

LOWELL OBSERVATORY

YEARS ENDED DECEMBER 31, 2019 AND 2018

LOWELL OBSERVATORY

YEARS ENDED DECEMBER 31, 2019 AND 2018

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Independent Auditors' Report

Lowell Observatory Sole Trustee, Lowell Observatory
Foundation Board of Trustees and Management
Lowell Observatory
Flagstaff, Arizona

We have audited the accompanying combined financial statements of Lowell Observatory (the Organization) which comprise the combined statements of financial position as of December 31, 2019 and 2018, and the related combined statements of activities, functional expenses and cash flows for the years then ended and the related notes to the combined financial statements.

Management's Responsibility for the Combined Financial Statements

Management is responsible for the preparation and fair presentation of these combined financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of combined financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these combined financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America established by the AICPA Auditing Standards Board and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the combined financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the combined financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the combined financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Organization's preparation and fair presentation of the combined financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Organization's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the combined financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the combined financial statements referred to above present fairly, in all material respects, the financial position of Lowell Observatory as of December 31, 2019 and 2018, and the changes in its net assets and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Report on Combining Information

Our audits were conducted for the purpose of forming an opinion on the combined financial statements as a whole. The accompanying combining information on pages 27 and 28 is presented for purposes of additional analysis of the combined financial statements rather than to present the financial position and results of operations of the individual entities, and it is not a required part of the combined financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the combined financial statements. The combining information has been subjected to the auditing procedures applied in the audit of the combined financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the combined financial statements or to the combined financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the combined financial statements as a whole.

Other Report Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued a report dated May 6, 2020, on our consideration of the Organization's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Organization's internal control over financial reporting and compliance.



Phoenix, Arizona
May 6, 2020

LOWELL OBSERVATORY

COMBINED STATEMENTS OF FINANCIAL POSITION

DECEMBER 31, 2019 AND 2018

	2019	2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 156,179	\$ 265,651
Restricted cash and cash equivalents	790,973	206,178
Restricted certificates of deposit	403,582	-
Investments	849	8,893
Grants receivable	319,429	360,146
Promises to give, current portion	2,788,205	1,265,726
Other current assets	341,900	338,767
Total current assets	4,801,117	2,445,361
Property and equipment, net	48,356,606	45,626,539
Promises to give, net of current portion	10,389,449	364,302
Collection item	400,000	400,000
Assets limited to use:		
Investments with donor restrictions	22,787,049	25,990,107
Total noncurrent assets	81,933,104	72,380,948
Total assets	\$ 86,734,221	\$ 74,826,309
LIABILITIES AND NET ASSETS		
Current liabilities:		
Accounts payable	\$ 375,473	\$ 427,401
Accrued expenses and other current liabilities	52,661	90,636
Total current liabilities	428,134	518,037
Note payable, bank	2,595,000	7,453,421
Deferred research grant revenue	44,576	85,454
Deferred access fee revenue	7,470,403	7,761,824
Total liabilities	10,538,113	15,818,736
Contingencies		
Net assets:		
Without donor restrictions:		
Net invested in property and equipment	45,761,606	38,173,118
Undesignated	(16,877,586)	(9,402,841)
	28,884,020	28,770,277
With donor restrictions	47,312,088	30,237,296
Total net assets	76,196,108	59,007,573
Total liabilities and net assets	\$ 86,734,221	\$ 74,826,309

See notes to combined financial statements.

LOWELL OBSERVATORY
COMBINED STATEMENT OF ACTIVITIES
YEAR ENDED DECEMBER 31, 2019

	Without donor restrictions	With donor restrictions	Total
Revenues, support and gains:			
Contracts with governmental and other agencies	\$ 3,276,144	\$ -	\$ 3,276,144
Telescope access fees	2,376,660	-	2,376,660
Contributions	1,601,759	17,899,671	19,501,430
Public program revenue	1,434,428	-	1,434,428
Investment income, net	251,954	3,761,524	4,013,478
Other income	194,861	-	194,861
Gain on sale of assets	56,500	-	56,500
Net assets released from restrictions	<u>4,586,403</u>	<u>(4,586,403)</u>	<u>-</u>
	<u>13,778,709</u>	<u>17,074,792</u>	<u>30,853,501</u>
Expenses:			
Program services:			
Research	4,478,426	-	4,478,426
Technology	4,017,253	-	4,017,253
Public programs	<u>2,637,567</u>	<u>-</u>	<u>2,637,567</u>
	<u>11,133,246</u>	<u>-</u>	<u>11,133,246</u>
Support services:			
Management and general	1,327,811	-	1,327,811
Fundraising	<u>1,203,909</u>	<u>-</u>	<u>1,203,909</u>
	<u>2,531,720</u>	<u>-</u>	<u>2,531,720</u>
	<u>13,664,966</u>	<u>-</u>	<u>13,664,966</u>
Increase (decrease) in net assets	113,743	17,074,792	17,188,535
Net assets, beginning	<u>28,770,277</u>	<u>30,237,296</u>	<u>59,007,573</u>
Net assets, ending	<u>\$ 28,884,020</u>	<u>\$ 47,312,088</u>	<u>\$ 76,196,108</u>

See notes to combined financial statements.

LOWELL OBSERVATORY
COMBINED STATEMENT OF ACTIVITIES
YEAR ENDED DECEMBER 31, 2018

	Without donor restrictions	With donor restrictions	Total
Revenues, support and gains:			
Contracts with governmental and other agencies	\$ 3,649,780	\$ -	\$ 3,649,780
Telescope access fees	2,343,971	-	2,343,971
Contributions	1,306,505	3,404,531	4,711,036
Public program revenue	1,374,741	-	1,374,741
Investment income (loss), net	158,016	(2,088,786)	(1,930,770)
Other income	69,684	-	69,684
Net assets released from restrictions	8,066,632	(8,066,632)	-
	16,969,329	(6,750,887)	10,218,442
Expenses:			
Program services:			
Research	4,108,652	-	4,108,652
Technology	4,157,008	-	4,157,008
Public programs	2,099,779	-	2,099,779
	10,365,439	-	10,365,439
Support services:			
Management and general	1,069,613	-	1,069,613
Fundraising	1,240,856	-	1,240,856
	2,310,469	-	2,310,469
	12,675,908	-	12,675,908
Increase (decrease) in net assets	4,293,421	(6,750,887)	(2,457,466)
Net assets, beginning	24,476,856	36,988,183	61,465,039
Net assets, ending	\$ 28,770,277	\$ 30,237,296	\$ 59,007,573

LOWELL OBSERVATORY

COMBINED STATEMENT OF FUNCTIONAL EXPENSES

YEAR ENDED DECEMBER 31, 2019

	Program Services				Supporting Services			Total expenses
	Research	Technology	Public programs	Total program services	Management and general	Fundraising	Total supporting services	
Salaries	\$ 2,297,641	\$ 1,479,980	\$ 1,466,386	\$ 5,244,007	\$ 692,393	\$ 723,135	\$ 1,415,528	\$ 6,659,535
Payroll taxes and benefits	433,260	315,494	302,459	1,051,213	209,673	134,103	343,776	1,394,989
	2,730,901	1,795,474	1,768,845	6,295,220	902,066	857,238	1,759,304	8,054,524
Depreciation	305,920	1,400,161	192,083	1,898,164	35,411	20,152	55,563	1,953,727
Equipment	27,688	49,706	26,421	103,815	5,253	2,971	8,224	112,039
Insurance	12,046	301,526	9,887	323,459	5,205	1,199	6,404	329,863
Interest	-	68,089	-	68,089	-	-	-	68,089
Other	23,663	86,930	267,213	377,806	47,962	151,441	199,403	577,209
Professional services	823,713	20,399	40,389	884,501	146,166	35,890	182,056	1,066,557
Repairs and maintenance	119,879	127,064	98,675	345,618	34,340	44,570	78,910	424,528
Supplies and postage	99,601	16,834	76,150	192,585	19,150	25,838	44,988	237,573
Training and development	10,138	6,286	48,508	64,932	97,311	4,510	101,821	166,753
Travel and meals	217,140	11,094	59,373	287,607	24,339	53,208	77,547	365,154
Utilities	107,737	133,690	50,023	291,450	10,608	6,892	17,500	308,950
	\$ 4,478,426	\$ 4,017,253	\$ 2,637,567	\$ 11,133,246	\$ 1,327,811	\$ 1,203,909	\$ 2,531,720	\$ 13,664,966

See notes to combined financial statements.

