumps in need to be replaced along with associated strainers, check valves and isolation valves.
3. It is recommended to replace select pipe insulation at horizontal mains and fittings that are observed with water damage.
4. The unit heater is 17 years old and is near industry expected service life of 20 years. This, in conjunction with observed condition, deems the unit heater in need to be replaced.
5. It is recommended to provide a new control panel to receive and integrate control points for all equipment associated with Building D. Integrate this control panel into the campus control system.

Electrical Systems

The entire electrical system appears to be in good condition. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the HVAC recommendations. Specific items for consideration during a detailed design project should include:

1. Provide new 800A, 480/277V, 3 Phase, 4 Wire, NEMA 3R Panelboard.
2. Provide new 225A, 480/277V, 3 Phase, 4 Wire, NEMA 3R Panelboard.
3. Provide new 100A, 120/208V, 3 Phase, 4 Wire, NEMA 3R Panelboard.
4. Provide new combination motor starters to associated pumps: CHWP-1, CHWP-2, HWP-1, and HWP-2.
5. Provide new surge protective devices at panelboards to protect new HVAC system components.
6. Provide short circuit and arc flash hazard assessment study.
7. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants' and their sub-consultants' opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor's methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous materials (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 20 wks	350	SF	\$ 0.50	\$ 175.00
Final cleanup, at end of job	350	SF	\$ 1.00	\$ 350.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	6	MTHS	\$ 350.00	\$ 2,100.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	24	WKS	\$ 75.00	\$ 1,800.00
Office Trailer - 20'x8'	6	MTHS	\$ 500.00	\$ 3,000.00
Dumpster, 20 CY, 1 dump / week	24	WKS	\$ 500.00	\$ 12,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	24	WKS	\$ 125.00	\$ 3,000.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
GENERAL TOTAL				\$24,125
MECHANICAL				
Demolish Pumps and associated valves (2 isolation each, 1 check valve each, 1 strainer each)	4	EA	\$ 250.00	\$ 1,000.00
Demolish pipe insulation for 2" pipe mains	20	LF	\$ 5.00	\$ 100.00
Demolish Unit Heater	1	EA	\$ 250.00	\$ 250.00
Pumps (3 hp, end suction) and associated valves (2 isolation each, 1 check valve each, 1 strainer each)	4	EA	\$ 3,000.00	\$ 12,000.00
Pipe insulation (building interior) for 2" pipes (1-1/2" thickness)	20	LF	\$ 20.00	\$ 400.00
Unit Heater - Hydronic - 12,000 BTUh	1	EA	\$ 3,000.00	\$ 3,000.00
HVAC DDC control system - Control panel to receive points from: Air Cooled Chiller, (4) natural gas fired boilers, (4) pumps	1	LS	\$ 8,000.00	\$ 8,000.00
Testing, Adjusting, & Balancing (hydronic system)	350	SF	\$ 1.50	\$ 525.00
HVAC Commissioning	350	SF	\$ 1.50	\$ 525.00
MECHANICAL TOTAL				\$25,800
ELECTRICAL				
Demolish existing 800A 480/277V three phase NEMA 3R Panelboard	1	EA	\$ 400.00	\$ 400.00
Demolish existing 100A 480/277V three phase NEMA 3R Panelboard	1	EA	\$ 250.00	\$ 250.00
Demolish existing 225A 480/277V three phase NEMA 3R Panelboard	1	EA	\$ 250.00	\$ 250.00
Demolish existing 20A/1P Disconnects to AHU-1, AHU-2, AHU-3	4	EA	\$ 175.00	\$ 700.00
800A 480/277V three phase NEMA 3R Panelboard w/ conduit & wire	1	EA	\$ 4,375.00	\$ 4,375.00
Circuit Tracing existing branch circuits	350	LS	\$ 3.00	\$ 1,050.00
100A 480/277V three phase NEMA 3R Panelboard w/ conduit & wire	1	EA	\$ 750.00	\$ 750.00
Circuit Tracing existing branch circuits	1	LS	\$ 500.00	\$ 500.00
225A 480/277V three phase NEMA 3R Panelboard w/ conduit & wire	1	EA	\$ 2,953.00	\$ 2,953.00
New 20A/1P NEMA 1 Disconnects to AHU-1, AHU-2, AHU-3 w/ conduit & wire	4	EA	\$ 700.00	\$ 2,800.00
Short-circuit/ Arc Flash Study	350	SF	\$ 3.00	\$ 1,050.00
ELECTRICAL TOTAL				\$15,078
SUBTOTAL				\$ 65,003
UNDEVELOPED DESIGN COSTS (30%)				\$ 19,501
BONDS (0.7%)				\$ 592
PERMITS (3%)				\$ 2,535
MOBILIZATION (8%)				\$ 6,760
TOTAL				\$ 94,391
PROBABLE CONSTRUCTION COST USE				\$ 94,000

Betty Dunkerley Public Health Campus Bldg C

General Building Information

- A. Address: Building C on the HHSD Administrative Campus, 7201 Levander Loop, Austin, Texas.
- B. Use: Administrative
- C. Gross Area: 7,448 SF
- D. Age: (unknown)

Description

Building C is a 1-story administrative building.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is by chilled and heating water produced at and pumped from nearby Building D. Airside systems are comprised of a Variable Air Volume (VAV) Air Handling Unit (AHU). Primary air from the AHU serves medium pressure ductwork upstream of VAV terminal units. The VAV terminal units modulate airflow and heating water (to integral heating coils and control valves) as required to meet zone temperatures.
2. AHU-3 is manufactured by York in 2003 and is comprised of the following components: Mixing section, filters, cooling coils, fan with variable speed drive (VSD). Corrosion was observed at the lower edges of the casing at the cooling coil sections. Inside the cooling coil section, corrosion was observed. This could indicate a clogged drainpipe.



