



2022 Total Cost of Ownership

Facilities – Maintenance & Operations

April 20, 2022

TABLE OF CONTENTS

1. Executive Summary – page 3
2. FUSION Facility Cost Index – pages 4-8
3. APPA Staffing Standards – pages 9-14
4. Physical Plant Work-order Data
5. Mt. San Antonio College vs. APPA Standards
6. Mt. San Antonio College vs. IFMA Survey - Maintenance
7. Total Costs of Ownership Calculations
8. Total Costs of Ownership –New Buildings

Mt. San Antonio College

Total Cost of Ownership

Executive Summary

Since Mt. San Antonio College was established in 1945, it has emerged as an educational leader in the state of California. It is both an accredited institution and one of the largest and best known community colleges in the country. The campus consists of over 135 buildings with another 5 buildings under construction on 421 acres. The 2021-22 GSF is 2,478,160 with the new buildings adding 271,417 GSF for a total of 2,749,577 GSF (2023).

The College has created a Facilities Master Plan and has initiated an aggressive expansion plan to meet the growing demand for quality community college education as well as leading edge athletic facilities.

Mt. San Antonio College has benefited from a stellar reputation, ideal location, and excellent support from the local communities with bond funding of over \$750 million for capital improvement projects. The Facilities Master Plan provides a roadmap for the implementation of the new building expansion plans, parking garages, new student center building, new athletic stadium, new aquatic center, new gymnasium, and new health & technology building.

Mt. San Antonio acknowledges that the long term capital improvements and technical planning and facilities support requires additional staffing and operational costs to effectively maintain the new buildings. Therefore, the District is adopting a Total Cost of Ownership analysis to quantify the additional costs and staffing resources necessary to effectively maintain the expanded campus at the acceptable quality levels. The model is flexible so that new projects can be analyzed and total costs can be evaluated.

The Total Cost of Ownership basis for staffing analysis is based on the Association of Physical Plant Administrators (APPA) guidelines with additional data from IFMA (McKinstry Consultants) Survey for specific maintenance trade personnel staffing ratios. These APPA metrics along with our CMMS work-order system data and budget spending history is the basis for the Total Cost of Ownership calculations that the District will use for facilities staffing and operating cost projections to maintain the capital improvements to meet taxpayer investment expectations for the District.

The Total Cost of Ownership calculations are used in strategic business meetings with Executive Leadership Committees and Staff Management as planning tools for current and future performance quality parameters. There are included in the Administrative and Facilities area strategic plans.

FUSION2						Facility Condition Index Report				
	Facility Name	Bldg #	Gross Area (Sq. Ft.)	Year Built	Renovate d	Cost Model	Cost/Sq. Ft	Repair Cost	Replacement Value	FCI%
	Mt. San Antonio Community College District							\$296,656,274	\$727,280,627	40.79%
	Mt. San Antonio College							\$296,656,274	\$727,280,627	40.79%
1	01A- ART CENTER	74	23,364	1973		CC Lab 1SwCP CF	\$490.29	\$5,316,227	\$11,455,190	46.41%
2	01B/C- ART CENTER/GALLERY	1	17,772	1931	2006	CC Class 1SnCP WF	\$479.17	\$2,827,393	\$8,515,833	33.20%
3	02M/T- PERFORMING ARTS CTR	2	67,401	1996	2007	CC Aud MSwCP C-I-P	\$498.81	\$5,137,019	\$33,620,055	15.28%
4	03- GYMNASIUM	3	43,904	1950	1963	CC Gym MSwCP C-I-P	\$595.62	\$13,352,241	\$26,150,315	51.06%
5	04- ADMINISTRATION	4	43,251	1965	2011	CC Admin MSwCP C-I-P	\$404.71	\$45,662	\$17,504,060	0.26%
6	06- LIBRARY/LEARNING TECH	6	109,017	1963	1999	CC Lib MSwCP C-I-P	\$513.02	\$8,611,348	\$55,928,369	15.40%
7	06A - INFORMATION KIOSK	16	96	1998		CC Shed WF-EI	\$97.79	\$3,589	\$9,388	38.23%
8	07- SCIENCE SOUTH	7	41,661	1960	2008	CC Class MSwCP P&B	\$427.04	\$4,045,560	\$17,790,948	22.74%
9	08- MOUNTIE CAFE	8	16,577	2015		CC SC 1SnCP SF	\$545.17	\$0	\$9,037,220	0.00%
10	09A- BOOKSTORE	115	21,311	1969	2006	CC SC 1SwCP CF	\$545.49	\$6,430,811	\$11,624,843	55.32%
11	09B- STUDENT SERVICES CENTER	105	56,730	1994	2008	CC Admin MSnCP CF	\$453.58	\$3,936,335	\$25,731,588	15.30%
12	09C- STUDENT LIFE CENTER	9	16,366	1962	2014	CC SC 1SwCP CF	\$545.49	\$4,708,452	\$8,927,417	52.74%
13	09D- MODULAR 9D	116	4,074	1977	2004	CC Modular WF	\$329.28	\$1,224,189	\$1,341,502	91.26%
14	09E- STUDENT SUCCESS CTR	31	24,173	2016		CC Aud MSwCP SF	\$514.72	\$0	\$12,442,385	0.00%
15	09F- MODULAR 9F	33	2,140	2017		CC Modular WF	\$329.28	\$0	\$704,667	0.00%
16	09G- MODULAR 9G	34	2,140	2017		CC Modular WF	\$329.28	\$0	\$704,667	0.00%
17	10- FOUNDERS HALL	10	8,452	1932	2007	CC Admin 1SnCP WF	\$479.19	\$60,375	\$4,050,145	1.49%
18	104- BRACKETT FIELD	104	7,613	1991		CC Trade Shop	\$261.68	\$429,543	\$1,992,195	21.56%
19	11- SCIENCE NORTH	11	27,786	1960	2009	CC Lab 1SnCP CF	\$530.98	\$0	\$14,753,789	0.00%
20	12- BUILDING 12	12	15,670	1963	2014	CC Class 1SwCP CF	\$476.13	\$0	\$7,460,947	0.00%
21	12C- ELEVATOR TOWER	14	700	2014		CC Block Elect/Mech	\$3,019.49	\$0	\$2,113,642	0.00%
22	13- DESIGN TECHNOLOGY	13	62,837	2012		CC Class MSwCP P&B	\$427.04	\$0	\$26,833,965	0.00%
23	16E- EQUITY CTR MODULAR	199	7,670	2018		CC Modular MF	\$352.06	\$0	\$2,700,329	0.00%
24	18A- MODULAR 18A	168	2,345	2006	2019	CC Modular WF	\$329.28	\$18,071	\$772,170	2.34%
25	18B- MODULAR 18B	169	1,560	2006		CC Modular WF	\$329.28	\$12,021	\$513,683	2.34%
26	18C- TERC MODULAR	37	2,518	2015		CC Modular WF	\$329.28	\$0	\$829,136	0.00%
27	18D- MODULAR 18D	38	2,518	2015		CC Modular WF	\$329.28	\$0	\$829,136	0.00%
28	23- COLLEGE SERVICES	23	17,500	2003	2015	CC Trade Shop	\$261.68	\$0	\$4,579,458	0.00%
29	23A- DATA CENTER	177	7,154	2008		CC Admin 1SnCP CF	\$477.29	\$0	\$3,414,545	0.00%
30	24- ELECTRICAL ENCLOSURE	26	483	1976		CC Block Electrical	\$851.28	\$41,837	\$411,170	10.18%
31	26A- HUMANITIES/SS NORTH	45	50,687	1967	2018	CC Class MSwCP C-I-P	\$444.53	\$12,693,800	\$22,531,898	56.34%
32	26B- HUMANITIES/SS EAST	47	23,935	1967	2018	CC Class MSwCP C-I-P	\$444.53	\$5,994,162	\$10,639,828	56.34%

