

**CALIFORNIA EDUCATIONAL FACILITIES AUTHORITY
BOND FINANCING PROGRAM**

EXECUTIVE SUMMARY

<p>Applicant: Stanford University ("Stanford") 3145 Porter Drive Stanford, CA 94304 Santa Clara County</p> <p>Facility Type: Private University</p> <p>Project Locations: Alameda, Santa Clara and San Mateo Counties</p> <p>Accreditation: Western Association of Schools and Colleges</p>	<p>Amount Requested: \$600,000,000</p> <p>Date Requested: February 28, 2019</p> <p>Resolution Number: 323</p>																
<p>Use of Proceeds: Bond proceeds will be used for renovation and construction of various campus projects, including student and faculty housing. Proceeds will also be used to refinance all or a portion of Stanford's commercial paper issued through CEFA as well as other commercial paper and its revolving credit line. Additionally, proceeds will be used to fund the cost of issuance.</p>																	
<p>Type of Issue: Fixed-rate, tax-exempt negotiated public offering</p> <p>Credit Enhancement: None</p> <p>Expected Credit Rating: AAA/Aaa/AAA (S&P/Moody's/Fitch)</p> <p>Financing Team: <i>Please see Exhibit 1 to identify possible conflicts of interest</i></p>																	
<p>Financial Overview: Stanford's income statement appears to reflect solid operating results due to revenue growth coupled with manageable operating expenses. Stanford's balance sheet appears to display financial strength with an increase in unrestricted net assets for each fiscal year and a pro forma debt service coverage ratio from operations of 1.30x and a 3.44x ratio from net assets.</p>																	
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<p>Due Diligence: Staff has received and reviewed the Eligibility, Legal Review, Religious Due Diligence, and CEQA documentation. All documentation satisfies the Authority's requirements.</p>																	
<p>Staff Recommendation: Staff recommends the Authority approve Resolution No. 323 in an amount not to exceed \$600,000,000 for Stanford University subject to a bond rating of at least investment grade by a nationally recognized rating agency. TAP International, Inc., the Authority's financial analyst, and KNN Public Finance, LLC ("KNN"), the Authority's financial advisor, concur with the Authority's staff recommendation.</p>																	

STAFF SUMMARY AND RECOMMENDATION

Stanford University (“Stanford”)

February 28, 2019

Resolution No. 323

I. PURPOSE OF FINANCING:

Stanford continues with its capital plan to address a shortage of affordable student housing as well as to maintain and upgrade academic facilities and campus infrastructure. Bond proceeds will be used to construct and renovate housing, dining and residential life projects, academic facilities, infrastructure, general plant improvements and various furniture, fixtures and equipment. Stanford will also use bond proceeds to refinance its tax-exempt commercial paper issued through the California Educational Facilities Authority (“CEFA”) as well as refinance other commercial paper, which is a mixture of tax-exempt and taxable, and its revolving credit line. Refinancing will also restructure the short-term commercial paper debt into long-term bond debt in order to match the debt to the useful life of the projects financed.

Project Fund **\$350,000,000**

In addition to other construction and renovations projects, one of the most notable projects is the Escondido Village Graduate Residences (“Escondido Village”) and corresponding parking garages as it represents the largest project in Stanford’s capital plan. The facility consists of four residence buildings that will add 2,020 on-campus beds for graduate students. There will be an exterior commons space for recreation as well as a lounge, a pub/café, an online market, exercise and activity rooms, laundry facilities, and group study rooms for the entire graduate community. Stanford anticipates completion by Fall 2020.

Refinancing **250,000,000**

Stanford plans to refinance all or a portion of its tax-exempt commercial paper issued through CEFA as well as refinance other commercial paper, which is a mixture of tax-exempt and taxable commercial paper, and its revolving credit line. Stanford used its commercial paper and revolving credit line for the purposes of interim funding for various capital projects, including housing and campus infrastructure projects.

Environmental Benefits:

Stanford takes a holistic approach to sustainability, and all campus buildings are certified to the Leadership in Energy & Environmental Design (“LEED”) Gold standard. The new Escondido Village will feature an innovative four-stream waste collection chute system with each chute sorting solid waste into landfill, paper, compost and plastics and glass.

Financing Costs **1,751,851**

Cost of Issuance \$774,893

Underwriter’s Discount 976,958

TOTAL ESTIMATED USES OF FUNDS **\$601,751,851**

II. PROPOSED COVENANTS, SECURITY AND DISCLOSURES:

The Executive Summary and recommendations include minimum requirements. Additional or more stringent covenants or disclosures may be added following consultation with Authority staff. These covenants cannot be diluted or removed without subsequent review. If there have been modifications to the covenant proposal following the preparation of this Executive Summary, staff will report such changes at the meeting.

After reviewing Stanford’s credit profile, including its current financial profile, prior bond transactions and considering what the market will support, Stanford, KNN, the Authority’s financial advisor, and the underwriter of the proposed bonds have concluded that the covenants listed below should be applicable to this transaction. Stanford’s current financial situation does not suggest that additional covenants should be required by the Authority.

- ✓ **Unconditional Promise to Pay.** *Borrower agrees to pay Lender all amounts required for principal and interest and other payments and expenses designated in the Loan Agreement. All Revenues¹ and any other amounts held in a designated fund or account under the Bond Indenture are pledged to secure the full payment of the bonds.*

- ✓ **Comply with SEC Rule 15c2-12.** *The rule prohibits underwriters from underwriting municipal bond deals unless the issuer or borrower contractually agrees to disclose designated financial and operating information to the marketplace during the life of the bonds and to report designated “material events” such as missed debt service payments, any change in bond ratings, defeasance, redemptions, etc.*

Staff has completed its due diligence, and KNN has reviewed the Loan Agreement, Bond Indenture, and prior Stanford offering documents associated with this financing package and found these documents and proposed covenants to be acceptable.