Figure 1 – AHU-3

3. VAV boxes were observed to be in good condition with no notable deficiencies.
4. The ductwork and air devices in Building C were observed to be in good condition.
5. A roof mounted restroom exhaust fan is located central to the building. It appears to be in fair condition. The operational performance was not observed.
6. A Talon building control system is in place for service of each AHU and the VAV terminal units.

Electrical Systems

1. The main electrical service is fed from building D Main Distribution Panel “MDP” circuit 2, 4, 6 with a 125A/3 pole breaker. The main panelboard in building C is in electrical room C.13. The main panelboard “HB” is a SIEMENS 225A type PRL2A 480/277V 3 Phase 4 Wire panelboard (Figure 2). The air handling unit “AHU-3” is served from this panelboard by a 20A/3 pole breaker on circuits 7, 9, 11. The panelboard was manufactured in 2003 and is 17 years old and appears in good condition. No arc flash labels were present as required per NFPA 70E.



Figure 2 – Panelboard “HB”

2. The downstream 120/208V 3 Phase 4 Wire Panelboard “LB” is a 2 Section SIEMENS type PRL1A 225A with 175A main breaker (Figure 3). The panel is fed from a 50kVA transformer and serves various loads and the associated HVAC controls. The panel was also manufactured in 2003 and appears to be in good condition. No arc flash labels were present as required per NFPA 70E.



Figure 3 – Panelboard “LB” Section 1 & 2

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants’ site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

The HVAC system for Building C is generally in good condition with no components at end of life. AHU-3 is 17 years old. Industry expected lifespan for AHU’s is 20 years. Based on observed condition of AHU-3 along with not yet reaching end of expected lifespan,

refurbishment or replacement of AHU-3 is not recommended. Stanley Consultants recommends the following improvements.

1. Retrofit an air sterilization device such as UV-C lamps or bipolar ionization for the AHU;
2. Provide a minimum MERV 13 filter at each existing AHU.
3. Clean all existing ductwork and air devices. Utilize an aerosol biocide.

Electrical Systems

The entire electrical system appears to be in good condition. Stanley Consultants does not recommend replacement of the associated electrical components in conjunction with the HVAC recommendation. Specific items for consideration during a detailed design project should include:

1. Provide new surge protective devices at panelboards to protect new HVAC system components.
2. Provide short circuit and arc flash hazard assessment study.
3. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants' and their sub-consultants' opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor's methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous material (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const	7,448	SF	\$ 0.50	\$ 3,724.00
Final cleanup, at end of job	7,448	SF	\$ 1.00	\$ 7,448.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	1	MTHS	\$ 350.00	\$ 350.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	4	WKS	\$ 75.00	\$ 300.00
Office Trailer - 20'x8'	1	MTHS	\$ 500.00	\$ 500.00
Dumpster, 20 CY, 1 dump / week	4	WKS	\$ 500.00	\$ 2,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	4	WKS	\$ 125.00	\$ 500.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
			GENERAL TOTAL	\$16,522
MECHANICAL				
Retrofit bipolar ionization system into ductwork for AHU-3 (estimated 8,000 CFM)	1	EA	\$ 10,500.00	\$ 10,500.00
HVAC DDC control system - Integrate points of duct ionization system into	1	LS	\$ 8,000.00	\$ 8,000.00
Air filter - MERV 13, 20"x20"x2"	6	EA	\$ 125.00	\$ 750.00
Clean building ductwork and air devices - galvanized ductwork with external insulation.	7,448	SF	\$ 0.50	\$ 3,724.00
			MECHANICAL TOTAL	\$22,974
ELECTRICAL				
Short-circuit/ Arc Flash Study	7,448	SF	\$ 1.50	\$ 11,172.00
			ELECTRICAL TOTAL	\$11,172
			SUBTOTAL	\$ 50,668
			UNDEVELOPED DESIGN COSTS (30%)	\$ 15,200
			BONDS (0.7%)	\$ 461
			PERMITS (3%)	\$ 1,976
			MOBILIZATION (8%)	\$ 5,269
			TOTAL	\$ 73,575
			PROBABLE CONSTRUCTION COST USE	\$ 74,000

Betty Dunkerley Public Health Campus Bldg E

General Building Information

- A. Address: Building E on the HHSD Administrative Campus, 7201 Levander Loop, Austin, Texas.
- B. Use: Administrative
- C. Gross Area: 12,403 SF
- D. Age: (unknown)

Description

Building E is a 1-story administrative building.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is by chilled and heating hot water produced at and pumped from nearby Building D. Airside systems are comprised of two (2) Variable Air Volume (VAV) Air Handling Units (AHU). Primary air from the AHUs serves medium pressure ductwork upstream of VAV terminal units. The VAV terminal units modulate airflow and heating water (to integral heating coils and control valves) as required to meet zone temperatures.
2. AHU-1 and AHU-2 are manufactured by York in 2003 and are comprised of the following components: Mixing section, filters, cooling coils, fan (with Variable Speed Drive [VSD]). AHU-1 serves the north side of the building while AHU-2 serves the south side of the building. Corrosion was observed at the lower edges of the casing at the cooling coil sections. Inside the cooling coil section, corrosion was observed.