33	26C- PLANETARIUM	118	3,704	1967	2009	CC Lab 1SnCP CF	\$530.98	\$1,167,036	\$1,966,747	59.34%
34	26D- HUMANITIES/SS SOUTH	46	66,175	1967	2018	CC Class MSwCP C-I-P	\$444.53	\$16,572,538	\$29,416,781	56.34%
35	27A- EXERCISE SCI/WEELLNESS CTR	27	20,116	1962	1990	CC SC 1SwCP CF	\$545.49	\$1,626,842	\$10,972,988	14.83%
36	27B- POOL BUILDING	119	3,000	1970		CC Pool House CF	\$709.69	\$1,729,818	\$2,129,077	81.25%
37	27C- PE CENTER	28	17,337	1960		CC lockrm Bld C-I-P	\$609.39	\$5,710,131	\$10,565,072	54.05%
38	27D- POOL PRESS BOX	29	150	1970		CC Press Box as part	\$245.83	\$27,404	\$36,874	74.32%
39	28A- TECHNOLOGY CENTER A	65	47,400	1971	1991	CC Lab 1SwCP TW	\$490.53	\$13,469,789	\$23,250,932	57.93%
40	28B- TECHNOLOGY CENTER B	66	80,743	1971	2006	CC Class MSwCP C-I-P	\$444.53	\$20,220,875	\$35,892,695	56.34%
41	29- CENTRAL PLANT	24	4,788	2004	2017	CC Block Elect/Mech	\$3,019.49	\$0	\$14,457,313	0.00%
42	29B- CENTRAL PLANT MODULAR	25	534	2014		CC Modular WF	\$329.28	\$0	\$175,837	0.00%
43	30- ADULT BASIC ED. CTR. MOD.	30	8,101	1993		CC Modular WF	\$329.28	\$812,667	\$2,667,527	30.47%
44	31A- CONT. ED. ESL MODULAR	172	2,852	2007		CC Modular WF	\$329.28	\$21,978	\$939,117	2.34%
45	31B- CONT. ED. ESL MODULAR	173	2,852	2007		CC Modular WF	\$329.28	\$21,978	\$939,117	2.34%
46	31C- TOILET ROOM MODULAR	171	504	2007		CC Restroom Stucco	\$500.01	\$0	\$252,006	0.00%
47	32- CONT. ED. ESL MODULAR	32	2,852	1997		CC Modular WF	\$329.28	\$36,708	\$939,117	3.91%
48	327-WEST COUNSELING OFFICES A	327	1,980	2021		CC Modular MF	\$352.06	\$0	\$697,086	0.00%
49	329-WEST COUNSELING OFFICES B	329	1,980	2021		CC Modular MF	\$352.06	\$0	\$697,086	0.00%
50	35- CONT. ED. ESL MODULAR	35	2,813	1997	2001	CC Modular WF	\$329.28	\$110,806	\$926,275	11.96%
51	36- OLDER ADULTS MODULAR	36	1,414	1997		CC Modular WF	\$329.28	\$73,898	\$465,607	15.87%
52	38A- ADULT HS DIPLOMA MODULAR	142	1,553	2000		CC Modular WF	\$329.28	\$19,989	\$511,378	3.91%
53	38B- BASIC SKILLS MODULAR	143	1,556	2000		CC Modular WF	\$329.28	\$20,027	\$512,365	3.91%
54	40- BUILDING 40	40	24,667	1997	2018	CC Trade Shop	\$261.68	\$18,904,311	\$6,454,942	292.87%
55	43- MODULAR 43	140	2,833	1999		CC Modular WF	\$329.28	\$284,198	\$932,861	30.47%
56	44- ATHLETICS MODULAR	198	11,280	2017		CC Modular MF	\$352.06	\$0	\$3,971,280	0.00%
57	45- KINESIOLOGY/ATHLETICS	141	20,467	2000	2012	CC Class 1SwCP P&B	\$434.41	\$216,403	\$8,891,010	2.43%
58	45B1- BASEBALL DUGOUT VISITOR	120	764	2004		CC Concrete Dugout	\$148.62	\$0	\$113,548	0.00%
59	45B2- BASEBALL PRESS BOX	121	228	2004		CC Block Elect/Mech	\$3,019.49	\$0	\$688,443	0.00%
60	45B3- CONCESSIONS	122	182	2004		CC Block Elect/Mech	\$3,019.49	\$0	\$549,547	0.00%
61	45B4- BASEBALL DUGOUT HOME	123	764	2004		CC Concrete Dugout	\$148.62	\$0	\$113,548	0.00%
62	45B5- BASEBALL STORAGE	124	691	2004		CC Block Electrical	\$851.28	\$0	\$588,237	0.00%
63	45B6- BASEBALL SERVICE	125	450	2004		CC Block Electrical	\$851.28	\$0	\$383,078	0.00%
64	45S1- SOCCER STORAGE	127	299	2004		CC Block Electrical	\$851.28	\$0	\$254,534	0.00%
65	45S2- SOCCER STORAGE	128	65	2004		CC Shed WF	\$76.19	\$0	\$4,953	0.00%
66	45SB1- SOFTBALL DUGOUT VISITOR	129	498	2004		CC Concrete Dugout	\$148.62	\$0	\$74,014	0.00%
67	45SB2- SOFTBALL PRESS BOX	130	228	2004		CC Block Elect/Mech	\$3,019.49	\$0	\$688,443	0.00%
68	45SB3- SOFTBALL DUGOUT HOME	131	498	2004		CC Concrete Dugout	\$148.62	\$0	\$74,014	0.00%
69	45SB4- SOFTBALL STORAGE	132	473	2004		CC Block Electrical	\$851.28	\$0	\$402,657	0.00%

