BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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HEATHER L. ROSENTRATER

REPRESENTING AVISTA CORPORATION

Avista Utilities

Facilities Infrastructure Plan

2020

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Introduction

A utility is an asset-heavy entity, requiring a great deal of infrastructure to support its operations. Trucks, crews, office and operations buildings, large storage areas, equipment and supplies, support staff and more are required in order to provide 24-hour a day customer service for Avista's electric and gas customers. As would be expected, many of the facilities built over time to support Avista operations are quite dated. Some were built in early Company days during the late 1800s, many others were built in the 1950s and 1960s (almost 70 years ago!) Others are modern and provide sufficient service for today's purposes.

Avista Facilities Team Responsibilities Include:

- *All maintenance requirements for office buildings, shops, call and service centers, equipment & vehicle areas, warehouses, docks, storage facilities, parking zones, and all other Company physical spaces*
- *Heating, cooling, ventilation, electrical, plumbing, and lighting system functionality & efficiency*
- *Space management*
- *Property and grounds*
- *Janitorial services*
- *Lease management*
- *Handling employee moves & accommodations*
- *Energy efficiency measures*
- *Facilities construction*
- *Shared space scheduling*
- *Parking areas*
- *Employee moves*
- *Planning, budgets, project management, record keeping*

In order to continue to adequately serve customer needs and customer investments in infrastructure going forward, buildings must be maintained, upgraded and updated to meet the uses for which they are intended. Common sense and good stewardship indicate that facilities will need more maintenance over time if they are to remain useful. Complete replacement may be required to remain functional, not only to keep up with current requirements, but also to save money over the long term. For Avista, these requirements include a steady increase in customer base and increasing focus on customer service, which naturally requires more employees and equipment over time.

Above: Mission Campus Pole Yard
Below: Lewiston Office

Trucks and vehicles have also increased in size and complexity, requiring more space as well as specialized maintenance and support. Materials and supplies must be located in close proximity to crews in an organized, efficient space for quick access in order to provide effective daily work flow and to remedy outages in a timely manner. Employees must have adequate and safe work areas to perform their jobs and serve customers. All of these facets come into

play in order for Avista to provide an appropriate level of customer service, and they are centered in the facilities that support Company operations.

"Maintenance" is defined as the act of keeping assets in acceptable condition. It includes preventative care, normal repair, replacement of parts and structural components, and other activities needed to preserve the asset so it can continue to provide acceptable service and achieve its expected life.

Facilities underpin the success of most organizations, and this is especially true in the utility industry. The heart of the ability to serve customers lies in the crews and equipment that go out and perform the work, from the daily practices such as replacing failed equipment or installing service for new customers, to crisis situations of putting the system back together after a major storm. This necessitates reliable, dependable vehicles, ready access to tools, equipment and supplies, effective and efficient employees, and a strong focus on safety. These requirements are at the heart of Avista Facilities Management work, plans, and strategies.

Avista Facilities Staff

- 1 Corporate Facilities Manager
- 1 Building Ops. Supervisor
- 1 Quality Assurance Inspector
- 3 Building Servicemen
- 1 Electrician
- 3 HVAC Technicians
- 1 Painter
- 1 Groundskeeper
- 2 Project Managers
- 1 Corporate Space Planner
- 1 Interior Planners
- 1 Administrative Assistant

Utility infrastructure also includes the support functions that are required for Avista to function as a business, such as accountants, engineers, mechanics, customer service representatives, line patrol vehicles, phone systems, work cubicles, chairs, computers, service bays, and so much more. All of this requires a framework for which the Avista Facilities team provides systems, structures, maintenance, and associated support.

This small group of seventeen employees is responsible for all of Avista's lands and buildings, which includes a wide spectrum of responsibilities such as managing janitorial services, ensuring a roof is repaired before it fails, replacing a structure when it no longer serves the necessary purpose or becomes cost ineffective, handling major construction projects, fixing clogged plumbing, and even spraying weeds. It should be noted that only about 57% of the Facilities staff performs actual maintenance and repair work across the Avista service territory; others execute capital projects, and others provide general support across the organization. This group manages and maintains 51 facilities totaling 1,265,514 square feet on over 59 acres, in addition to 38 sites across a service territory containing nearly 1.6 million customers scattered across 30,000 square miles in four states.[1] In addition, the Company service territory is split into sections of 12 operating districts, each containing

The little Avista service center in Kamiah

[1] Avista Quick Facts 2019, https://myavista.com/about-us/our-company/quick-factsqs

regional crews, support employees, buildings, storage yards, and associated equipment and facilities. Supporting such a vast area and such a diverse group of assets requires leadership, vision, good planning, expertise, experience, and decision-making tools. The Facilities team utilizes all of these aspects, including performing regular studies of facility condition, receiving feedback from employees when they identify issues, and using common sense, industry standards, surveys and evaluations, as well as asset management techniques such as life cycle costs and asset health indices. They consider issues such as safety, criticality, efficiency, cost, potential savings, and long term costs and value while holding to a clearly defined budget. It is a balancing act, as the age of Avista's buildings means that the needs and demands for repair, remodel, or replacement have continued to grow and become more pressing over time, while the budgets for maintenance have remained relatively flat. To add to this situation, the amount of facilities space being added to the Company portfolio continues to increase. This issue is clearly shown in Figure 1.

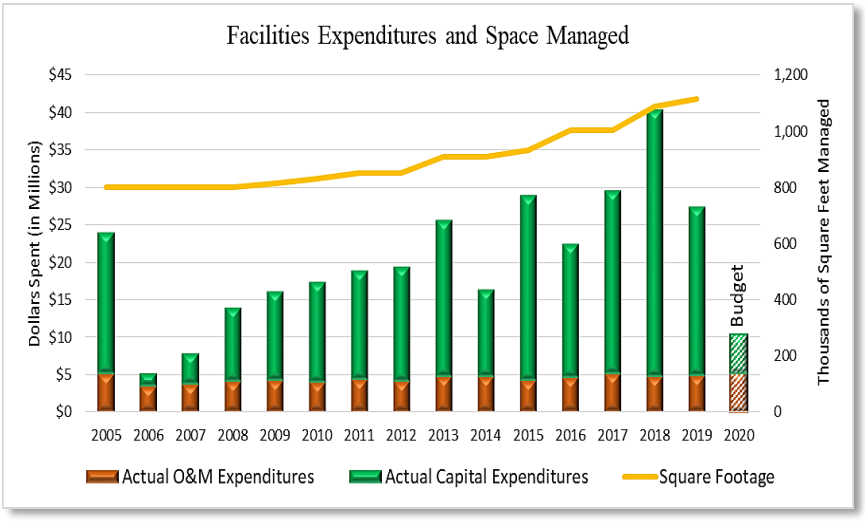


Figure 1. Avista Facilities Managed and Related Expenditures [2]

Manpower levels in Facilities have remained nearly the same for over a decade, as shown in Figure 2. Though industry standards recommend one full time employee per 49,000 square feet of space managed,[3] Avista currently has one employee per 55,903 square feet of space managed, putting ever increasing burdens on very few employees who are maintaining facilities which continue to grow older.

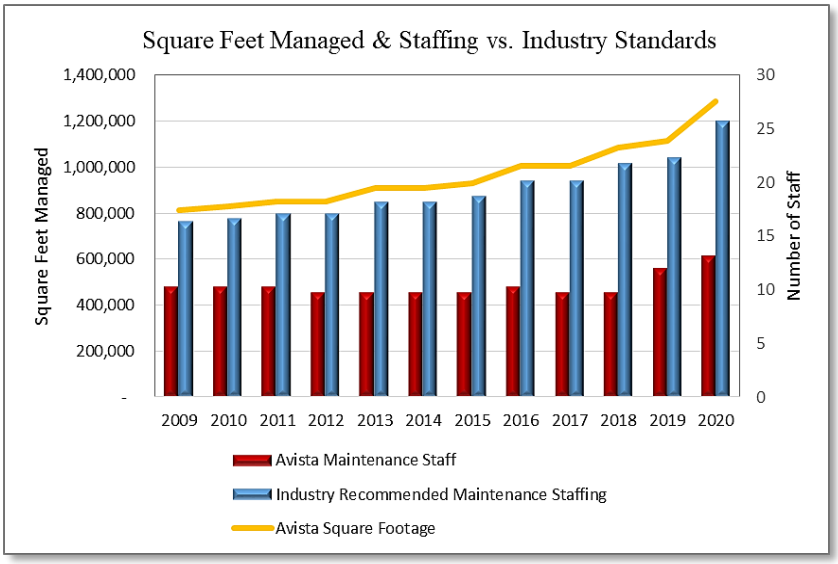


Figure 2. Avista Staffing Levels per Square Foot vs. Industry Standard

As shown in Figure 2, Avista has increased the number and size of its properties over 62% in the past ten years. Though capital expenditures to

[2] Larger expenditures in 2018 are due to the new Fleet Building ($6.3 million) as well as constructing the Dollar Road Facility ($14.3 million) and the Deer Park Service Center ($5.1 million).

[3] International Facilities Management Association, "Operations and Maintenance Benchmarks: Research Report #32," page 51. This report is not available online. It must be purchased. However, Avista has one available if requested.

purchase and build new facilities have increased, over the same time period O&M budgets have remained relatively flat, which means they are maintaining a far greater amount of space with the same amount of dollars.

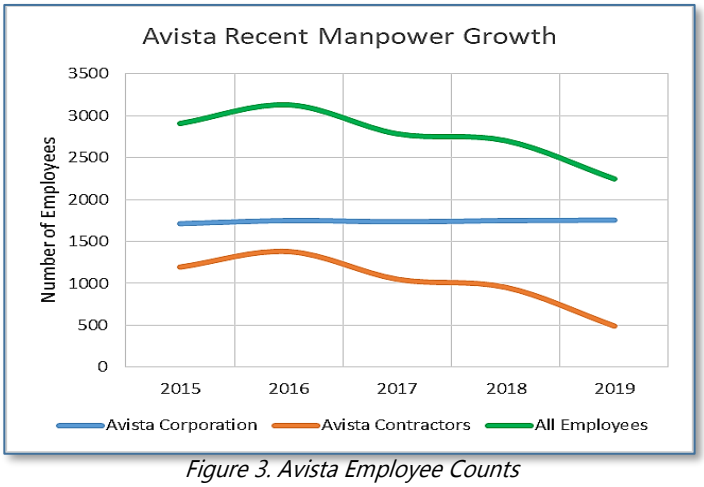


Figure 3. Avista Employee Counts

Avista's full time employee levels have remained relatively stable over the past few years as can be seen in Figure 3 (blue line). Figure 4 highlights the fact that most of Avista's space needs are related to professional level employees (both Avista employees and temporary employees or contractors.)

Often temporary employees are associated with technology, such as hiring specialists to install the new Windows 10 operating system company-wide. When temporary projects wind down, temporary employee levels decline accordingly, as shown in Figure 3. Contracting is a cost-saving measure, typically used when the Company either does not have the expertise in-house or lacks the manpower to perform labor and time-intensive tasks like wood pole and gas line inspections, or for short term tasks such as technology installations as mentioned above. Contractors are an important work source, and though they are not full-time long-term employees, they still need a place to work, even if just temporarily. Thus, finding adequate office space, maximizing the use of existing space, and minimizing splitting up teams is an ongoing struggle.

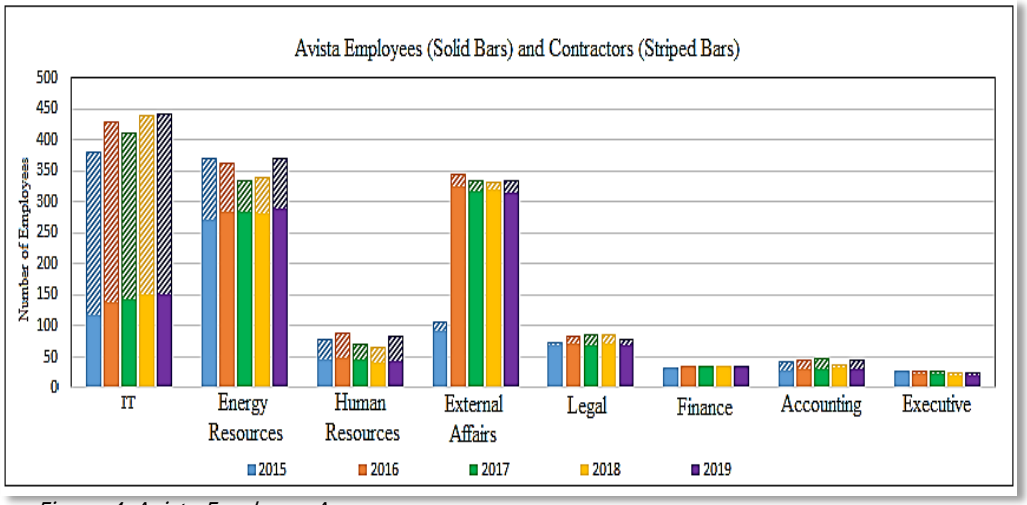
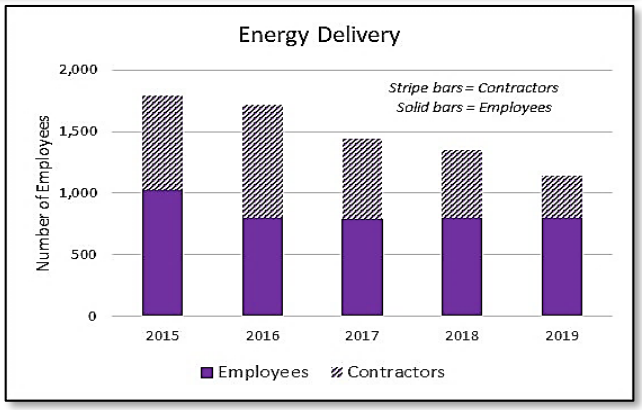


Figure 4. Avista Employee Area Growth

Note that Energy Delivery is broken out because it contains the largest number of employees and would skew the main chart.



Another issue repeatedly faced by the Facilities team is declining customer satisfaction. They face constant

complaints from customers, employees and contractors about the condition of the buildings they manage, including dirty windows, stained carpets, pot holes in the parking lots, odors, cracks, loss of paint, too few (or no) conference rooms, lack of adequate work space, etc. To make matters worse, work response time to internal customer issues at Avista facilities has increased significantly in the past ten years. Currently what used to be same-day response has increased to an average of three days to react to non-emergency concerns simply due to lack of manpower.

IFMA Recommended Maintenance Staff	
Square Feet Managed	**# of FTEs**
Less than 50,000	2
50,000 - 100,000	4
100,001 - 250,000	5
250,001 - 500,000	9
500,001 - 750,000	13
750,001 - 1,000,000	16
1,000,001 - 1,500,000	27
1,500,001 - 2,000,000	35
2,000,001 - 3,000,000	44
More than 3,000,000	140

Unfortunately, existing funding has required an O&M shift to maintaining only the most critical systems, thus more aesthetic problems such as dirty carpets and windows are "selectively neglected." These types of issues tend to be very noticeable to employees and customers, affecting the perceptions of both with respect to the Company. It also reduces the expected life of assets and increases long term maintenance costs. As can be imagined, all of these issues along with the constant pressure of not being able to address basic problems, unhappy customers both internal and external, and being understaffed and overworked is taking a toll on Facility employee morale as well as the lifecycle expectations and costs associated with these assets.