Figure 1 – Typical AHU Casing Corrosion



Figure 2 – Typical AHU Cooling Coil Corrosion

3. VAV boxes were observed to be in good condition with no notable deficiencies.
4. The ductwork and air devices in Building E were observed to be in good condition.
5. A Direct Expansion (DX) 'Mini-Split' heat pump systems “cools” a server room with an approximate capacity of 2 nominal Tons. The associated condensing unit is located outside. Both the indoor unit, condensing unit, and associated refrigerant piping and insulation appear to be beyond their useful life.



Figure 3 – Mini Split Condensing Unit

6. A roof mounted restroom exhaust fan is located central to the building. It appears to be in fair condition. The operational performance was not observed.
7. A Talon building control system is in place for service of each AHU and the VAV terminal units.

Electrical Systems

1. The main electrical service is fed from Building D Main Distribution Panel “MDP” circuit 7, 9, 11 with a 200A/3 pole breaker.
2. The main panelboard in building E is located in electrical room E.13. The main panelboard “HA” is a SIEMENS 225A type PRL2A 480/277V 3 Phase 4 Wire panelboard (Figure 4). The air handling units “AHU-1” and “AHU-2” are served from 20A/3 pole breakers on circuits 13, 15, 17 and 14, 16, 17. The panelboard was manufactured in 2003 and is 17 years old and appears in good condition. No arc flash labels were present as required per NFPA 70E.



Figure 4 – Panelboard “HA”

3. The downstream 120/208V 3 Phase 4 Wire Panelboard “LA” is a two-section SIEMENS type PRL1A 250A with 250A main breaker (Figure 5). The panel is fed from a 75kVA transformer and serves various loads and the associated HVAC controls. The panel was also manufactured in 2003 and appears to be in good condition. No arc flash labels were present as required per NFPA 70E.



Figure 5 – Panelboard “LA” Section 1 & 2

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants’ site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

The HVAC system for Building E is generally in good condition with a few components at or near end of life. AHUs 1 and 2 are 17 years old. Industry expected lifespan for AHUs is 20 years. Based on observed condition of AHUs 1 and 2 along with not yet reaching end of

expected lifespan, refurbishment or replacement of AHU-1 and 2 is not recommended. However, specific items for consideration during a detailed design project should include:

1. The Mini-Split system age is estimated to be 17 years old. Industry expected lifespan for DX mini-split systems is 15 years. As the mini-split has exceeded the expected lifespan, Stanley Consultants recommends replacing the Mini-Split and associated condensing unit.
2. Replace the Mini-Split system that cools the server room. Integrate replacement unit into building control system.
3. Retrofit an air sterilization device such as UV-C lamps or bipolar ionization for each of two AHUs.
4. Provide a minimum MERV 13 filter at each existing AHU.
5. Clean all existing ductwork and air devices utilizing an aerosol biocide.

Electrical Systems

The entire Electrical system appears to be in good condition. Stanley Consultants does not recommend replacement of the associated electrical components in conjunction with the HVAC recommendation. Specific items for consideration during a detailed design project should include:

1. Provide new surge protective devices at panelboards to protect new HVAC system components.
2. Provide short circuit and arc flash hazard assessment study.
3. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants' and their sub-consultants' opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor's methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous material (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 20 wks	12,403	SF	\$ 0.50	\$ 6,201.50
Final cleanup, at end of job	12,403	SF	\$ 1.00	\$ 12,403.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	4	MTHS	\$ 350.00	\$ 1,400.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	16	WKS	\$ 75.00	\$ 1,200.00
Office Trailer - 20'x8'	6	MTHS	\$ 500.00	\$ 3,000.00
Dumpster, 20 CY, 1 dump / week	16	WKS	\$ 500.00	\$ 8,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	16	WKS	\$ 125.00	\$ 2,000.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
GENERAL TOTAL				\$35,905
MECHANICAL				
Demolish 2 Ton DX Mini-Split System (Indoor Unit, Condensing Unit, Refrigerant Piping and Pipe Insulation)	1	LS	\$ 500.00	\$ 500.00
2 Ton DX Mini-Split System (Indoor Unit, Condensing Unit, Refrigerant Piping HVAC DDC control system - Integrate points of mini-split and duct ionization systems (2) into existing building control system.	1	LS	\$ 8,200.00	\$ 8,200.00
	1	LS	\$ 8,000.00	\$ 8,000.00
Retrofit bipolar ionization system into ductwork for each of AHU-1 and AHU-2 (estimated 8,000 CFM each)	2	EA	\$ 10,500.00	\$ 21,000.00
Air filter - MERV 13, 20"x20"x2"	12	EA	\$ 125.00	\$ 1,500.00
Clean building ductwork and air devices - galvanized ductwork with external insulation.	12,403	SF	\$ 0.50	\$ 6,201.50
MECHANICAL TOTAL				\$45,402
ELECTRICAL				
30A/2P NEMA 3R Disconnect to Mini-Split w/ conduit & wire	2	EA	\$ 800.00	\$ 1,600.00
Short-circuit/ Arc Flash Study	12,403	SF	\$ 1.00	\$ 12,403.00
ELECTRICAL TOTAL				\$14,003
SUBTOTAL				\$ 95,309
UNDEVELOPED DESIGN COSTS (30%)				\$ 28,593
BONDS (0.7%)				\$ 867
PERMITS (3%)				\$ 3,717
MOBILIZATION (8%)				\$ 9,912
TOTAL				\$ 138,398
PROBABLE CONSTRUCTION COST USE				\$ 138,000