70	45SB5- SOFTBALL SERVICE	133	450	2004		CC Block Electrical	\$851.28	\$0	\$383,078	0.00%
71	45SB6- ATHLETICS RESTROOM BLDG	134	709	2008		CC Restroom Bldg.	\$500.01	\$0	\$354,508	0.00%
72	46- EMERGENCY OPERATIONS	64	4,046	2014		CC SC 1SwCP SF	\$544.42	\$0	\$2,202,738	0.00%
73	46A- DOC STORAGE MODULAR	44	2,373	2016		CC Modular WF	\$329.28	\$0	\$781,390	0.00%
74	46B- CONSTRUCTION OFFICES MODULAR	42	1,414	2019		CC Modular WF	\$329.28	\$0	\$465,607	0.00%
75	47- FP+M/MAINTENANCE	62	21,061	1968		CC Trade Shop	\$261.68	\$5,781,664	\$5,511,312	104.91%
76	48- RECEIVING/TRANSPORT	63	36,091	1968		CC Trade Shop	\$261.68	\$128,466,817	\$9,444,412	1360.24%
77	60- SCIENCE LABORATORIES	164	63,761	2006		CC Lab MSwCP SF	\$490.51	\$0	\$31,275,283	0.00%
78	61- MATH AND SCIENCE	178	65,825	2009		CC Class MSwCP P&B	\$427.04	\$0	\$28,109,963	0.00%
79	66- LANGUAGE CENTER	160	44,457	2004		CC Class MSwCP P&B	\$427.04	\$470,057	\$18,984,955	2.48%
80	67A- HEALTH CAREERS CTR A	161	31,990	2005		CC Class MSwCP P&B	\$427.04	\$338,239	\$13,661,036	2.48%
81	67B- HEALTH CAREERS CTR B	162	10,650	2005		CC Class MSwCP P&B	\$427.04	\$0	\$4,547,985	0.00%
82	69- WELDING/HVAC	165	26,207	2005		CC Lab 1SwCP SF	\$503.11	\$0	\$13,184,954	0.00%
83	70- CDC ADMINISTRATION	70	6,039	2014		CC Class 1SwCP WF	\$434.41	\$0	\$2,623,384	0.00%
84	71- CDC INFANTS/TODDLERS	71	8,122	2014		CC Class 1SwCP WF	\$434.41	\$0	\$3,528,254	0.00%
85	72- CDC PRESCHOOLERS	72	10,232	2014		CC Class 1SwCP WF	\$434.41	\$0	\$4,444,853	0.00%
86	73- CDC ADULT INSTRUCTION	73	10,278	2014		CC Class 1SwCP WF	\$434.41	\$0	\$4,464,836	0.00%
87	730- CHAMPION PARKING STRUCTURE	730	328,593	2020		CC Parking Structur	\$87.90	\$0	\$105,392	0.00%
88	734-TENNIS COURT RESTROOMS	734	867	2020		CC Restroom Bldg.	\$500.01	\$0	\$433,510	0.00%
89	736-STADIUM BROADCAST	736	580	2020		CC Block Building	\$385.29	\$0	\$223,469	0.00%
90	742-STADIUM FIELD HOUSE	742	89,660	2020		CC Stadium	\$229.78	\$0	\$20,602,248	0.00%
91	746-STADIUM CONCESSIONS + TICKETING	746	2,912	2020		CC Block Building	\$385.29	\$0	\$1,121,969	0.00%
92	748-STADIUM RESTROOMS NORTH	748	2,490	2020		CC Restroom Bldg.	\$500.01	\$0	\$1,245,030	0.00%
93	752-STADIUM RESTROOMS EAST	752	23,488	2020		CC Restroom Bldg.	\$500.01	\$0	\$11,744,280	0.00%
94	754 - ATHLETIC STORAGE	179	9,595	2010		CC Trade Shop	\$261.68	\$0	\$2,510,851	0.00%
95	758-STADIUM SCOREBOARD	758	366	2020		CC Press Box as part	\$245.83	\$0	\$89,973	0.00%
96	77- BUS & COM TECH SOUTH	77	36,161	2018			\$0.00	\$0	\$0	0.00%
97	78- BUS & COM TECH EAST	78	53,224	2018			\$0.00	\$0	\$0	0.00%
98	79- BUS & COM TECH NORTH	79	23,440	2018			\$0.00	\$0	\$0	0.00%
99	80- AGRICULTURAL SCIENCE	80	37,858	2011		CC Lab MSwCP SF	\$490.51	\$0	\$18,569,654	0.00%
100	81- POND SHELTER	55	260	1967		CC Pole Barn	\$32.93	\$12,326	\$8,562	143.95%
101	82- LAKE SHELTER	56	260	1967		CC Pole Barn	\$32.93	\$8,840	\$8,562	103.25%
102	83- HAWKINS AMPHITHEATER	57	130	1986		CC Gazebo	\$120.35	\$5,645	\$15,645	36.08%
103	84- PETERSEN AMPHITHEATER	58	824	2001		CC Gazebo	\$120.35	\$0	\$99,167	0.00%
104	BH- BLOCK HOUSE	22	1,166	1965		CC Block Electrical	\$851.28	\$100,997	\$992,597	10.18%
105	EC- EMERGENCY COMMUNICATIONS SHED	49	96	2018	2020	CC Block Storage	\$255.59	\$0	\$24,537	0.00%
106	F1- HORTICULTURE UNIT	81	915	1959		CC Shed WF-EI	\$97.79	\$119,996	\$89,476	134.11%
107	F10- FOUNDATION/ALUMNI	96	2,990	2003	2019	CC Admin 1SwCP P&B	\$430.32	\$0	\$1,286,664	0.00%
108	F1A- SHERMAN PARK RESTROOMS	94	310	1973		CC Restroom Bldg.	\$500.01	\$0	\$155,004	0.00%