Even facing all of these challenges, the Facilities team has achieved numerous successes and awards. Facilities has worked to achieved LEED GOLD status for each floor of its corporate office building. A LEED certified building has incorporated sustainability into its design and construction, and thus can potentially perform more sustainably than typical comparable buildings in the marketplace. Addressing this phase of a building's life is important because many irreversible decisions with impacts on sustainability are made during the design and construction processes. At Avista, this sustainability focus was included as part of an overall renovation of the corporate office building, including the HVAC, electrical and plumbing systems for each floor.

Avista Officers and Facilities staff receive the LEED GOLD Award

Upon the completion of this work, the Facilities team chose to apply for the designation of LEED-Existing Building (EB). LEED-EB aims to maximize operational efficiency while minimizing environmental impacts. Its main users are building owners and facilities managers. Since LEED-EB is based on actual building O&M practices, a LEED-EB certified building is actually performing more sustainably than its peers. Addressing the operations phase of a building's life is critical, because on a life-cycle basis, that is typically when most of the environmental impacts occur. Moreover, improvements in this phase lead to actual, concrete, measurable benefits. Facilities was able to demonstrate all these benefits and received LEED GOLD for this work.

Another designation that Facilities has worked toward is an Energy Star rating. Buildings that earn the U.S. Environmental Protection Agency's Energy Star use 35% less energy and generate 35% fewer greenhouse gas emissions than similar buildings across the nation. The financial value of energy savings isn't just limited to utility bills. It accrues across the board — from asset value to shareholder value to operating income. Beyond the positive financial impacts, saving energy also makes a real-world impact in meeting environmental goals of reducing greenhouse gas emissions. To date Facilities has achieved this designation at two of its facilities, the Spokane Valley Call Center and the Corporate Office Building.

Benefits of Well Maintained Facilities

Buildings and facilities are exposed to all kinds of weather – rain, sun, snow, wind and other natural elements. Over time, this exposure has an adverse effect on roofs, windows, doors, paint, asphalt, wood and other building materials. Paint begins to peel, doors warp, and covers leak. If left unattended, interior walls, floor coverings and ceilings can also be damaged through routine use, resulting in costly repairs if not addressed in a timely manner. Avista's buildings house employees and expensive equipment that must be protected. These are Avista assets, paid for by customers, and must be adequately maintained in order to continue to perform their intended purposes, be it storing poles and transformers, providing maintenance and storage areas for vehicles, or creating working spaces for employees.

Performing adequate maintenance allows the Company to preserve and fully utilize their properties while reducing expensive repairs in the long term. It also ensures a safe environment for people and equipment. Damaged or poorly maintained facilities can create very real safety risks and associated liability for employees, customers, and contractors. The Facilities group focuses on reducing risk by monitoring the condition of Avista facilities across the service territory using a variety of tools and techniques described in further detail later in this report.

One of the subtle but important aspects of maintaining facilities is to provide comfortable, safe, and efficient work spaces. This is one of the keys in attracting and maintaining quality employees. It is estimated that over 30% of current utility employees are within five years of retirement.[4] The utility industry is seeing a huge shift in

[4] Gil C. Quiniones, "30% of Utility Workers Retiring in 5 Years, New Recruiting Strategies Essential," Breaking Energy, June 12, 2014, https://breakingenergy.com/2014/06/12/utilities-preparing-for-massive-workforce-turnover/

attracting, motivating and training new employees. Today's employees, especially those with specialized skills, know that they are in high demand in every industry and are no longer interested in being employed by one organization or industry for their entire careers. Utilities such as Dominion Energy, with an employee base of over 16,000 employees, have found that employee workspaces play a large role in helping them retain talent. They state: "A company that hopes to have a successful future must attract strong candidates and retain talented employees. We strive to create work spaces that meet the needs of our current employees and help attract new ones."[5] One of the ways they achieve this is to focus on providing a comfortable, clean, efficient and welcoming workplace. A recent study found that 2 out of 3 employees in today's workforce say that the physical environment of their workplace affects their decision to stay or leave an organization and, in fact it ranked 8 out of 10 in impacting their satisfaction and job performance.[6]

Many of Avista's work areas are less than ideal

Employees view their work setting and the workplace services offered as an extension of their level of care by a company. A recent study revealed that high workplace satisfaction is also positively correlated with high employee production, meaning the physical workplace can be used as a strategic asset to improve engagement, employee motivation, and performance. In fact, studies prove that a "shabby" work environment creates negative attitudes in employees, reducing their output and actually affecting the bottom line.[7] Satisfied employees provide higher quality customer service, which is a primary goal at Avista.

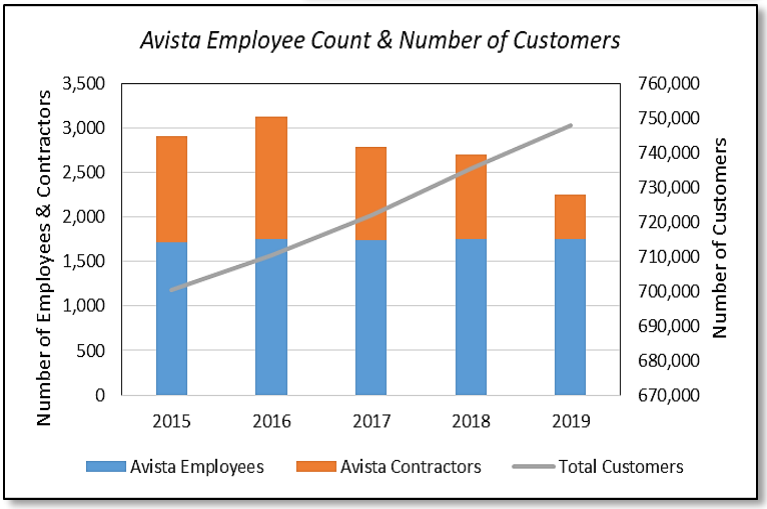


Figure 5. Avista Employee Headcount and Customer Growth

[5] "Attracting, Developing, and Retaining Talent," Dominion Energy, https://sustainability.dominionenergy.com/talent-strategy/ and https://sustainability.dominionenergy.com/employee-experience-overview/

[6] Michael Guta, "23% of Employees Decide Where to Work Based on the Office Environment, Survey Finds," Small Business Trends Magazine, July 8, 2018, https://smallbiztrends.com/2018/07/office-design-can-attract-employees.html and Lindsey Pollak, "What Do Multigenerational Employees Want in a Work Environment?" https://www.lindseypollak.com/multigenerational-work-environment/

[7] "Facilities Management Plays Key Role in Employee Satisfaction," Buildings Magazine, March 20, 2012, https://www.buildings.com/article-details/articleid/13762/title/facilities-management-plays-key-role-in-employee-satisfaction also "Employee Engagement Linked To Workplace Satisfaction," Executive Magazine, May 27, 2016, https://facilityexecutive.com/2016/05/employee-engagement-linked-to-workplace-satisfaction/

The Facilities staff participates in helping Avista retain its talent base by attempting to provide work areas that help promote job satisfaction and work production, have ergonometric designs to safeguard employee health, and that are safe, effective and efficient. Adequate meeting areas, maintenance and work stations, cafeteria and break areas, exercise facilities, and the like all add to employee quality of work life. However, providing these basic amenities is a constant challenge at Avista, given the age of many of the facilities and lack of funding to provide space, furniture and equipment.

Customer perception is also a subtle but important Facilities consideration. Run down, dilapidated facilities give the impression of poor service and performance. Customers may hesitate to enter a customer service center in this condition, isolating them from interactions with the Company. Poorly maintained facilities may also encourage customers to feel that the money they send in every month as they pay their bills may not be spent wisely or to preserve the assets they have provided for the Company through their rates. Avista strives to be engaging and welcoming with customers, encouraging interaction. That makes this is an important facet in maintaining the appearance and condition of the physical presence of the Company in its service buildings, operations areas, storage yards, and customer service centers.

Management Practices: The "How"

We know why this work is important, so how does the Facilities team effectively tackle such a large, complex, and diverse asset base and the associated tasks? One methodology employed is the utilization of systematic procedures and protocols to determine how to best manage Avista's facilities. Part of this evaluation includes industry best practices as determined by national organizations that specialize in this area, including Building Owners and Managers Association (BOMA) and the International Facility Management Association (IFMA).

BOMA uses their expertise in the industry to provide training as well as research results and recommendations to building owners across the nation. They also give out highly prestigious industry awards. Avista has received the BOMA 360 Performance Program

INTERNATIONAL FACILITY MANAGEMENT ASSOCIATION (IFMA)

Founded in 1980, IFMA is the world's largest and most widely recognized international association for facility management professionals, supporting 24,000 members in more than 100 countries. Together they manage more than 78 billion square feet of property and annually purchase more than $526 billion in products and services. They focus on best practices, training, research, and education.

BUILDING OWNERS AND MANAGERS ASSOCIATION (BOMA)

The Building Owners and Managers Association (BOMA) International is a federation of 88 BOMA U.S. associations and 18 international affiliates. Founded in 1907, BOMA represents the owners and managers of all commercial property types including nearly 10.5 billion square feet of U.S. office space that supports 1.7 million jobs and contributes $234.9 billion to the U.S. GDP. Its mission includes advocacy, education, shared knowledge, and best practices.

Certification for the Corporate Headquarters Building.[8] This certification was granted to Avista as a result of the Facilities team's efforts to add energy efficiency measures when they remodeled this 1959-era building, and acknowledges the fact that they operate and manage it better than most comparable buildings around the world.[9]

IFMA is also recognized as an international expert on managing facilities, offering certification, education, and industry-specific information and research.[10] The expertise offered by these organizations helps guide Avista's facilities management practices. In addition, Facility's employees utilize technology to monitor equipment, systems, energy usage, etc. Specialized analysis is also used to help predict failures and to help identify issues prior to failure. Data is gathered to track issues and concerns over time in the service of developing a more proactive approach to sustaining assets. The Company also calls in outside expertise to objectively evaluate the condition of facilities and provide professional guidance on facilities and conditions as described below.

Terracon Facilities Evaluation

In 2017 the Company hired Terracon Consultants to perform a condition assessment on 76 Avista-owned facilities and 35 real estate sites at 34 different locations, comprising approximately 981,000 square feet. These facilities were constructed between 1903 and 2016. Terracon estimated the value of this infrastructure at approximately $242 million.

The Terracon study was highly detailed and in depth. They examined every characteristic of each facility from a variety of perspectives. External structures from asphalt in the parking lot to roof condition, fences, curbs, and storage areas were examined to ascertain and score condition and to identify issues and note concerns. Internal aspects such as walls, carpets, and furniture condition were evaluated. They surveyed building systems including plumbing, heating and cooling, electrical, lighting, air quality, drainage, and security. They looked at safety aspects from both the customer and employee perspective. Then each item in the facility was rated based upon its condition and assigned a budget category of O&M Preventative Maintenance, O&M Deficiency Repairs, Capital Replacement, and Capital Renewal/In-Kind Replacement.[11]

[8] https://www.boma.org/BOMA/Recognition-Awards/BOMA_360_Performance_Program/BOMA_360_Buildings/BOMA/Recognition-Awards/BOMA_360_Buildings.aspx?hkey=651693fa-b5df-4923-b091-0b3a9987e937
[9] "BOMA 360 Performance Program," BOMA International, https://www.boma.org/BOMA/Recognition-Awards/BOMA_360_Performance.aspx
[10] International Facility Management Association (IFMA), https://www.ifma.org/
[11] O&M Preventative Maintenance is planned maintenance conducted regularly on equipment still in working condition. O&M Deficiency Repairs involve unplanned maintenance conducted on equipment to get it into working condition. Capital Replacement is unplanned, replacement or refurbishment of assets that have failed. Capital Renewal/In-Kind Replacement involves planned, cyclical replacement or refurbishment of assets at the end of their useful lives to maintain a state of good repair.

Facilities Evaluated by Terracon			
Site	Square Feet	Acres	Value
Beacon Substation	31,670	19	$4,729,932
Chewelah Facility	5,200	1.6	$1,094,625
Clarkston Service Center	24,678	4.3	$5,080,245
Coeur d'Alene Service Center	51,084	9.4	$10,794,280
Colfax Facility	2,169	0.3	$263,453
Colville Service Center	20,105	6	$5,364,761
Courtyard	56,000	1	$16,082,583
Davenport Service Center	13,608	0.7	$2,443,993
Dollar Road Service Center	15,000	1	$4,566,811
Downtown Project Center	25,000	1	$4,676,144
East Davenport	2,000	0.9	$377,072
Elk City Facility	1,800	1	$276,358
Grangeville Facility	9,904	0.5	$1,036,402
Grants Pass Service Center	1,126	0.3	$1,129,175
Jack Stewart Training Center	26,108	34.5	$4,260,418
Kamiah Facility	800	0.5	$378,818
Kellogg Service Center	13,622	1.9	$3,074,896
Klamath Falls Service Center	5,132	1	$3,680,695
LaGrande Service Center	3,730	0.6	$2,646,677
Lewiston Call Center	5,468	0.6	$1,614,292
Main Campus	463,692	37.9	$118,237,135
Medford Service Center	29,800	1	$5,555,944
Orofino Facility	7,190	0.5	$2,127,522
Othello Service Center	6,400	0.5	$1,644,203
Pierce Facility	1,200	1	$239,668
Pullman Service Center	25,436	6	$5,128,085
Ritzville Facility	2,500	1	$404,586
Roseburg Service Center	4,000	1	$1,417,649
Sandpoint Service Center	17,931	6.5	$3,857,002
Spokane Valley Call Center	14,022	2.8	$3,136,360
St. Maries Service Center	12,209	4.3	$2,625,370
Steam Plant Square	81,500	1	$23,384,227
Tekoa Facility	1,383	0.1	$186,134
Total	**981,467**	**149.7**	**$241,515,515**

Figure 6. Avista Square Feet of Property Managed & Value

Terracon Inspection Items Included:

- Building Exterior (lighting, paint, glass, doors, siding, trim, general condition)
- Outbuildings & Storage Areas
- Perimeter (fences, sidewalks, parking, storm drains, landscaping, storage yards, signage, lighting)
- Roof (general condition, drains, gutters, downspouts, seams, flashings)
- HVAC (type, age, filters, belts, fans, air intakes, general condition)
- Electrical Systems (panels, lighting, service mast, etc.)
- Emergency generator (age and condition)
- Plumbing (restroom condition, toilets, sinks, septic systems, general infrastructure)
- Building Interior Systems (paint, carpets, tile, casework, general furniture condition & usability)
- Line Docks
- Elevators
- Fire Protection Systems
- Security (general and security systems)
- Roll Up Doors
- Waste Collection
- Compressed Air Systems

The Terracon study identified and prioritized issues they found with the goal of extending the overall service life of these facilities and reducing the possibility of unplanned repairs, safety issues, failures or service interruptions. It also provided a thorough inventory and condition assessment of all Avista-owned facilities, including current deficiencies, forecasted costs for repairs and anticipated future maintenance needs. Terracon prioritized the maintenance and replacements they identified using a specialized software product designed for this purpose.

