

Engineering and Capital Projects



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Engineering and Capital Projects



Description

The Engineering and Capital Projects Department (E&CP) strives to provide quality engineering, construction management, and inspection services that enhance the safety and environment of the City of San Diego. The Department has more than 800 engineers, surveyors, and support staff that provide services in a wide variety of engineering specialties such as water and sewer pipelines, roads, and highways, structural, electrical, traffic engineering, material testing and surveying.

The Department's activities include engineering on various public infrastructure assets to rehabilitate, restore, improve, and add to the City's capital facilities. E&CP provides a full range of engineering services for the City's capital investments in its various types of infrastructure. The Department is responsible for planning, designing, project and construction management of public improvement projects; quality assurance and inspection of public and private work permitted in rights-of-way; surveying, and materials testing. The Department is also responsible for the procurement of Capital Improvement Program (CIP) construction, minor repairs, and associated professional consulting services, as well as contract management functions to ensure that contracts are meeting the City's needs. It also manages the centralized advertising and award of construction contracts and professional services in conformance with the City's Charter and Municipal Code.

E&CP supports a broad range of projects including Pure Water, libraries, fire, lifeguard and police

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stations, parks and recreation centers; outdoor lighting, streetlights and traffic signals; street and sidewalk improvements, bikeways and other transportation projects; drainage and flood control facilities, water and sewer pipeline, treatment plants and pump stations; and undergrounded facilities. E&CP is also responsible for asset management of citywide survey monumentation.

The vision is:

To be the innovative industry leader in developing public infrastructure systems.

The mission is:

To deliver high quality public infrastructure systems by cultivating expertise and leveraging our engineering responsibility in a collaborative environment.

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Goals and Objectives

Goal 1: Balance growth, preservation, and conservation in our land use plans and programs

- Promote sustainable and responsible development
- Practice preservation of our natural, physical, and cultural environment

Goal 2: Foster public and community trust

- Improve transparency regarding our department efforts
- Promote inclusiveness, equity, and effective communication

Goal 3: Achieve operational efficiencies

- Enhance productivity with consideration of budget and overall City priorities
- Invest in staff development and technology

Key Performance Indicators

Performance Indicator	FY2020 Target	FY2020 Actual	FY2021 Target	FY2021 Actual	FY2022 Target
Percentage of Capital Improvement Projects delivered on baseline Project Charter schedule	80%	82%	80%	80%	80%
Average number of days to award contracts ¹	90	83	90	103	90
Number of information-sharing meetings with industries supporting City infrastructure	12	9	12	13	12
Percentage of all Construction Change Orders due to changed/unforeseen conditions and design errors	4%	3%	4%	3%	4%

1. The FY 2021 estimate is 14.4% higher than the FY 2021 target due to the impacts of the COVID-19 pandemic and the business process adjustments the City made to perform essential functions.

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Department Summary

	FY2020 Actual	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
FTE Positions (Budgeted)	782.50	825.50	825.50	0.00
Personnel Expenditures	\$ 90,727,302	\$ 97,923,476	\$ 101,900,055	\$ 3,976,579
Non-Personnel Expenditures	13,765,621	18,392,231	21,891,557	3,499,326
Total Department Expenditures	\$ 104,492,922	\$ 116,315,707	\$ 123,791,612	\$ 7,475,905
Total Department Revenue	\$ 111,865,568	\$ 115,732,090	\$ 115,997,294	\$ 265,204

Engineering & Capital Projects Fund

Department Expenditures

	FY2020 Actual	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
Architectural Engineering & Parks	\$ 11,288,321	\$ 11,854,508	\$ 12,186,837	\$ 332,329
Business Operations & Fiscal Services	13,977,659	22,303,877	31,052,650	8,748,773
Capital Asset Management	9,417,112	10,009,994	9,650,899	(359,095)
Construction Management & Field Engineer	26,510,076	25,116,100	25,970,404	854,304
Contracting	8,814	4,994,736	3,761,989	(1,232,747)
Engineering & Capital Projects	931,795	1,532,485	848,787	(683,698)
Engineering Support & Technical Services	24,652,156	22,190,972	21,794,307	(396,665)
Public Works-Contracting	-	124,393	-	(124,393)
Transportation Engineering Operations	-	-	-	-
Transportation & Utility Engineering	17,706,988	18,188,642	18,525,739	337,097
Total	\$ 104,492,922	\$ 116,315,707	\$ 123,791,612	\$ 7,475,905