Betty Dunkerley Public Health Campus Bldg H

General Building Information

- A. Address: Building H on the HHSD Administrative Campus, 7201 Levander Loop, Austin, Texas.
- B. Use: Administrative
- C. Gross Area: 10,016 SF
- D. Age: (unknown)

Description

Building H is a 1-story administrative building.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is provided by a Direct Expansion (DX) split system Air Handling Unit (AHU) manufactured in 1993. The AHU is a single zone system serving the entire area of the building and is in a mechanical room. The AHU utilizes a variable speed drive for fan motor control and incorporates an airside economizer control sequence. The refrigerant used in this machine is R-22. Building heat is provided by an electric heating element in the AHU.
2. Corrosion was observed around the bottom edges of the AHU casing. The fan and motor were observed to be noisy during operation. Industry expected equipment service life for AHUs is 20 years. The AHU has been in service for 27 years and is beyond useful life.

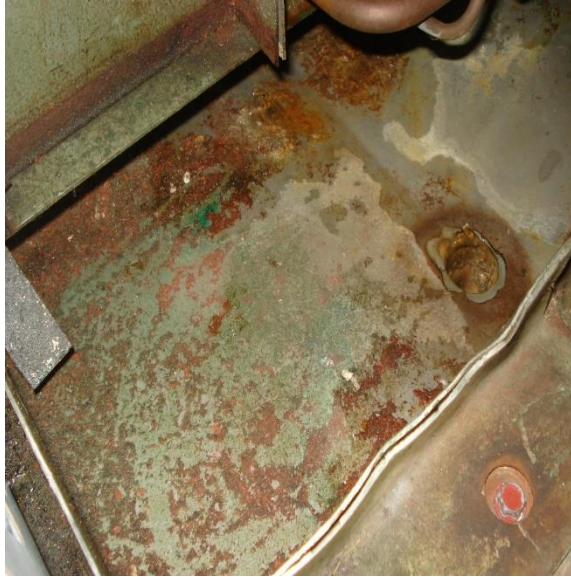


Figure 1 – AHU-1 Internal at Cooling Coil

3. The associated outdoor condensing unit is in a mechanical yard adjacent to the mechanical room. The condensing unit is also manufactured in 1993. The condensing unit was observed to be in poor condition with rust showing at the frame edges. The refrigerant pipe insulation jacket was dented, and the clamp hardware was rusted. Industry expected equipment service life for commercial condensing units is 20 years. The condensing unit has been in service for 27 years and is beyond life expectancy.



Figure 2 – ACCU-1 Corrosion on Condensing Unit Frame

4. The ductwork and air devices in Building H were observed to be in good condition.
5. A roof mounted restroom exhaust fan is located on the east side of the building. It appears to be in fair condition. The operational performance was not observed. A

Schneider Electric control module serves the AHU and associated condensing unit. The age of this system is not known.

Electrical Systems

1. The main electrical service is fed from Austin Energy's 12.47kV distribution to three pole mounted single phase 50kVA transformers. The service transitions underground to feed a current transformer enclosure and associated meters and main disconnect (Figure 3).



Figure 3 – Service Entrance and associated Metering

2. The interior main panelboard "HA" is a Cutler-Hammer 400A 480/277V 3 Phase 4 Wire Panelboard (Figure 4). The panel was manufactured in 2005 so roughly 15 years old and in good condition. The panel serves the air-cooled chiller ACCU-1 the air handling unit AHU-1 and various variable air volume units. No arc flash labels were present as required per NFPA 70E.



Figure 4 – Panelboard “HA”

3. The downstream 120/208V 3 Phase 4 Wire Panelboard “LA” is a 2 Section SIEMENS type PRL1A 225A with 175A main breaker (Figure 5). The panel is fed from a 50kVA transformer and serves various loads and the associated HVAC controls. The panel was also manufactured in 2003 and appears to be in good condition. These panels serve various loads including the controls for the HVAC system. No arc flash labels were present as required per NFPA 70E.



Figure 5 – Panelboard “LA” Section 1 & 2

Conclusions and Recommendations

The following conclusions and recommendations and/or advice are based on Stanley Consultants’ site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

Stanley Consultants recommends replacing the AHU and associated condensing unit. Specific items for consideration during a detailed design project should include.

1. Replace AHU-1 and ACCU-1. The capacity of existing equipment is unknown but can be estimated as 30 Nominal Tons.
2. Retrofit zone control(s) for the building. This may be achieved by modifying existing ductwork to incorporate Variable Air Volume (VAV) terminal units. Reheat capabilities may be required at some zones; this may be achieved by electric terminal unit heat.
3. Provide a building pressure monitoring and control system to maintain a positive building pressure of at least 0.05 in wg.
4. Provide an air sterilization device such as UV-C lamps or bipolar ionization systems.
5. Provide a minimum MERV 13 air filter at the new AHU; Clean all existing ductwork and air devices utilizing an aerosol biocide.
6. Provide a Direct Digital Control system for service to all new HVAC equipment. Enable control through a campus control system.