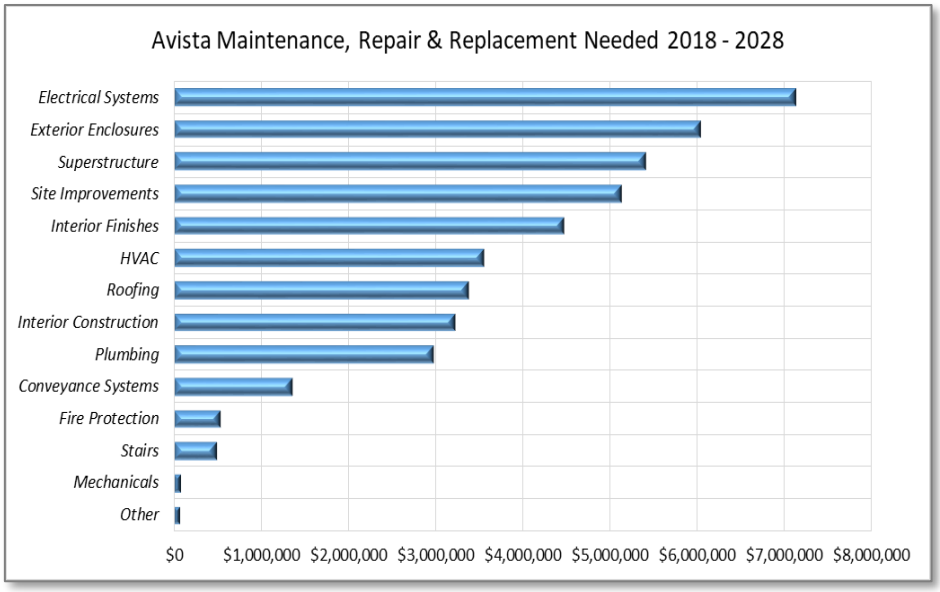


Figure 7. Terracon Identified Avista Facilities Total Issues by Cost

Terracon's research into Avista's infrastructure and practices found that Avista is underfunding preventative maintenance activities, leading to a reduced service life of Company assets and their components and increasing the possibility of unplanned service interruptions. In Terracon's expert opinion (which is backed by the industry), funding levels for preventative maintenance should typically run from 2-4% of the plant replacement value of the assets being maintained.[12] This level of funding provides the necessary expenditures to maintain only the basic functionality of facilities. In fact, they assert that this funding level should be used as an absolute minimum value, encouraging that "Where neglect of maintenance has caused a backlog of needed repairs to accumulate, spending must exceed this minimum level until the backlog has been eliminated."[13]

The estimated replacement value of Avista's assets when the survey was taken in 2018 was approximately $242 million, with estimated maintenance and replacement requirements based on the Terracon report of $8,800,640 *per year*, which equals 3.64% of the current replacement value of Avista's facility-related assets. Figure 8 clearly demonstrates that the

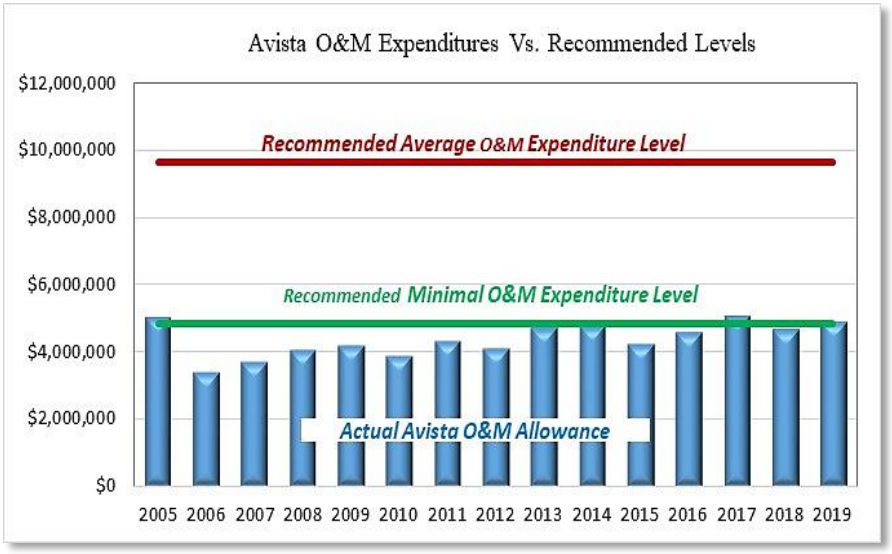


Figure 8. Avista Maintenance Expenditures vs. Industry Recommendation

[12] The 2-4% is mandated by the Building Research Advisory Board, a branch of the National Academy of Sciences, in their report "Committing to the Cost of Ownership - Maintenance and Repair of Public Buildings," https://www.nap.edu/catalog/9807/committing-to-the-cost-of-ownership-maintenance-and-repair-of. This percentage level is also recommended by the Federal Facilities Council, "Determining Current Replacement Values," https://www.nap.edu/read/9226/chapter/4. It is also recommended by the Building Research Board Committee on Advanced Maintenance Concepts for Buildings report "Committing to the Cost of Ownership – Maintenance and Repair of Public Buildings," https://eric.ed.gov/?id=ED322581

[13] The National Academies of Sciences, Engineering, and Medicine, "Budgeting for Facilities Maintenance and Repair Activities: Report Number 131," https://www.nap.edu/read/9226/chapter/3

amount spent by Avista at about $4 million per year (the blue bars), does not reach the minimum level of O&M expenditures standard in the building industry for basic sustenance of facilities (the green line). At Avista, O&M expenditures have actually decreased with the addition of more square footage. In fact, over the past ten years Facilities has increased its portfolio of square footage by almost 63% with no significant increases in staff or funding levels for maintenance and repair.

Out of the approximately $4 million budgeted for facilities O&M annually, only about $850,000 is applied to actual maintenance, which primarily consists of changing filters. The rest goes to pay for utility bills including electricity, gas, water, sewer, garbage service, internet service, and the like.

Unfortunately, facility maintenance activities compete for limited funding with many other programs: transmission line rebuilds, turbine replacements or upgrades, substation transformers, technology programs, gas line extensions, wood pole inspections, etc. and it is relatively easy to push building maintenance activities to the bottom of the priority list. Often deferred maintenance is not immediately reported, if at all, and the associated issues can go unrecognized until assets fail, start to incur significant costs, create safety hazards, or present noticeably poor service to the public.

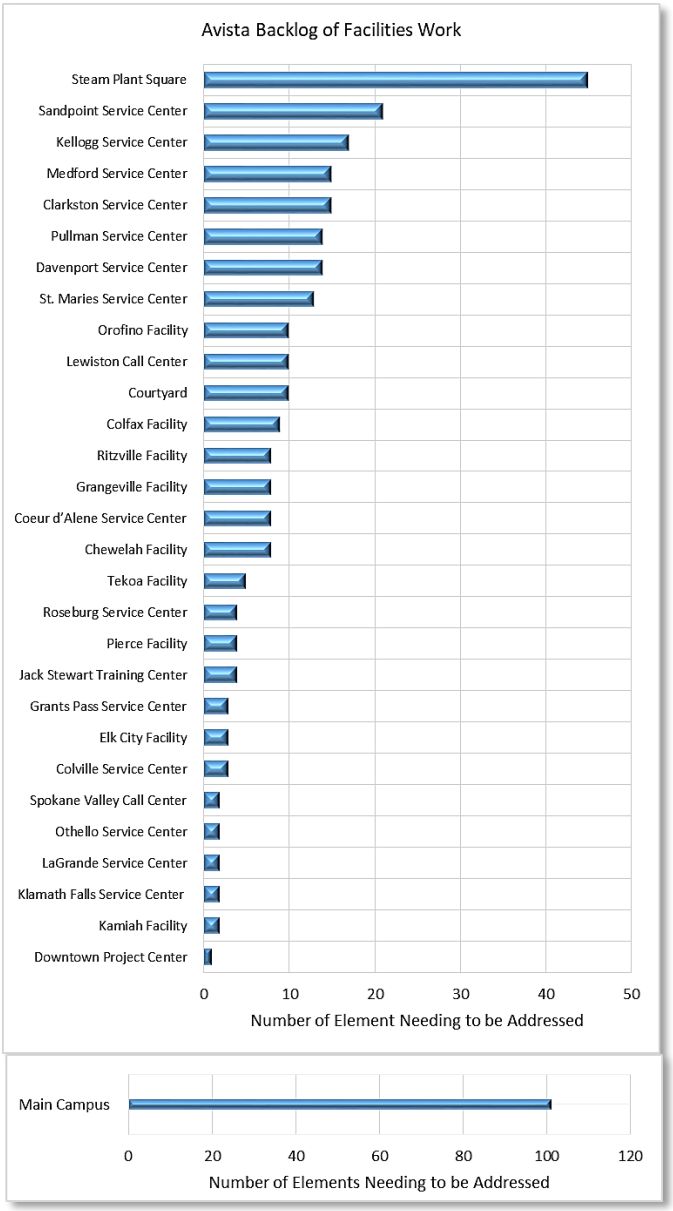
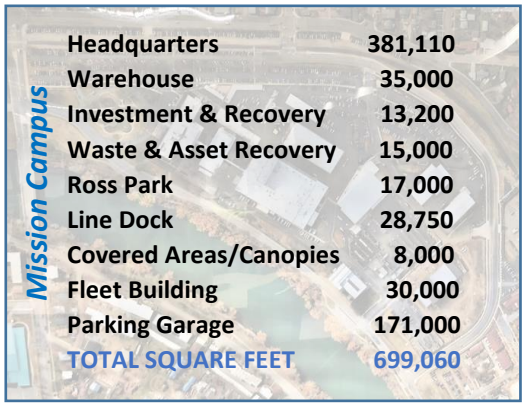


Figure 9. Avista Work Backlog Identified by Terracon Study



The backlog of work required to adequately maintain Avista facilities continues to grow as shown in Figure 9. Nearly every facility requires some kind of corrective work, and this has been especially true at the Mission campus, which houses nearly 60% of the Company's buildings.

To get a handle on this situation, Terracon recommends that Avista change to a budgeting concept that is based upon projected maintenance requirements rather than the straight-line (plus inflation) approach currently used by the

Company. They believe that this will help the Company get a handle on this backlog and move to a more proactive strategy. They also encourage an increase in preventative maintenance activities to extend the remaining service life of the Company's assets, thus delaying the need to capitalize expenditures required when replacing these assets before their expected end-of-life timeframe.

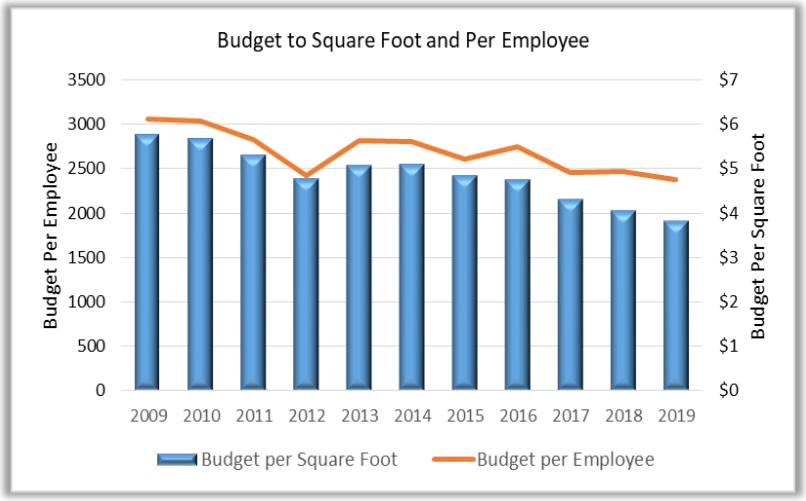


Figure 10. Avista Budget by Square Foot & Per Employee

This Terracon study is the center of the Company's Facilities asset management plan. It provides both a benchmark of the current building performance and a defensible estimate of reinvestment costs needed to keep Avista's facilities functioning at an acceptable level. Terracon's extensive study of Avista's facilities resulted in a list with specific, detailed descriptions of condition and issues identified. This list includes everything critical to the operation of Avista's facilities. Items such as 60-year old electrical panels no longer in compliance with safety standards, old motors that have far exceeded their expected life and for which parts are no longer available, wood surfaces desperately in need of paint to protect them from the elements, missing lights, leaking roofs, and more can be found on this list.

Terracon's list is sorted by relative risk and the impact the item has on the Company's ability to perform its work, making the highest priority projects readily apparent. Of the 363 "at risk" items Terracon identified, nearly 60% had a risk rating higher than 5 (on a 1 to 10 scale) and 20% were identified as having an actual impact on operations. All of the items on list were identified as needing an immediate fix at a cost of almost $6.4 million, a mixture of capital and O&M required dollars. Though each year as many elements on this list as possible are being addressed in a priority fashion, the list will continue to grow as the infrastructure continues to age, especially if it is not receiving adequate maintenance in the meantime. The Terracon priority list is on the next page.

Sorted by Number of Issues Identified						
Facility	# of Items	Total Cost to Repair or Replace	Ave. Risk Factor	Ave. Impact Rating	Highest Risk Rating	Highest Critical Rating
Main Campus	101	$2,505,742	5.7	3.3	7.68	10
Steam Plant Square	45	$1,583,121	5.6	2.8	6.56	8
Sandpoint Service Center	21	$189,662	5.7	3.5	7.07	8.5
Kellogg Service Center	17	$87,440	5.2	2.5	6.4	2.5
Clarkston Service Center	15	$365,264	5.7	2.6	6.71	4
Medford Service Center	15	$73,166	4.8	2.7	7.35	6
Davenport Service Center	14	$82,945	4.6	3.6	6.16	8.5
Pullman Service Center	14	$141,803	4.9	2.7	6.16	4
St. Maries Service Center	13	$214,844	4.9	3.2	6.56	6
Courtyard	10	$573,117	6.0	4.7	7.07	10
Lewiston Call Center	10	$68,191	4.9	3.1	6.16	8
Orofino Facility	10	$96,053	3.9	5.1	5.83	10
Colfax Facility	9	$41,622	5.1	3.4	6.48	8
Chewelah Facility	8	$37,956	4.9	4.1	6	8.5
Coeur d'Alene Service Cente	8	$25,174	3.9	6.1	4.36	10
Grangeville Facility	8	$113,191	5.2	4.1	6.16	10
Ritzville Facility	8	$32,273	4.2	6.2	5.1	10
Tekoa Facility	5	$16,469	4.9	3.9	6.71	10
Jack Stewart Training Center	4	$44,414	4.2	3.5	5.1	6.5
Pierce Facility	4	$19,850	6.0	2.0	6	2.5
Roseburg Service Center	4	$14,230	4.2	2.5	5.39	2.5
Colville Service Center	3	$2,465	3.5	6.5	3.74	6.5
Elk City Facility	3	$2,765	5.0	4.0	5.39	5
Grants Pass Service Center	3	$8,158	3.7	2.5	4.36	2.5
Kamiah Facility	2	$1,115	4.8	2.5	5.39	2.5
Klamath Falls Service Center	2	$20,691	3.9	2.5	4.12	2.5
LaGrande Service Center	2	$952	4.5	4.5	5.2	6.5
Othello Service Center	2	$35,295	4.3	3.5	4.9	4.5
Spokane Valley Call Center	2	$906	4.4	8.3	4.36	10
Downtown Project Center	1	$10,469	3.7	2.5	3.74	2.5

Figure 11. Terracon Number of Issues Identified by Location and Risk

Equipment Monitoring

Another tool in the Facilities toolkit is the use of equipment monitoring technology. This technology allows Facilities to actively monitor and track equipment and building performance, and to create more thorough and cost-effective preventative maintenance (PM) schedules. For the buildings that have this specialized equipment installed, the information provided allows observing and controlling the building environments in real time as well as scheduling and modifying mechanical equipment operation remotely. These systems also collect and store data about system performance for trending and analysis. Results can be used to predict failures and correct issues before

critical failure. The type of data collected includes temperatures, run hours, BTUs, gas or electric consumption rates, pressure, and more.