105	EC- EMERGENCY COMMUNICATIONS SHED	49	96	2018	2020	CC Block Storage	\$255.59	\$0	\$24,537	0.00%
106	F1- HORTICULTURE UNIT	81	915	1959		CC Shed WF-EI	\$97.79	\$119,996	\$89,476	134.11%
107	F10- FOUNDATION/ALUMNI	96	2,990	2003	2019	CC Admin 1SwCP P&B	\$430.32	\$0	\$1,286,664	0.00%
108	F1A- SHERMAN PARK RESTROOMS	94	310	1973		CC Restroom Bldg.	\$500.01	\$0	\$155,004	0.00%
109	F2A- FARM OFFICES	82	2,120	1971	2002	CC Trade Shop	\$261.68	\$581,982	\$554,769	104.91%
110	F2B- HORTICULTURE STORAGE	83	1,706	1960		CC Trade Shop	\$261.68	\$468,331	\$446,432	104.91%
111	F2C- IRRIGATION/LANDSCAPE	95	7,040	1960		CC Barn	\$97.79	\$292,316	\$688,426	42.46%
112	F3- EQUIPMENT BARN	84	6,338	2003		CC Shed WF-EI	\$97.79	\$146,393	\$619,779	23.62%
113	F3A- OLD DAIRY UNIT	85	2,209	1971		CC House 1SnCP WF	\$389.76	\$500,251	\$860,977	58.10%
114	F4A- SWINE MARKET PENS	86	2,767	1971		CC Trade Shop	\$261.68	\$759,597	\$724,078	104.91%
115	F4B- SWINE FARROWING HOUSE	87	3,667	2010		CC Trade Shop	\$261.68	\$0	\$959,593	0.00%
116	F5A- VIVARIUM	88	3,197	1971		CC Trade Shop	\$261.68	\$877,640	\$836,601	104.91%
117	F5B- SMALL ANIMAL CARE UNIT	89	4,186	2010		CC Class 1SnCP CF	\$520.89	\$0	\$2,180,461	0.00%
118	F6A- EQUINE BREEDING BARN	90	4,106	1998		CC Trade Shop	\$261.68	\$165,257	\$1,074,472	15.38%
119	F6B- EQUINE MARE MOTEL	98	5,528	2000		CC Bay Small Metal	\$89.83	\$0	\$496,589	0.00%
120	F6C- EQUINE HAY BARN	91	3,495	2010		CC Class 1SnCP CF	\$520.89	\$0	\$1,820,523	0.00%
121	F7- MOUNTIE MAKERSPACE	92	4,427	1971		CC Trade Shop	\$261.68	\$1,215,300	\$1,158,472	104.91%
122	F8- HAY BARN	99	2,823	1971		CC Pole Barn	\$32.93	\$93,498	\$92,968	100.57%
123	F9- LIVESTOCK PAVILION	93	10,974	2003		CC Bay Large Metal B	\$185.74	\$0	\$2,038,276	0.00%
124	G1- GREENHOUSE	181	1,267	1997		CC Greenhouse	\$50.81	\$0	\$64,379	0.00%
125	G2- GREENHOUSE	188	1,774	1963		CC Greenhouse	\$50.81	\$81,029	\$90,140	89.89%
126	G3- GREENHOUSE	187	1,500	1980		CC Greenhouse	\$50.81	\$68,514	\$76,218	89.89%
127	G4- GREENHOUSE	189	4,133	1998		CC Greenhouse	\$50.81	\$0	\$210,005	0.00%
128	G5- GREENHOUSE	183	4,656	2010		CC Greenhouse	\$50.81	\$54,725	\$236,580	23.13%
129	G7- GREENHOUSE/CONSERVATORY	190	1,268	1999		CC Greenhouse	\$50.81	\$0	\$64,429	0.00%
130	890- GATEWAY PARKING STRUCTURE	890	370,600	2021			\$0.00	\$0	\$0	0.00%
131	P1- PROPAGATION SHED	100	284	1973		CC Greenhouse	\$50.81	\$9,169	\$14,431	63.54%
132	P2- PROPAGATION SHED	101	313	1973		CC Greenhouse	\$50.81	\$10,106	\$15,904	63.54%
133	PS1- PESTICIDE STORAGE SHED	106	144	1988		CC Shed WF	\$76.19	\$11,532	\$10,972	105.11%
134	SS- STORAGE SHED	102	346	1973		CC Bay Small Metal	\$89.83	\$17,840	\$31,082	57.40%
135	TS- TOOL SHED	103	1,206	1973		CC Bay Small Metal	\$89.83	\$62,182	\$108,337	57.40%
			2,478,160							

GROSS SQUARE FOOTAGE SUMMARY

	TOTAL 2022 GSF	2,478,160	
	2022-23 NEW BUILDINGS		
136	410-STUDENT CENTER	112,343	2023
137	480-TRANSIT CENTER	1,107	2023
138	482-WEST TEMPLE AVE PEDESTRIAN BRIDGE	8,669	2023
139	484-TRANSIT CENTER UTILITY BUILDING	323	2023
140	720-712 GYMNASIUM/AQUATICS/POOL BLDG	135,847	2023
141	744-HERITAGE HALL	13,128	2022
		271,417	
	TOTAL 2023 GSF	2,749,577	

Recommended APPA STAFFING STANDARDS

APPA's Levels of Service
Establishing Parameters

Level	<u>Maintenance</u>	<u>Custodial</u>	<u>Grounds</u>
1	Showpiece Facility	Orderly Spotlessness	State of the Art
2	Comprehensive Stewardship	Orderly Tidiness	High Level
3	Managed Care	Casual Inattention	Moderate Level
4	Reactive Management	Moderate Dinginess	Moderately Low-Level
5	Crisis Response	Unkempt Neglect	Minimum Level

APPA CUSTODIAL STANDARDS-LEVELS 1-3

Figure 1. Custodial Appearance Levels

Level 1 – Orderly Spotlessness

- Floors and base moldings shine and/or are bright and clean; colors are fresh. There is no buildup in corners or along walls.
- All vertical and horizontal surfaces have a freshly cleaned or polished appearance and have no accumulation of dust, dirt, marks, streaks, smudges, or fingerprints. Lights all work and fixtures are clean.
- Washroom and shower fixtures and tile gleam, and are odor-free. Supplies are adequate.
- Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

Level 2 – Ordinary Tidiness

- Floors and base moldings shine and/or are bright and clean. There is no buildup in corners or along walls, but there can be up to two days worth of dust, dirt, stains, or streaks.
- All vertical and horizontal surfaces are clean, but marks, dust, smudges, and fingerprints are noticeable upon close observation. Lights all work and fixtures are clean.
- Washroom and shower fixtures and tile gleam, and are odor-free. Supplies are adequate.
- Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

Level 3 – Casual Inattention

- Floors are swept or vacuumed clean, but upon close observation there can be stains. A buildup of dirt and/or floor finish in corners and along walls can be seen.
- There are dull spots and/or matted carpet in walking lanes. There are streaks or splashes on base molding.
- All vertical and horizontal surfaces have obvious dust, dirt, marks, smudges, and fingerprints. Lamps all work and fixtures are clean.
- Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

APPA CUSTODIAL STANDARDS –LEVELS 4-5

Level 4 – Moderate Dinginess

- Floors are swept or vacuumed clean, but are dull, dingy, and stained. There is an obvious buildup of dirt and/or floor finish in corners and along walls.
- There is a dull path and/or obviously matted carpet in the walking lanes. Base molding is dull and dingy with streaks or splashes.
- All vertical and horizontal surfaces have conspicuous dust, dirt, smudges, fingerprints, and marks.
- Lamp fixtures are dirty and some (up to 5 percent) lamps are burned out.
- Trash containers and pencil sharpeners have old trash and shavings. They are stained and marked.
- Trash containers smell sour.

Level 5 – Unkempt Neglect

- Floors and carpets are dull, dirty, dingy, scuffed, and/or matted. There is a conspicuous buildup of old dirt and/or floor finish in corners and along walls. Base molding is dirty, stained, and streaked. Gum, stains, dirt, dust balls, and trash are broadcast.
- All vertical and horizontal surfaces have major accumulations of dust, dirt, smudges, and fingerprints, all of which will be difficult to remove. Lack of attention is obvious.
- Light fixtures are dirty with dust balls and flies. Many lamps (more than 5 percent) are burned out.
- Trash containers and pencil sharpeners overflow. They are stained and marked. Trash containers smell sour.

However, to develop baselines from whence your organization came, it is important to go back through your records and clearly document certain key pieces of information. Data from the previous five years (10 years would be more meaningful) should include the following elements:

- A building inventory of how many buildings have been maintained over the years and the cleanable square feet of the buildings. The gross square feet method provides only a thumbnail sketch; the cleanable square feet method is much more effective, as there are many areas and spaces in a building that a custodial staff may not clean.
- A staffing inventory of the staff that has been used to clean these buildings over the years that are being audited.