Electrical Systems

The entire electrical system appears to be in good condition. Stanley Consultants recommend replacement of the associated electrical components in conjunction with the HVAC recommendation. Specific items for consideration during a detailed design project should include:

1. Provide disconnect to air cooled condenser ACCU-1.
2. Provide disconnect to air handling unit AHU-1.
3. Provide new surge protective devices at panelboards to protect new HVAC system components.
4. Provide short circuit and arc flash hazard assessment study.
5. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants' and their sub-consultants' opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor's methods, or over competitive bidding or market conditions. Therefore, we do not guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous material (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description		Quantity		Unit Cost	Total Cost
		No. of Unit	UOM		
GENERAL					
	Site cleanup, daily, during const, 20 wks.	10,016	SF	\$ 0.50	\$ 5,008.00
	Final cleanup, at end of job	10,016	SF	\$ 1.00	\$ 10,016.00
	Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
	Photograph Documentation - Const. monthly	6	MTHS	\$ 350.00	\$ 2,100.00
	Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
	Toilet portable, rental	24	WKS	\$ 75.00	\$ 1,800.00
	Office Trailer - 20'x8'	6	MTHS	\$ 500.00	\$ 3,000.00
	Dumpster, 20 CY, 1 dump / week	24	WKS	\$ 500.00	\$ 12,000.00
	Temp. Chain-link fence, rented, 6' high, w/ 1 gate	24	WKS	\$ 125.00	\$ 3,000.00
	CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
GENERAL TOTAL					\$38,624
MECHANICAL					
	Demolish AHU-1 (30 Ton) and associated condensing unit, refrigerant piping and insulation.	2	EA	\$ 7,500.00	\$ 15,000.00
	Demolish select ductwork associated with VAV retrofit.	1	LS	\$ 4,000.00	\$ 4,000.00
	AHU and associated condensing unit, refrigerant piping and insulation: 30 Ton nominal capacity, electric heat, integral duct ionization system.	1	EA	\$ 37,500.00	\$ 37,500.00
	Retrofit single duct VAV with electric reheat. Average 1,200 CFM Each.	10	EA	\$ 500.00	\$ 5,000.00
	Ductwork modifications to retrofit 10 VAV boxes	1	LS	\$ 1,500.00	\$ 1,500.00
	Bipolar ionization system for each AHU	2	EA	\$ 5,000.00	\$ 10,000.00
	Air filter - MERV 13, 2" Depth	6	EA	\$ 100.00	\$ 600.00
	Clean building ductwork and air devices - galvanized ductwork with external ins	10,016	SF	\$ 0.50	\$ 5,008.00
	HVAC DDC control system - control panel to receive points from new AHU, associated condensing units, (10) VAV's. Integrate into campus controls.	1	LS	\$ 10,000.00	\$ 10,000.00
MECHANICAL TOTAL					\$88,608
ELECTRICAL					
	Demolish ACCU-1 Disconnect 30A/3P/NEMA 3R/600V	1	EA	\$ 200.00	\$ 200.00
	Demolish AHU-1 Disconnect 100A/3P/NEMA 1/600V	1	EA	\$ 250.00	\$ 250.00
	New ACCU-1 Disconnect 30A/3P/NEMA 3R/600V w/ conduit & wire	1	EA	\$ 800.00	\$ 800.00
	New AHU-1 Disconnect 100A/3P/NEMA 1/600V w/ conduit & wire	1	EA	\$ 1,000.00	\$ 1,000.00
	Short-circuit/ Arc Flash Study	10,016	SF	\$ 1.00	\$ 10,016.00
ELECTRICAL TOTAL					\$12,266
SUBTOTAL					\$ 139,498
UNDEVELOPED DESIGN COSTS (30%)					\$ 41,849
PHASED CONSTRUCTION (3%)					\$ 5,440
BONDS (0.7%)					\$ 1,269
PERMITS (3%)					\$ 5,440
MOBILIZATION (8%)					\$ 14,508
TOTAL					\$ 208,005
PROBABLE CONSTRUCTION COST USE					\$ 208,000

Montopolis Neighborhood Center

General Building Information

- A. Address: 1416 Montopolis, Austin, Texas
- B. Use: Administrative and Examination
- C. Gross Area: 2,840 SF
- D. Age: 38 years.

Description

Montopolis Neighborhood Center is a 1-story building originally constructed in 1982. The building is used for administrative as well as examination.

Existing System Observations and Assessments

Mechanical HVAC Systems

1. The Building Heating, Ventilation, and Air Conditioning (HVAC) is provided by two residential-type Direct Expansion (DX) split system Air Handling Units (AHU). The AHU's are vertical units and are in a mechanical room with exterior access. Each AHU has a cooling capacity of approximately 4 nominal Tons.

The AHU's provide heat to the building by natural gas fired furnaces. Raw (unconditioned, ambient temperature) outdoor air is provided to the building by air direct ducted to the return side of the AHU's.