Building Automation Management Systems

The Company's Building Automation Management System is similar to the equipment monitoring systems, collecting a variety of information similar to that collected by the other equipment monitoring systems. However, the Automation System also includes a graphical front-end user interface, making it easier to use and understand. HVAC operational information such as temperature, run hours, pressure levels, energy usage, etc. is collected to provide early identification of problems within the building's systems, automatically optimize their operation and performance, monitor and make changes in real time, and generate customized reports of performance. The Automated System is incredibly helpful in troubleshooting issues as well as identifying when a system has failed (or is getting close to doing so) before it significantly impacts general building operations.

Both of these systems also help maximize building energy efficiency. For example, they may help Facilities experts see that window blinds are needed for a work area that is requiring higher-than-expected cooling, or that the run schedule of an HVAC can be modified to reduce operating time. These systems collect searchable data with complete maintenance records of all equipment and systems to help identify recurring problems, to identify trends, and to perform analysis.

About 75% of Avista's facilities (based on square footage) have added automation to increase the efficiency of building management, primarily in larger facilities and service centers. The Company's objective is to have 100% of existing buildings automated. This is a key component of Facility's goal of continual improvement in managing their facilities. For new buildings, this technology is a Company standard, along with required energy efficiency measures to keep Avista in compliance with Washington State Energy Code.[14] It is difficult to measure the full savings impact of these systems on new buildings other than what common sense would dictate, but as an example, the Company's existing HVAC system upgrades to this technology saved 60% of HVAC electrical cost alone, so it is apparent that the savings from this careful monitoring are significant.

Project or Site	Year of Impact	Added Square Feet	Total Square Foot Increase	Avista Facilities Work Staff	Industry Recommended Staffing
2008 Baseline square Footage	2008		**800,937**	10	16
Spokane Valley Call Center	2009	14,022	814,959	10	17
Colville Service Center	2010	8,000	822,959	10	17
Dollar Road Truck Storage	2010	8,000	830,959	10	17
Mini Line Dock Addition	2011	13,000	843,959	10	17
Jack Stewart Training Center Modular	2011	2,000	845,959	10	17
St. Maries Offsite Parking	2011	5,000	850,959	10	17
New Mission Warehouse Building	2013	35,000	885,959	10	18
New Dollar Road Fleet Building	2013	23,000	908,959	10	19
New Waste and Asset Recovery	2015	15,000	923,959	10	19
Kettle Falls Office	2015	7,800	931,759	10	19
Investment Recovery Building	2016	7,000	938,759	10	19
Beacon Vehicle Storage	2016	21,000	959,759	10	20
Noxon/Cabinet Gorge Bunkhouses	2016	20,000	979,759	10	20
Downtown Project Center	2016	25,000	1,004,759	10	21
Mission Fleet Building	2018	15,000	1,019,759	10	21
Deer Park Service Center	2018	12,000	1,031,759	10	21
Dollar Road Phase 2	2018	35,000	1,066,759	10	22
Airport Hanger	2018	4,000	1,070,759	10	22
Dollar Road Wash Bay	2018	16,000	1,086,759	10	22
Dollar Road Phase 3	2019	28,000	1,114,759	12	23
Mission Parking Garage	2020	171,000	1,285,759	13	26
Total Square Feet		**484,822**	**20,219,739**		

Figure 12. Avista Facilities Growth 2008 – Present and Associated Staff

[14] https://www.energycodes.gov/adoption/states/washington under "Washington State Certification of Commercial and Residential Building Energy Code"

Contracted Services

Limited staff means that some of the work required must be performed by contractors. Currently approximately 60% of Facilities work is contracted. Contractors are selected based upon a variety of criteria, including performance benchmarks, cost, and evaluations. In Facilities, these individuals are primarily utilized for repetitive tasks such as grounds keeping, janitorial work, snow removal, and cafeteria duties. Contracting can be less expensive than using Company employees, but that is not always the case, so Facilities makes this choice based on the type of work needed, length of contract required, and the criticality of the work being performed. A recent complication in bringing in contract help is that the main campus is now a "locked down" security site. This means that all contractors must be escorted by an employee at all times while on site, so when help is brought in for the Mission Campus, both the cost of the contractor and the associated escorting employee must be factored in.

Although contractors provide a beneficial resource for Facilities, an important factor to note is that Avista Facility employees manage all of the Company's buildings and primary systems. Being well acquainted with these facilities provides a quick and efficient response to issues. It may take days or even weeks to schedule a contractor to do a repair, and the issue may be of such a nature that waiting is not an option. Having skilled employees available to do specialized work, and relatively quickly, with a robust understanding of the equipment or buildings involved and loyalty that encourages performing the work well is a great benefit to the Company.

Given limited manpower and budgets, a careful blend of resources helps allow Facilities to keep operating at current levels.

Managing Regulatory Issues

The Facilities group is heavily impacted by regulations. Building codes, rules, and standards all have an impact on work processes and expenditures. There are a wide variety of regulations related to facilities and how they are managed, such as state and federal requirements for energy efficiency when building new facilities or renovating existing ones, fire codes, safety regulations, city statutes and building codes, federal requirements to provide adequate accessible parking spaces and building accommodations, and much more.

DEPARTMENT OF ENERGY HAS CODE REQUIREMENTS FOR:

- *Total building performance*
- *Air leakage*
- *Mechanical systems*
- *Interior & exterior lighting*
- *Elevators*
- *Transformers & meters*
- *Motors*

These apply to any new buildings, additions or any building alteration.

STATE OF WASHINGTON HAS CODE REQUIREMENTS FOR:

- *Energy efficiency standards*
- *Insulation*
- *Mechanical systems*
- *Water heating systems*
- *Climate zones*
- *Arrangement of windows & doors*
- *Plumbing*
- *Electrical & lighting systems*
- *Footings, foundations & walls*
- *Equipment & system controls*
- *Fans*
- *Duct sealing*
- *Lighting*
- *Location of daylight zones*
- *Air barriers/thermal envelopes*
- *Construction elements*
- *Accessibility*

These apply to any new buildings, additions or any building alteration.

Federal regulations impact most elements of buildings.[15] According to the U.S. Department of Energy: "The legal obligation to comply with the energy code (meeting all the applicable requirements) rests squarely on the professionals who design and construct buildings."[16] Many of these codes also apply to maintenance. For Avista, this means Facilities. It touches the way they design and remodel buildings, which heating, cooling, and lighting systems they install, and how they sustain key elements of each building.

Federal law mandates that each state have an energy code and establish minimum requirements for that code. It is up to each state to implement and enforce its own code that meets or exceeds the federal government requirements. Thus the State of Washington also has a lengthy list of requirements.[17] In addition, different counties have their own requirements, and so do cities and towns. An example of some of the regulations that impact Facilities are the impacts of today's Energy Code on new construction projects. These requirements include the allowable watts per square foot of lighting systems, the minimum energy efficiencies required of mechanical systems, occupancy requirements for offices and conference rooms, and use of energy efficiency techniques to meet the requirements of the code.[18] All of these items cause an increase in scope, schedule and budget for most new construction projects and remodels as well, but are required in today's regulatory environment.

Managing Environmental Issues

Another, often unrecognized, issue facing Facilities is the impact of environmental regulations. There are federal, state, and local permits and requirements for elements such as managing runoff associated with parking lots, state and county storm water compliance, wells and water quality permits, zoning and setbacks, right-of-ways, protection mitigation for sensitive areas, and the like. Many of Avista's facilities were designed and built in the 1960's. The codes and requirements between now and then have increased greatly, causing many of the Company's locations to fall below not only Avista's environmental standards, but below state and federal requirements as well. The chart on the next page indicates the Company's current environmental compliance ratings.

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[15] U.S. Department of Energy, "Building Energy Codes Program," 2018, https://www.energycodes.gov/sites/default/files/becu/2018_IECC_commercial_requirements_lighting.pdf

[16] U.S. Department of Energy, "Building Energy Code Compliance," November 14, 2016, https://www.energy.gov/eere/buildings/articles/building-energy-code-compliance

[17] "Washington State Energy Code, Commercial Provisions," https://fortress.wa.gov/ga/apps/SBCC/File.ashx?cid=6195

[18] For more information, please see: "Whole Building Design Guide," https://www.wbdg.org/resources/energy-codes-and-standards

Colville District Office

Medford Weld Shop

Rathdrum Service Center

ENVIRONMENTAL COMPLIANCE FACILITY RANKING 10.16.2019	Stormwater Management	Critical Areas/ Physical Location	Waste Management	Oil Containment	Score Average
Washington					
Central Operating Facility	3	3	0	1	2
Chewelah Facility	4	3	0	3	3
Clarkston Service Center	3	0	0	2	1
Colville Service Center	0	2	0	0	1
Colfax Facility	1	2	3	1	2
Davenport Service Center	5	3	0	3	3
Dollar Road Service Center	2	1	0	1	1
Deer Park Service Center	0	0	0	0	0
Downtown Project Center	2	0	0	1	1
Downtown Network Ops Bldg	2	0	0	1	1
Goldendale	1	3	0	0	1
Othello Service Center	3	2	0	2	2
Post Street Substation / Annex	2	3	0	4	2
Pullman Service Center	5	2	0	2	2
Ritzville Facilty	1	0	0	1	1
Tekoa Facility	2	0	3	2	2
Idaho					
Coeur d'Alene Service Center	2	3	0	1	2
Elk City	0	2	3	0	1
Grangeville Facility	4	3	0	3	3
Kamiah Construction Office	1	1	0	1	1
Kellogg Service Center	3	3	0	2	2
Orofino Facility	3	0	0	2	1
St. Maries Service Center	2	1	0	3	2
St. Maries Storage Yard	2	4	0	2	2
Sandpoint Service Center	4	3	0	3	3
Oregon					
Grants Pass	1	1	0	0	1
Klamath Falls	0	0	0	0	0
LaGrande	0	0	0	0	0
Medford	0	0	0	0	0
Roseburg	1	0	0	0	0

Ranking Scale/Risk Level

0 = Lowest Risk
5 = Highest Risk

Figure 13. Environmental Compliance Issues and Ranking

Avista's Facilities Investments

Managing Expenditures

The Facilities group is responsible for a continually growing – and growing older – portfolio of infrastructure while staying within an established budget. Though capital budgets have grown along with Company expansion, Operations & Maintenance expenditures have not kept pace, as shown in Figure 14. Since 2008 Avista has added 464,577 square feet of facility space, as reflected in the increased capital expenditures, but during the same period, O&M expenditures have remained nearly flat.

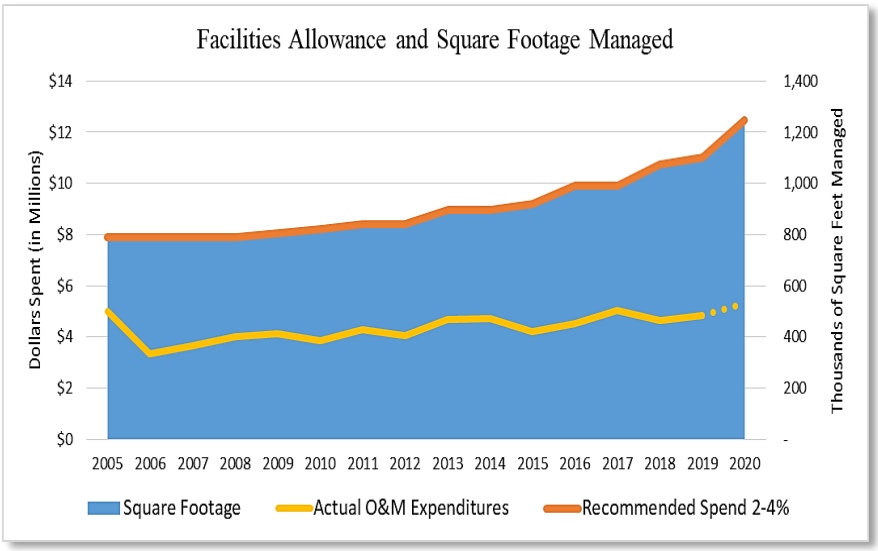


Figure 14. Facilities Spending Compared to Space Managed

Some of the largest capital expenditures in recent years include extensive renovations of the headquarters and other old buildings on the main campus. This work took place from 2013 through 2018. The new Dollar Road Service Center and the Downtown Network warehouse were completed in 2017 and 2018, and the new Deer Park Service Center entered into service in 2018. These projects are discussed below in further detail.

Dollar Road facility under construction

The new Deer Park Service Center

Over the past several years, Facilities has also dealt with a great deal of change in their O&M funding allowances, making managing expenditures more and more difficult. As an example, in the past, Facilities would submit O&M projects for planned maintenance activities each year, but as O&M Facility's budgets have become flat, they no longer have the funding for planned maintenance. Discretionary income has been reduced to nearly zero, meaning most maintenance is reactive in nature. Often assets are not repaired or replaced until they fail.

Emergency repairs are almost always more expensive than planned work, and when these types of situations arise, the impact on their already limited budget is significant.

Another major factor in the Facilities O&M budget is the impact of weather. As mentioned earlier, Facilities does not have available funding for discretionary work. Safety regulations require an entire plow of sidewalks and parking areas for every inch of snow, which can cost approximately $15,000 per event just for the Corporate Headquarters, not counting all of the service and customer centers. Snow removal is allocated an annual budget of $50,000 per year, which is enough to manage about 1.5 snow events within that year. However, experience has shown that an average winter can result in up to $220,000 in snow removal costs, which include snow and ice removal from company parking areas for the safety of customers and employees. Freezing rain requires de-icing and its associated costs as well. These unpredictable costs often result in Facilities exceeding their budget. There have been times when the parking lots have required several plowing events within just a few days. In a heavy snow year, the cost of snow removal and de-icing can add up quickly. As an example, in 2019, almost $330,000 was spent for snow removal and de-icing for the Mission Campus parking areas, using up not only the snow removal budget, but the entire yearly unplanned budget for Facilities.

Expense requests and costs also change over time. For an example, outlying service centers used to take care of routine maintenance of their land and buildings themselves, including plowing their parking lots, but in recent years these activities have gradually returned to central Facilities. These expenses were not anticipated or budgeted for, thus they drain funding from other competing needs. Trying to find the money needed to match every Terracon-identified issue, employee identified issue, and unexpected expense that arises is a balancing act. We will try to describe the processes for trying to maintain this balance in the next section.