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¹Capitalized terms are defined in the Indenture.

III. FINANCIAL ANALYSIS:

Stanford University
Statement of Activities
Unrestricted (\$000s)

	Year Ended August 31		
	2018	2017	2016
<i>Operating Revenues</i>			
Student income	\$ 635,020	\$ 617,813	\$ 587,344
Sponsored research support	1,655,527	1,636,105	1,452,867
Health care services	1,089,421	1,023,321	906,486
Current year gifts in support of operations	278,867	324,523	250,769
Net assets released from restrictions	190,596	184,084	175,418
Investment income distributed for operations	1,493,388	1,309,833	1,321,669
Special program fees and other income	524,675	508,899	523,506
Total Operating Revenues	5,867,494	5,604,578	5,218,059
<i>Operating Expenses</i>			
Salaries and benefits	3,495,306	3,301,485	3,091,657
Depreciation	380,142	364,857	345,977
Other operating expenses	1,794,501	1,711,188	1,476,976
Total Operating Expenses	5,669,949	5,377,530	4,914,610
Change in Net Assets from Operating Activities	197,545	227,048	303,449
<i>Non-Operating Activities</i>			
Increase in reinvested gains	951,197	1,375,450	118,270
Donor advised funds, net	(6,489)	68,021	21,783
Current year gifts not included in operations	3,064	4,090	2,381
Equity and fund transfers, net	126,000	87,760	104,944
Capital and other gifts released from restrictions	162,511	109,174	117,490
Pension and other postemployment benefit related changes other than net periodic benefit expense	69,570	5,855	180,708
Transfer to permanently restricted net assets, net	(53,349)	(50,490)	(45,651)
Transfer to temporarily restricted net assets, net	(61,251)	(67,369)	(35,082)
Swap interest and change in value of swap agreements	8,168	10,844	(19,966)
Non-controlling interest attributable to SHC	18,093	45,710	-
Other	(11,721)	707	(131)
Net Change in Unrestricted Net Assets	1,403,338	1,816,800	748,195
Net Change in Temporarily Restricted Net Assets	433,644	878,738	(349,306)
Net Change in Permanently Restricted Net Assets	355,237	276,503	886,813
Net Change in Total Net Assets	2,192,219	2,972,041	1,285,702
Total Net Assets, beginning of year	34,691,219	31,719,178	30,433,476
Total Net Assets, end of year	\$ 36,883,438	\$ 34,691,219	\$ 31,719,178

Stanford University
Statement of Financial Position (\$000s)

	As of August 31		
	2018	2017	2016
Assets			
Cash and cash equivalents	\$ 265,795	\$ 260,373	\$ 640,224
Assets limited as to use	165,429	194,376	315,889
Accounts receivable, net	285,038	284,693	316,193
Receivables (payables) from Stanford Health Care and Lucile Salter Packard Children's Hospital at Stanford, net	114,219	92,808	91,468
Prepaid expenses and other assets	87,666	96,210	103,043
Pledges receivable, net	1,321,168	1,356,535	1,357,508
Student loans receivable, net	60,336	70,906	78,549
Faculty and staff mortgages and other loans receivable, net	712,161	677,545	610,026
Investments at fair value, including securities pledged or on loan	34,517,436	33,297,493	29,085,787
Plant facilities, net of accumulated depreciation	6,507,537	5,623,283	5,168,720
Total Assets	\$ 44,036,785	\$ 41,954,222	\$ 37,767,407
Liabilities			
Accounts payable and accrued expenses	\$ 933,291	\$ 865,313	\$ 742,872
Accrued pension and postretirement benefit obligations	518,553	564,090	555,047
Liabilities associated with investments	708,629	953,794	768,280
Deferred income and other obligations	1,118,899	871,729	657,378
Notes and bonds payable	3,834,297	3,954,141	3,270,617
U.S. government refundable loan funds	39,678	53,936	54,035
Total Liabilities	7,153,347	7,263,003	6,048,229
Net Assets			
Unrestricted	20,475,957	19,072,619	17,255,819
Temporarily restricted	8,707,127	8,273,483	7,394,745
Permanently restricted	7,700,354	7,345,117	7,068,614
Total Net Assets	36,883,438	34,691,219	31,719,178
Total Liabilities and Net Assets	\$ 44,036,785	\$ 41,954,222	\$ 37,767,407

	Proforma			
	<u>Long-Term Debt</u> ^(a)	<u>2018</u>	<u>2017</u>	<u>2016</u>
Debt service coverage (x) - operations ^{(b)(c)}	1.30	2.13	2.19	1.96
Debt service coverage (x) - net assets ^{(b)(c)}	3.44	5.66	7.02	3.11
Debt to expendable net assets (x) ^(b)	0.15	0.13	0.14	0.13
Expendable net assets to operations (x)		5.15	5.09	5.02
Margins		3%	4%	6%

^(a) Recalculates FY 2018 results to include the impact of the proposed financing.

^(b) Includes the taxable bond debt that Stanford plans to issue after and separately from the CEFA bonds.

^(c) Pro-forma ratio considers Stanford's proposed financing and existing debt payments. Calculation uses the average of the three largest long-term debt payments.

Financial Discussion:

Stanford's income statement appears to reflect solid operating results due to revenue growth coupled with manageable operating expenses.

Stanford posted positive operating results during the review period as total operating revenue increased 12%. During the same period, Stanford's total operating expenses increased 15% with salaries and benefits, Stanford's largest expense, increasing 13%. According to Stanford's management, factors contributing to the increase included annual salary increases for faculty and staff, salary programs designed to maintain Stanford's competitive position, higher benefit costs, and additional hiring in order to accommodate increased student enrollment.