LOWELL OBSERVATORY

COMBINED STATEMENT OF FUNCTIONAL EXPENSES

YEAR ENDED DECEMBER 31, 2018

	Program Services				Supporting Services			Total expenses
	Research	Technology	Public programs	Total program services	Management and general	Fundraising	Total supporting services	
Salaries	\$ 2,204,076	\$ 1,556,330	\$ 1,123,714	\$ 4,884,120	\$ 533,989	\$ 650,611	\$ 1,184,600	\$ 6,068,720
Payroll taxes and benefits	422,170	321,514	262,000	1,005,684	121,250	134,080	255,330	1,261,014
	2,626,246	1,877,844	1,385,714	5,889,804	655,239	784,691	1,439,930	7,329,734
Depreciation	268,404	1,425,809	176,753	1,870,966	30,414	30,685	61,099	1,932,065
Equipment	43,611	6,495	17,943	68,049	4,834	848	5,682	73,731
Insurance	18,385	236,393	26,466	281,244	8,152	4,015	12,167	293,411
Interest	-	187,990	-	187,990	-	-	-	187,990
Other	23,799	34,543	202,091	260,433	70,951	200,765	271,716	532,149
Professional services	662,278	46,729	29,300	738,307	135,930	97,020	232,950	971,257
Repairs and maintenance	86,019	143,706	68,846	298,571	27,143	38,523	65,666	364,237
Supplies and postage	95,165	24,408	69,250	188,823	13,197	21,465	34,662	223,485
Training and development	12,036	5,434	26,943	44,413	68,553	5,866	74,419	118,832
Travel and meals	176,600	18,858	48,045	243,503	42,398	47,295	89,693	333,196
Utilities	96,109	148,799	48,428	293,336	12,802	9,683	22,485	315,821
	<u>\$ 4,108,652</u>	<u>\$ 4,157,008</u>	<u>\$ 2,099,779</u>	<u>\$ 10,365,439</u>	<u>\$ 1,069,613</u>	<u>\$ 1,240,856</u>	<u>\$ 2,310,469</u>	<u>\$ 12,675,908</u>

See notes to combined financial statements.

LOWELL OBSERVATORY

COMBINED STATEMENTS OF CASH FLOWS

YEARS ENDED DECEMBER 31, 2019 AND 2018

	<u>2019</u>	<u>2018</u>
Cash flows from operating activities:		
Increase (decrease) in net assets	\$ <u>17,188,535</u>	\$ <u>(2,457,466)</u>
Adjustments to reconcile increase (decrease) in net assets to net cash provided by operating activities:		
Depreciation	1,953,727	1,932,065
Net realized and unrealized (gains) losses on investments	(3,546,205)	2,971,730
Gain on disposal of assets	(56,500)	-
Changes in operating assets and liabilities:		
Grants receivable	40,717	(78,562)
Promises to give	(11,547,626)	(157,722)
Other current assets	(3,133)	120,128
Accounts payable	(51,928)	117,432
Accrued expenses and other current liabilities	(37,975)	145
Deferred research grant revenue	(40,878)	(513,499)
Deferred access fee revenue	(291,421)	(548,444)
Net adjustments	<u>(13,581,222)</u>	<u>3,843,273</u>
Net cash provided by operating activities	<u>3,607,313</u>	<u>1,385,807</u>
Cash flows from investing activities:		
Purchases of property and equipment	(4,683,794)	(4,106,044)
Proceeds from disposal of assets	56,500	-
Purchases of investments	(3,408,827)	(1,202,278)
Proceeds from sale/maturity of investments	10,166,134	6,326,475
Purchases of certificates of deposit	<u>(403,582)</u>	<u>-</u>
Net cash provided by investing activities	<u>1,726,431</u>	<u>1,018,153</u>
Cash flows from financing activities:		
Payments on note payable, bank	<u>(4,858,421)</u>	<u>(2,746,579)</u>
Net cash used in financing activities	<u>(4,858,421)</u>	<u>(2,746,579)</u>
Net increase (decrease) in cash, cash equivalents, and restricted cash and cash equivalents	475,323	(342,619)
Cash, cash equivalents, and restricted cash and cash equivalents, beginning	<u>471,829</u>	<u>814,448</u>
Cash, cash equivalents, and restricted cash and cash equivalents, ending	<u>\$ 947,152</u>	<u>\$ 471,829</u>

See notes to combined financial statements.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2019 AND 2018

1. Description of organization and summary of significant accounting policies:

Organization:

Lowell Observatory (the Observatory), located in Flagstaff, Arizona, is a nonprofit organization whose purpose is conducting astronomical research and sponsoring educational programs related to astronomy. The Observatory's mission is to pursue the study of astronomy, especially the study of our solar system and its evolution; to conduct pure research in astronomical phenomena; and to maintain quality public education and outreach programs to bring the results of astronomical research to the general public. The Observatory is overseen by a Sole Trustee, who is the responsible party for all operations of the Observatory. The Observatory's programs are supported primarily by government grants, public contributions, and investment returns. Therefore, the Organization's viability is dependent upon the strength and support provided to the not for profit industry, and the Organization's ability to collect on its contracts and promises to give.

The Trust U/W of Percival Lowell (the Trust) is a perpetual trust established for the benefit of the Observatory and is overseen by the Sole Trustee of the Observatory. Percival Lowell's will, which established the Trust, was executed on February 21, 1913, with its final codicil dated December 15, 1915. Percival Lowell died November 12, 1916. The Trust has been amended since that date.

The Lowell Observatory Foundation (the Foundation) was established on September 9, 2014 as a non-profit organization governed by an independent board of trustees and dedicated solely to supporting the Observatory's mission.

Principles of consolidation and combination:

The Trust is consolidated into the Observatory. The combined financial statements include the accounts of the Observatory and the Foundation (collectively the Organization). Due from related party and due to related party are obligations between the Observatory and the Foundation that will be satisfied in future years. All significant interorganizational accounts and transactions have been eliminated.

Estimates:

The preparation of combined financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the combined financial statements and the reported amounts of revenues, support, gains and expenses during the reporting period. On an ongoing basis, management evaluates its estimates, including those related to inputs used to recognize revenue over time. Actual results could differ materially from such estimates and assumptions.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

1. Description of organization and summary of significant accounting policies (continued):

Net assets:

Net assets, revenues, gains, and losses are classified based on the existence or absence of donor or grantor imposed restrictions. Accordingly, net assets and changes therein are classified and reported as follows:

- *Net assets without donor restrictions* - Net assets available for use in general operations and not subject to donor restrictions.
- *Net assets with donor restrictions* - Net assets subject to donor-imposed restrictions. Some donor-imposed restrictions are temporary in nature, such as those that will be met by the passage of time or other events specified by the donor. Other donor-imposed restrictions are perpetual in nature, where the donor stipulates that resources be maintained in perpetuity. Donor-imposed restrictions are released when a restriction expires, that is, when the stipulated time has elapsed, when the stipulated purpose for which the resource was restricted has been fulfilled, or both.