Department Personnel

	FY2020 Budget	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
Architectural Engineering & Parks	88.00	88.00	88.00	0.00
Business Operations & Fiscal Services	72.50	74.50	76.50	2.00
Capital Asset Management	88.00	84.00	80.00	(4.00)
Construction Management & Field Engineer	195.00	193.00	190.00	(3.00)
Contracting	0.00	48.00	49.00	1.00
Engineering & Capital Projects	4.00	3.00	3.00	0.00
Engineering Support & Technical Services	178.00	181.00	182.00	1.00
Transportation & Utility Engineering	157.00	154.00	157.00	3.00
Total	782.50	825.50	825.50	0.00

Engineering and Capital Projects

Significant Budget Adjustments

	FTE	Expenditures	Revenue
Salary and Benefit Adjustments Adjustments to reflect savings resulting from vacant positions for any period of the fiscal year, retirement contributions, retiree health contributions, and labor negotiations.	0.00	\$ 3,605,268	-
One-Time Additions and Annualizations Adjustment to reflect one-time revenues and expenditures, and the annualization of revenues and expenditures, implemented in Fiscal Year 2021.	0.00	1,475,770	-
Survey Monument Preservation Addition of non-personnel expenditures and associated revenue to preserve survey monuments as required by California's Business and Professions Code §8771	0.00	500,000	500,000
Pay-In-Lieu of Annual Leave Adjustments Adjustment to expenditures associated with projected compensation to employees in-lieu of the use of annual leave.	0.00	372,130	-
Non-Discretionary Adjustment Adjustment to expenditure allocations that are determined outside of the department's direct control. These allocations are generally based on prior year expenditure trends and examples of these include utilities, insurance, and rent.	0.00	352,343	-
Non-Standard Hour Personnel Funding Funding allocated according to a zero-based annual review of hourly funding requirements.	0.00	(819)	-
Equipment Rate Reduction Reduction in non-personnel expenditures associated with a rate reduction for equipment rentals.	0.00	(8,423)	-
Branch Management Cost Allocation Reduction of non-personnel expenditures associated with the cost allocation of branch management expenditures to non-General Fund departments.	0.00	(13,697)	-
Reduction of Non-Personnel Expenditures Reduction of one-time non-personnel expenditures related to training.	0.00	(34,572)	-
Support for Information Technology Adjustment to expenditure allocations according to a zero-based annual review of information technology requirements.	0.00	1,227,905	-
Revised Revenue Adjustment to reflect revised revenue projections.	0.00	-	100,000
Right-of-Way Permit Reimbursements Revenue adjustment associated with reimbursements for Fiscal Year 2020 right-of-way utility permits.	0.00	-	(334,796)
Total	0.00	\$ 7,475,905	\$ 265,204

Engineering and Capital Projects

Expenditures by Category

	FY2020 Actua	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
PERSONNEL				
Personnel Cost	\$ 54,753,831	\$ 58,994,752	\$ 59,698,948	\$ 704,196
Fringe Benefits	35,973,470	38,928,724	42,201,107	3,272,383
PERSONNEL SUBTOTAL	90,727,302	97,923,476	101,900,055	3,976,579
NON-PERSONNEL				
Supplies	\$ 271,188	\$ 344,408	\$ 816,446	\$ 472,038
Contracts	6,541,482	8,563,854	10,210,516	1,646,662
Information Technology	5,740,625	8,202,446	9,646,821	1,444,375
Energy and Utilities	357,264	414,970	351,221	(63,749)
Other	818,768	866,553	866,553	-
Capital Expenditures	36,294	-	-	-
NON-PERSONNEL SUBTOTAL	13,765,621	18,392,231	21,891,557	3,499,326
Total	\$ 104,492,922	\$ 116,315,707	\$ 123,791,612	\$ 7,475,905