While posting solid operating results each fiscal year, Stanford experienced decreasing margins with net assets from operating activities decreasing from approximately \$303 million in FY 2016 to approximately \$198 million in FY 2018. According to Stanford's management, decreases from FY 2016 to FY 2018 were due in part to lower royalty revenues from a known expiration of a patent, lower payouts from expendable funds, higher interest expense from bond issuances, continued enhancement of the financial aid program, and increased salary program to address regional affordability.

Stanford's balance sheet appears to display financial strength with an increase in unrestricted net assets for each fiscal year and a pro forma long-term debt service coverage ratio from operations of 1.30x and a 3.44x ratio from net assets.

Stanford's balance sheet indicates a strong history of repaying debt with a consistent debt service coverage ratio from operations of 1.96x in FY 2016, 2.19x in FY 2017, and 2.13x in FY 2018. With the proposed CEFA bond issuance, Stanford remains capable of debt repayments with a solid pro forma long-term debt service coverage ratio of 1.30x from operations and a pro forma long-term debt service coverage ratio of 3.44x from net assets. Additionally, during the review period, Stanford's debt to expendable net assets ratios were also consistent at 0.13x in FY 2016 and FY 2018, and 0.14x in FY 2017, indicating that Stanford is not highly leveraged and is able to take on new debt. Stanford will continue to display a modest use of debt with a pro forma debt to expendable net assets ratio of 0.14x.

In addition, during the review period, Stanford's plant facilities increased 26%. According to management, the increase was due to Stanford's continued investment in its physical facilities to promote teaching and research. In FY 2017 and FY 2018, construction continued on almost 200 projects, with approximately half of Stanford's FY 2017 and FY 2018 capital expenditures focused on student, faculty, and staff housing to address the shortage of affordable housing in the region.

IV. BACKGROUND:

General

Stanford University was founded in 1885 by Leland and Jane Stanford in memory of their son, Leland Stanford Junior. Situated on 8,200 acres near Palo Alto in Santa Clara County, Stanford is 35 miles southeast of San Francisco and 20 miles northwest of San Jose. It is internationally recognized for the quality of its teaching and research, its distinguished faculty, and the achievement of its student body. Stanford offers both undergraduate and graduate programs in a broad range of academic disciplines. The Schools of Earth, Energy & Environmental Sciences, Engineering, Humanities and Sciences offer undergraduate and graduate degree programs. The Schools of Business, Education, Law, and Medicine offer graduate and professional degree programs.

Administration

Stanford is a trust with corporate powers under California law. The Internal Revenue Service has determined the University to be a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code. Stanford is governed by a Board of Trustees consisting of a minimum of 25 and a maximum of 38 members, including the President of Stanford. The Board operates under its own bylaws and a series of resolutions on major policy. The Founding Grant prescribes that the Board of Trustees appoints the President of the University. The Board of Trustees delegates the responsibility to the President to prescribe the duties of professors and teachers, to set the course of study and the mode and manner of teaching and to exercise all other necessary powers relating to the educational, research, financial and business affairs of the University, including the operation of the physical plant. The President appoints, subject to confirmation by the Board, the Provost and the other Officers of the University. The Stanford Management Company is the operating division of the University responsible for the management of the University's investment assets.

Accreditations

Stanford is fully accredited by the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges ("WASC"), the primary accrediting body for institutions of higher education in the western United States. The last WASC accreditation was in 2013. Stanford is also accredited by the appropriate body regarding its following programs: School of Medicine, School of Law, School of Education, School of Engineering, Graduate School of Business, and Physician Assistant Master of Science Program.

Academic Programs

Stanford is a major research and teaching university offering a wide range of undergraduate, graduate and professional degree programs. The Schools of Earth Sciences, Engineering and Humanities and Sciences (which includes the core humanities, fine arts, languages and literature, the social sciences, mathematics, and the natural sciences) offer both undergraduate and graduate degree programs. The Schools of Business, Education, Law, and Medicine offer graduate and professional degree programs. Undergraduate students are admitted to Stanford and have access to any undergraduate major and to classes and research opportunities in all seven schools. Degree programs are offered by departments and through interdepartmental programs involving faculty from multiple departments in one or more schools.

V. OUTSTANDING DEBT (\$000s):

	<u>Original Issue Amount</u>	<u>Amount Outstanding as of 8/31/18</u>	<u>Estimated Amount Outstanding After Proposed Financing</u>
Existing Debt:			
Tax-exempt:			
CEFA Revenue Bonds:			
Series L	36,208	36,208	36,208
Series S	181,200	171,410	171,410
Series T	188,900	188,900	188,900
Series U	1,167,205	1,167,205	1,167,205
Commercial Paper		130,000	-
Taxable:			
Fixed Rate Notes and Bonds:			
Stanford University Bonds		150,000	150,000
Medium Term Note		50,000	50,000
Stanford University Series 2009A*		137,815	-
Stanford University Series 2012		143,235	143,235
Stanford University Series 2013		150,115	150,115
Stanford University Series 2014		150,000	150,000
Stanford University Series 2015		250,000	250,000
Stanford University Series 2017		750,000	750,000
Revolving Line of Credit		75,850	37,050
Other		3,481	3,481
Proposed:			
CEFA, Series V			600,000
Stanford University Series 2019 [‡]			121,000
Total		\$ 3,554,219	\$ 3,968,604

* Stanford Series 2009A bonds were paid in full as of November 30, 2018.

[‡] Stanford Series 2019 taxable bonds will be issued after and separately from the CEFA bonds.