Avista's Facilities Capital Investments

Capital Project Investment Selection Process

In the Facilities world, the allowed capital budget is quite small, typically between 2% and 5% of the entire Avista budget, thought this varies significantly based on large projects they are given, such as building a new service center. The Facilities capital budget includes the Structures and Improvements program for Asset Condition work. This typically comprises things like replacing a compressor, roof, shop door or pump as well as remodeling space for improved efficiency or to meet new needs. It also includes repairing damage from storms or general use. This bucket is wide ranging and varies based on the conditions Facilities faces every day. Facilities apportions approximately 50% to Asset Condition work that is identified using Paragon Asset Condition software (Terracon), 30% is set aside for manager requested projects, and 20% is kept aside for unexpected capital needs and furniture replacements.

Business Case	*Primary Driver*	*2020*	*2021*	*2022*	*2023*	*2024*
New Pullman Service Center	Asset Condition	$0	$0	$5,000,000	$7,000,000	$0
Service Building Basement Renovation	Asset Condition	$3,000,000	$0	$0	$0	$0
Structures and Improvements/Furniture	Asset Condition	$2,000,000	$2,200,000	$2,500,000	$2,750,000	$2,750,000
Central 24 HR Operations Facility	Performance & Capacity	$0	$0	$0	$10,000,000	$9,000,000
Sandpoint Service Center	Performance & Capacity	$0	$0	$0	$1,500,000	$8,500,000
	Total Facilities Capital Budget	$5,000,000	$2,200,000	$7,500,000	$21,250,000	$20,250,000
	Total Avista Capital Budget	**$405,000,000**	**$405,000,000**	**$405,000,000**	**$405,000,000**	**$405,000,000**
	% of Total Capital Budget	1%	1%	2%	5%	5%

Table 1. Facilities Capital Budget Compared to Avista Capital Budget

Facilities Capital Request Board

Since the Terracon list has been described at length in previous sections, we will now describe the approval process for capital projects that are proposed by Avista personnel (the 30% allotment).

These types of requested facilities projects undergo a multi-level internal review process. It begins with the related manager who either identifies the capital need themselves or is notified of an issue that needs to be resolved by an employee. If the manager believes the project is in the best interests of the group and the Company, the proposal is submitted to that manager's director. If the director also sees the value of the request, it is submitted to a group known as the Facilities Capital Request Board.

Proposed Capital Projects Approval Process

Manager

⇩

Department Director

⇩

Facilities Capital Request Board

⇩

Facilities Project Steering Committee

⇩

Capital Planning Group

This Board meets every fall to review the requested projects for the upcoming year. Managers from each major business area send a representative. The employee chosen usually changes every year. In

addition, there is a requirement of at least one person from Environmental Affairs, Operations, Materials Management, and Facilities. This broad mixture of perspectives is designed to provide a neutral and "outside" perspective while having access to the expertise and experience of the directly related and impacted business entities.

Business Units Represented in the Facilities Capital Request Board

- *Shared Services*
- *Information Technology*
- *Security*
- *Natural Gas*
- *Financial Planning & Analysis*
- *Generation & Substations*
- *Corporate Communications*
- *Environmental Affairs **
- *Operations **
- *Materials Management **
- *Facilities **

* *Key Advisors*

By the time the Board receives the list of requests, it has already been vetted twice within its related department. The requests are prioritized based on the Capital Request form[19] that was filled out and approved.

At this level, each request is reviewed for required criteria such as risk, safety, environmental impact, and compliance. It is important to note that peer pressure is a very effective tool in these negotiations. People tend to work in natural silos. A leaking roof in Colville seems just as important to those employees as a broken service bay door does to the employees in Colfax. When the Board members see all of these requests together, the impacts, cost/benefit, and priority can be examined comparatively, making it much easier to prioritize them and see which would have the most positive impact or create the most value for the Company as a whole. Thus this process is designed to ensure that multiple stakeholder participation provides a thorough and robust analysis of all facility needs and alternatives across the Company.

Facilities Steering Committee

For standalone Business Cases, such as the new service building in Deer park, approval comes from the Facilities Project Steering Committee. This Committee is comprised of directors who are responsible for approving the submission of all Business Cases to the Capital Planning Group. Before approval, it is the responsibility of Facilities to make sure each business case includes a description of the business problem and background on the situation, alternatives, projected costs, savings, requirements, timelines and deadlines, benefits, proposals/options and a recommended solution. Once Facilities has demonstrated the need for a capital investment, the Steering Committee will allow the Business Case to move forward into the Capital Planning Process.

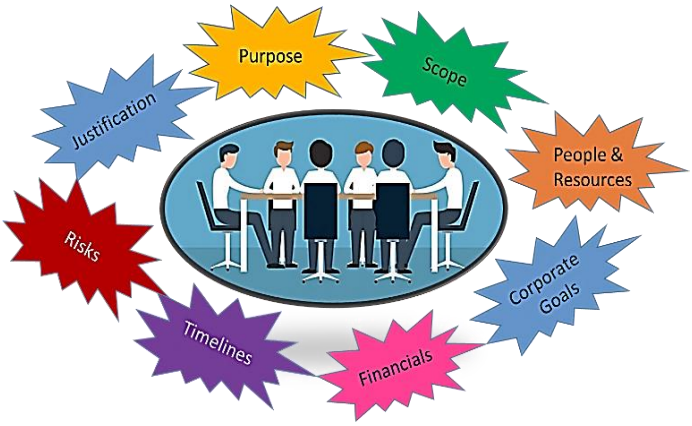
Chewelah Service Center

[19] A copy of the Capital Request/Business Case Request Form can be found in Appendix B.

Capital Planning Group

Once they pass through the processes described above and are approved for consideration, business cases are submitted to the Capital Planning Group (CPG), a group of Avista Directors that represent capital intensive areas of the Company. This group is comprised of directors from a variety of business units to add a depth of perspective, though their role is to consider capital decisions from the perspective of *overall* Company operations and strategic goals. Facilities business cases are evaluated equally with those from Transmission, Distribution, Enterprise Technology, Generation, etc.

The Capital Planning Group (CPG) reviews the submitted business cases from business units across the organization, including Facilities, and prioritizes funding to meet the upcoming five year capital spending guidance as set by senior management and approved by the Finance Committee of the Board of Directors. The CPG meets monthly to review the status of the capital projects and programs, evaluate changes requested, and approve or decline new business cases. They also monitor the overall current year capital budget. This group develops and recommends a 5-year capital expenditure plan by investment driver to the Company's officers based upon the amount of funding available as approved by the Company's Board of Directors. The CPG is responsible for reviewing, approving, deferring, or denying capital requests, and for appraising productivity and strategic proposals.



Initial expenditure requests may need to be modified based on the timing of equipment, permits, available crews, priorities of projects, etc. The CPG approves or declines these changes based on managing a total budget amount. Therefore, as changes occur throughout the project, project funding may change, or one project may be funded while another is removed or delayed to allow higher priority projects to be funded. This is done while remaining within the total approved capital spending amount. This group reprioritizes as needed to ensure that the highest priority projects are identified and funded.

Avista's Capital Planning Group evaluates aspects such as the project description, alternatives, cost and other financial assessments, risk, justification, resource requirements, and how each project fits into the Company's overall strategies. They provide a comprehensive and strategic perspective that helps ensure that the right projects are funded adequately at the right time.

Ultimately the individual investments selected to be included in Avista's final budget represent a portfolio of projects and funding levels intended to optimize:

1) *The overall demand for investment,*
2) *The specific requirements of the projects and programs proposed for funding, and the potential*

consequences associated with deferring needed investments, and

3) *A balance among the needs and priorities of all investment requests across the enterprise and the Company's investment planning principles.*

In setting its overall infrastructure spending limits, the Company considers a range of factors referred as "key planning principles" as shown in the bubble diagram on the right. The result demonstrates a reasonable balance among competing needs required to maintain the performance of Avista's systems, as well as prudent management of the overall enterprise in the best interest of customers.

External factors such as new regulatory or legislative requirements may drive changes in the plan. The projects in the Company's portfolio are continuously reviewed for changes in assumptions, constraints, project delays, accelerations, weather impacts, outage coordination, system operations, performance, permitting/licensing/agency approvals, safety, and customer-driven needs that arise.

Classification of Infrastructure Need by Investment Drivers

Each year Avista makes investment decisions with the goals of maximizing the value of limited funding and other resources while managing competing requirements and alignment with the Company mission and values. A variety of projects are proposed for each budget cycle with varying characteristics.

Avista utilizes a method of organizing infrastructure investments to create more clarity around the particular needs being addressed with each investment and to simplify the organization and understanding of overall project plans for the entire Company. This process organizes capital investments using six classifications of need or "Investment Drivers." Utilizing the standards and principles described previously, Facilities develops projects that are within their allocated budget and that are intended to make best use of the funds they are given. Like the other business units, they group their requested projects into the appropriate investment driver to help promote understanding of the basic need related to their requests. The Company's investment drivers are defined below.

Note that all of Avista's capital expenditures across the Company can be characterized by one of these drivers, though not all of the investment driver categories are represented for each asset class. For example, electric distribution investments encompass all six categories; however, investments planned for Facilities only utilize two of the six categories: Asset Condition and Performance & Capacity. Definitions of the others are included here for the reader's information to help promote understanding of the Company's strategic budgeting categorization. It is also important to note that even though not all of the investment drivers will be used in all of Avista's primary asset categories in every budgeting

cycle, they remain an efficient and effective way of categorizing expenditures in a clear and transparent fashion that promotes better understanding of how the Company makes business decisions.

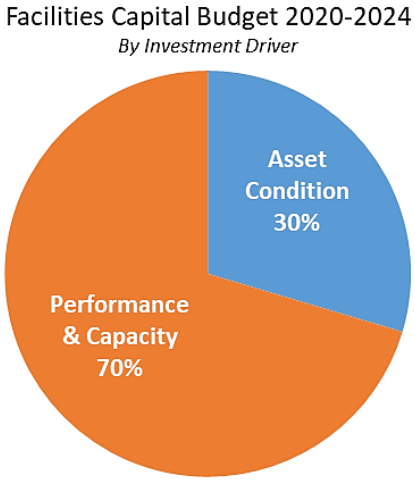


Figure 15. Facilities Capital Budget

- ***Asset Condition*** – All assets have a functional service life. The Asset Condition category provides funding to replace assets or portions of assets as needed. This may include replacing parts as they wear out or when items can no longer meet their required purpose, as systems become obsolete and replacement parts are no longer available, if safety or environmental issues are identified, or if the condition of an asset is such that it is no longer optimizing its own performance or customer value and actions need to be taken to restore the condition of the equipment or replace it. Some things are so critical that they cannot be allowed to fail. When these types of items reach an age when they are close to or at the end of their useful life, the Company preventively replaces them to maintain reliability and acceptable levels of service. Examples in this category include everything from building new service centers in Pullman and on Dollar Road as the old centers have deteriorated and been outgrown, to replacing failing roofs and installing energy efficient lighting. This broad category for Facilities is called "Structures and Improvements" and it is comprised of everything from replacing a broken door to purchasing property.

- ***Performance & Capacity*** – Programs in this category help ensure that assets satisfy business needs and meet performance standards. This may include upgrading systems and controls, remodeling work areas, providing equipment such as cranes for lifting large transformers, spools of conductor and the like, replacing old and inefficient HVAC and electrical systems, consolidating supplies into a common area for efficiency and inventory control, security and safety measures, providing warehouse space, etc. It the other primary driver for the Facilities group.

- ***Mandatory & Compliance*** – The Company makes a large number of business decisions as a direct result of compliance with laws, regulations and agreements, including projects related to air and water quality permits, equipment essential to legally operating within the interconnected grid, public safety, contractual obligations, etc. These expenditures are compelled by regulation or contract and are largely beyond the control of the Company. The Facilities group does not have money set aside under this category, as their expenditures related to environmental compliance, for example, are typically part of a larger project belonging to another group and are therefore not specifically singled out in this category.

- ***Failed Plant & Operations*** – This category funds replacement of failed equipment. At times assets will fail unexpectedly due to damage or an accident or will wear out earlier than expected, but this category also accounts for equipment that requires periodic replacement. Facilities accomplishes these types of programs using their Structures and Improvements capital spending category under the Asset Condition driver.

- ***Customer Requested*** – This category is primarily related to connecting new distribution customers or large transmission-direct customers. This category is not applicable to Facilities.
- ***Customer Service Quality & Reliability*** – This category is set aside for expenses relating to meeting customer expectations for quality of service and reliability. Typical expenses the Company would see in this category might include distribution feeder automation which allows isolating the sections of a line so customers not directly impacted by a faulted section can maintain their service. No funds were set aside in this budget cycle for Facilities in this investment driver category.

Business Case	Primary Driver	2020	2021	2022	2023	2024
New Pullman Service Center	Asset Condition	$0	$0	$5,000,000	$7,000,000	$0
Service Building Basement Renovation	Asset Condition	$3,000,000	$0	$0	$0	$0
Structures and Improvements/Furniture	Asset Condition	$2,000,000	$2,200,000	$2,500,000	$2,750,000	$2,750,000
Central 24 HR Operations Facility	Performance & Capacity	$0	$0	$0	$10,000,000	$9,000,000
Sandpoint Service Center	Performance & Capacity	$0	$0	$0	$1,500,000	$8,500,000
	TOTAL	$5,000,000	$2,200,000	$7,500,000	$21,250,000	$20,250,000

Table 2. Facilities Capital Projects 2020 - 2024

As mentioned earlier, it is easy to push Facilities projects to the bottom of the priority list. Many of the issues this group deals with are not as obvious as a failed transformer or a broken cross arm. Aging buildings and structures typically affect only those who work there, and there is a lack of direct correlation between these failures and/or constraints and providing exceptional service. However, these issues do impact employees and their efficiency and effectiveness in performing their jobs, as well as impacting job satisfaction, loyalty and pride. Customers also take note of deteriorated buildings, sidewalks, and landscaping, which impacts their perceptions about the Company. These factors, though they may not be directly connected with dollars, are important and have a value. Thus they are an underlying component of Facilities planning and cost requests.

Recent History Capital Expenditures

Facilities uses their capital funding to tackle a wide variety of required work. The general categories are shown in Figure 16.