Standard/Local Space Category	New CSF/Custodian				
	Level 1	Level 2	Level 3	Level 4	Level 5
Auditorium Seating & Foyer	6,300	15,200	35,200	75,900	443,600
Auditorium Stage & Wings	19,100	28,200	86,700	263,800	*
Cafeteria with Carpet	12,200	18,800			
Cafeteria with Hard Floor	12,700	17,700			
Classroom with Carpet Floor — Heavy Use	7,200	17,000	18,100	23,600	24,500
Classroom with Carpet Floor	13,800	29,600	33,100	45,700	48,500
Classroom with Hard Floor	10,200	19,100	32,000	43,400	48,500
Classroom with Hard Floor — Heavy Use	5,500	10,600	11,200	22,800	24,300
Dormitory Lounge	6,300	10,900	22,800	54,800	171,000
Dormitory Sleep/Study	4,600	4,800	9,500	22,200	31,300
Dormitory Washroom	2,000	2,600			
Entranceway	5,100	8,800	13,800	22,400	36,100
Gymnasium (Wood Floor)	20,000	39,600	86,200	262,400	1,130,000
Library with Carpet	23,000	48,600	96,000	140,900	166,600
Library with Hard Floor	11,700	21,800	24,900	49,800	58,200
Locker/Changing Room — No Shower	14,000	14,200			
Nursing Station — Hard Floor	6,400	6,400			
Office with Carpet Floor	12,300	24,500	45,600	74,000	116,800
Office with Hard Floor	9,400	16,800	30,700	41,200	54,000
Patient Conference Room	10,200	10,200			
Patient Treatment Area — Carpeted	3,600	3,600			
Patient Treatment Area — Hard Floor	3,400	3,400			
Public (Circulation) with Carpet Floor	23,300	55,300	74,900	117,500	135,900
Public (Circulation) with Hard Floor	9,100	24,400	36,100	44,500	47,600
Research Lab with Hazardous Waste	6,200	8,500	10,100	14,600	36,900
Research Lab without Hazardous Waste	7,800	11,700	14,900	27,000	88,600
Shower Room	7,800	7,800			
Stairwell	9,300	18,600	21,800	30,600	93,800
Storeroom	81,800	240,200	452,200	1,895,900	3,348,800
Utility	4,600	6,000	10,700	19,100	50,300
Vending	5,900	13,300	18,900	20,700	22,600
Washroom	2,600	3,500			
Washroom — Heavy Use	1,300	1,900			

Note 1: Shaded areas indicate that APPA does not recommend cleaning these areas lower than APPA Level 2.

Note 2: Figures are represented in cleanable square feet (CSF).

*For Auditorium with Wings, APPA recommends cleaning this area at a level no lower than Level 4 due to potential safety concerns.

APPA CLASSROOM TASK LIST & FREQUENCIES

Sample Classroom task list and frequencies per APPA level

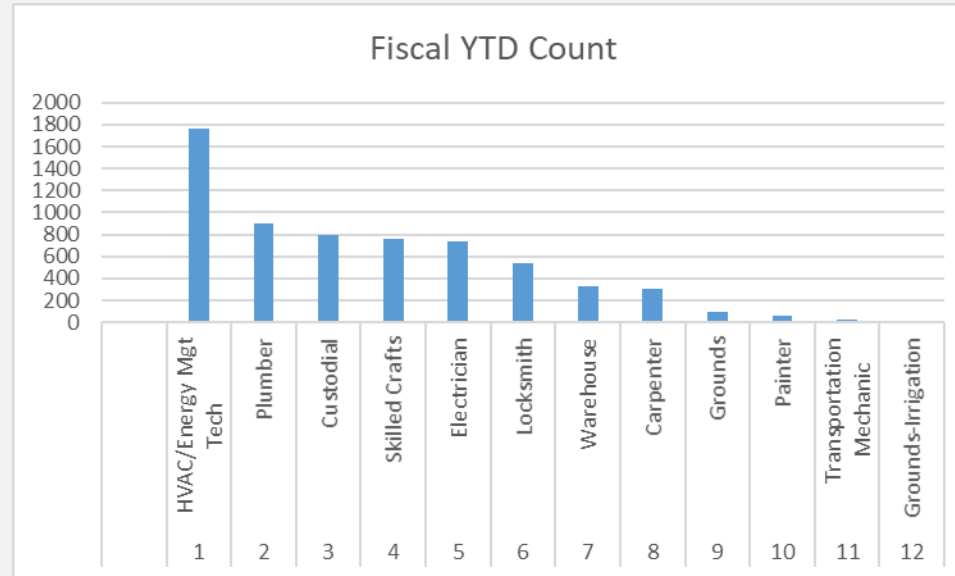
Classrooms	APPA 1	APPA 2	APPA 3	APPA 4	APPA 5
Empty trash/replace liners	Daily	Daily	Daily	2X Week	1X Week
Clean whiteboards	Daily	Daily	Daily	2X Week	1X Week
Sweep/Dust mop floors	Daily	Daily	Daily	3X Week	1X Week
Spot mop floor	Daily	Daily	Daily	Daily	Daily
Damp mop entire floor	Daily	Daily	1X Week	Bi-Weekly	Monthly
Vacuum high traffic areas	Daily	Daily	Daily	3X Week	1X Week
Wall to wall vacuuming	Daily	Daily	1X Week	Bi-Weekly	Monthly
Carpet Spot Removal	As Needed	As Needed	Daily	Bi-Weekly	Monthly
Wipe down touch points	Daily	Daily	Daily	3X Week	1X Week
Clean/disinfect drinking fountain	Daily	Daily	Daily	1X Week	Bi-Weekly
Spot clean interior glass	Daily	Daily	Daily	Daily	Daily
Clean interior glass (full cleaning)	Daily	Daily	Daily	1X Week	Bi-Weekly
Dust furniture	Daily	Daily	1X Week	Bi-Weekly	Monthly
High/low dust	Daily	Daily	1X Week	Bi-Weekly	Monthly
Spot clean walls, doors and graffiti	Daily	Daily	Daily	Daily	Daily
Machine scrub floor	As Needed	As Needed	Monthly	Quarterly	1X Year
Burnish floors	As Needed	As Needed	Monthly	Quarterly	1X Year
Vacuum supply and return air vents	As Needed	Bi-Weekly	Monthly	Bi-Monthly	Quarterly
Dust ceiling area and light fixtures	As Needed	Bi-Weekly	Monthly	Bi-Monthly	Quarterly
Clean trash receptacles	Daily	1X Week	Monthly	Bi-Monthly	Quarterly
Wipe down window ledges	Daily	1X Week	Monthly	Bi-Monthly	Quarterly
Scrub and recoat floors	As Needed	2X Year	1X Year	Every Other Year	1X Year
Strip and refinish floors	As Needed	1X Year	1X Year	1X Year	Every Other Year
Full carpet extraction	As Needed	Monthly	2X Year	1 Year	Every Other Year