VI. DUE DILIGENCE:

Due diligence has been completed with regard to the following items:

- Religious Due Diligence
- Legal Review
- Compliance with Section 94212(b) of the Education Code – California Environmental Quality Act
- Iran Contracting Act Certificate

VII. STAFF RECOMMENDATION:

Staff recommends the Authority approve Resolution No. 323 in an amount not to exceed \$600,000,000 for Stanford University subject to a bond rating of at least investment grade by a nationally recognized rating agency. TAP International, Inc., the Authority's financial analyst, and KNN, the Authority's financial advisor, concur with the Authority's staff recommendations.

EXHIBIT 1

Financing Team Stanford University

Borrower:	The Board of Trustees of the Leland Stanford Junior University (“Stanford University” or “Stanford”)
Agent for Sale:	California State Treasurer
Issuer’s Counsel:	Attorney General’s Office
Issuer’s Financial Advisor:	KNN Public Finance, LLC
Issuer’s Financial Analyst:	TAP International, Inc.
Bond Counsel:	Orrick, Herrington & Sutcliffe LLP
Senior Managing Underwriter:	Goldman Sachs & Co. LLC
Co-Managing Underwriters:	J.P. Morgan Securities, LLC Merrill Lynch, Pierce, Fenner & Smith Incorporated (Bank of America Merrill Lynch)
Underwriter’s Counsel:	Hawkins Delafield & Wood LLP
Borrower’s Counsel:	Ropes and Gray, LLP
Trustee:	The Bank of New York Mellon, N.A.
Trustee’s Counsel:	The Law Office of Samuel D. Waldman
Rating Agencies:	Moody’s Investors Service, Inc. Standard & Poor’s Financial Services, LLC Fitch Ratings, Inc.
Auditor to the University:	PricewaterhouseCoopers LLP

RESOLUTION NO. 323

RESOLUTION OF THE CALIFORNIA EDUCATIONAL FACILITIES AUTHORITY AUTHORIZING THE ISSUANCE OF REVENUE BONDS TO FINANCE AND/OR REFINANCE EDUCATIONAL FACILITIES FOR THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY

February 28, 2019

WHEREAS, the California Educational Facilities Authority (the “Authority”), a public instrumentality of the State of California, is authorized and empowered by the provisions of the California Educational Facilities Authority Act (the “Act”) to issue revenue bonds and to loan the proceeds thereof to a participating private college or a participating nonprofit entity (both as defined in the Act) for the acquisition or construction of projects (as defined in the Act), to refund existing bonds, mortgages, or advances or other obligations incurred, given, or made by a participating private college for the acquisition or construction of any projects, to loan the proceeds thereof to a participating private college for the purpose of refinancing projects not originally funded pursuant to the Act (including repayment of costs, as defined in the Act), and to refund existing bonds or notes of the Authority;

WHEREAS, The Board of Trustees of the Leland Stanford Junior University (the “Borrower”) is a nonprofit public benefit corporation duly organized and existing under the laws of the State of California;

WHEREAS, the Borrower has requested that the Authority issue one or more series of its revenue bonds in an aggregate principal amount not to exceed \$600,000,000, to (i) make one or more loans of the proceeds of the Bonds (as defined below) to the Borrower to finance and/or refinance the acquisition, construction, expansion, rehabilitation, remodeling, renovation and equipping of certain educational facilities of the Borrower, such facilities being more fully described in Exhibit A attached hereto and incorporated herein (the “Project”) and (ii) pay costs of issuance of the Bonds;

WHEREAS, to the extent required by subdivision (b) of Section 94212 of the Education Code, the Borrower has provided documentation to the Authority demonstrating, to the extent applicable, that the Project has complied with Division 13 (commencing with Section 21000) of the Public Resources Code or is not a “project” under such division; and

WHEREAS, approval of the terms of issuance and sale of such revenue bonds and various related matters is now sought.

NOW, THEREFORE, BE IT RESOLVED by the California Educational Facilities Authority as follows:

Section 1. Pursuant to the Act, revenue bonds of the Authority designated as the “California Educational Facilities Authority Revenue Bonds (Stanford University), Series V-1” (the “Bonds”), in a total aggregate principal amount not to exceed \$600,000,000, are hereby

authorized to be issued from time to time, in one or more series, with such other name or names of the Bonds or series thereof as designated in the Indenture, hereinafter mentioned below, pursuant to which the Bonds will be issued. The proceeds of the Bonds shall be used for any or all of the purposes set forth in the third recital above.

Section 2. The Treasurer of the State of California (the “Treasurer”) is hereby authorized to enter into agreements to sell the Bonds in one or more series, on one or more sale dates at any time within one year of the date of adoption of this Resolution, at public or private sale, in such aggregate principal amount (not to exceed the aggregate principal amount set forth in Section 1) and in such series, at such prices, at such interest rate or rates, with such maturity date or dates and upon such other terms and conditions as the Treasurer, with the advice and consent of the Borrower, may determine. The Bonds, at issuance, shall be rated at investment grade by an active nationally recognized rating agency. The Bonds or any series of them may, at the sole option of the Borrower, be secured or supported by one or more of the following: deed of trust, bond reserve fund, bond insurance, other credit and/or liquidity facility and/or another security arrangement.