Revenues by Category

	FY2020 Actua	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
Charges for Services	\$ 111,584,960	\$ 115,732,090	\$ 115,997,294	\$ 265,204
Fines Forfeitures and Penalties	20,906	-	-	-
Other Revenue	2,215	-	-	-
Rev from Money and Prop	(198,794)	-	-	-
Rev from Other Agencies	58	-	-	-
Transfers In	456,222	-	-	-
Total	\$ 111,865,568	\$ 115,732,090	\$ 115,997,294	\$ 265,204

Personnel Expenditures

Job Number	Job Title / Wages	FY2020 Budget	FY2021 Budget	FY2022 Proposed	Salary Range	Total
FTE, Salaries, and Wages						
20000011	Account Clerk	3.00	2.00	2.00	\$ 33,613 - 40,456	\$ 80,912
20000012	Administrative Aide 1	12.00	18.00	18.00	39,458 - 47,528	820,850
20000024	Administrative Aide 2	7.00	9.00	10.00	45,448 - 54,766	514,031
20001140	Assistant Department Director	1.00	1.00	1.00	63,128 - 239,138	153,462
20001202	Assistant Deputy Director	6.00	7.00	7.00	50,128 - 184,330	892,475
20000070	Assistant Engineer-Civil	227.00	240.00	238.00	61,755 - 74,402	16,950,754
20000071	Assistant Engineer-Civil	0.00	23.00	23.00	61,755 - 74,402	1,491,411
20000077	Assistant Engineer- Electrical	7.00	7.00	9.00	61,755 - 74,402	618,683
20000116	Assistant Engineer-Traffic	5.00	4.00	4.00	61,755 - 74,402	297,608
21000175	Assistant Trainer	1.00	1.00	0.00	47,466 - 57,699	-
20000143	Associate Engineer-Civil	130.00	132.00	131.00	71,094 - 85,862	11,067,292
20000145	Associate Engineer-Civil	0.00	7.00	7.00	71,094 - 85,862	566,346
20000150	Associate Engineer- Electrical	4.00	4.00	5.00	71,094 - 85,862	417,938
20000154	Associate Engineer- Mechanical	1.00	0.00	0.00	71,094 - 85,862	-
20000167	Associate Engineer-Traffic	5.00	5.00	5.00	71,094 - 85,862	429,310
20000119	Associate Management Analyst	20.00	21.00	21.00	57,699 - 69,722	1,341,448