Adoption of new accounting standards:

In May 2014, the FASB issued Accounting Standards Update (“ASU”) No. 2014-09, “Revenue from Contracts with Customers (Topic 606).” Topic 606 and all related Accounting Standards Updates supersedes previous revenue recognition requirements and establishes a core principle requiring the recognition of revenue to depict the transfer of promised goods or services to customers in an amount reflecting the consideration to which the entity expects to be entitled in exchange for such goods or services in exchange transactions. The new rule requires an entity to (1) identify the contract, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations, and (5) recognize revenue based on a point in time or over time. The Organization adopted Topic 606 as of January 1, 2019.

Effective January 1, 2019, the Organization adopted Topic 606 utilizing the full retrospective method. Under the full retrospective method, the standard was applied to each prior reporting period presented and the cumulative effect of applying the standard was recognized at January 1, 2018. In implementing Topic 606, the Organization was required to recalculate the revenue earned on any exchange transactions that were in process at the implementation date and to restate the revenue and related expenses as if Topic 606 had been followed from the inception of the contract. The Organization’s revenue recognition practices for contracts with customers under Topic 606 do not differ significantly from prior practices. Therefore, no changes were required to previously reported revenues as a result of the adoption and a retrospective analysis of account balance changes was not required.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

1. Description of organization and summary of significant accounting policies (continued):

Adoption of new accounting standards (continued):

In June 2018, the FASB issued ASU No. 2018-08, "Not-for-Profit Entities (Topic 958)". The update clarifies the scope and accounting guidance for contributions received and contributions made. Effective January 1, 2019, the Organization adopted ASU 2018-08 utilizing the retrospective method. The Organization's revenue recognition practices for contributions under Topic 958 do not differ significantly from prior practices. Therefore, no changes were required to previously reported revenues as a result of the adoption and a retrospective analysis of account balance changes was not required.

In November 2016, the FASB issued ASU No. 2016-18, "Statement of Cash Flows (Topic 230): Restricted Cash." The update addresses the cash flow classification and presentation of changes in restricted cash and restricted cash equivalents. Effective January 1, 2019, the Organization adopted Topic 230 utilizing the retrospective method. There was no effect on net assets or the change in net assets for any period presented related to the adoption.

In January 2016, the FASB issued ASU No. 2016-01, "Financial Instruments - Recognition and Measurement of Financial assets and Financial Liabilities (ASU 2016-01)". ASU 2016-01 requires all investments be measured at fair value, clarified certain investment disclosures and provides prescribed measurement for equity investments without readily determinable fair values. Effective January 1, 2019, the Organization adopted ASU 2016-01 utilizing the retrospective method. There was no effect on net assets or the change in net assets for any period presented related to the adoption.

Practical expedients and exemptions:

Upon the adoption of Topic 606, the Organization utilized certain permitted practical expedients and exemptions as follows:

- In cases where the Organization has an unconditional right to consideration from a customer in an amount that corresponds directly with the value of our performance completed to date, the Organization recognizes revenue in the amount to which it has a right to invoice for services performed.
- The portfolio approach was used to evaluate a portfolio of contracts with similar characteristics because it was determined that the effects of applying this method to the portfolio of contracts would produce the same results as if each contract in the portfolio was evaluated through the five-step approach individually. The Organization accounted for its use of the portfolio approach by using estimates and assumptions that reflect the size and composition of the portfolio.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

1. Description of organization and summary of significant accounting policies (continued):

Revenue recognition:

Contracts with governmental and other agencies:

The Observatory has various contracts with governmental and other agencies. For contracts that have an exchange element, revenue is recognized over time as goods or services are transferred and expenditures for services under the provisions of the contract are incurred. Advances received from governmental funding sources in excess of costs incurred under the related exchange contracts are deferred and recognized as revenue when the related expenses are incurred using a cost-based input method. Deferred revenue from research contracts with an exchange element is a contract liability and is classified as deferred research grant revenue on the combined statements of financial position. At January 1, 2018, the balance of deferred research grant revenue was \$598,953. Revenue related to non-exchange contracts with governmental and other agencies is recognized as a contribution.

Telescope access fees:

Telescope access fees are charged to partnering universities for time on the Organization's telescopes in exchange transactions. Advances received from the partnering universities are recorded as deferred revenue. Revenue is recognized at a point in time in the period earned based on actual nights used. Deferred revenue from telescope access fees is a contract liability and is classified as deferred access fee revenue on the combined statements of financial position. At January 1, 2018, the balance of deferred access fee revenue was \$8,310,268.

Contributions:

Contributions are considered non-exchange transactions and are recognized in the appropriate category of net assets in the period received. Contributions of assets other than cash are recorded at their estimated fair value at the date of gift. Conditional promises to give are not recognized until the conditions on which they depend have been substantially met.

Public program revenue:

Public program revenue consists of exchange transactions recognized at a point in time when the related services are provided.

Donated goods and services:

Support arising from donated goods and services is recognized in the combined financial statements at its fair value. Donated services are recognized when the services received meet one of the following criteria:

- (a) create or enhance nonfinancial assets
- (b) require specialized skills, are provided by individuals possessing those skills, and would typically need to be purchased if not provided by donation.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

1. Description of organization and summary of significant accounting policies (continued):

Revenue recognition (continued):

Donated goods and services (continued):

Although the Organization utilizes the services of outside volunteers to perform a variety of tasks that assist the Organization, the fair value of all these services may not be reflected in the financial statements because the above criteria are not met.

Transaction price:

For exchange transactions, the transaction price is the amount of consideration the Organization expects to be entitled to in exchange for transferring goods and services to the customer. When a contract has a single performance obligation, the entire transaction price is attributed to that performance obligation. When a contract has more than one performance obligation, the transaction price is allocated to each performance obligation based on estimated relative standalone selling prices of the goods or services at the inception of the contract, which typically is determined using cost plus an appropriate margin.

Performance obligations:

Contracts that constitute exchange transactions are considered to contain a single performance obligation if the promise to transfer individual goods or services is not separately identifiable from other promises in the contracts primarily because the Organization provides a significant service of integrating a complex set of tasks and components into a single project or capability. A series of goods or services are a single performance obligation if the goods or services are substantially the same and each distinct good or service in the series will be satisfied over time and the same method would be used to measure progress towards satisfaction. Contracts that cover multiple performance phases of the product lifecycle (development, production, maintenance and support) are typically considered to have multiple performance obligations even when they are part of a single contract.

For contracts with multiple performance obligations, the Organization allocates the transaction price to each performance obligation using the best estimate of the standalone selling price of each distinct good or service in the contract. The Organization invoices its customers over time as the performance obligations are satisfied. Payment is typically due within 30 days of invoice.

Contract combination and modification:

To determine proper revenue recognition for exchange transactions, the Organization evaluates whether two or more contracts should be combined and accounted for as a single contract and whether a combined or single contract should be accounted for as more than one performance obligation. This evaluation requires significant judgment, and the decision to combine contracts or separate a combined or single contract into multiple performance obligations could change the amount of revenue and profit recorded in a given period.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

1. Description of organization and summary of significant accounting policies (continued):

Revenue recognition (continued):

Contract combination and modifications (continued):

The Organization accounts for contract modifications as a separate contract when the modification results in the promise to deliver additional goods or services that are distinct and the increase in price of the contract is for the same amount as the stand-alone selling price of the additional goods or services included in the modification.

Cost and expense recognition:

Contract costs include direct labor, materials, and indirect costs related to contract performance, such as indirect labor, communications, technology and depreciation costs. Costs charged to certain contracts from government agencies include indirect costs and are subject to audit by the United States Department of the Interior, Interior Business Center, as directed by the Office of National Aeronautics and Space Administration.