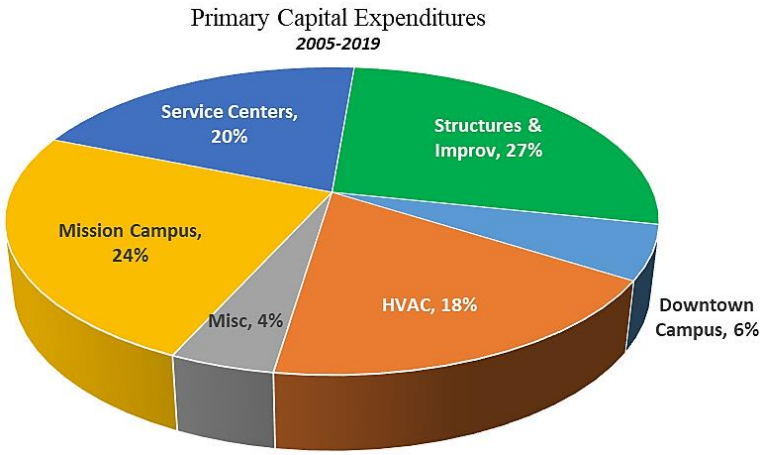


Figure 16. Primary Capital Expenditures for Facilities 2005-2019

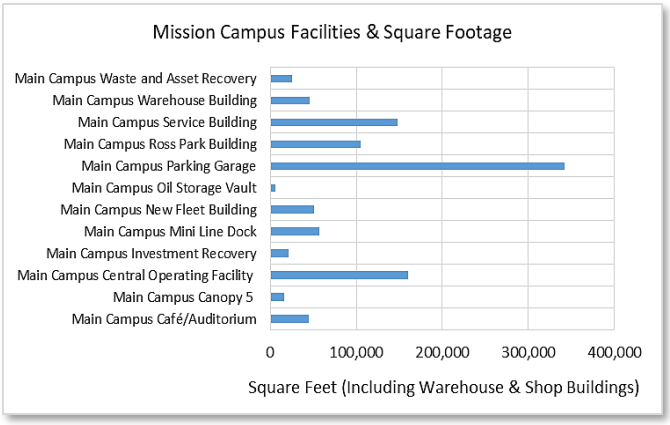
The Company's area service centers are on a continual track for repairs and upgrades. All of them made the Terracon list with at least one item that is considered "immediate repair required," with an average of eight items each and an average cost of $64,000 to make each of the required repairs. Repairs are initiated using a priority process (as described earlier) so the strategy is not necessarily to tackle an entire service center at a time, but to start with the most pressing needs at each service center as

determined by safety, customer service, and impact on the business based upon Terracon's risk rating system or as determined by the Steering Committee.

The "miscellaneous" category shown on the pie chart includes a broad spectrum of capital projects, including security expenditures like fencing, cameras, and fire suppression systems, parking lot repair or improvements, and storage solutions to name a few. In the recent past, this category included the cost to reroute North Crescent around the Mission Campus as an example.

Structures and Improvements is an ongoing category that includes capital maintenance, site improvement, and furniture and equipment budgets at over 40 Avista offices, storage buildings, and service centers. It includes major repairs such as leaking roofs, control systems, and floors; replacing equipment such as air conditioners, windows, generators, pumps, and lighting; installing sprinkler systems, handrails, exterior siding, and condensers. It also includes larger-scale projects such as remodels and renovations such as adding covered storage areas and warehouse space. Items can range from purchasing a cash register that cost about $100 for the cafeteria to a completely new HVAC system for the Corporate Headquarters building that cost over $22 million.

Avista's buildings range in age from the late 1800s to today, and many are facing the associated age challenges. The HVAC category focuses on replacing end-of-life heating and cooling systems in older facilities with new energy efficient systems. Most of this work over the past ten years was performed on the Company's buildings in Spokane, but several outlying service areas have also been updated. This effort will continue into the future as aging and end-of-life systems are replaced and upgraded to help save energy costs. In the current budgeting cycle, it is expected that expenditures will follow a very similar pattern



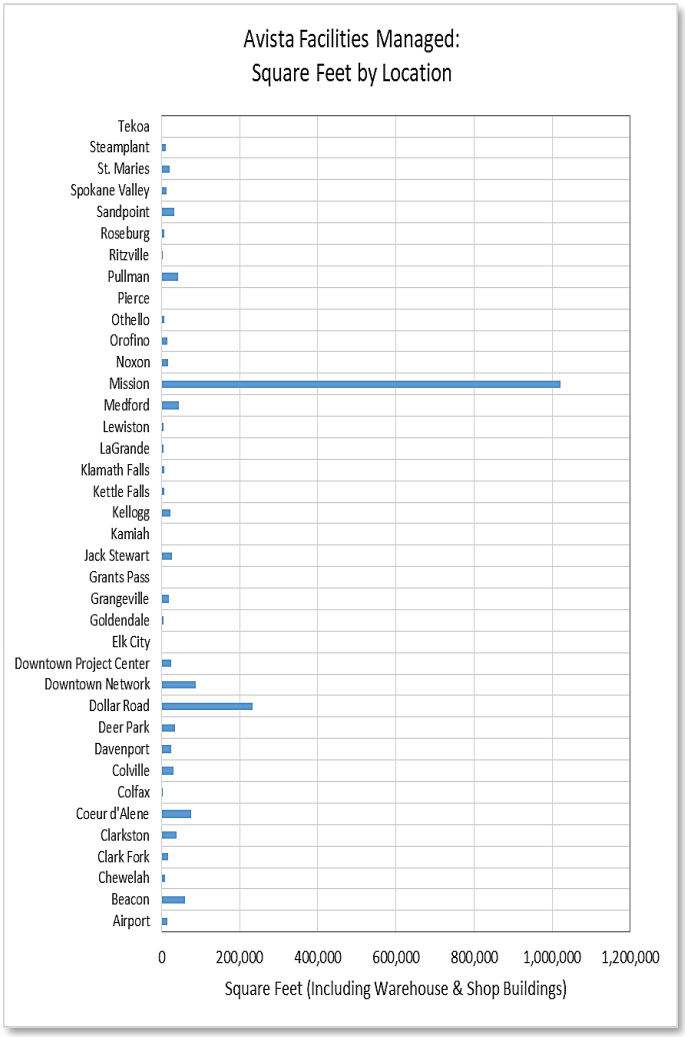


Figure 17. Square Footage of Avista Facilities Managed

for Facilities capital spending with the exception of the Mission Campus, for which the long-term upgrade is nearly complete.

Over the past ten years, the main campus has undergone updates, renovations, additions, and repairs which are being finalized this year. The Corporate Headquarters building, completed in 1959 and designed by famed architect Kenneth Brooks, has undergone extensive upgrades. The Mission campus and associated buildings comprise nearly 60% of the Company's buildings and infrastructure, so this was a very large project. The Corporate Headquarters building was renovated one floor at a time, upgrading outdated heating, cooling, electrical and plumbing systems, remodeling the existing space to increase usage efficiency, and removing asbestos. Avista applied its own energy management practices to this restoration, which earned them a BOMA 360 designation, LEED Gold Certification, and achieved significant energy savings of more than $350,000 per year in electricity costs (depending upon the weather) plus nearly an 82% reduction in water usage, all due to energy and water efficiency measures included in the remodel.

Mission Campus

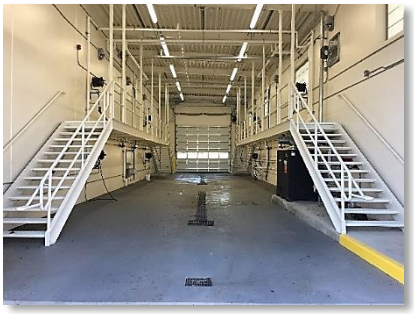
Headquarters	381,110
Warehouse	35,000
Investment & Recovery	13,200
Waste & Asset Recovery	15,000
Ross Park	17,000
Line Dock	28,750
Covered Areas/Canopies	8,000
Fleet Building	30,000
Parking Garage	171,000
TOTAL SQUARE FEET	699,060

This large long-term project included replacing several old outbuildings with new buildings able to provide service for today's larger trucks and equipment, as well as renovating storage areas to more effectively manage the supplies and equipment the Company requires to serve customers (such as transformer and pole inventories). When the campus parking structure is finished in 2020, the ten-year Mission Campus Plan should be complete and this project will no longer require a large percentage of Facilities capital budget.

One of the highlights of the Mission renovation is the new Service Building on the campus, which now allows Avista to efficiently service and maintain their own fleet of trucks and vehicles rather than having to use outside maintenance sources, which are far more

expensive.[20] It also provides space for storing valuable vehicles and equipment inside an enclosed and secure area.

The Fleet Building is a great example of the creative and efficient ways the Facilities Group manages projects. To design the new Fleet building in a way that maximizes its effectiveness, the Facilities team put together a Business Process Improvement (BPI) team. This team observed existing workflow and processes. They watched Fleet employees performing their jobs, specifically how they maintained vehicles in the existing building. They interviewed personnel on what would make their work more efficient and safer. They drew a "spaghetti" diagram of existing work flows showing, for example, how many times an employee had to go to the back of the building to get supplies and how long that took. They toured other fleet operations facilities to glean best practices.



At the end of this process, and with extensive input from Fleet personnel, a building was designed which stayed in budget while providing a state-of-the-art facility that has become an example for other fleet buildings around the country.

New Fleet Building wash bay and service areas (above)

In this new building, personnel have the capability of adding or removing booms, buckets, and accessories as needed, there are pull-through lanes to increase safety,[21] parts and fluids are located directly adjacent to each of the maintenance bays (rather than in the back of the building), safe wash bays were added,[22] doorways are wide enough to fit today's larger vehicles,[23] and lifts are included that can be quickly adapted to fit a variety of vehicle sizes. The Company is adding

Our largest vehicles can fit into the Fleet Building for maintenance & repair

[20] According to AAA most auto repair shops charge between $47 and $215 per hour for auto repair only, not specifically for the large and specialized vehicles Avista utilizes, which can cost much more.

[21] Prior to pull through lanes, trucks had to back out into a tight turnaround area with a number of flaggers on hand to direct them so they didn't back into anything or anyone.

[22] This may seem like a trivial thing, but one of the ways Avista strives to keep their vehicles well cared for includes cleaning them. In the past, this was done by an employee with a spray hose on a ladder, an obvious safety concern. The new wash bays have decks all around them on the second story of the building, allowing employees to clean the largest rigs safely.

[23] The previous fleet building literally had one inch of clearance on either side for many of the Company's largest work trucks; many would not fit inside.

Compressed Natural Gas vehicles to its fleet, and the new building provides the capability of servicing these specialized vehicles as well. Energy efficiency was also a major consideration. Rather than heat this large open space with traditional HVAC systems, in-floor heating was chosen. This system keeps the work areas warm at far less cost. The new Fleet building can service Avista's largest vehicles inside an enclosed area rather than out in the parking lot. Employees state that having their tools readily at hand saves them hours of work every month and has greatly enhanced employee satisfaction.

Facilities Budgeted Capital Projects By Business Driver

Asset Condition Projects/Programs

Asset Condition	2020	2021	2022	2023	2024	Five Year Total	Five Year Average
New Pullman Service Center	$0	$0	$5,000,000	$7,000,000	$0	$12,000,000	$2,400,000
Service Building Basement Renovation	$3,000,000	$0	$0	$0	$0	$3,000,000	$600,000
Structures and Improvements/Furniture	$2,000,000	$2,200,000	$2,500,000	$2,750,000	$2,750,000	$12,200,000	$2,440,000
Total	$5,000,000	$2,200,000	$7,500,000	$9,750,000	$2,750,000	$12,200,000	$5,440,000

Table 3. Facilities Planned Asset Condition Budget

During this budget cycle, Facilities has three projects in the Asset Condition category, including general structures and facilities improvements, renovation of the existing Mission Campus Service Building, and building the new Pullman Service Center. These projects are described in detail below.

Pullman Service Center

The Pullman Service Center was constructed in the 1950s, and although it has experienced upgrades, remodels, and additions since that time, it has been outgrown for today's needs and size of equipment. The current center provides support to nearly 41,000 natural gas and electric customers scattered over some 5,000 square miles. Forty one employees work out of this facility. The Pullman area is one of the fastest growing in Avista's service territory, significantly increasing the workload requirements of the crews there as well as the amount of equipment needed onsite.

Above: Pullman break room/meeting room/work area
Below: One of the many Pullman storage areas

The current facility is simply too small to efficiently and effectively support employees in serving customers. Supplies are scattered across a variety of storage areas around the Pullman area, not onsite. Expensive company vehicles have no protected parking areas and today's large work vehicles

cannot fit into the existing shop for maintenance. There is also insufficient space for employee work areas.

Current Pullman Service Center Highway Location

A third-party assessment found that the building suffers from a serious need for repairs to the electric, water, plumbing and septic systems, roof, floors, and ceilings. The shop roll-up doors (original to the building) have become a safety concern for both employees and the vehicles that use them. There is no fire system in place at all. This independent survey identified over $5 million in repairs needed to continue to utilize the original building.

Analysis determined that it made more fiscal sense to let go of the concept of trying to invest in the old building and start again with a new, larger, more efficient facility that will provide the services needed to best serve customers. It will include space for all of the Pullman crews and their functions to be located in one central location. It also provides a materials yard large enough to hold and organize all of the equipment crews need to perform their jobs in one location, which is especially important in an outage situation where quick access to supplies can directly shorten customer outages. Employees will be located in a clean, safe work space with room for both offices and maintenance areas.

Safety is also a major consideration. The new location will not be located on a major highway, unlike the existing facility, which has an entrance that requires entering and exiting onto a 55 mph highway. Trucks pulling large equipment onto that roadway can be terrifying for both Avista crews and passing motorists as well. The new location will also provide environmental benefits, with storm water protection and oil containment measures.

Service Building Renovation

The Gas Meter Shop was located on the Mission Campus in the Service Building, which is attached to the corporate office building. It was recently relocated to Dollar Road, leaving 13,000 square feet of total vacated space in the basement of the Service Building. The design and use of the vacated space will need to be determined. There are a number of space requests that Facilities has received and these needs will be evaluated to determine the best solution for developing that space. Regardless of the option chosen, capital expenditures would likely include HVAC, electrical, plumbing, lighting, sprinkler systems as well as asbestos abatement and wall construction.

Possible solutions being explored for this space include:

- Work Space - Facilities has found itself in continual need of space. Included in this request would be workstations, offices, conference rooms and a breakroom. There are currently no enclosed offices open within Mission Campus, with a mix of open area workstations scattered throughout the General Office Building. It is possible that there will be more need for offices and office space in the future.
- Meeting Space - Facilities has received many requests for large meeting rooms for 50 or more employees. Currently the only room that can accommodate a crowd of this size is the Auditorium, which is not an effective meeting space.
- Training Space - There is an increasing need for additional training areas, especially given increasing mandatory training requirements, many in the craft area. The Jack Stuart Center has limited training room available and is only available when not being utilized by the Line School. The Service Building location could be designed to accommodate both training and multi-purpose events.
- "MakerSpace" – This is a collaborative work space for making, learning, exploring and sharing ideas which would allow employees to work on projects together.
- Increase Wellness Center - There have been many requests to expand the current Wellness Center, perhaps including a multi-purpose room to offer larger classes and provide additional workout equipment.

Structures and Improvements

As described earlier, this program is responsible for the capital maintenance, site improvement, and furniture budgets at all of Avista offices, storage buildings, and service centers. There is money budgeted in this category each year; it is an ongoing program. Its purpose is to systematically evaluate the condition of all the Company's facilities and develop plans and strategies for functionality while being cost-effective. Part of these expenditures are driven by the Terracon condition study, and part are determined via an internal Facilities Condition Assessment Survey, which takes into account the condition, lifecycle costs, age, functionality, and criticality of each facility and ranks their needs accordingly.

Above: Roof repairs needed

Left: A line truck impedes a stairway in order to fit inside a service bay

The work in this category may include repairing or replacing a roof, replacing asphalt, concrete or old furniture, repairing broken structural elements, adding security features such as fencing and gates, augmenting materials storage areas, installing irrigation systems, replacing a boiler that fails,

purchasing emergency generators, or replacing old and inefficient electric or plumbing systems. It can also include work improvement elements such as adding a crane to safely lift heavy equipment, shelves to store maintenance materials closer to work areas, or adding ergonomics to improve productivity. One focus area is for canopies, the covered areas used to shelter trucks and equipment. Many of these have become unstable over time and require replacement.