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Personnel Expenditures

Job Number	Job Title / Wages	FY2020 Budget	FY2021 Budget	FY2022 Proposed	Salary Range	Total
20000162	Associate Planner	9.00	9.00	9.00	69,950 - 84,531	719,642
20000110	Auto Messenger 2	0.50	0.50	0.50	31,928 - 38,480	18,951
20000539	Clerical Assistant 2	4.00	5.00	5.00	31,928 - 38,480	177,949
20000545	Contracts Processing Clerk	5.00	3.00	3.00	35,173 - 42,474	118,634
20001101	Department Director	1.00	1.00	1.00	63,128 - 239,138	192,067
20001168	Deputy Director	6.00	7.00	7.00	50,128 - 184,330	976,542
21000451	Environmental Biologist 3	2.00	2.00	2.00	76,440 - 92,581	183,773
20000924	Executive Assistant	1.00	1.00	1.00	46,467 - 56,202	56,202
20000178	Information Systems Administrator	1.00	1.00	1.00	78,395 - 94,952	94,952
20000290	Information Systems Analyst 2	3.00	3.00	3.00	57,699 - 69,722	207,043
20000293	Information Systems Analyst 3	2.00	2.00	2.00	63,336 - 76,586	153,172
20000998	Information Systems Analyst 4	2.00	2.00	2.00	71,240 - 86,320	157,560
20000377	Information Systems Technician	2.00	2.00	2.00	45,448 - 54,766	90,896
20001018	Land Surveying Assistant	36.00	36.00	35.00	67,933 - 81,848	2,628,023
20001019	Land Surveying Associate	8.00	8.00	9.00	78,208 - 94,453	832,567
90001073	Management Intern-Hourly	4.00	4.00	4.00	30,160 - 31,200	132,046
20000634	Organization Effectiveness Specialist 2	1.00	1.00	1.00	57,699 - 69,722	57,699
20000639	Organization Effectiveness Supervisor	1.00	1.00	1.00	71,240 - 86,320	86,320
20000669	Park Designer	4.00	4.00	4.00	71,136 - 85,904	343,616
20000680	Payroll Specialist 2	5.00	5.00	4.00	40,726 - 49,171	179,028
20000740	Principal Drafting Aide	4.00	4.00	9.00	53,352 - 64,605	524,231
20000743	Principal Engineering Aide	83.00	70.00	62.00	53,352 - 64,605	3,706,237
20000518	Principal Survey Aide	21.00	20.00	20.00	58,698 - 71,074	1,327,768
20001234	Program Coordinator	1.00	1.00	1.00	30,160 - 147,160	112,050
20001222	Program Manager	4.00	3.00	3.00	50,128 - 184,330	358,403
20000760	Project Assistant	32.00	32.00	34.00	61,755 - 74,402	2,388,063
20000761	Project Officer 1	12.00	11.00	11.00	71,094 - 85,862	867,637
20000763	Project Officer 2	8.00	7.00	7.00	81,952 - 99,070	674,886
20001042	Safety and Training Manager	1.00	1.00	1.00	71,240 - 86,320	84,594
20000847	Safety Officer	0.00	1.00	1.00	61,797 - 74,630	61,797
20000885	Senior Civil Engineer	33.00	35.00	35.00	81,952 - 99,070	3,369,842
20000890	Senior Civil Engineer	0.00	4.00	4.00	81,952 - 99,070	370,767
20000927	Senior Clerk/Typist	1.00	0.00	0.00	38,480 - 46,426	-
20000904	Senior Electrical Engineer	1.00	1.00	1.00	81,952 - 99,070	99,070
20000900	Senior Engineering Aide	11.00	11.00	11.00	47,403 - 57,304	564,793
20001014	Senior Land Surveyor	2.00	2.00	2.00	90,147 - 108,971	216,086
20000015	Senior Management Analyst	12.00	13.00	14.00	63,336 - 76,586	1,049,726
20000918	Senior Planner	5.00	5.00	5.00	80,579 - 97,427	468,338
20000929	Senior Survey Aide	4.00	4.00	4.00	52,146 - 63,045	215,557
20000926	Senior Traffic Engineer	2.00	2.00	2.00	81,952 - 99,070	181,022
90000964	Student Engineer- Hourly	4.00	4.00	4.00	30,160 - 34,154	136,616

Engineering and Capital Projects

Personnel Expenditures

Job Number	Job Title / Wages	FY2020 Budget	FY2021 Budget	FY2022 Proposed	Salary Range	Total
20000970	Supervising Management Analyst	8.00	8.00	8.00	71,240 - 86,320	675,480
21000177	Trainer	1.00	1.00	2.00	57,699 - 69,722	115,398
20001041	Training Supervisor	1.00	1.00	1.00	63,336 - 76,586	75,054
20000756	Word Processing Operator	5.00	6.00	6.00	33,613 - 40,456	220,184
	Bilingual - Regular					2,912
	Budgeted Personnel					(7,436,532)
	Expenditure Savings					
	Infrastructure In-Training					838,193
	Pay					
	Infrastructure Registration					1,998,856
	Pay					
	Landscape Architect Lic					25,772
	Overtime Budgeted					379,270
	Reg Pay For Engineers					1,901,078
	Sick Leave - Hourly					6,273
	Termination Pay Annual					91,662
	Leave					
	Vacation Pay In Lieu					978,663
FTE, Salaries, and Wages Subtotal		782.50	825.50	825.50		\$ 59,698,948