Cash and cash equivalents:

All highly liquid debt instruments purchased with a maturity of three months or less are considered to be cash equivalents. All cash and cash equivalents are placed with various credit institutions. At times, such amounts may be in excess of the FDIC insurance limits; however, management does not believe they are exposed to any significant credit risk on cash and cash equivalents.

Restricted cash and cash equivalents consist of amounts received with donor-imposed restrictions. All donor-imposed restrictions on restricted cash and cash equivalents are temporary in nature.

The following table provides a reconciliation of cash and cash equivalents, and restricted cash and cash equivalents reported on the combined statements of financial position to the combined statements of cash flows:

	<u>2019</u>	<u>2018</u>
Cash and cash equivalents	\$ 156,179	\$ 265,651
Restricted cash and cash equivalents	<u>790,973</u>	<u>206,178</u>
	<u>\$ 947,152</u>	<u>\$ 471,829</u>

The restrictions on cash and cash equivalents restricted by donors will lapse when the funds are spent on the related restricted purposes.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

1. Description of organization and summary of significant accounting policies (continued):

Investments:

Investments are carried at fair value. Donated investments are recorded at fair value at the date of gift. Investment gains and losses are included in the changes in net assets in the accompanying combined statements of activities as increases or decreases in net assets without donor restrictions unless their use is restricted by explicit donor-imposed stipulations or legal requirements net of related investment fees. Realized gains or losses on disposition of investments are recorded on a trade date basis using the specific identification method. Dividends and interest income are accrued when earned. Investments are considered to be impaired when a decline in fair value is judged to be other-than-temporary.

Fair value measurements:

Fair value is defined as the price to sell an asset or transfer a liability between market participants in an orderly exchange in the principal or most advantageous market for that asset or liability. The fair value for qualifying alternative investments is determined based on the investment's net asset value as a practical expedient. Considerable judgment is required in interpreting market data used to develop the estimates of fair value. Accordingly, the estimates presented in the financial statements are not necessarily indicative of the amounts that could be realized in a current market exchange. The use of different market assumptions and estimation methodologies may have a material effect on the estimated fair value.

Grants receivable:

The Organization records grants receivable for its unconditional rights to consideration arising from performance under contracts with customers that are primarily Federal Government agencies. The carrying value of such receivables, net of allowance for doubtful accounts, represents their estimated net realizable value. At January 1, 2018, the balance of grants receivable was \$281,584.

The Organization grants unsecured credit without interest to governmental agencies. The Organization grants credit to all other customers, generally without collateral or interest. Grants receivable consist primarily of uncollateralized obligations from the Federal Government agencies related to amounts earned but uncollected from the Organization's contracts with those agencies. Payments of grants receivable are applied to the specific invoices identified on the remittance advice, or if unspecified, to the earliest unpaid invoices.

Management considers all accounts over 30 days to be past due and provides an allowance for doubtful accounts based upon prior experience and management's assessment of the collectibility of specific accounts. Doubtful accounts are periodically reviewed for collectibility and charged against operations when management determines that all collection efforts have been exhausted. As of December 31, 2019 and 2018, receivable balances are considered fully collectible by management; therefore, no allowance for doubtful accounts has been provided.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

1. Description of organization and summary of significant accounting policies (continued):

Promises to give:

Unconditional promises to give are recognized as revenues at their estimated net realizable value in the period received. Promises to give that are collectible over future periods are discounted to their net present value. The provision for uncollectible promises to give is based on management's estimate of current economic factors, applied as a percentage of gross contribution revenues. Promises to give are periodically reviewed for collectibility and written off when determined uncollectible. At December 31, 2019 and 2018, promises to give are considered fully collectible, therefore, no allowance for uncollectible pledges has been provided.

Property and equipment:

Property and equipment are stated at cost except for donated equipment, which is recorded at its fair market value at the date of gift. Property and equipment with a value of greater than or equal to \$5,000 and a useful life of more than one year is capitalized. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets.

Buildings and improvements	5 - 40 years
Equipment and computers	3 - 30 years
Furniture and fixtures	5 - 10 years
Vehicles	5 - 10 years

Collection item:

The Organization has ownership of a vintage car, which was donated to the Observatory by the Sole Trustee in 2002. The vehicle is capitalized based on its appraised value at the date of the unrestricted contribution.

Endowments:

The Organization's endowments consist of funds established under either donor restriction or as designated by the Trustees for a variety of purposes. As required by GAAP, net assets associated with endowment funds (including funds designated by the Trustees to function as endowments) are classified and reported based on the existence or absence of donor-imposed restrictions.

The Trustees of the Foundation have interpreted the Uniform Prudent Management of Institutional Funds Act (UPMIFA) as requiring the preservation of the fair value of the original gift, as of the gift date of the donor-restricted endowment funds, unless there are explicit donor stipulations to the contrary. As a result of this interpretation, the Organization retains in perpetuity (a) the original value of initial and subsequent gift amounts donated to the endowment and (b) any accumulations to the endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added. Donor-restricted amounts not retained in perpetuity are subject to appropriation for expenditure by the Organization in a manner consistent with the standard of prudence prescribed by UPMIFA.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

1. Description of organization and summary of significant accounting policies (continued):

Program expense allocations:

The Organization's expenses are classified into functional expenses, which include program services and supporting services.

Program services are comprised of the following functional categories: research, technology, and public programs. Research encompasses all expenses to conduct research in all areas of astronomy, including studies of the sun, solar system, stars, exoplanets, galaxies and cosmology. This includes outlays related to contracts with governmental and other agencies. Technology includes the cost of servicing, maintaining and developing the telescopes, and the facilities and instruments used for research operations. It also integrates expenses related to telescope access fees. Public programs category is comprised of expenses to operate the education and outreach program provided to the general public, which includes tours, solar viewing, presentations, telescope viewing and camps.

Supporting services are comprised of the following functional categories: management and general and fundraising. Management and general provides the administrative support for the Organization. Fundraising incorporates costs associated with donor development, communications, compliance and generating donations for the Organization.

The combined financial statements report certain categories of expenses that are attributable to one or more program or supporting services of the Organization. Those expenses include depreciation, the Director's office, communications department, and information technology department. Depreciation is allocated based on a square footage basis, the Director's office is allocated based on a time and cost study of where efforts are made, certain costs of the communications department are allocated based on the benefit received, and the information technology department is allocated based on a cost study of specific technology utilized and the benefit received.

Advertising:

Advertising costs are expensed as incurred. Total advertising expense was \$220,402 and \$220,286 for 2019 and 2018.

Income taxes:

The Observatory, the Foundation, and the Trust are exempt from income taxes under both Internal Revenue Code (IRC) section 501(c)(3) and Arizona income tax laws. The Observatory is classified as other than a private foundation under IRC section 509(a)(1). The Foundation and the Trust are each classified as other than a private foundation under IRC section 509(a)(3) as a supporting organization of the Observatory. Income from certain activities not directly related to the Organization's tax-exempt purpose, however, may be subject to taxation as unrelated business taxable income (UBTI).

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

1. Description of organization and summary of significant accounting policies (continued):

Income taxes (continued):

From time to time, the Organization may be subject to penalties and interest assessed by various taxing authorities, which are classified as general and administrative expenses if they occur.

Subsequent events:

The Organization's management has evaluated the events that have occurred subsequent to December 31, 2019 through May 6, 2020, the date that the combined financial statements were available to be issued.

2. Liquidity and availability of financial assets:

As part of the Organization's liquidity management, it has a policy to structure its financial assets to be available as its general expenditures, liabilities and other obligations come due. In addition, the Organization invests cash in excess of daily requirements in short-term investments. To help manage unanticipated liquidity needs, the Organization has also committed a line of credit in the amount of \$9.2 million, which it could draw upon. At December 31, 2019 the Organization could draw down an additional \$6.6 million.