AHU-1 and the associated condensing unit appears to be building original (1982). They were observed to have areas of rust developing on equipment casings. Refrigerant pipe insulation was observed to be in poor condition. Industry expected

equipment service life for residential DX split system AHUs is 15 years. AHU-1 has been in service for 38 years and is beyond useful life.

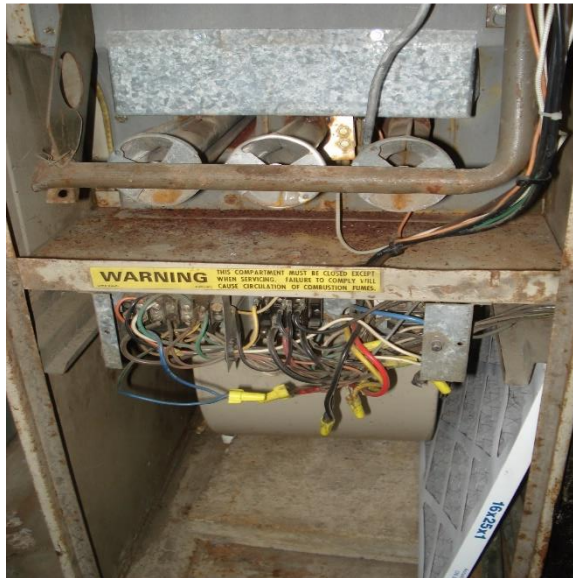


Figure 1 – Internals of AHU-1.

AHU-2 and the associated condensing unit was replaced and has a manufacture date of 2012 and appears to be in good working condition.

2. Building air devices were observed to be in poor condition with corrosion and broken blades.



Figure 2 – Typical Air Device with Corrosion.

3. Ductwork is galvanized with external insulation. Ductwork was generally observed to be in good condition. Insulation associated with AHU-1 that is in the mechanical room is in poor condition with signs of water damage and biological growth.



Figure 3 – AHU-1 Ductwork with biological growth.

4. The AHU's are controlled by wall-mounted, programmable thermostats.

Electrical Systems

1. The main electrical service is fed from Austin Energy's 12.47kV distribution to three pole mounted single phase 25kVA transformers and then transitions underground to feed a 200A, 120/208V 3 Phase 4 Wire Main Disconnect and meter in the fenced in area (Figures 4 & 5).



Figure 4– Main Electrical Service Fenced Area.



Figure 5 – Main Electrical Service Disconnect and Meter.

2. The interior main panelboard “A” is a Westinghouse 225A 120/208V 3 Phase 4 Wire panelboard. The panelboard appears to be original to the building so approximately 38 years old and in need of replacement. The panelboard serves the two condensing units and air handling units. No arc flash or short circuit labels were posted on any of the panelboards as required per NFPA 70E.



Figure 6 – Main Panelboard “A”.

Recommendations

The following recommendations and/or advice are based on Stanley Consultants' site observations, experience and represent our judgement and opinions.

Mechanical HVAC Systems

Stanley Consultants recommends replacement of the following components and systems. Specific items for consideration during a detailed design project should include:

1. AHU-1 and associated condensing unit is in poor condition and beyond useful life. As such, AHU-1 and the associated condensing unit should be replaced.
2. Provide an air sterilization device such as UV-C lamps or bipolar ionization system for both AHU-1 and AHU-2;
3. Provide a minimum MERV 13 air filter for existing AHU-2 and new AHU-1.
4. Clean all existing ductwork utilizing an aerosol biocide.
5. Replace all building air devices.
6. Replace ductwork insulation in mechanical room associated with AHU-1.
7. Install a building control system to allow remote reporting and control of AHU's.

Electrical Systems

The entire electrical system is in poor condition and beyond useful life. Stanley Consultants recommends replacement of the associated electrical components in conjunction with the HVAC system and replacement. Specific items for consideration during a detailed design project should include:

1. Provide new 400A/3P/NEMA 3R/SE/600V main disconnect on the exterior of the building.
2. Provide new 200A, 120/208V 3 Phase 4 Wire Main Panelboard.
3. Provide new disconnects for new condensing unit and air handling unit.
4. Provide new surge protective devices at panelboard to protect new HVAC system components.
5. Provide short circuit and arc flash hazard assessment study.
6. Provide arc flash labels at all panelboards per NFPA 70E requirement.

Opinion of Probable Construction Costs

All cost estimates presented in this report are Stanley Consultants' and their sub-consultants' opinions of probable construction costs. Cost estimates are made on the basis of our experience and represent our best judgment. We have no control over cost of labor, materials, equipment, contractor's methods, or over competitive bidding or market conditions. Therefore, we do not

guarantee that proposals, bids, or actual construction costs will not vary from estimates of construction costs presented.

Cost estimates were based on R.S. Means unit prices in 2020 dollars. Cost estimates are for construction materials and labor, and contractor overhead / profit cost, but do not include soft costs such as design services costs, or Owner management costs.

Cost estimates do not include hazardous material (i.e. asbestos, lead, etc.) abatement costs which is understood to be Owner-provided under a separate contract.