APPA STAFFING STANDARDS

Quality Level	Description -Maintenance	Service	SF/Staff	Classroom	Lab	Office
1	Showpiece	Maintenance	47,220	66,667	37,037	41,667
2	Comprehenshive Stewardship	Maintenance	67,456	83,333	47,619	62,500
3	Managed Care	Maintenance	94,439	111,111	66,667	90,900
4	Reactive Management	Maintenance	118,049	125,000	111,111	125,000
5	Crisis Response	Maintenance	236,098	166,667	166,667	250,000
Quality Level	Description-Custodial	Service	SF/Staff			
1	Orderly Spotlessness	Custodial	8,500			
2	Ordinary Tidiness	Custodial	16,700			
3	Casual Inattention	Custodial	26,500			
4	Moderate Dinginess	Custodial	39,500			
5	Unkempt Neglect	Custodial	45,600			
Quality Level	Description-Grounds	Service	Main Grounds Acres/Staff	Open Areas Acres/Staff	Athletic Acres/Staff	Industry Std Acres/Staff
1	State of the Art	Grounds	1.15	20	2.71	
2	High Level	Grounds	2.3	25	4.09	10
3	Moderate Level	Grounds	2.55	33.33	5.99	
4	Moderately Low-Level	Grounds	5.74	50	11.52	
5	Minimum Level	Grounds	13.5	100	14.29	

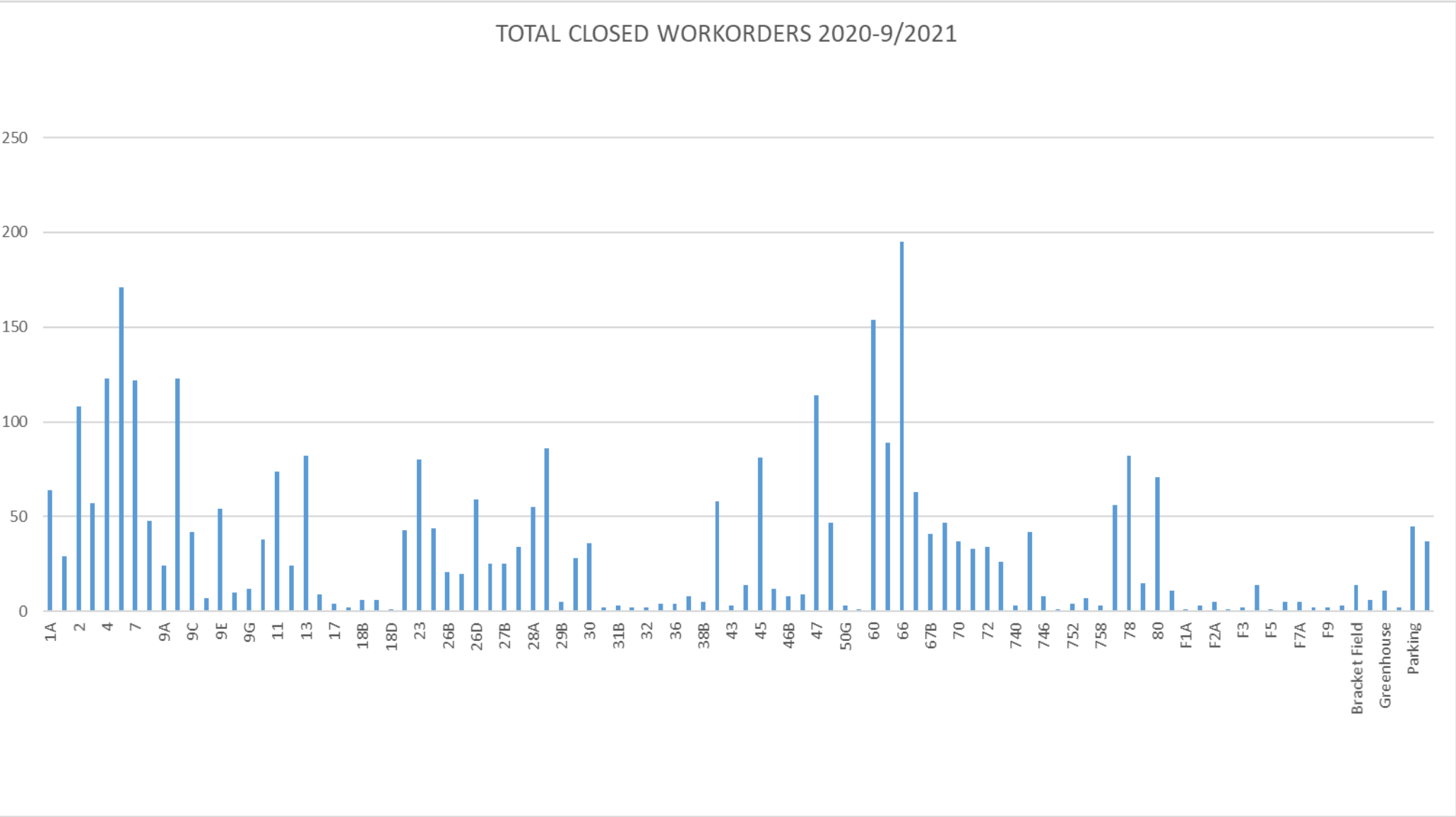
WORKORDER SUMMARY 2021-22

Calendar YTD Cost	Fiscal YTD Count	Fiscal YTD Cost	Total Count	Trade
\$44,898.79	1209	\$143,768.07	6983	HVAC Tech
\$21,336.25	901	\$76,899.75	9107	Plumber
\$18,518.75	635	\$38,909.30	5268	Electrician
\$16,562.22	570	\$67,944.22	4482	Skilled Crafts
\$13,439.90	562	\$31,198.15	6311	Custodial
\$11,184.00	556	\$18,669.00	2842	Energy Mgt Tech
\$6,358.75	428	\$22,257.50	3639	Locksmith
\$761.00	326	\$3,348.00	2644	Warehouse
\$20,711.25	308	\$56,163.75	2249	Carpenter
\$2,768.15	231	\$9,136.05	2167	Custodial
\$30.00	88	\$157.50	585	Skilled Crafts
\$6,008.75	83	\$8,591.25	724	Locksmith
\$2,161.25	58	\$9,161.25	1153	Painter
\$945.00	56	\$3,651.25	194	Grounds
\$16,110.25	54	\$18,917.75	502	Electrician
\$180.00	48	\$1,090.00	151	Skilled Crafts
\$3.00	26	\$14,675.50	118	Skilled Crafts
\$195.00	24	\$663.75	186	Electrician
\$375.00	23	\$1,046.25	300	Electrician
\$153.75	23	\$488.75	221	Locksmith
\$120.00	23	\$120.00	2006	Transportation Mechanic
\$70.00	21	\$351.25	164	Grounds
\$320.00	20	\$1,582.50	545	Skilled Crafts
\$35.00	12	\$385.00	85	Grounds-Irrigation
\$0.00	10	\$184.65	76	Grounds
\$35.00	7	\$455.00	33	Grounds
\$255.00	6	\$412.50	24	Skilled Crafts
\$62.50	5	\$162.50	104	Skilled Crafts
\$35.00	1	\$35.00	55	Transportation Mechanic
\$183,633.56	6,314	\$530,425.44	52,918	