The following reflects the Organization's financial assets as of the combined statement of financial position date, reduced by the amounts not available for general use within one year of the combined statement of financial position date because of contractual or donor-imposed restrictions.

	<u>2019</u>	<u>2018</u>
Cash and cash equivalents	\$ 156,179	\$ 265,651
Restricted cash and cash equivalents	790,973	206,178
Restricted certificates of deposit	403,582	-
Investments	22,787,898	25,999,000
Grants receivable	319,429	360,146
Promises to give	<u>13,177,654</u>	<u>1,630,028</u>
Total financial assets	<u>37,635,715</u>	<u>28,461,003</u>
Promises to give scheduled to be collected in more than one year	(10,389,449)	(364,302)
Contractual or donor-imposed restrictions:		
Endowment funds	(5,912,722)	(5,064,600)
Other donor restrictions	(3,753,399)	(3,679,025)
Restricted certificates of deposit	(403,582)	-
Funds restricted by lender as collateral	(2,595,000)	(7,453,421)
Restricted cash and cash equivalents	<u>(790,973)</u>	<u>(206,178)</u>
Financial assets available to meet cash needs for general expenditures within one year	<u>\$ 13,790,590</u>	<u>\$ 11,693,477</u>

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

3. Investments:

	2019	2018
Money market funds	\$ 3,043,053	\$ 1,406,382
Fixed income securities	5,490,788	7,335,618
Equity securities	13,826,359	15,112,483
Alternative investments	427,698	2,144,517
	22,787,898	25,999,000
Less investments with donor restrictions	22,787,049	25,990,107
	\$ 849	\$ 8,893

Investment income for the years ended December 31, 2019 and 2018 is as follows:

	2019	2018
Interest and dividends	\$ 578,332	\$ 1,175,695
Net realized and unrealized gain (loss) on investments	3,546,205	(2,971,730)
Investment fees	(111,059)	(134,735)
	\$ 4,013,478	\$ (1,930,770)

4. Fair value measurements:

At December 31, 2019, the fair value of assets measured on a recurring basis is as follows:

	Fair value	Level 1	Practical expedient
Money market funds	\$ 3,043,053	\$ 3,043,053	\$ -
Fixed income securities	5,490,788	5,490,788	-
Equity securities:			
US large cap	8,733,765	8,733,765	-
US mid cap	1,293,160	1,293,160	-
US small cap	676,298	676,298	-
Developed international	2,182,494	2,182,494	-
Other	940,642	940,642	-
Alternative investments	427,698	-	427,698
	\$ 22,787,898	\$ 22,360,200	\$ 427,698

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

4. Fair value measurements (continued):

At December 31, 2018, the fair value of assets measured on a recurring basis is as follows:

	Fair value	Level 1	Practical expedient
Money market funds	\$ 1,406,382	\$ 1,406,382	\$ -
Fixed income securities	7,335,618	7,335,618	-
Equity securities:			
US large cap	8,871,260	8,871,260	-
US mid cap	1,636,877	1,636,877	-
US small cap	903,889	903,889	-
Developed international	2,485,082	2,485,082	-
Other	1,215,375	1,215,375	-
Alternative investments	2,144,517	-	2,144,517
	\$ 25,999,000	\$ 23,854,483	\$ 2,144,517

The assets in the preceding tables were measured primarily using the market approach. Following is a description of the valuation methodologies used for assets measured at fair value. The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Transfers between levels are recorded at the beginning of the reporting period in which they occur. Valuation techniques used maximize the use of observable inputs and minimize the use of unobservable inputs:

Level 1 - Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Plan has the ability to access.

Practical Expedient - Investments for which fair value is measured at net asset value per share (or its equivalent). Due to the inherent uncertainty of these estimates, these values may differ materially from the values that would have been used had a ready market for these investments existed.

The fair value of the Organization's investments are valued at the closing price reported on the active market on which the individual securities are traded except for the alternative investments. The Organization's alternative investments are valued based on their net asset value using the practical expedient. The alternative investments consist primarily of offshore investment funds that provide investment exposure to global equity, bond, currency and commodity markets and fixed-income securities, without quoted prices. The funds may invest in instruments that provide economic exposure to developed and emerging market issuers. These investments have restrictions on redemptions consisting of lock up periods of up to 65 days. No unfunded commitments exist related to these investments.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

5. Property and equipment:

	2019	2018
Land	\$ 1,253,088	\$ 670,434
Buildings and improvements	27,716,508	23,647,243
Equipment and computers	38,712,390	38,567,187
Furniture and fixtures	653,381	653,381
Vehicles	465,815	449,362
Construction in progress	3,821,578	4,557,924
	72,622,760	68,545,531
Less accumulated depreciation	24,266,154	22,918,992
	\$ 48,356,606	\$ 45,626,539

6. Note payable, bank:

The Organization has a \$9,180,000 revolving line of credit note (the Note) with BNY. The Note calls for monthly interest only payments at the monthly LIBOR rate (1.70% and 2.34% at December 31, 2019 and 2018) with a floor of 0.90% and matures on March 2023. The Note is collateralized by investment assets of the Organization. The Organization had an outstanding balance of \$2,595,000 and \$7,453,421 related to this line of credit at December 31, 2019 and 2018.

The Organization is required to be in compliance with certain non-financial covenants.

7. Deferred access fee revenue:

The Organization has entered into a series of agreements to provide several educational institutions access to its telescopes. Under the terms of the agreements, the institutions are required to provide prescribed levels of financial support in exchange for nights of telescope use. Deferred access fee revenue represents amounts received from the institutions for nights not yet provided. At December 31, 2019 and 2018 deferred access fee revenue totaled \$7,470,403 and \$7,761,824.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

8. Net assets with donor restrictions:

Net assets with donor restrictions are restricted for the following purposes or periods.

	2019	2018
Subject to expenditure for specified purpose:		
Improvements and maintenance	\$ 15,546,206	\$ 2,432,080
Marketing	-	28,489
Exhibits, education and outreach, and other public programs	198,185	125,684
Research	570,358	1,092,773
Funds held in Trust U/W of Percival Lowell to be used for Observatory purposes	25,084,617	21,493,670
	41,399,366	25,172,696
Endowments:		
Earnings are subject to appropriation and expenditure for specified purposes:		
Endowment fund	22,810	9,566
Exploration fund, subject to reversionary agreement	71,724	62,184
Exploration fund, not subject to reversionary agreement	1,771,110	1,508,653
Giovale endowed fund for astronomical research	538,784	465,066
Historic preservation fund, subject to reversionary agreement	1,051	915
Historic preservation fund, not subject to reversionary agreement	45,131	24,243
Instrumentation fund, subject to reversionary agreement	713,068	605,542
Instrumentation fund, not subject to reversionary agreement	1,720	454
Marcus cometary research fund	349,799	301,045
Mars Hill fund, subject to reversionary agreement	57,580	50,076
Mars Hill fund, not subject to reversionary agreement	1,030	899
Millenium fund, subject to reversionary agreement	2,125,942	1,852,213
Waddell fund, subject to reversionary agreement	104,479	91,065
Young scholar fund	108,494	92,679
Total endowments	5,912,722	5,064,600
	\$ 47,312,088	\$ 30,237,296

9. Endowments:

The Organization's endowment consists of the Millennium Fund and nine other perpetually restricted funds. Investment earnings related to the endowed assets are restricted for prescribed operating purposes.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

9. Endowments (continued):

Reversionary agreement governing the Millennium Fund:

In 2000, the Lowell Millennium Fund (the Fund) was created to be a fund for the benefit of the Observatory. The Fund received both gifts without restrictions and gifts with perpetual restrictions from outside parties. The Observatory, through the Executive Committee of the Lowell Observatory Advisory Board, determined that it would consider all of the Fund as an endowment fund and began to administer it in that manner. When the Foundation was created, the Executive Committee contributed the Fund to the Foundation, but retained the right to compel its return in the future at the discretion of the Executive Committee.