	FY2020 Actual	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
Fringe Benefits				
Employee Offset Savings	\$ 276,134	\$ 268,927	\$ 240,721	\$ (28,206)
Flexible Benefits	7,667,275	8,953,248	9,245,007	291,759
Long-Term Disability	-	184,572	224,131	39,559
Medicare	836,549	836,608	842,508	5,900
Other	300,704	-	-	-
Other Post-Employment Benefits	4,199,503	4,386,221	4,309,074	(77,147)
Retiree Medical Trust	69,423	76,910	83,645	6,735
Retirement 401 Plan	45,322	49,166	49,022	(144)
Retirement ADC	17,739,965	19,024,283	21,805,481	2,781,198
Retirement DROP	104,063	121,167	106,540	(14,627)
Risk Management Administration	810,055	738,123	746,361	8,238
Supplemental Pension Savings Plan	3,618,654	3,940,757	4,065,665	124,908
Unemployment Insurance	77,427	81,915	81,216	(699)
Workers' Compensation	228,395	266,827	401,736	134,909
Fringe Benefits Subtotal	\$ 35,973,470	\$ 38,928,724	\$ 42,201,107	\$ 3,272,383
Total Personnel Expenditures			\$ 101,900,055	

Department Summary

	FY2020 Actual	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
FTE Positions (Budgeted)	43.00	0.00	0.00	0.00
Personnel Expenditures	\$ 2,224,263	\$ -	\$ -	-
Non-Personnel Expenditures	745,333	-	-	-
Total Department Expenditures	\$ 2,969,596	\$ -	\$ -	-
Total Department Revenue	\$ 1,916,197	\$ -	\$ -	-

Engineering and Capital Projects

Engineering & Capital Projects Fund

Department Expenditures

	FY2020 Actual	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
Public Works - Contracts	\$ 2,969,596	\$ -	\$ -	-
Total	\$ 2,969,596	\$ -	\$ -	-

Department Personnel

	FY2020 Budget	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
Public Works - Contracts	43.00	0.00	0.00	0.00
Total	43.00	0.00	0.00	0.00

Expenditures by Category

	FY2020 Actual	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
PERSONNEL				
Personnel Cost	\$ 1,446,320	\$ -	\$ -	-
Fringe Benefits	777,943	-	-	-
PERSONNEL SUBTOTAL	2,224,263	-	-	-
NON-PERSONNEL				
Supplies	\$ 4,833	\$ -	\$ -	-
Contracts	103,663	-	-	-
Information Technology	294,338	-	-	-
Transfers Out	342,499	-	-	-
NON-PERSONNEL SUBTOTAL	745,333	-	-	-
Total	\$ 2,969,596	\$ -	\$ -	-

Revenues by Category

	FY2020 Actual	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
Charges for Services	\$ 1,896,912	\$ -	\$ -	-
Fines Forfeitures and Penalties	19,262	-	-	-
Other Revenue	23	-	-	-
Total	\$ 1,916,197	\$ -	\$ -	-

Personnel Expenditures

Job Number	Job Title / Wages	FY2020 Budget	FY2021 Budget	FY2022 Proposed	Salary Range	Total
FTE, Salaries, and Wages						
20000012	Administrative Aide 1	3.00	0.00	0.00	\$ 39,458 - 47,528	-
20000070	Assistant Engineer-Civil	2.00	0.00	0.00	61,755 - 74,402	-
20000071	Assistant Engineer-Civil	19.00	0.00	0.00	61,755 - 74,402	-
20000143	Associate Engineer-Civil	3.00	0.00	0.00	71,094 - 85,862	-
20000145	Associate Engineer-Civil	4.00	0.00	0.00	71,094 - 85,862	-

Engineering and Capital Projects

Personnel Expenditures

Job Number	Job Title / Wages	FY2020 Budget	FY2021 Budget	FY2022 Proposed	Salary Range	Total
20000119	Associate Management Analyst	1.00	0.00	0.00	57,699 - 69,722	-
20000539	Clerical Assistant 2	1.00	0.00	0.00	31,928 - 38,480	-
20001168	Deputy Director	1.00	0.00	0.00	50,128 - 184,330	-
20000743	Principal Engineering Aide	1.00	0.00	0.00	53,352 - 64,605	-
20000760	Project Assistant	1.00	0.00	0.00	61,755 - 74,402	-
20000761	Project Officer 1	1.00	0.00	0.00	71,094 - 85,862	-
20000885	Senior Civil Engineer	1.00	0.00	0.00	81,952 - 99,070	-
20000890	Senior Civil Engineer	2.00	0.00	0.00	81,952 - 99,070	-
20000015	Senior Management Analyst	1.00	0.00	0.00	63,336 - 76,586	-
20000756	Word Processing Operator	2.00	0.00	0.00	33,613 - 40,456	-
FTE, Salaries, and Wages Subtotal		43.00	0.00	0.00	\$	-