Item Description	Quantity		Unit Cost	Total Cost
	No. of Unit	UOM		
GENERAL				
Site cleanup, daily, during const, 20 wks.	2,840	SF	\$ 0.50	\$ 1,420.00
Final cleanup, at end of job	2,840	SF	\$ 1.00	\$ 2,840.00
Photograph Documentation - Existing Site	1	LS	\$ 600.00	\$ 600.00
Photograph Documentation - Const. monthly	6	MTHS	\$ 350.00	\$ 2,100.00
Photograph Documentation - Post const.	1	LS	\$ 600.00	\$ 600.00
Toilet portable, rental	24	WKS	\$ 75.00	\$ 1,800.00
Office Trailer - 20'x8'	6	MTHS	\$ 500.00	\$ 3,000.00
Dumpster, 20 CY, 1 dump / week	24	WKS	\$ 500.00	\$ 12,000.00
Temp. Chain-link fence, rented, 6' high, w/ 1 gate	24	WKS	\$ 125.00	\$ 3,000.00
CIP Project Sign	1	EA	\$ 500.00	\$ 500.00
			GENERAL TOTAL	\$27,860
ARCHITECTURAL				
Selected demolish: gyp board ceilings	280	SF	\$ 1.00	\$ 280.00
1/2" gypsum board ceiling, floated, taped, painted	280	SF	\$ 2.50	\$ 700.00
Selected demolish: 2x2 acoustical ceiling tiles	280	SF	\$ 1.00	\$ 280.00
2x2 acoustical tile ceiling w/ suspension system	280	SF	\$ 3.75	\$ 1,050.00
			ARCHITECTURAL TOTAL	\$2,310
MECHANICAL				
Demolish AHU-1 and associated condensing unit, refrigerant piping and insulation.	1	EA	\$ 1,625.00	\$ 1,625.00
Demolish ductwork associated with AHU-1 located inside mechanical room.	1	LS	\$ 2,840.00	\$ 2,840.00
Demolish natural gas flues associated with AHU-1 and AHU-2.	1	LS	\$ 150.00	\$ 150.00
AHU-1 and associated condensing unit: 4 Ton nominal capacity, natural gas fired heat.	1	EA	\$ 6,500.00	\$ 6,500.00
Retrofit bipolar ionization system into ductwork for each of AHU-1 and AHU-2 (estimated 1,600 CFM each)	2	EA	\$ 5,000.00	\$ 10,000.00
Ductwork for AHU-1 located inside mechanical room.	1	LS	\$ 8,520.00	\$ 8,520.00
Natural gas flues associated with AHU-1 and AHU-2.	1	LS	\$ 600.00	\$ 600.00
Replace air terminal devices	2,840	SF	\$ 4.00	\$ 11,360.00
Clean building ductwork - galvanized with external insulation.	2,840	SF	\$ 0.50	\$ 1,420.00
HVAC DDC control system - Provide building control system to allow for remote access. Control panel to receive points from new AHU-1; retrofit for existing AHU-2 and new ionization systems .	1	LS	\$ 7,400.00	\$ 7,400.00
			MECHANICAL TOTAL	\$50,415
ELECTRICAL				
Demolish existing 200A NEMA 3R 240V Main Disconnect	1	EA	\$ 250.00	\$ 250.00
Demolish existing 225A NEMA 1 42 Ckt Main Panelboard	1	EA	\$ 250.00	\$ 250.00
Demolish existing 30A/3P/NEMA 3R Disconnect to CU	1	EA	\$ 125.00	\$ 125.00
Demolish existing 30A/3P/NEMA 1 Disconnect to AHU	1	EA	\$ 125.00	\$ 125.00
New 400A/NEMA 3R/3P/SE/600V Main Disconnect w/ conduit, wire, & SPD	1	EA	\$ 2,500.00	\$ 2,500.00
New 225A 120/208V NEMA 1 42 Ckt Main Panelboard w/ SPD, conduit, & wire	1	EA	\$ 3,000.00	\$ 3,000.00
Circuit Tracing existing branch circuits	2,840	SF	\$ 1.00	\$ 2,840.00
New 30A/3P/NEMA 3R Disconnect to CU w/ conduit & wire	1	EA	\$ 800.00	\$ 800.00
New 30A/3P/NEMA 1 Disconnect to AHU w/ conduit & wire	1	EA	\$ 800.00	\$ 800.00
Short-circuit/ Arc Flash Study	2,840	SF	\$ 1.50	\$ 4,260.00
			ELECTRICAL TOTAL	\$14,950
			SUBTOTAL	\$ 95,535
			UNDEVELOPED DESIGN COSTS (30%)	\$ 28,661
			BONDS (0.7%)	\$ 869
			PERMITS (3%)	\$ 3,726
			MOBILIZATION (8%)	\$ 9,936
			TOTAL	\$ 138,726
			PROBABLE CONSTRUCTION COST USE	\$ 139,000

Section 16

Summary

Proposed Construction Priority

Based on the conclusions and recommendations in each respective section, Stanley Consultants recommends prioritizing the building projects as shown below based on the existing system(s) age, serviceability, remaining equipment life, and our experience and judgement.