Reversionary agreements relative to certain other Foundation endowment funds:

Since the creation of the Foundation, the Observatory has been the recipient of other gifts that were received without donor restrictions, which it then, subsequently, donated to the Foundation with restrictions consistent with the requirements and stipulations of certain of the Foundation's endowment funds. By agreement between the Observatory and the Foundation, the Observatory can, at any time, compel the return of these funds to the Observatory by written request.

In both cases, because the assets held by the Foundation are restricted by the terms of their contribution to the Foundation as only having the income available to benefit the Observatory, they are all recorded as perpetually restricted. At December 31, 2019 and 2018 these funds comprised 52% and 53% of the Foundation's perpetually restricted net assets.

Changes in endowment net assets for the year ended December 31, 2019 are as follows:

	Without donor restrictions	With donor restrictions	Total
Endowment net assets, beginning	\$ -	\$ 5,064,600	\$ 5,064,600
Investment loss, net fees	-	983,515	983,515
Contributions	-	65,031	65,031
Distributions	-	(200,424)	(200,424)
	<u>\$ -</u>	<u>\$ 5,912,722</u>	<u>\$ 5,912,722</u>

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

9. Endowments (continued):

Changes in endowment net assets for the year ended December 31, 2018 are as follows:

	Without donor restrictions	With donor restrictions	Total
Endowment net assets, beginning	\$ -	\$ 5,118,816	\$ 5,118,816
Investment return, net fees	-	(355,983)	(355,983)
Contributions	-	467,872	467,872
Distributions	-	(166,105)	(166,105)
Endowment net assets, ending	<u>\$ -</u>	<u>\$ 5,064,600</u>	<u>\$ 5,064,600</u>

Funds with deficiencies:

From time to time, certain donor-restricted endowment funds may have fair values less than the amount required to be maintained by donors or by law (underwater endowments). We have interpreted UPMIFA to permit spending from underwater endowments in accordance with prudent measures required under law. At December 31, 2019 and 2018, funds with original gift values of \$5,446,808 and \$5,381,777, fair values of \$5,912,722 and \$5,064,600, and deficiencies of \$0 and \$317,177 were reported in net assets with donor restrictions. These deficiencies resulted from unfavorable market fluctuations that occurred after the investment of new permanently restricted contributions and continued appropriation for certain programs that was deemed prudent by the Board of Trustees.

Return objectives and risk parameters:

The Organization has adopted investment policies including those for endowment assets that attempt to preserve the capital, preserve the purchasing power, and achieve long-term growth of capital of the endowment assets. Endowment assets include those assets of donor-restricted funds that the organization must hold in perpetuity or for a donor-specified period(s). Under these policies all assets including endowment assets are invested in a manner that is intended to produce results that exceed various external benchmarks while assuming a moderate level of investment risk. Actual returns in any given year may vary from this amount.

Spending policy and how the investment objectives relate to spending policy:

The Trust and Foundation have spending policies in place whereby amounts are appropriated based on determination of certain criteria to include the preservation of the endowment corpus, consideration of economic conditions, effects of inflation and deflation and the expected return from income and appreciation of investments.

The spending policy over the Trust endowments utilizes a total return approach.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

9. Endowments (continued):

Spending policy and how the investment objectives relate to spending policy (continued):

The spending policy over the Foundation endowments also utilizes a total return approach, but provides for appropriations (currently a 4% rate annually) which may be made regardless of whether an Endowment Fund has sufficient current period and/or accumulated net investment returns but after taking into consideration the criteria specified above.

10. Retirement plans:

The Organization has a contributory 403(b) retirement plan historically held at Teachers' Insurance and Annuity Association. The last contributions sent to TIAA were in December 2016. Beginning in December 2016, new contributions were sent to Mutual of America. In 2017, the plan documents were changed and eligible employees may voluntarily participate in the plan. The Observatory contributes 5% of gross earnings up to the Internal Revenue Service maximum allowable, when the employee contributes at least 5% of gross earnings. The Organization made contributions of \$300,380 and \$275,523 to the plan during the years ended December 31, 2019 and 2018.

11. Contingencies:

For the years ended December 31, 2019 and 2018, substantially all of the Organization's grant revenue and receivables are comprised of revenue derived from federal agencies. A significant reduction in the level of this support, if it were to occur, would have a material effect on the programs and activities of the Organization. The governmental funding is subject to compliance audits by the respective governmental agencies. Assessments from such audits, if any, are recorded when the amounts of such assessments are reasonably determinable.

12. Statement of cash flows:

Supplemental disclosure of cash flow information:

Cash paid for interest was \$84,124 and \$179,132 for the years ended December 31, 2019 and 2018.

13. Reclassifications:

The 2018 financial statements have been reclassified in order to conform to the 2019 financial statement presentation. The reclassifications had no effect on net assets at December 31, 2018 or on the increase (decrease) in net assets for the year then ended.

LOWELL OBSERVATORY

NOTES TO COMBINED FINANCIAL STATEMENTS (CONTINUED)

YEARS ENDED DECEMBER 31, 2019 AND 2018

14. Pending pronouncements:

In February 2016, the FASB issued ASU 2016-02 "Leases." ASU 2016-02 requires a lessee to recognize in the statement of financial position a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term, along with additional qualitative and quantitative disclosures. ASU 2016-02 is effective for reporting periods beginning after December 15, 2020, with early adoption permitted.

Management is currently evaluating the effect that this standard will have on the combined financial statements.

15. Subsequent events:

The COVID-19 outbreak in the United States has caused business disruption. The extent of the impact of COVID-19 on operational and financial performance will depend on certain developments, including duration and spread of the outbreak, impact on customers, employees and vendors, all of which are uncertain and cannot be predicted. At this point, the extent to which COVID-19 may impact the combined financial statements is uncertain.

In April 2020, the Organization was granted an unsecured Paycheck Protection Program (PPP) loan from Alliance Bank in the amount of \$1,413,200, pursuant to the CARES Act (the Act). The loan matures in April 2022 and bears interest at a rate of 1%, and is payable monthly commencing in November 2020. The loan may be prepaid by the Borrower at any time prior to maturity with no prepayment penalties. Funds from the Loan may only be used for payroll costs, rent, utilities and interest, as defined under the Act. The Organization intends to use the entire loan amount for covered expenses. Under the terms of the PPP, certain amounts of the loan may be forgiven if they are used for covered expenses as described in the Act.

In February and March of 2020, the Organization received approximately \$968,000 in total of unrestricted funds from a donor's will. The funds will be used to establish the Foundation's board designated Reserve Endowment Fund. The Organization will receive additional funds from the donor's will in 2020 upon determination of the value of those assets.