Section 3. The following documents:

(a) the Loan Agreement relating to the Bonds (the “Loan Agreement”), between the Authority and the Borrower;

(b) the Indenture relating to the Bonds (the “Indenture”), between the Authority and The Bank of New York Mellon Trust Company, N.A., as trustee (the “Trustee”);

(c) the Bond Purchase Agreement, including the appendices thereto, relating to the Bonds (the “Bond Purchase Agreement”), among Goldman Sachs & Co. LLC (the “Representative”) as representative of itself, J.P. Morgan Securities LLC, and Merrill Lynch, Pierce, Fenner & Smith Incorporated (the “Underwriters”), the Treasurer and the Authority and approved by the Borrower; and

(d) the preliminary official statement relating to the Bonds (the “Preliminary Official Statement”).

are hereby approved in substantially the forms on file with the Authority prior to this meeting, with such insertions, deletions or changes therein (including, without limitation, insertions, deletions or changes therein appropriate to reflect provisions relating to a deed of trust, a bond reserve fund, bond insurance, any other credit and/or liquidity facility and/or another security arrangement, at the sole option of the Borrower, for any series of Bonds) as the officer(s) executing the same may require or approve, such approval to be conclusively evidenced by execution and delivery thereof in the case of the Loan Agreement, the Indenture, and the Bond Purchase Agreement and by delivery thereof in the case of the Preliminary Official Statement. The Acting Executive Director shall seek the advice of bond counsel and counsel to the Authority with respect to any such insertions, deletions or changes therein.

Section 4. The dated dates, maturity dates (not exceeding 50 years from the respective date of issue), interest rates, manner of determining interest rates, interest payment dates, denominations, forms, registration privileges or requirements, place or places of payment,

terms of purchase or tender, terms of redemption, provisions governing transfer and other terms of the Bonds, including provisions for credit and/or liquidity facilities, if any, from time to time, shall be as provided in the Indenture, as finally executed.

Section 5. The Underwriters are hereby authorized to distribute the Preliminary Official Statement for each issue of the Bonds to persons who may be interested in the purchase of such Bonds offered in such issuance, it being understood that, at the discretion of the Underwriters (in consultation with the Borrower), a preliminary official statement may not be used with respect to any series of Bonds. The Underwriters are hereby directed to deliver a final official statement for each issue of the Bonds (the “Official Statement”) to all actual purchasers of such Bonds.

Section 6. The Bonds, when executed, shall be delivered to the Trustee for authentication by the Trustee. The Trustee is hereby requested and directed to authenticate the Bonds by executing the Trustee’s Certificate of Authentication appearing thereon, and to deliver the Bonds, when duly executed and authenticated, to or upon direction of the Underwriters thereof in accordance with written instructions executed on behalf of the Authority, which instructions are hereby approved. Said instructions shall provide for the delivery of the Bonds to or upon direction of the Underwriters, as determined and confirmed by the Treasurer, upon payment of the purchase price thereof.

Section 7. Each officer of the Authority is hereby authorized and directed, for and in the name and on behalf of the Authority, to do any and all things which they may deem necessary or advisable in order to consummate the issuance, sale, and delivery of the Bonds and otherwise to effectuate the purposes of this Resolution and the Indenture, Loan Agreement, Bond Purchase Agreement and Official Statement. The Authority hereby approves any and all documents to be delivered in furtherance of the foregoing purposes, including without limitation: (a) a tax certificate and agreement and other certifications; and (b) any agreement or commitment letter with respect to the provision of bond insurance, a letter of credit, a surety bond, a credit facility and/or a liquidity facility for the Bonds.

Section 8. The provisions of the Authority’s Resolution No. 2018-01 apply to the documents and actions approved in this Resolution.

Section 9. The Authority hereby approves and ratifies each and every action taken by its officers, agents and employees prior to the date hereof in furtherance of the purposes of this Resolution.

Section 10. This Resolution shall take effect from and after the date of adoption.

Date of Adoption: _____

EXHIBIT A

Project

100 Gigabyte Border Routers Upgrade
100 Gigabyte Connectivity to CENIC
408 Panama Mall Office Building
565 Cowell-Electrical Service
1651 Page Mill Human Immune Monitoring Center (HIMC) Project
1651 Page Mill Post Proj Scope
1651 Page Mill Renovation
1701 Page Mill Road Tenant Improvements
2017 Campus Drainage Improvements
2370 Watson Court Tenant Improvements
3145 Porter Drive Tenant Improvements
3172 Porter Drive Tenant Improvements
Academic Equipment
Access Ramps
Accessible Parking
Accessible Pathways
Accessible Restrooms
Administrative Systems Infrastructure
All-Gender Restroom Conversion
All-Gender Restroom Conversion Lake House
Alumni Center Distributed Digital Control Upgrade
Americans with Disabilities Act compliance at various buildings (ADA)
Anne T. and Robert M. Bass Biology Research Building and Connective Elements
Arguello Way Storm Drain Upgrade
Arrillaga Family Dining Commons Robotic Autobagger
Arrillaga Family Sports Center Backfill
Arrillaga Hall (formerly Cardinal Hall)
Auxiliary Equipment
Backbone & Firewall Refresh @ Porter Drive & SCRF
Backup/Storage Improvements
Barriers Removal
Bicycle and Pedestrian Paths & Lighting
BioChem Quad Utilities
Biomedical Innovation Building
Boiler Feed Water Piping Systems
Building Access Door Refresh
Building Energy Retrofit Program
Building Expansions
Building Renovations
Cabrillo-Dolores Faculty Homes
Campus Central Management & Control System Upgrade
Campus Drainage Improvements
Campus Drive at Galvez Domestic Water
Campus Drive East Domestic Water Replacement
Campus Drive East Lake Water Line Replacement
Campus Drive West Domestic Water Replacement
Campus Energy Management Control System (EMCS) Upgrade
Campus Transit Improvements
Capital Utilities Program (CUP)
Casper Domestic Hot Water System Renewal
Casper-Kimball Resident Fellow Apartment Renovation
Center for Academic Medicine (formerly Clinical Excellence Center)