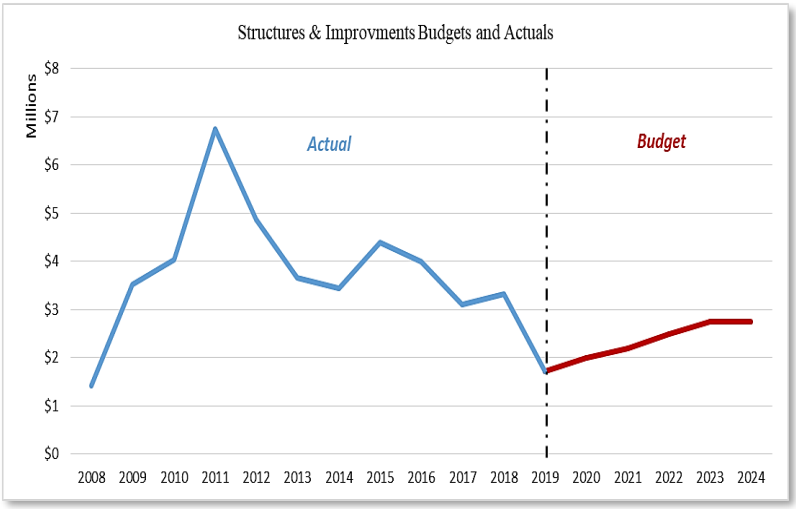


Figure 18. Facilities Structures & Improvements Capital Budget & Actuals

Employee efficiency is also a tangible benefit of adequately maintaining facilities. The turnaround time for performing routine maintenance on a line truck for example, can be reduced significantly if tools, supplies, and equipment are readily available. Even simple things like having a truck lift that allows the crew to move freely underneath the vehicle to perform maintenance and repairs quickly reduces downtime and increases vehicle availability.

In order to continue to function, buildings must be maintained. The Company recognizes that letting assets fall into disrepair ultimately impacts the ability to provide the best possible customer service, creates safety risks, and ends up costing much more in the long term. The goal of the Structures & Improvements program is to adequately maintain Company properties while trying to keep costs low as well as remain within the Facility allotted budget.

Above: Mission Campus canopy buildings

Facilities work involves complex systems like those above and on the left as well as historically significant assets such as the Steam Plant in Downtown Spokane (far left)

Performance & Capacity Projects

Performance & Capacity	2020	2021	2022	2023	2024	Five Year Total	Five Year Average
Central 24 HR Operations Facility	$0	$0	$0	$10,000,000	$9,000,000	$19,000,000	$3,800,000
Sandpoint Service Center	$0	$0	$0	$1,500,000	$8,500,000	$10,000,000	$2,000,000
Total	$0	$0	$0	$11,500,000	$17,500,000	$29,000,000	$5,800,000

Table 4. Facilities Planned Performance & Capacity Budget

The current budget cycle has two Performance and Capacity projects: construction of a 24-hour Operations Facility and a new service center in Sandpoint. These projects are described in detail below.

Central 24-Hour Operations Facility

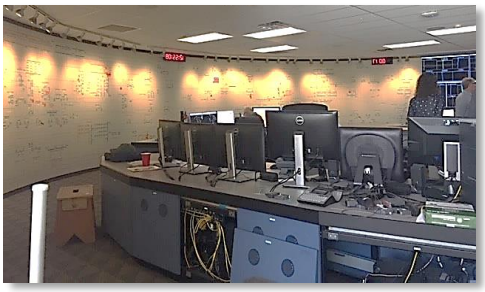
Avista is a 24-hour a day operation. Employees from Transmission, Delivery, Information Technology, Security, Customer Service, Electric and Gas Dispatch, SCADA and Operations are on the job constantly to ensure the integrity of Avista's systems, continual customer service and that customer load requirements are being met every minute of the day. At Avista, the current location for both System and Distribution Operations is the fourth floor of the Corporate Headquarters building.

Above: Distribution Operations tight workspace

Below: Work space conditions when extra personnel are brought in for emergencies

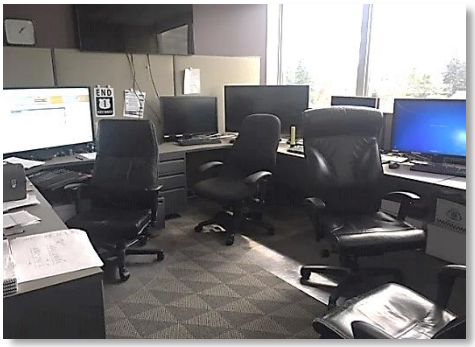
The existing Distribution Operations area is congested, in great part due to the large number of computer screens required to monitor distribution system conditions and handle daily distribution operations, as well as deal with outages and emergency situations. This group is also responsible for dispatching crews for maintenance activities or to address issues. Distribution Operators work 12-hour shifts, 24 hours a day, every day. As they hand off their work to the next Operator on shift, there is no room at the desk for the incoming Operator to sit beside the on-shift Operator to be brought up to speed on current conditions. In addition, there is no space in their area for training or to utilize when they bring in additional personnel and expertise during events such as storms.

System Operations faces a similar situation, primarily due to regional and federal issues. They are regulated by the North American Electric Reliability Corporation (NERC). NERC oversees developing and supporting standards related to the entire American interconnected grid as the regulatory body for all U.S. utilities. NERC requires all System Operators to be certified and regularly pass a national test, which requires continuous training. Currently the training area is the Training Coordinator's office, which allows room for only 3-4 additional employees at a time, making it difficult to adequately provide required employee training in a timely fashion.



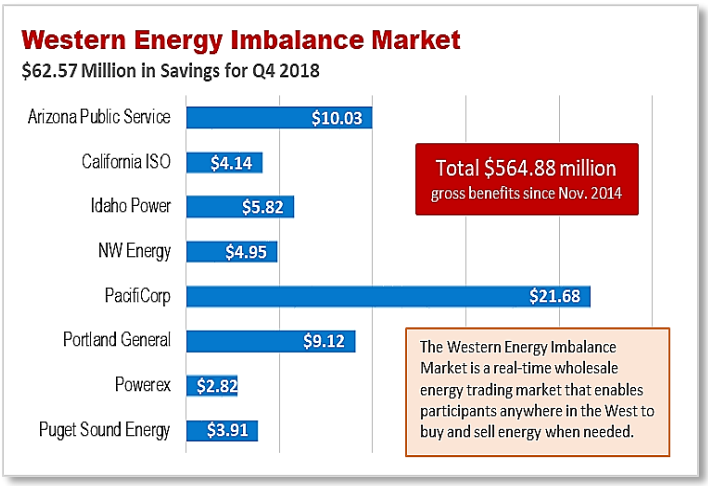
Above: One desk in System Dispatch: note the number of required screens and space needed

Below: The current training area



In addition, in April 2022 Avista will be joining the Western Energy Imbalance Market (EIM),[24] which will heavily impact System Operations in both workload, training, and space requirements. This Market encompasses about 75% of the loads and resources in the Western Interconnection, providing Avista (and its customers) additional buying and selling power in the Western energy market. The EIM provides a number of advantages for its participants which will directly benefit Avista and its customers. The Western EIM's state-of-the-art technology automatically finds and delivers the lowest cost energy to serve more than 42 million consumers in eight western states and parts of Canada. In addition to optimizing diverse resources from a larger pool (which lower costs for all participants) the EIM provides environmental benefit by spreading intermittent renewable energy integration across the Western U.S., helping more renewable energy assimilate into the system. The broad base of participating utilities allows Avista, for example, to purchase excess low-cost California solar energy when that state's customer demand levels are low but Northwest loads are high. The decision by Avista to become part of this system has obvious and tangible benefits to customers, including access to a broad, diverse resource pool, more opportunities to access low cost power, ability to leverage the diversity of loads and demands across the region (i.e. selling

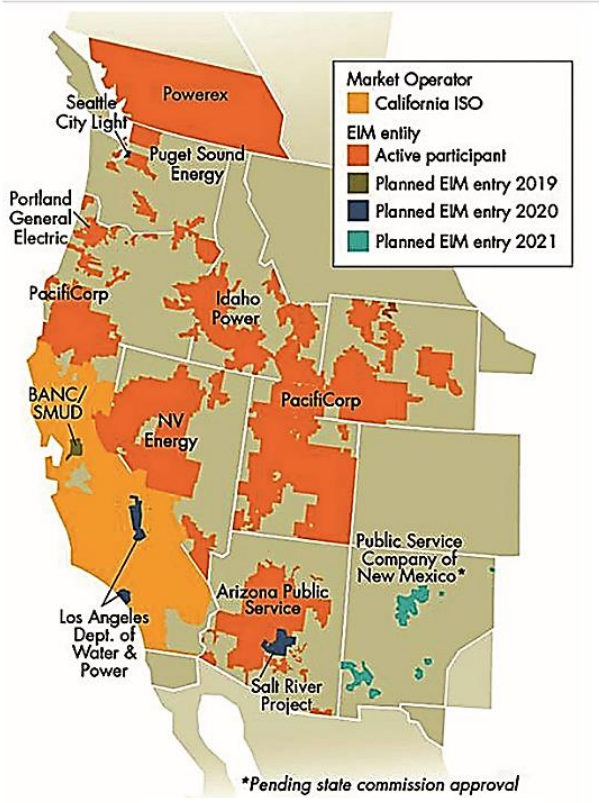
Western Energy Imbalance Market Benefits		
Year	Curtailment Avoided (MWh)	CO2 Emissions Avoided (metric tons)
2015	31,082	13,220
2016	328,238	140,486
2017	161,097	68,951
2018	194,988	83,455
Total	715,405	306,112



[24] The Western Energy Imbalance Market (EIM) is administered by the California Independent System Operator (CAISO). For more information, see https://www.westerneim.com/pages/default.aspx

energy to a southern utility when it's loads are peaking, then buying back from them when Avista's loads are high in the same day or even across seasons.) In addition, this forum provides increased access to renewable energy that is expected to be required in the near future by the Washington Legislature.[25]

In order to integrate the complex requirements of this new market into existing Company operations, changes will be required in the way the Company manages the real time system. This will require an estimated 13 additional personnel in System Operations.[26] The space for the current critical Operations functions has been maximized for the existing staff. These additional positions will require more space than is available without a significant remodel, moving other employees, or moving this entire group to a new location. These specialized employees also require additional equipment beyond the typical employee, for example, extra space for computer monitors (some of these positions utilize 8 to 12 large screens or more for monitoring the system and operating conditions), and therefore require significantly larger workspaces than a typical employee.[27]



Current Energy Imbalance Market Participants surrounding Avista

System and Distribution Operations are the nerve center of the utility, controlling the distribution, transmission and generation system in real time. These employees perform a critical function, operating Avista resources in balance with the energy market to ensure that resources exactly meet load requirements for customers every minute of the day. Utilities often separate these critical 24-hour operations from their headquarters for security reasons, typically locating these key people and associated systems in unmarked locations, as the disruption of this group could be devastating to system operations, reliability, and stability. The change in manpower requirements associated with the EIM creates an opportunity to move System Operations to a more secure and anonymous location. At the same time, this project would enable providing an upgrade to

[25] Western Energy Imbalance Market chart from their home page: https://www.westerneim.com/pages/default.aspx

[26] System Operators are mandated by NERC Standards to ensure that frequency, voltage, interchange and system stability are within acceptable ranges and to respond to emergencies accurately and within a specified time frame. System Operators must respond to ever-changing conditions of normal operations and emergency conditions due to weather, equipment malfunctions, public accidents and even vandalism and sabotage. They ensure that adequate resources are available to meet customer load demands within Avista's system, and to guarantee that Avista is adequately managing its part of the Western Interconnection. The new positions will manage the Company's participation in the EIM.

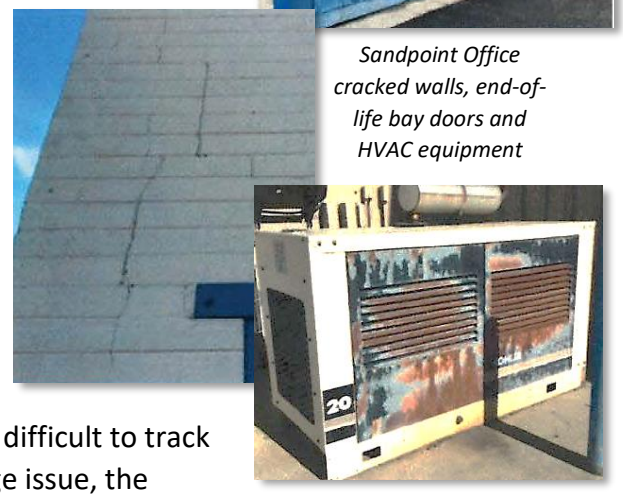
[27] This is true for both Distribution Operations and System Operations. It is estimated that an additional eight workstations will be required for the new System Operators as these are 24-hour positions served in 12 hour shifts.

the technology used by these employees to monitor and control grid operations and to incorporate the new systems required for Avista to integrate into the Western Energy Imbalance Market.

Another important consideration in the physical location of the operations-related employees is that the Federal Energy Regulatory Commission (FERC) Standards of Conduct Requirements demand separation between electric and natural gas transmission system employees and wholesale operations employees.[28] Due to the changing nature of FERC's Standards of Conduct regulations over time, most utilities have taken a conservative approach in ensuring they are in compliance with this mandate. They have found that it can become extremely complex to adequately separate these employees if they are in the same building. Structural and physical separation and information technology network controls have not always been sufficient. Moving Avista's System Operations offsite would mitigate any risk of non-compliance with FERC Standards of Conduct now and in the future, as well as address the current space limitations.

Sandpoint Service Center

The Sandpoint Service Center dates to the 1950s. It was acquired by Avista when the Company took over PacifiCorp's electric operations there in 1996. This area is experiencing a high level of growth, with a rate of 2.9% from 2017 to 2018[29] compared to about 1.8% growth in Spokane over the same time period,[30] spurred in part by some great publicity for Sandpoint such as being named "Best Small Town" by both Sunset Magazine and USA Today.[31] Over time the Company has outgrown the Sandpoint facility. The existing storage area does not have room for all of the inventory required to keep up with current work demands, and there is no adjacent property available for expansion. The Sandpoint storekeeper has become incredibly inventive, utilizing every spare nook and cranny in the facility, but that makes it difficult to track and manage inventory effectively. To add to the storage issue, the Sandpoint area has a unique voltage level which differs from the rest of Avista due to its development by another utility. This requires unusual materials and supplies that cannot be acquired from other district offices and so must be stored onsite in Sandpoint.



Sandpoint Office cracked walls, end-of-life bay doors and HVAC equipment

[28] "FERC Standards of Conduct and Business Support Functions," FindLaw, https://corporate.findlaw.com/litigation-disputes/ferc-standards-of-conduct-and-business-support-functions.html.
[29] World Population Review 2019, http://worldpopulationreview.com/us-counties/id/bonner-county-population/ /
[30] World Population Review 2019, http://worldpopulationreview.com/us-counties/wa/spokane-county-population
[31] "Best Small Town: Sandpoint, Idaho," Sunset Magazine, https://www.sunset.com/travel/northwest/best-small-town-sandpoint-idaho-0 and "USA Today, Rand McNally name Sandpoint most beautiful small town in America," Coeur d'Alene/Post Falls Press, https://www.cdapress.com/archive/article-763b3f51-0162-5d6f-a396-093d843e5552.html

Safety concerns at this facility are very real. There are no exit lights or smoke detection systems. The yard is so small that there are both vehicle and employee safety issues as vehicles attempt to maneuver into and out of the yard and up to the loading dock. Some of the roll up loading bay doors are damaged beyond repair, the lighting must be upgraded, the roof requires repair, the windows must be replaced, the concrete sidewalks and asphalt parking areas are cracked and pitted, the fences are broken in places, there are security issues, and the list goes on. Many of the building's systems, including electrical and HVAC, are antiquated and inefficient and some violate current code requirements.