LOWELL OBSERVATORY

COMBINING STATEMENT OF FINANCIAL POSITION

DECEMBER 31, 2019

	ASSETS			
	Lowell Observatory and Trust	Lowell Observatory Foundation	Eliminating	Combined total
Current assets:				
Cash and cash equivalents	\$ 133,267	\$ 22,912	\$ -	\$ 156,179
Restricted cash and cash equivalents	667,931	123,042	-	790,973
Restricted certificates of deposit	403,582	-	-	403,582
Investments	849	-	-	849
Grants receivable	319,429	-	-	319,429
Promises to give, current portion	2,787,555	650	-	2,788,205
Other current assets	<u>339,600</u>	<u>2,300</u>	<u>-</u>	<u>341,900</u>
Total current assets	<u>4,652,213</u>	<u>148,904</u>	<u>-</u>	<u>4,801,117</u>
Property and equipment, net	48,356,606	-	-	48,356,606
Due from related party	-	1,020	(1,020)	-
Promises to give, net of current portion	9,872,932	516,517	-	10,389,449
Collection item	400,000	-	-	400,000
Assets limited to use:				
Investments with donor restrictions	<u>16,748,190</u>	<u>6,038,859</u>	<u>-</u>	<u>22,787,049</u>
Total noncurrent assets	<u>75,377,728</u>	<u>6,556,396</u>	<u>(1,020)</u>	<u>81,933,104</u>
Total assets	<u>\$ 80,029,941</u>	<u>\$ 6,705,300</u>	<u>\$ (1,020)</u>	<u>\$ 86,734,221</u>

LIABILITIES AND NET ASSETS

Current liabilities:				
Accounts payable	\$ 375,473	\$ -	\$ -	\$ 375,473
Accrued expenses and other current liabilities	52,661	-	-	52,661
Due to related party	<u>1,020</u>	<u>-</u>	<u>(1,020)</u>	<u>-</u>
Total current liabilities	429,154	-	(1,020)	428,134
Note payable, bank	2,595,000	-	-	2,595,000
Deferred research grant revenue	44,576	-	-	44,576
Deferred access fee revenue	<u>7,470,403</u>	<u>-</u>	<u>-</u>	<u>7,470,403</u>
Total liabilities	<u>10,539,133</u>	<u>-</u>	<u>(1,020)</u>	<u>10,538,113</u>
Contingencies				
Net assets:				
Without donor restrictions:				
Net invested in property and equipment	45,761,606	-	-	45,761,606
Undesignated	<u>(16,902,468)</u>	<u>24,882</u>	<u>-</u>	<u>(16,877,586)</u>
28,859,138	28,859,138	24,882	-	28,884,020
With donor restrictions	<u>40,631,670</u>	<u>6,680,418</u>	<u>-</u>	<u>47,312,088</u>
Total net assets	<u>69,490,808</u>	<u>6,705,300</u>	<u>-</u>	<u>76,196,108</u>
Total liabilities and net assets	<u>\$ 80,029,941</u>	<u>\$ 6,705,300</u>	<u>\$ (1,020)</u>	<u>\$ 86,734,221</u>

LOWELL OBSERVATORY

COMBINING STATEMENT OF ACTIVITIES

YEAR ENDED DECEMBER 31, 2019

	Lowell Observatory and Trust	Lowell Observatory Foundation	Eliminating	Combined total
	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Revenues, support and gains:				
Contracts with governmental and other agencies	\$ 3,276,144	\$ -	\$ -	\$ 3,276,144
Telescope access fees	2,376,660	-	-	2,376,660
Contributions	19,811,556	(310,126)	-	19,501,430
Public program revenue	1,434,428	-	-	1,434,428
Investment loss, net	3,009,301	1,004,177	-	4,013,478
Other income	194,861	-	-	194,861
Gain on sale of assets	56,500	-	-	56,500
	<u>30,159,450</u>	<u>694,051</u>	<u>-</u>	<u>30,853,501</u>
Expenses:				
Program services:				
Research	4,478,426	-	-	4,478,426
Technology	4,017,253	-	-	4,017,253
Public programs	2,637,567	-	-	2,637,567
	<u>11,133,246</u>	<u>-</u>	<u>-</u>	<u>11,133,246</u>
Support services:				
Management and general	1,320,106	7,705	-	1,327,811
Fundraising	1,199,361	4,548	-	1,203,909
	<u>2,519,467</u>	<u>12,253</u>	<u>-</u>	<u>2,531,720</u>
	<u>13,652,713</u>	<u>12,253</u>	<u>-</u>	<u>13,664,966</u>
Increase in net assets	<u>\$ 16,506,737</u>	<u>\$ 681,798</u>	<u>\$ -</u>	<u>\$ 17,188,535</u>

LOWELL OBSERVATORY
SINGLE AUDIT REPORTS
YEAR ENDED DECEMBER 31, 2019

LOWELL OBSERVATORY
SINGLE AUDIT REPORTS
YEAR ENDED DECEMBER 31, 2019

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**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL
OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED
IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS***

Sole Trustee and Management
Lowell Observatory
Flagstaff, Arizona

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Lowell Observatory (the Organization) which comprise the statement of financial position as of December 31, 2019, and the related statements of activities, functional expenses, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated May 6, 2020.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Organization's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Organization's internal control. Accordingly, we do not express an opinion on the effectiveness of the Organization's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. *A material weakness* is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Organization's financial statements will not be prevented, or detected and corrected, on a timely basis. *A significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of the internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Organization's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Organization's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Organization's internal control and compliance. Accordingly this communication is not suitable for any other purpose.

A handwritten signature in black ink that reads "Beach Fleischman PC". The signature is written in a cursive, flowing style.

Phoenix, Arizona
May 6, 2020

**INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR PROGRAM,
ON INTERNAL CONTROL OVER COMPLIANCE, AND ON THE SCHEDULE OF EXPENDITURES
OF FEDERAL AWARDS REQUIRED BY THE UNIFORM GUIDANCE**

Sole Trustee and Management
Lowell Observatory
Flagstaff, Arizona

Report on Compliance for Each Major Federal Program

We have audited Lowell Observatory's (the Organization) compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the Organization's major federal programs for the year ended December 31, 2019. The Organization's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for each of the Organization's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of *Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the Organization's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the Organization's compliance.

Opinion on Each Major Federal Program

In our opinion, the Organization complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended December 31, 2019.

Report on Internal Control Over Compliance

Management of the Organization is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the Organization's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Organization's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance

We have audited the financial statements of the Organization as of and for the year ended December 31, 2019, and have issued our report thereon dated May 6, 2020, which contained an unmodified opinion on those financial statements. Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated in all material respects in relation to the financial statements as a whole.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.