Central Energy Facility Eyewash Showers
Central Energy Facility Low Temperature Hot Water System Improvements
Central Loading Dock and Stauffer III Demolition
Chilled Water Extensions
Chilled Water Heat Exchangers
Chilled Water Metering
Clark Center Whole Building Energy Retrofit Program
Client/Server Hardware
Communications & Networking Systems
Communications Services Conduits
Copper Cable
CUP - All Other
CUP - Chilled Water
CUP - Creek/Pump Stations
CUP - Department Firewalls
CUP - Domestic Water
CUP - Fish Ladders
CUP - Hot Water
CUP - Information Technology (IT) & Communication Systems (CS)
CUP - Lake Water
CUP - Other
CUP - Reservoirs
CUP - Sewer
CUP - Steam
CUP - Storm Drains
CUP System Expansion and CUP System Replacement
Data Center Power and Cooling Upgrade/Improvements
Data Center Power Improvements
Deferred/Planned Maintenance
Denning House
Department Firewalls Refresh Forsythe
Department Firewalls Refresh Northwest Data Center and Communication Hub
Departmental Firewall Refresh
Distributed Digital Control (DDC) Retrofit
District Work Centers
Dolores Knob, Tube & Misc Upgrade
Domestic Hot Water Improvements for Memorial Auditorium
Domestic Water (DW) Facilities
Domestic Water Inter-Tie Upgrade
Domestic Water Supervisory Control and Data Acquisition Improvements (SCADA)
Domestic Water System Bowdoin Pressure Reducing Valve (PRV) Stations
Drainage
Drainage System Upgrades
Duena Sanitary Sewer Improvements
Durand Domestic Hot Water (DHW) System Renewal
Durand Knob, Tube & Misc Scope and Design
Durand Phase 4 DDC
East Campus Infrastructure
East Campus Networking & Communication Redevelopment
El Camino Swale Rehab
Electrical Smart Meters

Electrical Upgrade Backlog - Synergy
Electricity Metering Projects
Electronic Communications Hub (ECH)/Enterprise Data Center Cable & Conduit
Elevator Upgrade
Elevators
Emergency Generators and Fueling Project
Emergency Management & Control Systems (EMCS)
Emergency Operations Center and Electronic Communications Hub Building (EOC and ECH Bldg)
Energy Retrofit - CCSR
Energy Retrofit Program
Energy Retrofit Program - Air Handler
Energy Retrofit Program - Avery Pool Controller
Energy Retrofit Program - Medical School Lab Surge Glass Wash Variable Air Volume System
Energy Retrofit Program - Medical School Office Building Air Handler
Energy Retrofit Program Heating, Ventilation and Air Conditioning Upgrades at Arrillaga Center for Sports and Recreation
Energy Retrofit Program-Maples Control System
Enterprise Data Center Cable & Conduit
Environmental Health & Safety (EH&S) Tenant/Occupant Improvements
Environmental Health & Safety Facility Expansion
Escondido Road Lake Water
Escondido South Hot Water Line
Escondido South Interiors Renovation
Escondido Village Domestic Water Lateral Replacement
Escondido Village Graduate Residences (EVGR) and Parking Garages
Escondido Village High-rise Sprinklers Installation
Escondido Village Low Rise Sewer Infrastructure
Escondido Village Low-Rise Fire Alarm
Escondido Village Low-Rise Kitchen & Bath Mockup
Escondido Village Sewer Infrastructure Upgrades
Escondido Village Slab Heat Renovation
Escondido Cottage Roof Replacement
EVGR Pavilion Emergency Generator
Exterior Backlog Scope & Design
Exterior Backlog Stern Windows
Faculty Staff Area Drainage Improvement
Felt Lake Water Line Replacement
Felt Lake Water Line Replacement Phase 2
Fiber cables
Fire Alarms
Fire Sprinkler for Campus Parking Structure V (PV)
Forsythe Backbone & Firewall Refresh
Forsythe Power Distribution Units (PDU) Replacement
Fremont Road Longitudinal Welded Pipe Upgrade
French Knob, Tube & Misc. Upgrades
Furniture, Fixtures & Equipment (FF&E)
Galvez Mall and Law School Lake Water
Galvez Mall Lake Water Pipe
Galvez Mall Sanitary Sewer Improvements
Galvez Street Storm Drain Upgrade
Gender-Neutral Restroom Conversions Initiatives

General Use Permit (GUP) Mitigation Projects
 Golf Course Lake Water Line Replacement
 Golf to Felt Lake Water Line Replacement
 Governor's Corner Suites Improvements
 Governor's Corner Suites Dining Societies Key Card Access
 Green Earth Sciences Whole Building Energy Retrofit Project (WBERP)
 GSB Bio-Retention Renewal
 Heating, Ventilation, and Air Conditioning (HVAC)
 High Voltage (HV) Infrastructure Upgrade and HV Transmission System Improvements
 High Voltage Cable Replacement
 High Voltage Infrastructure for ChEM-H
 High Voltage Replacements
 High Voltage Supervisory Control and Data Acquisition (SCADA) Upgrades
 Hohbach Hall (Redevelopment of Green East, 1st Floor)
 Home of Champions
 Hot Water Pipe Via Ortega, Via Pueblo
 HV Infrastructure Upgrade
 Information Technology & Communication Systems
 Information Technology System (ITS) Communications Cable
 Information Technology System (ITS) Communications Conduit
 Information Technology System (ITS) Improvements
 Information Technology System (ITS) Networking Systems Cable
 Infrastructure Improvements
 Infrastructure Upgrade
 Infrastructure Upgrade Lagunita
 Interiors Backlog Hammarskjold
 Interiors Backlog Toilet Retrofits Synergy
 ITS Conduit: California Ave Faculty Residences
 ITS Conduit: East Campus
 ITS Conduit: East Campus Plan
 ITS Conduit: Kingscote Renovation
 ITS Conduit: Lagunita New Wings
 ITS Conduit: MH Security
 ITS Copper: 408 Panama
 ITS Copper: East Campus Redevelopment
 ITS Copper: Forsythe/QUAD-VG
 ITS Copper: Frost Amphitheater
 ITS Copper: Kingscote Renovation
 ITS Copper: Manzanita Relocate
 ITS Copper: New Adult Hospital
 ITS Copper: New Bass Biology
 ITS Copper: New ChEM-H Bldg
 ITS Copper: New Childrens Hospital
 ITS Copper: New Denning House
 ITS Copper: New Manzanita Residence Hall
 ITS Copper: New Siebel Golf
 ITS Copper: Parking Structure 10
 ITS Copper: Traitel Conference Ctr.
 ITS Fiber Northwest Data Center and Communications Hub (NDCCH) to Medical ECH
 ITS Fiber Northwest Data Center and Communications Hub (NDCCH) to Puichon
 ITS Fiber: 408 Panama