Overcrowded storage area

Sandpoint also has some unique environmental concerns. A creek runs through the Service Center property that floods in the spring, inundating the pole yard with water. This close proximity to water sources that drain into area waterways demands a higher level of accountability, especially with Avista's environmental focus. This highly utilized service yard contains trucks and equipment that by their nature experience leaks and create mud and runoff that cannot be adequately contained with the current set up.

This area also experiences some of the highest amounts of snowfall in Avista's service territory, averaging about 58 inches of snow per year.[32] A great effort goes into removing snow from work vehicles before they can go out into the field because there are not adequate places for Company vehicles to be sheltered. In fact, one of the old shelters collapsed in 2017 due to snow loading and poor construction. Recently another vehicle suffered significant damage due to ice unloading from an Avista storage area due to lack of covered vehicle spaces.

Covered parking would be great! At times, vehicles must be shoveled out before use

The Company proposes acquiring a new site (not located on a major highway) upon which to construct a new service building, line dock, storage yard, warehouse, and covered storage areas for vehicles and equipment. This will include energy efficient heating and cooling systems, security and fire systems, plus adequate room for employees and maintenance operations. One of the focus areas will be on environmental protection, with storm water management, oil handling facilities, and protected transformer storage, ensuring compliance with legal and environmental regulations. Another key benefit will be in bringing all of the Sandpoint area employees together in one location along with the supplies and equipment they need to most capably perform their jobs. The existing facility will be sold to help offset the cost of the new location.

[32] https://www.bestplaces.net/climate/city/idaho/sandpoint

Avista's Facilities O&M Investments

Since 2005 the Company has spent an average of $4.3 million on Facilities operation and maintenance, divided into sections based on expected levels of need. O&M spending pays the utilities at every site, including electricity, water, sewer, garbage pickup, and natural gas service. It also funds repairs for leaking roofs, energy management audits and upgrades, grounds keeping, office supplies, building supplies such as lights and toilet paper, coordinating employee moves, and managing office space, to name a few. To add further complexity, the definition of what can be considered capital has become more restrictive, forcing more requests into the limited O&M category. As shown in Figure 19, not only has Facilities kept their O&M budgets fairly flat, but they have stayed very close to their budget allocation even with the variability they face in this category of spending.

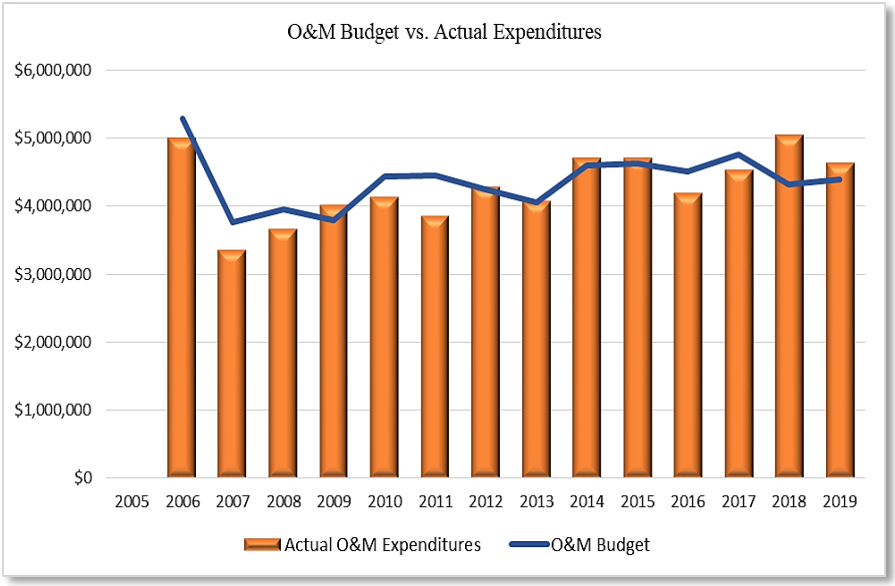


Figure 19. Facilities O&M Budget and Actual Spending

Facilities Operations and Maintenance work is separated into two categories, discretionary and non-discretionary. Discretionary work is maintenance not related to asset lifecycle or safety, such as carpet cleaning, general equipment maintenance, exterior upkeep, asphalt repairs and painting. Non-discretionary spending is primarily related to safety. This includes maintenance of elevators, fire systems, and lighting as well as snow and ice removal. It also includes building automation, janitorial/cleaning services, and utilities such as electricity and sewer. Due to budget limitations, facilities is often forced to choose not to do sustaining maintenance and instead "run to fail" those particular assets that do not fall under the category of public or employee safety. General operating costs such as utility bills have continually increased, requiring Facilities to postpone or eliminate more and more maintenance projects in order to stay within their allocated budget.

The Terracon (and industry standards) recommended spending levels for simply sustaining a company's facilities and meeting the basic needs (such as providing utilities) should be between 2-4% of the value of those facilities.[33] In Avista's case, their infrastructure value has been placed at $241,515,515, meaning the minimum sustainability O&M facilities spending level should be between

[33] "Budgeting for Facilities Maintenance and Repair Activities," National Academy of Sciences, Engineering, and Medicine, https://www.nap.edu/read/9226/chapter/3

$4.8 million and $9.6 million per year. As mentioned earlier, the total funding for Avista Facilities O&M budget is about $4.3 million on average, somewhat lower than the lowest recommended percentage, but that is somewhat misleading. The industry standard number assumes that this funding will sustain buildings, that is, provide preventative maintenance. Almost none of Avista's O&M money is spent for preventative work unless replacement of filters is included. Most of this money instead goes to paying for basic utilities.

Ritzville Service Center exterior (above) and interior (right)

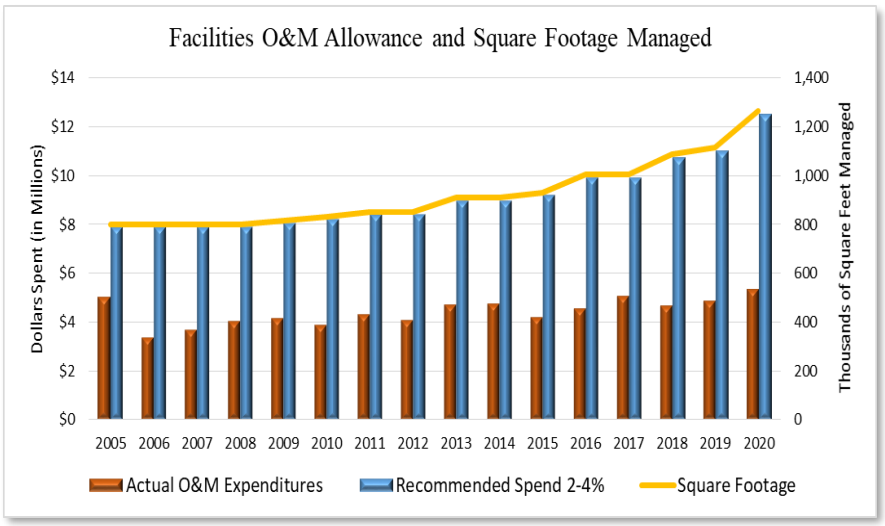


Figure 20. Avista O&M Spending vs. Industry Recommended Levels

Avista parking area & sidewalk

To add complexity, analysis of Facilities investments is not necessarily as straight-forward as other assets can be, as they are dealing with so many variables. The buildings this team manages are a variety of ages and are comprised of a variety of materials. For example, the Clarkston Service Center has an exterior made of wood rather than composite siding or brick. It has been in serious need of repainting for quite some time and, as a result, has suffered weather damage. Because Facilities was unable to do proper maintenance over time, the cost to make this repair is now significantly higher than it should be, costing an estimated $60,000, which is not manageable in the current funding model. Thus this work, though it needs to get done, continues to fall back on to the "to do" list or "fun to fail".

For another example, many of the Company's parking areas have broken curbing, pot holes, and cracks. Though these problems can cause safety issues, there is not enough funding to address them all. Facilities does its best to care for all of its assets, but this team is constantly fighting an uphill battle in trying to stay ahead of the need.

Summary and Wrap-Up

It is quite possible that Facilities is the most underrated and least appreciated team at Avista, which is somewhat understandable. Every employee utilizes dozens of Facility assets in their daily work lives, from parking lots to cubicles, bathrooms, water fountains, break areas, truck maintenance facilities, conference room technology, heating, cooling, and the like. We benefit from cleaning services, mowed and green lawns, exercise facilities, security, and so much more, but most are not really cognizant of the effort it takes to provide these routine services. Employees just naturally expect to have them, much like customers, who don't really pay much attention to the convenience of their electric power until there is an outage.

Facilities uses the best technology and information available to them to try to manage their buildings with the lowest cost and highest efficiency. When given money, this group focuses on using it to provide both long term value and customer benefits. As shown here, they have very little funding; thus, it is in the very best interests of all parties that this money is used wisely.

The Terracon study provides invaluable insights into areas of highest need for replacement or repair, which provides great assistance in delegating funds to get the most possible value. Facilities also utilizes automated building management systems to track building operations and help identify recurring problems and trends which should be addressed. The Facilities team is always on the go. There is never an end to the need to repair or replace something in their 1.2 million square feet of real estate. It is important to note that they do this extremely successfully given their limited funding. They are operating at about half the recommended national staffing level for facilities per square foot, with approximately half the amount required to effectively maintain facilities according to national standards, and with almost no O&M budgets or discretionary funding for handling unexpected expenses such as a heavy snowfall or a failed HVAC system. Their O&M expenditures often go over budget, much to their chagrin, because they simply cannot predict when something might fail and must be repaired or replaced.

Even with all of the efficiencies the team has developed and creative solutions they employ, there is a consequence to running at such lean manpower and funding levels. Many basic objectives cannot be achieved. Buildings simply cannot be sustained at the level they should be, which leads to early deterioration and, eventually, higher costs to repair or replace. Systems cannot be maintained adequately without preventative maintenance needed for the assets to achieve their optimum lifecycle and provide the most economic value. Employees cannot reasonably be expected to continue to do their best work under constant criticism and frustration. This situation is simply not sustainable and is ultimately not in the best interests of the Company or customers.

Appendix A: Awards

LEARN MORE AT energystar.gov

ENERGY STAR® Application for Certification

99

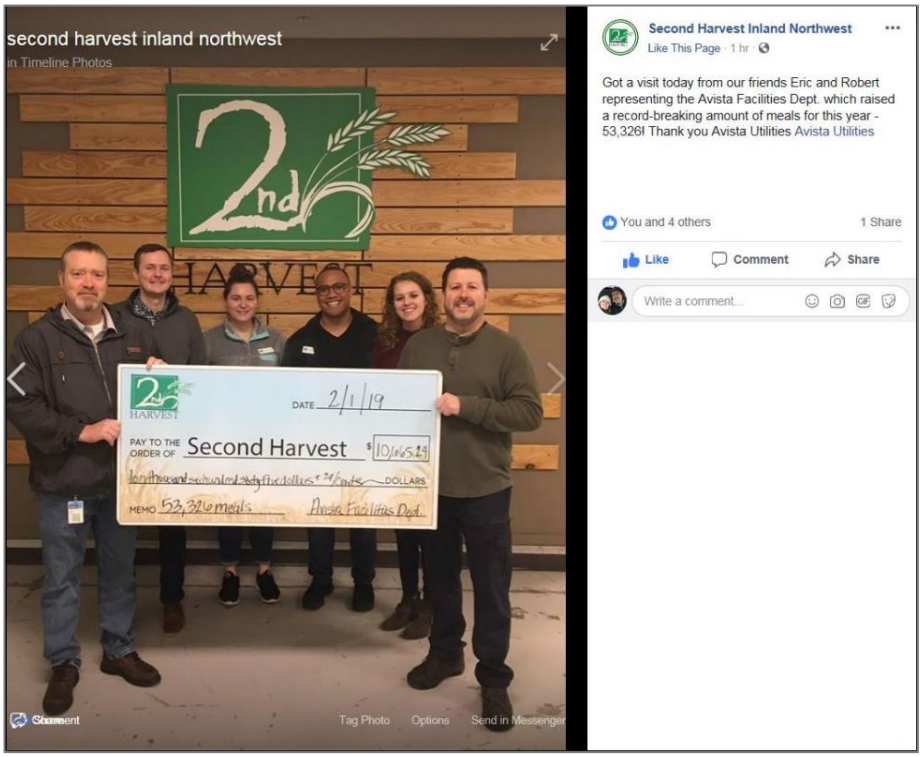
ENERGY STAR ® Score[1]

Avista Spokane GOB

Registry Name: Avista Spokane GOB
Property Type: Office
Gross Floor Area (ft²): 151,400
Built: 1950

For Year Ending: 08/31/2017[2]
Date Application Becomes Ineligible: 12/29/2017

1. The ENERGY STAR Score is based on total source energy. A score of 75 is the minimum to be eligible for the ENERGY STAR.
2. Applications must be submitted to EPA within 120 days of the Year Ending Date. The award is not final until approval is received from EPA.



The Facilities Group raised over $10,663 for the Second Harvest Foodbank in 2019, enough for 53,000 meals

Appendix B: Capital Request Form

<Business Case Name>

1 NATURE OF THE CHANGE

Type of Change	Choose an item.
Primary Reason for Change	Choose an item.
Response needed by	Click here to enter a date.

Year	Current Approval	Requested Change	Proposed Total
2019	$0	$0	$0
2020	$0	$0	$0
2021	$0	$0	$0
2022	$0	$0	$0
2023	$0	$0	$0
2024	$0	$0	$0

This section must describe the reason for the funds change request. Including but not limited to:

- *Identify what has changed such that the current approval is not sufficient.*
- *Identify why this work is needed now and what risks there are if not approved or deferred.*
- *Please reference studies that support the problem and attach to this document.*
- *Outline, at a high-level, what business functions/processes may be impacted and how, by the business case for it to be successfully implemented including additional O&M costs, employee or staffing, reductions to O&M (offsets), etc.*
- *Discuss what alternatives were considered. Describe why this is the best and/or least cost alternative (e.g., cost benefit analysis, attach as supporting documentation).*
- *Confirm that the justification narrative is still valid given the nature of this change. If not, indicate that the narrative will be updated to incorporate.*
- *Please delete this blue text, and format your response in non-italicised black font.*

2 APPROVAL AND AUTHORIZATION

The undersigned acknowledge they have reviewed the funds change request and agree with the approach it presents, and that it has been approved by the relevant governance group. Signatures are required before funding can be considered.

Name	Role	Signature	Date
	BC Owner		
	BC Sponsor		

3 CAPITAL PLANNING GROUP RESPONSE

Response			
Name	**Role**	**Signature**	**Date**
	FP&A		