	FY2020 Actual	FY2021 Budget	FY2022 Proposed	FY2021-2022 Change
Fringe Benefits				
Employee Offset Savings	\$ 5,952	\$ -	\$ -	-
Flexible Benefits	225,151	-	-	-
Medicare	22,427	-	-	-
Other	2,643	-	-	-
Other Post-Employment Benefits	117,543	-	-	-
Retiree Medical Trust	2,619	-	-	-
Retirement 401 Plan	2,045	-	-	-
Retirement ADC	267,645	-	-	-
Retirement DROP	2,353	-	-	-
Risk Management Administration	23,097	-	-	-
Supplemental Pension Savings Plan	98,888	-	-	-
Unemployment Insurance	2,290	-	-	-
Workers' Compensation	5,289	-	-	-
Fringe Benefits Subtotal	\$ 777,943	\$ -	\$ -	-
Total Personnel Expenditures		\$	-	

Engineering and Capital Projects

Revenue and Expense Statement (Non General Fund)

Engineering & Capital Projects Fund	FY2020 Actual	FY2021* Budget	FY2022** Proposed
BEGINNING BALANCE AND RESERVES			
Balance from Prior Year	\$ (11,918,110)	\$ (5,598,993)	\$ (1,160,421)
TOTAL BALANCE AND RESERVES	\$ (11,918,110)	\$ (5,598,993)	\$ (1,160,421)
REVENUE			
Charges for Services	\$ 113,481,743	\$ 115,732,090	\$ 115,997,294
Fines Forfeitures and Penalties	40,168	-	-
Other Revenue	2,238	-	-
Revenue from Other Agencies	58	-	-
Revenue from Use of Money and Property	(198,794)	-	-
Transfers In	456,222	-	-
TOTAL REVENUE	\$ 113,781,636	\$ 115,732,090	\$ 115,997,294
TOTAL BALANCE, RESERVES, AND REVENUE	\$ 101,863,526	\$ 110,133,097	\$ 114,836,873
OPERATING EXPENSE			
Personnel Expenses	\$ 56,200,151	\$ 58,994,752	\$ 59,698,948
Fringe Benefits	36,751,414	38,928,724	42,201,107
Supplies	276,021	344,408	816,446
Contracts	6,645,145	8,563,854	10,210,516
Information Technology	6,034,963	8,202,446	9,646,821
Energy and Utilities	357,264	414,970	351,221
Other Expenses	818,768	866,553	866,553
Transfers Out	342,499	-	-
Capital Expenditures	36,294	-	-
TOTAL OPERATING EXPENSE	\$ 107,462,518	\$ 116,315,707	\$ 123,791,612
TOTAL EXPENSE	\$ 107,462,518	\$ 116,315,707	\$ 123,791,612
BALANCE	\$ (5,598,993)	\$ (6,182,610)	\$ (8,954,739)
TOTAL BALANCE, RESERVES, AND EXPENSE	\$ 101,863,526	\$ 110,133,097	\$ 114,836,873

* At the time of publication, audited financial statements for Fiscal Year 2021 were not available. Therefore, the Fiscal Year 2021 column reflects final budgeted revenue and expense amounts from the Fiscal Year 2021 Adopted Budget, while the beginning Fiscal Year 2021 balance amount reflects the audited Fiscal Year 2020 ending balance.

** Fiscal Year 2022 Beginning Fund Balance reflect the projected Fiscal Year 2021 Ending Fund Balance based on updated Revenue and Expenditures projections for Fiscal Year 2021.