Phoenix, Arizona
May 6, 2020

LOWELL OBSERVATORY

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

YEAR ENDED DECEMBER 31, 2019

<u>Federal Grant/Pass-Through Grantor/ Program or Cluster Title</u>	<u>Grant number</u>	<u>Pass-through entity identifying number</u>	<u>Federal CFDA number</u>	<u>Passed through to subrecipients</u>	<u>Federal expenditures</u>
Research and Development - Cluster					
<u>National Aeronautics and Space Administration</u>					
Science:					
Direct awards:					
NASA Headquarters	71452	NNX11AH46G	43.001	\$ -	\$ 43,239
NASA Headquarters	81094	80NSSC18K0856	43.001	32,937	200,785
NASA Headquarters	81105	80NSSC19K0556	43.001	62,642	97,892
NASA Headquarters	81130	80NSSC19K0289	43.001	-	64,199
NASA Headquarters	81210	NNX16AQ02G	43.001	107,508	206,121
NASA Headquarters	81310	80NSSC18K0987	43.001	70,257	167,570
NASA Headquarters	81320	80NSSC18K1687	43.001	-	61,457
NASA Headquarters	81405	NNX17AF13G	43.001	-	19,368
NASA Headquarters	81420	80NSSC18K0729	43.001	83,668	102,966
NASA Headquarters	81490	NNX16AJ51G	43.001	9,980	54,889
NASA Headquarters	81495	80NSSC18K0203	43.001	134,150	169,193
NASA Headquarters	81502	NNX17AH06G	43.001	103,930	274,646
NASA Headquarters	81505	NNX16AG52G	43.001	-	172,630
NASA Headquarters	81506	80NSSC19K0420	43.001	-	7,183
NASA Headquarters	81509	NNX16AK68G	43.001	-	29,781
NASA Headquarters	81520	NNX15AJ82G	43.001	38,911	51,721
NASA Headquarters	81530	80NSSC19K01586	43.001	-	7,076
Total direct NASA				<u>643,983</u>	<u>1,730,716</u>
Pass-through awards:					
NASA JPL/CalTech	82202	RSA 1634072	43.001	-	3,466
NASA JPL/CalTech	82402	RSA 1580984	43.001	-	211
NASA JPL/CalTech	82415	RSA 1610345	43.001	-	7,201
NASA JPL/CalTech	82805	RSA 1580392	43.001	-	5,229
NASA JPL/CalTech	82806	RSA 1620446	43.001	-	9,142
Space Telescope Science Institute	73705	HST-GO-13781.001-A	43.001	-	37,729
Space Telescope Science Institute	73706	HST-GO-14707.001-A	43.001	-	85,760
Space Telescope Science Institute	73817	HST-GO-13692.001-A	43.001	-	(480)
Space Telescope Science Institute	73819	HST-GO-13667.007-A	43.001	-	35,893
Space Telescope Science Institute	73820	HST-AR-14581.002-A	43.001	-	4,715
Space Telescope Science Institute	73821	HST-GO-14928.004-A	43.001	-	868
Space Telescope Science Institute	73822	HST-GO-15207.005-A	43.001	-	114
Space Telescope Science Institute	73823	HST-GO-15233.001-A	43.001	-	1,765
Space Telescope Science Institute	73824	HST-GO-15143.003-A	43.001	-	244
Space Telescope Science Institute	73825	HST-GO-15144.004-A	43.001	-	203
Space Telescope Science Institute	73826	HST-GO-15142.003-A	43.001	-	240
Space Telescope Science Institute	73844	HST-GO-14133.002-A	43.001	-	20,375
Space Telescope Science Institute	73865	HST-GO-13777.003-A	43.001	-	796
Space Telescope Science Institute	73866	HST-GO-15170.002-A	43.001	-	796
Space Telescope Science Institute	73875	HST-GO-14794.003-A	43.001	-	9,546
Boston University	78310	4500002707	43.001	-	10,415
Johns Hopkins Applied Physics Lab	78502	#128572	43.001	-	766
Southwest Research Institute	78415	#K99090JRG	43.001	-	351
Southwest Research Institute	78420	#K99058JRG	43.001	-	10,038

See accompanying notes to schedule of expenditures of federal awards

LOWELL OBSERVATORY

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS (CONTINUED)

YEAR ENDED DECEMBER 31, 2019

<u>Federal Grant/Pass-Through Grantor/ Program or Cluster Title</u>	<u>Grant number</u>	<u>Pass-through entity identifying number</u>	<u>Federal CFDA number</u>	<u>Passed through to subrecipients</u>	<u>Federal expenditures</u>
Research and Development - Cluster (continued)					
<u>National Aeronautics and Space Administration</u>					
Science:					
Pass-through awards (continued):					
Southwest Research Institute	78425	#K99038MEC	43.001	\$ -	\$ 21,171
Southwest Research Institute	78431	#278981Q	43.001	-	106,121
Planetary Science Institute	78440	#1374	43.001	-	7,849
Planetary Science Institute	78445	#1437	43.001	-	14,009
Made in Space, Inc.	78460	C1001.21L	43.001	-	8,387
Total pass-through NASA				-	402,920
Total - NASA				643,983	2,133,636
<u>National Science Foundation</u>					
Mathematical and Physical Sciences:					
Direct awards:					
National Science Foundation	74803	AST-1411563	47.049	-	(224)
National Science Foundation	74804	AST-1518081	47.049	-	91,107
National Science Foundation	83005	AST-1907492	47.049	-	4,081
National Science Foundation	83011	AST-1831063	47.049	-	37,776
National Science Foundation	83050	AST-1734484	47.049	-	59,948
National Science Foundation	83090	AST-1616084	47.049	78,732	174,689
National Science Foundation	83116	AST-1612874	47.049	-	47,992
Total direct National Science Foundation				78,732	415,369
Pass-through awards:					
New Mexico Institute of Mining and Technology	83200	SRIS10	47.049	-	1,464
Southwest Research Institute	78435	#H99010HP	47.049	-	15,236
Southwest Research Institute	78436	#L99001JRG	47.049	-	1,395
Total pass-through National Science Foundation				-	18,095
Total National Science Foundation				78,732	433,464
<u>Department of Defense</u>					
Basic and Applied Scientific Research:					
Direct awards:					
Naval Research Laboratory	75115, 75120, 75125	N00173-16-2-C904	12.300	-	709,042
Total Department of Defense				-	709,042
Total Research and Development - Cluster				722,715	3,276,142
Total expenditures of federal awards				\$ 722,715	\$ 3,276,142

See accompanying notes to schedule of expenditures of federal awards

LOWELL OBSERVATORY

NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

YEAR ENDED DECEMBER 31, 2019

1. Basis of presentation:

The accompanying Schedule of Expenditures of Federal Awards (the Schedule) includes the federal award activity of Lowell Observatory (the Organization) under programs of the federal government for the year ended December 31, 2019. The information in the Schedule is presented in accordance with the requirements of *Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance)*. Because the Schedule presents only a selected portion of the operations of Lowell Observatory, it is not intended to and does not present the financial position, changes in net assets or cash flows of the Organization.

2. Summary of significant accounting policies:

Expenditures reported on the Schedule are reported on the accrual basis of accounting. Such expenditures are recognized following the cost principles contained in the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement.

The Organization has not elected to use the ten percent de minimis indirect cost rate as allowed under the Uniform Guidance.

3. Catalog of Federal Domestic Assistance (CFDA) Numbers:

The program titles and CFDA numbers or federal identification numbers were obtained from the federal or pass-through grantor or the update to the *2019 Catalog of Federal Domestic Assistance*.

LOWELL OBSERVATORY

SCHEDULE OF FINDINGS AND QUESTIONED COSTS

YEAR ENDED DECEMBER 31, 2019

SUMMARY OF AUDITORS' RESULTS

Financial Statements

The auditors' report expressed an unmodified opinion on the financial statements of Lowell Observatory.

Internal control over financial reporting:

Material weakness(es) identified? Yes No
Significant deficiency(ies) identified? Yes None reported

Noncompliance material to financial statements noted? Yes No

Federal Awards

Internal control over major federal programs:

Material weakness(es) identified? Yes No
Significant deficiency(ies) identified? Yes None reported

The auditors' report on compliance for the major federal awards program of Lowell Observatory expressed an unmodified opinion on its major programs.

Audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a):

Yes No

Identification of major federal programs:

Research and Development Cluster:
Science CFDA 43.001
Mathematical and Physical Sciences CFDA 47.049
Basic and Applied Scientific Research CFDA 12.300

Dollar threshold used to distinguish between Type A and Type B programs: \$750,000

Auditee qualified as a low-risk auditee? Yes No

LOWELL OBSERVATORY

SCHEDULE OF FINDINGS AND QUESTIONED COSTS (CONTINUED)

YEAR ENDED DECEMBER 31, 2019

FINDINGS - FINANCIAL STATEMENT AUDIT

None

LOWELL OBSERVATORY

SCHEDULE OF FINDINGS AND QUESTIONED COSTS (CONTINUED)

YEAR ENDED DECEMBER 31, 2019

FINDINGS AND QUESTIONED COSTS - MAJOR FEDERAL AWARD PROGRAMS AUDIT

None

LOWELL OBSERVATORY

SUMMARY SCHEDULE OF PRIOR YEAR FINDINGS

YEAR ENDED DECEMBER 31, 2019

None