ITS Fiber: Arboretum Childcare
ITS Fiber: Beckman to Edwards
ITS Fiber: Beckman to Loading Dock
ITS Fiber: Beckman to West ECH
ITS Fiber: Bonair to Stadium SM
ITS Fiber: East Campus Redevelopment
ITS Fiber: East ECH to Press ECH
ITS Fiber: East ECH to Quad ECH
ITS Fiber: Frost Amphitheater
ITS Fiber: Haas 0.1 to Mayfield
ITS Fiber: Kingscote Renovation
ITS Fiber: Knoll to 670 Lomita
ITS Fiber: Lagunita New Wings
ITS Fiber: Maples to Police Co
ITS Fiber: Medical ECH Reinforcement
ITS Fiber: Medical ECH to Beckman
ITS Fiber: Med ECH to Beckman
ITS Fiber: Med ECH to Falk Center
ITS Fiber: NDCCH 1.2 to 1.3
ITS Fiber: NDCCH to ATT Ring
ITS Fiber: NDCCH to East ECH
ITS Fiber: NDCCH to Forsythe DC
ITS Fiber: NDCCH to MH B12-30
ITS Fiber: NDCCH to Ped SM
ITS Fiber: NDCCH to Puichon
ITS Fiber: NDCCH/Med/West
ITS Fiber: New Bass Biology
ITS Fiber: New California Ave Faculty Residences
ITS Fiber: New ChEM-H Bldg
ITS Fiber: New Child Care Center
ITS Fiber: New Childrens Hospital
ITS Fiber: New Denning House
ITS Fiber: New Hospital-Med ECH
ITS Fiber: New Manzanita Residence
ITS Fiber: New Siebel Golf
ITS Fiber: New Stanford HealthCare Parking Structure (PS)
ITS Fiber: Parking Structure 10
ITS Fiber: Press ECH IDFs
ITS Fiber: Press ECH Reinforce
ITS Fiber: PS5 (Oak) Reinforce
ITS Fiber: Puichon to EH&S
ITS Fiber: Redwood City Campus
ITS Fiber: Quad ECH-Aero/Astro
ITS Fiber: Stadium to Maples
ITS Fiber: Stern Hall to Wings
ITS Fiber: Sunken Diamond
ITS Fiber: Traitel Conference Center
ITS Fiber: West ECH to East ECH
ITS Fiber: West ECH to NDCCH
ITS Fiber: West ECH to Quad ECH
ITS Fiber: Women's Softball

Jen-Hsun Huang Engineering Center
 Junipero Serra Boulevard Lake Water Lake Lagunita to Campus East
 Junipero Serra Boulevard Lake Water Line Replacement
 Junipero Serra Boulevard Lake Water Replacement Fremont to Lake Lagunita
 Kairos Knob, Tube & Misc Scope and Design
 Kingscote/Denning Hot Water/Chilled Water
 Knob, Tube & Misc. Scope and Design Projects
 Lagunita Court Refurbishment
 Lagunita Dining Sewer Ejection
 Lagunita Stucco Restoration
 Lake Water Filtration
 Lake Water Supervisory Control and Data Acquisition
 Lasuen Escondido Main Quad DW
 Lasuen Lake Water Replacement
 Lasuen Mall Sewer
 Lauren Knob & Tube & misc. upgrade
 Lauren Knob & Tube & Misc. upgrade Scope and Design
 Li Ka Shing Center for Learning & Knowledge
 Li Ka Shing Center Renovation
 Life Safety and Code Compliance - Fire Sprinklers
 Life Safety and Code Compliance and Miscellaneous Upgrades
 Life Safety and Code Compliance Backlog
 Life Safety and Code Compliance Backlog Stern Elevator
 Life Safety and Code Compliance Fire Alarms
 Life Safety and Code Compliance Fire Alarms - STERN BURBANK
 Life Safety and Code Compliance Fire Alarms - STERN DONNER
 Life Safety and Code Compliance Fire Sprinklers - SIGMA ALPHA EPSILON (SAE)
 Life Safety and Code Compliance-Fire Alarms-STERN LARKN N
 Life Safety and Code Compliance-Fire Alarms-STERN LARKN W
 Life Safety and Code Compliance-Fire Alarms-STERN SERRA
 Life Safety and Code Compliance-Fire Alarms-STERN TWAIN E
 Life Safety and Code Compliance-Fire Alarms-STERN TWAIN N
 Life Safety and Code Compliance-Fire Alarms-STERN ZAPATA
 Loading Docks
 Lokey WBERP Project
 Lorry I Lokey Stem Cell Research Building
 Main Quad DW Replacement
 Manzanita Park Refurbishment
 Mars Knob, Tube & Misc. Scope and Design
 McCullough Energy Efficiency
 Mechanical, Electrical and Plumbing, Sewer & Exterior Infrastructure
 Medical School Office Building (MSOB) Renovation 3rd Floor Wing
 Meters & Backflow Preventer
 Meters and Backflows
 Middle Plaza (formerly 500 El Camino Real Residential Project)
 Midrise Generator Replacements
 Miranda Avenue Domestic Water System Reconfiguration
 Miranda Domestic Water Upgrade
 Munger 4 - Green Room Restroom
 Munger Domestic Hot Water Heat Exchanger Modifications
 Munger Paul Brest Audio/Visual System