Priority	Building	OPCC	Estimated Construction Duration
1	South Austin Neighborhood Center	\$652,000	12 Months
2	Rosewood Zaragoza Neighborhood Center	\$530,000	12 Months
3	A. K. Black Clinic Building	\$239,000	6 Months
4	Blackland Neighborhood Center	\$176,000	6 Months
5	Betty Dunkerley Public Health Campus Building H	\$208,000	6 Months
6	Betty Dunkerley Public Health Campus Building B	\$152,000	6 Months
7	Montopolis Neighborhood Center	\$139,000	6 Months
8	Betty Dunkerley Public Health Campus Building E	\$138,000	4 Months
9	Hauke House	\$78,000	3 Months
10	Far South WIC	\$135,000	3 Months
11	East Austin Neighborhood Center	\$137,000	6 Months
12	Clarksville Health Center	\$102,000	3 Months
13	Betty Dunkerley Public Health Campus Building D	\$94,000	6 Months
14	Betty Dunkerley Public Health Campus Building C	\$74,000	1 Month
TOTAL OPINION OF PROBABLE CONSTRUCTION COSTS:		\$2,854,000	



Council Question and Answer

Related To

Item #20

Meeting Date

November 15, 2022

Additional Answer Information

Item #20: Authorize negotiation and execution of three contracts for solid waste consultant services with Burns & McDonnell Engineering Company, Inc., Newgen Strategies and Solutions, LLC, and Risa Weinberger & Associates, each for a term of five years in an amount not to exceed \$500,000, divided among the contractors. [Note: This solicitation was reviewed for subcontracting opportunities in accordance with City Code Chapter 2-9C, (Minority Owned and Women Owned Business Enterprise Procurement Program.) For the services required for this solicitation, there were no subcontracting opportunities; therefore, no subcontracting goals were established].

MAYOR PRO TEM ALTER'S OFFICE

1. *Please provide additional details regarding the contemplated scope of work that these consultants will perform as it relates to workforce planning.*

The projects the consultants may be used for on these contracts may include: review of cost of service and billing methodology applicable to the Central Business District customer base; consultation and research to provide transfer station expertise including permitting, citing, and construction; and assistance with research for and development of new approaches (e.g., education campaigns, incentives, etc.) to increase participation in citywide waste and recycling programs; performing research and benchmarking with other municipalities across the state and country and to come up with innovative; and developing creative ideas for meeting the department's operational and administrative workforce needs.



Council Question and Answer

Related To

Item #21

Meeting Date

November 15, 2022

Additional Answer Information

Item #21: Authorize negotiation and execution of two multi-term contracts with Transworld Systems Inc. and I C System Inc. for collection services for delinquent utility accounts each for up to five years for total contract amounts not to exceed \$3,000,000, divided between the contractors. [Note: This solicitation was reviewed for subcontracting opportunities in accordance with City Code Chapter 2-9C (Minority Owned and Women Owned Business Enterprise Procurement Program.) For the services required for this solicitation, there were insufficient subcontracting opportunities; therefore, no subcontracting goals were established].

MAYOR PRO TEM ALTER'S OFFICE

1. *What is the total amount of current delinquent and aged inactive customer utility debt? Based on previous trends, how much delinquent and aged inactive customer utility debt do we anticipate to collect with these contracts?*

Current delinquent debt (also called - active debt aged over 30 days) is related to active utility accounts. For October 2022, active debt aged over 30 days (for all COA Utilities) is \$41 million. The entire portfolio of inactive debt is \$151 million - this includes aged debt already placed with current collection agencies. "Aged inactive utility debt", and what is being referenced in these contracts, is only inactive debt - the customers who owe this money are no longer active COA Utility customers.

Historically (the last 5 years) we saw collection trends for aged inactive customer utility debt between 10-20% and expect to collect a similar percentage with these contracts. These contracts do not handle active/delinquent utility debt.



Council Question and Answer

Related To

Item #38

Meeting Date

November 15, 2022

Additional Answer Information

Item #38: Authorize negotiation and execution of Amendment No. 2 to the agreement with Lock Arms for Life to provide a safe gun storage campaign, to extend the term to September 30, 2023 and add funding in an amount not to exceed \$180,000, for a revised total agreement amount not to exceed \$360,000.

COUNCIL MEMBER KELLY'S OFFICE

1. *What is the success of the program? How many locks have been given away since the start of the program?*

Below you will find the year 1 outcomes/outputs for the Lock Arms for life agreement, of which breaks down the success of the program.

- Gun Lock Distribution and education
 - 1201 cable locks
 - 98-gun boxes
 - 17 events attended
- Safe Gun Storage Campaign: Lock Arms for Life put together a first of its kind collaboration launched during SXSW to help educate people about safe gun storage and prevent gun-related injuries and deaths in the city of Austin. A series of billboards and bus ads were placed throughout the city
 - Funded/supported by
 - Texas Department of Public Safety
 - Austin Police Department
 - APH Office of Violence Prevention
 - Travis County District Attorney Office
 - Texas Gun Sense
 - Creation of safeguntoagesaveslives.org where residents can learn more about Safe Gun Storage and request a free gun lock
 - Billboard Results
 - Locations:
 - Congress and Slaughter Lane
 - Highway 183 and Spicewood Springs Road

- Lamar and Koenig Lane
 - Highway 71 and Highway 290
 - Burnet Road and Koenig Lane
- Impressions: Planned: 3,995,309 Actual: 5,091,457 Bonus Impressions: 1,096,148
- Capita Metro Bus Ads
 - 125 inside cards + 25 bonus placements
 - 10 queens (side of bus) + 2 bonus placements
 - 25 bus backs
 - **Total Estimated Impressions: 1.67 million**