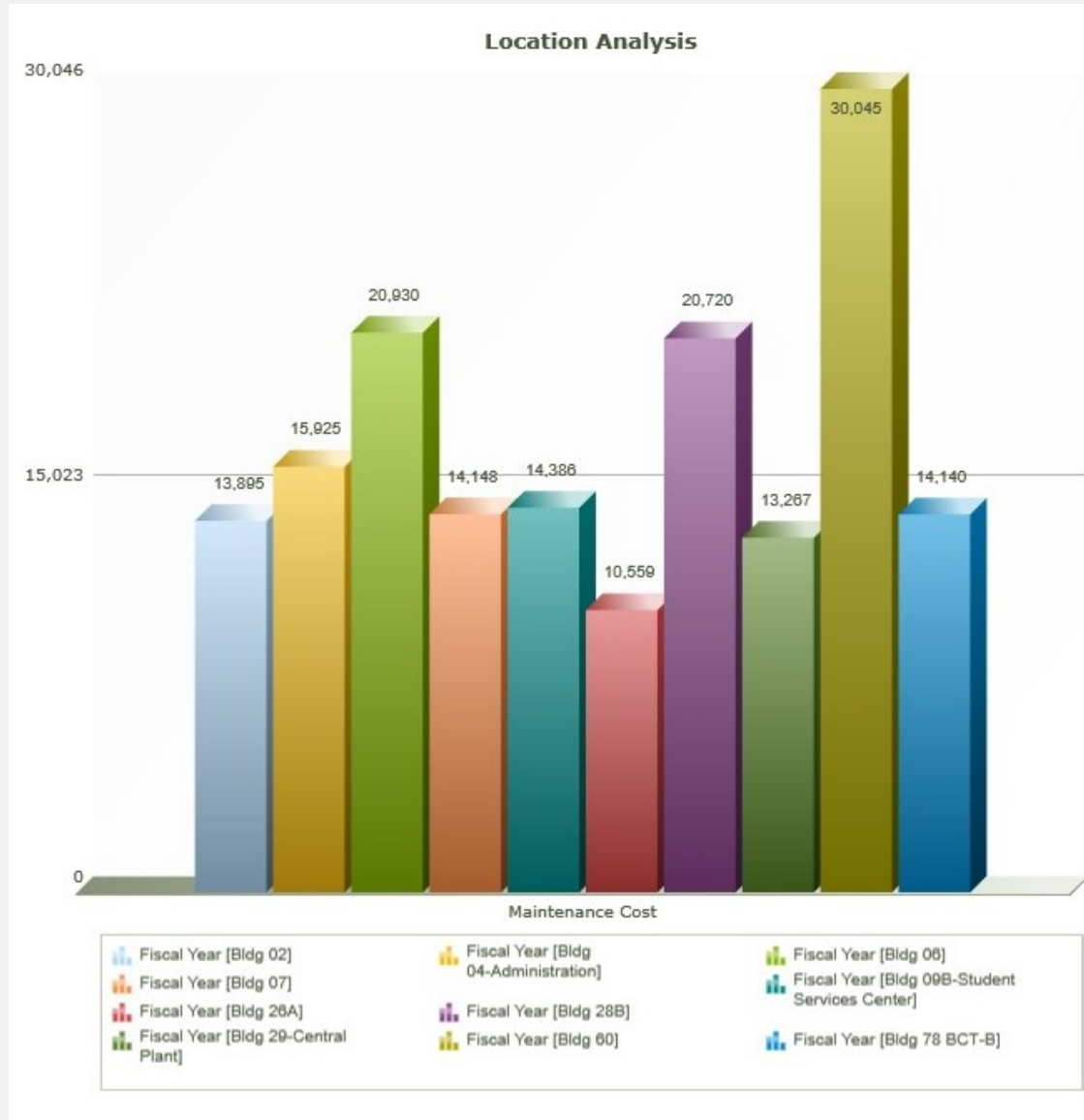


#	Workorder count by Trade	Fiscal YTD Count	Fiscal YTD Cost
1	HVAC/Energy Mgt Tech	1,765	\$ 162,437
2	Plumber	901	\$ 76,900
3	Custodial	793	\$ 40,334
4	Skilled Crafts	763	\$ 86,025
5	Electrician	736	\$ 59,537
6	Locksmith	534	\$ 31,338
7	Warehouse	326	\$ 3,348
8	Carpenter	308	\$ 56,164
9	Grounds	94	\$ 4,642
10	Painter	58	\$ 9,161
11	Transportation Mechanic	24	\$ 155
12	Grounds-Irrigation	12	\$ 385
		6,314	\$ 530,426

WORK-ORDER SUMMARY BY BUILDING 2020-9/2021



WORK-ORDER SUMMARY-TOP 10 WO REQUESTS BY BUILDING



SUMMARY OF APPA STAFFING RATIOS – MAINTENANCE

2	MAINTENANCE							
	FISCAL YEAR	GROSS SQ. FT (GSF)	MAINTENANCE	GSF/Staff	APPA Quality Level	APPA Description		
	2021-22	2,478,160	19	130,429	4	Reactive Mgt		
	2022-23	2,749,577	29	94,813	3	Managed Care		

SUMMARY OF APPA STAFFING RATIOS – GROUNDS

3	GROUNDS						
	FISCAL YEAR	GROSS ACRES	TOTAL GROUNDS STAFF	MAIN CAMPUS GROUNDS STAFF	MAIN GROUNDS ACRES	MAIN AREAS Acres/Staff	APPA Quality Level
	2021-22	421	23	18	210.97	11.72	4
	2022-23	421	26	21	208.95	9.95	4
					*less Athletics, Farm, Parking Lots & Bldgs		
	GROUNDS						
	ATHLETIC FIELD ACRES	DEDICATED ATHLETIC AREAS STAFF	ATHLETIC FIELD Acres/Staff	APPA Quality Level			
	20.77	5	4.15	2			
	20.77	5	4.15	2			
	SUMMARY		2021-22	2022-23 Proposed	Staffing Requests		
	CUSTODIAL		61	71	10		
	MAINTENANCE		19	29	10		
	GROUNDS		23	26	3		

TOTAL COST OF OWNERSHIP CALCULATIONS

Total GSF for Mt Sac Campus 2021-22	2,478,160	
Total ASF for Mt Sac Campus 2021-22	1,280,457	
FACILITIES STAFF		
Number of Custodial Staff	61	
Number of Grounds Staff	23	
Numer of Maintenance Staff	19	
Number of Managers for above areas	7	
Number of Admin Support Staff	3	
Total Employee Count (Custodial/Maint/Grounds)	113	
		\$/GSF
Annualized Cost of Custodians	\$ 5,945,060	2.40
Annualized Cost of Grounds Staff	\$ 2,206,574	0.89
Annualized Cost of Maintenance Staff	\$ 2,154,726	0.87
Annualized Cost of Asst Directors & Support Staff	\$ 750,322	0.30
Total Salary & Benefits	\$ 11,056,682	4.46
		\$/GSF
Total Cost of Custodial Supplies, Repairs, & Equipment	\$ 330,291	0.133
Total Cost of Grounds Supplies, Repairs, & Equipment	\$ 241,784	0.098
Total Cost of Maintenance Supplies, Repairs, & Equipt.	\$ 1,771,983	0.715
Total Cost Materials	\$ 2,344,058	0.946
		\$/GSF
Total Cost of Custodial Support	\$ 6,275,351	2.53
Total Cost of Grounds Support	\$ 2,448,358	0.99
Total Cost of Maintenance Support	\$ 3,926,709	1.58
Total Cost of Management & Administrative Support	\$ 750,322	0.30
Total Cost of Facilities Services	\$ 13,400,740	5.41