N4 DDC Migrations
Near East & West ECH UPS Refresh
Network Refresh (MMR) at Livermore, West ECH, East ECH
Network Taps
Network-Backbone
Networking Load Balancer
Networking Load Balancer Refresh
Networking Load Balancer System
Networking Special Projects
Networking Systems Copper Cable
Networking Systems Fiber Cable
New Buildings
New Dining & Kitchens and Renovations
New Residences at Lagunita
New Wells & Rehabilitations
North-South Axis DW Replacement
North-South Axis to Roth DW Replacement
Northwest Data Center and Communications Hub
On Campus Photovoltaics
Panama Mall Lake Water (LW) Replacement
Panama Street Utility Relocation
Physics-Astro HVAC Upgrades
Pine Hall Electronic Communications Hub Uninterruptable Power Supply Refresh
Pump Stations
Quad 1 Exterior LED Lights
Quad 14 Exterior LED Lights
Quad 2 Exterior LED Lights
Quad 3 Exterior LED Lights
Quad 6 & 7 Exterior LED Lights
Quad 8 Exterior LED lights
Quarry Road HV Service Upgrade
Rains Houses Renovation
Recreation Sport Court Center
Recycled Water System
Refrigerant Leak Alarm System
Renovation/Construction/Relocation of administrative Office Space (R&DE)
Renovations and Seismic Projects
Replacement Boiler Plant
Replacement Central Energy Facility Site Camera and Card Reader Addition
Reservoir 2 Pump Station Replacement
Research Animal Facility 1 and Research Animal Facility 2 (RAF) Rehabilitation & Retrofit
Research Park Dry Lab Space TI
Resident Fellow Apartment Renovations
Residential & Dining Enterprise (R&DE) Capitalized Operational Improvements
Residential & Dining Enterprise (R&DE) Deferred Maintenance Backlog projects
Residential & Dining Enterprise (R&DE) Major Renovation Plan (formally Capital Project Program (CPP) and Capital Improvement Program (CIP))
Residential & Dining Enterprises (R&DE) Deferred Maintenance Backlog
Residential Computing Wireless
Roads
Roof Replacement

Roofs and Maintenance Equipment Backlog Construction SAE
Roofs and Maintenance Equipment Backlog Scope & Design
Row Kitchen Renovations
Salvatierra St Domestic Water Replacement
San Juan Hill Drainage Improvements
San Juan Hill Sewer Replacement
San Juan Reservoir Rehabilitation
Sanitary Sewer Instrumentation
Sanitary Sewer Lift Station Replacement
Sanitary Sewer Rehabilitation
Sapp Center for Science Teaching and Learning (formerly Science Teaching and Learning)
Scientific Research Computing Facility - Backbone and Firewall Refresh
Scientific Research Computing Facility "Uplift" Racks Refresh
SCRL Street Light LED Retrofit
Serra Mall DW Replacement
Service Center Equipment
Sewer and Domestic Water Line Replacement
Sherlock Cluster Uplift
Shriram Center for Bioengineering and Chemical Engineering
Site Improvements
Slab Heating Replacement
Software Systems
Special Fast Track Cable
Spilker DDC Controls Upgrade
Stanford Ave Storm Drain Replacement
Stanford ChEM-H and the Wu Tsai (formerly Stanford ChEM-H and the Stanford Neurosciences Institute (SNI))
Stanford in Redwood City
Stanford in Redwood City Occupant/Interior Improvements
Stanford Infrastructure Program (SIP)
Steam Metering
Stern Complex Basement Piping
Stern Hall Window Replacement
Storey DHW System Renewal
Storm Drain Improvements
Storm Drainage
Student Computing Infrastructure - Farmshare
Supervisory Control and Data Acquisition (SCADA) System Upgrade
Sweet Hall/Galvez Lake Water Upgrade
Terman Engineering Laboratory WBERP Project
Trails
Undergraduate Housing and Dining
Underground Utilities Infrastructure Improvements
Uninterruptable Power Supply (UPS)
University Terrace (previously named California Avenue Homes)
UPS Refresh at Forsythe, Livermore, NDCCH, Press
UPS Refresh at Quad & Puichon
Utility Metering, Billing, Reporting and Sustainability Systems Integration
Utility Upgrades Site & Safety Improvements
Wallenberg Hall DDC Retrofit
Waste Collection System

Water Conservation & Recycling Plan Implementation
Water Conservation Program
Water Mains
Water Wells Rehabilitation
West Campus Detention Facilities
Whole Building Energy Retrofit Program (WBERP)
Whole Building Energy Retrofit Program (WBERP) - Mechanical Engineering Research Lab (MERL)
Whole Building Energy Retrofit Program (WBERP) - Varian
Whole Building Energy Retrofit Program Keck 1st Floor
Wilbur Dining Doors & Hardware
Wilbur Roof Backlog & Asset Renewal
Wireless Infrastructure
Wiremold Replacement
Yang & Yamazaki Environment and Energy Building
Zone 2 DW Main Replacement