TOTAL COST OF OWNERSHIP CALCULATIONS – SUMMARY

			thru 4/29/22	Budget
UTILITIES	Budget	Spent thru 4/29/22	\$/GSF	\$/GSF
Natural Gas	\$ 662,881	\$ 675,709	0.273	0.267
Electricity	\$ 4,147,900	\$ 3,354,196	1.354	1.674
Water	\$ 509,511	\$ 434,741	0.175	0.206
Telephone	\$ 211,620	\$ 120,517	0.049	0.085
Telecommunications	\$ 30,280	\$ 25,098	0.010	0.012
Water Disposal	\$ 281,304	\$ 203,538	0.082	0.114
Recycling	\$ 7,134	\$ 6,800	0.003	0.003
Cable/Satellite Services	\$ 4,186	\$ 2,724	0.001	0.002
Mandated Fees	\$ 505	\$ -	-	0.000
	\$ 5,855,321	\$ 4,823,323	1.946	2.363
TOTAL COST OF FACILITIES & UTILITIES				
	COSTS	\$/GSF		
Total Cost of Facilities Services	\$ 13,400,740	5.41		
Total Cost of Utilities	\$ 5,855,321	2.36		
TOTAL	\$ 19,256,061	7.77		

SUMMARY OF IFMA (MCKINSTRY) STAFFING RATIOS –MAINTENANCE

MT SAN ANTONIO COLLEGE - TOTAL GSF	2,478,160	current 2021-22		2,749,577	future 2022-23 SF	
Current Maintenance Staff	14	5/2/2022		19	Actual + RTFs	
GSF per FTE	177,011			144,715		
	GSF per FTE	Required FTEs	Actual+RTF's	GAP		
APPA -Level 1-Showpiece	47,220	52.48	19	33.48		
APPA -Level 2-Comprehensive Stewardship	67,456	36.74	19	17.74		
APPA -Level 3- Managed Care	94,439	26.24	19	7.24		
APPA - Level 4-Reactive Management	118,049	20.99	19	1.99		
APPA -Level 5- Crisis Response	236,098	10.50	19	(8.50)		
IFMA - (McKinstry Consultants)	SF per Trade	Required Trade	ACTUAL	GAP-Actual	Actual+RTF's	GAP-Future
Electricians	285,000	8.70	2	6.70	3	5.70
HVAC	257,000	9.64	3	6.64	3	6.64
Plumbing	495,000	5.01	3	2.01	3	2.01
Controls	567,000	4.37	1	3.37	1	3.37
Painters	533,000	4.65	1	3.65	1	3.65
Skilled Crafts	121,000	20.48	2	18.48	4	16.48
Carpenters	420,000	5.90	2	3.90	2	3.90
Locksmiths	850,000	2.92	0	2.92	2	0.92
		61.66	14		19	
		GAPS	47.66		42.66	
M&O Staffing Requirements	Current SF	2,478,160	Future SF	2,749,577		
	Est. Needs	SF per Trade	SF per Trade	Est Need		
Electricians	4	619,540	549,915	5		
HVAC	5	495,632	458,263	6		
Plumbing	3	826,053	687,394	4		
Controls	2	1,239,080	1,374,789	2		
Painters	3	826,053	916,526	3		
Skilled Crafts	4	619,540	549,915	5		
Carpenters	2	1,239,080	1,374,789	2		
Locksmiths	2	1,239,080	1,374,789	2		
Total Required	25			29		
Actual + RTFs	19			19		
Gap	6			10		
SF per FTE	99,126			94,813		
APPA Level	3-Managed Care			3-Managed Care		

NEW STUDENT CENTER & AQUATIC CENTER/GYM BLDG.-STAFF ESTIMATES

			Level 3	Level 3	Level 4	
#	Building	GSF	Custodial	Maint	Grounds	
	Student Center	112,343	4.24	1.19	0.5	
			Level 3	Level 3	Level 2	
#	Building	GSF	Custodial	Maint	Grounds	
	Aquatic Center/Gym	135,847	5.13	1.44	0.4	
			Level 3	Level 3	Level 2	
#	Building	GSF	Custodial	Maint	Grounds	
	Heritage Hall	13,128	0.50	0.14	0.1	
			Level 4	Level 3	Level 4	
#	Building	GSF	Custodial	Maint	Grounds	
	Transit Ctr/Pedestrian Bridge	10,099	0.22	0.11	0.1	
	Total New Staff Required		10.08	2.87	1.10	14.06
	Maintenance Staff Needs					
	1 Certified Pool Operator -Skilled Crafts					
	1 HVAC Tech					
	1 Plumber					

TOTAL COST OF OWNERSHIP ANALYSIS-AQUATIC CENTER & GYM

	AQUATIC CENTER / GYM	135,847	GSF
		124,718	SF
#	DESCRIPTION	\$/GSF	Total Cost/Yr
1	CUSTODIAL STAFF	2.4	\$ 326,033
2	GROUNDS STAFF	0.89	\$ 120,904
3	MAINTENANCE STAFF	0.87	\$ 118,187
	Total Staff (no increase in Mgt)		\$ 565,124
4	CUSTODIAL SUPPLIES	0.133	\$ 18,068
5	GROUNDS SUPPLIES/CONTRACT	0.098	\$ 13,313
6	MAINTENANCE SUPPLIES/CONTRACTS	0.715	\$ 97,131
7	POOL CHEMICALS INCREASE		\$ 40,000
8	POOL SERVICE CONTRACT INCREASE		\$ 112,530
			\$ 281,041
9	UTILITIES	2.363	\$ 321,006
	TOTAL		\$ 1,167,171

TOTAL COST OF OWNERSHIP ANALYSIS-STUDENT CENTER

	STUDENT CENTER	112,343	GSF
		106,003	SF
#	DESCRIPTION	\$/GSF	Total Cost/Yr
1	CUSTODIAL STAFF	2.4	\$ 269,623
2	GROUNDS STAFF	0.89	\$ 99,985
3	MAINTENANCE STAFF	0.87	\$ 97,738
	Total Staff (no increase in Mgt)		\$ 467,347
4	CUSTODIAL SUPPLIES	0.133	\$ 14,942
5	GROUNDS SUPPLIES/CONTRACT	0.098	\$ 11,010
6	MAINTENANCE SUPPLIES/CONTRACTS	0.715	\$ 80,325
7	ELEVATOR CONTRACT INCREASE		\$ 27,966
8	FOOD EQUIPMENT CONTRACT INCR.		\$ 8,000
			\$ 142,242
9	UTILITIES	2.363	\$ 265,467
	TOTAL		\$ 875,056