



Ashland School District  
*inspiring learning for life*

# ASHLAND SCHOOL DISTRICT 2019 CAPITAL BOND PROGRAM

# PROGRAM GUARDRAILS

- 1. Building Standards
- 2. Educational Program
- 3. Sustainability Standards (CEAP)



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# ASD's Priorities for Sustainability

- ❑ Transparency in commitments → School projects' progress on CEAP metrics
- ❑ Recognition for success → Tell the Sustainability Story with City's CEAP
- ❑ Framework for continuous improvement → ASD Standards/Design to Construction to O&M
- ❑ Leverage projects for change → Align project goals with community's goals
- ❑ Students experience sustainable systems → Tell the Sustainability Story, experience how buildings can be our solutions
- ❑ Must fit within schedule and budget → Sustainability/CEAP in support of bond goals
- ❑ Every dollar contributes to student academic success → Health, Environment, Resilience, Collaboration

# Ashland Climate & Energy Action applied to ASD

<b>CM-5-1</b>	<b>CONSUMPTION + MATERIALS MANAGEMENT: Improve the sustainability of City operations and purchases</b> Introduce environmentally preferable purchasing (EPP) guidelines for City procurement
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## Strategy

- Use of low-emitting materials (paints, coatings, flooring, composite woods, thermal insulation, acoustic insulation, ceilings, furniture, adhesives, sealants);
- Preference for strategic use of low-embodied carbon materials
- Preference for use of:...
  - post-recycled content
  - FSC-certified wood
  - US-, OR-made products
  - other attributes ASD values

## Metrics

- 100% of on-site wet-applied products meet VOC limits (LEED) and
- 80% by square footage of products meet emissions testing standards (LEED)
  
- To-be-defined
  
- To-be-defined

# Ashland Climate & Energy Action applied to ASD

NS-2-2	<b>NATURAL SYSTEMS:</b> Manage and conserve community water resources Explore water-efficient technologies on irrigation systems and consider requiring them during permitting
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## Strategy

- Design landscape for minimal or no permanent irrigation. Where irrigation is deemed necessary, design with water-efficient, smart irrigation technologies.
- Landscape with trees on the City of Ashland's Tree List

## Metrics

- Reduce landscape water requirement by at least 50% compared to US EPA WaterSense Water Budget Tool (LEED)
- 100% of new trees are on the City's Tree List

# Ashland Climate & Energy Action applied to ASD

NS-2-3	<b>NATURAL SYSTEMS:</b> <b>Manage and conserve community water resources</b> Expand water conservation outreach and incentive programs for residents and businesses
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## Strategy

- Enroll ASD in applicable water efficiency incentive programs (Ashland Water Dept.)
- Install fixtures from (updated) ASD Design Standards to US EPA WaterSense-labeled:
  - Water Closets → 1.28 gpf max.
  - Urinals → 0.5 gpf max.
  - Lavs → 0.5 gpm max.
  - Showerheads → 2.0 gpm
  - Pre-rinse valves → 1.0-1.28 gpm
  - Breakroom/kitchen faucets → 1.5 gpm

## Metrics

- Total water-savings incentive dollars
- Annual fixture water usage
  - Annual water/sewer costs
  - Pre-bond to Post-bond annual water usage and costs

# Ashland Climate & Energy Action applied to ASD

<b>CC-1-1</b>	<b>CROSS-CUTTING STRATEGIES:</b> <b>Educate and empower the public</b> Create a formal public outreach and education plan to inform the community about climate actions
<b>CC-1-2</b>	<b>CROSS-CUTTING STRATEGIES:</b> <b>Educate and empower the public</b> Support capacity of community groups, including schools, to implement climate mitigation and adaptation initiatives

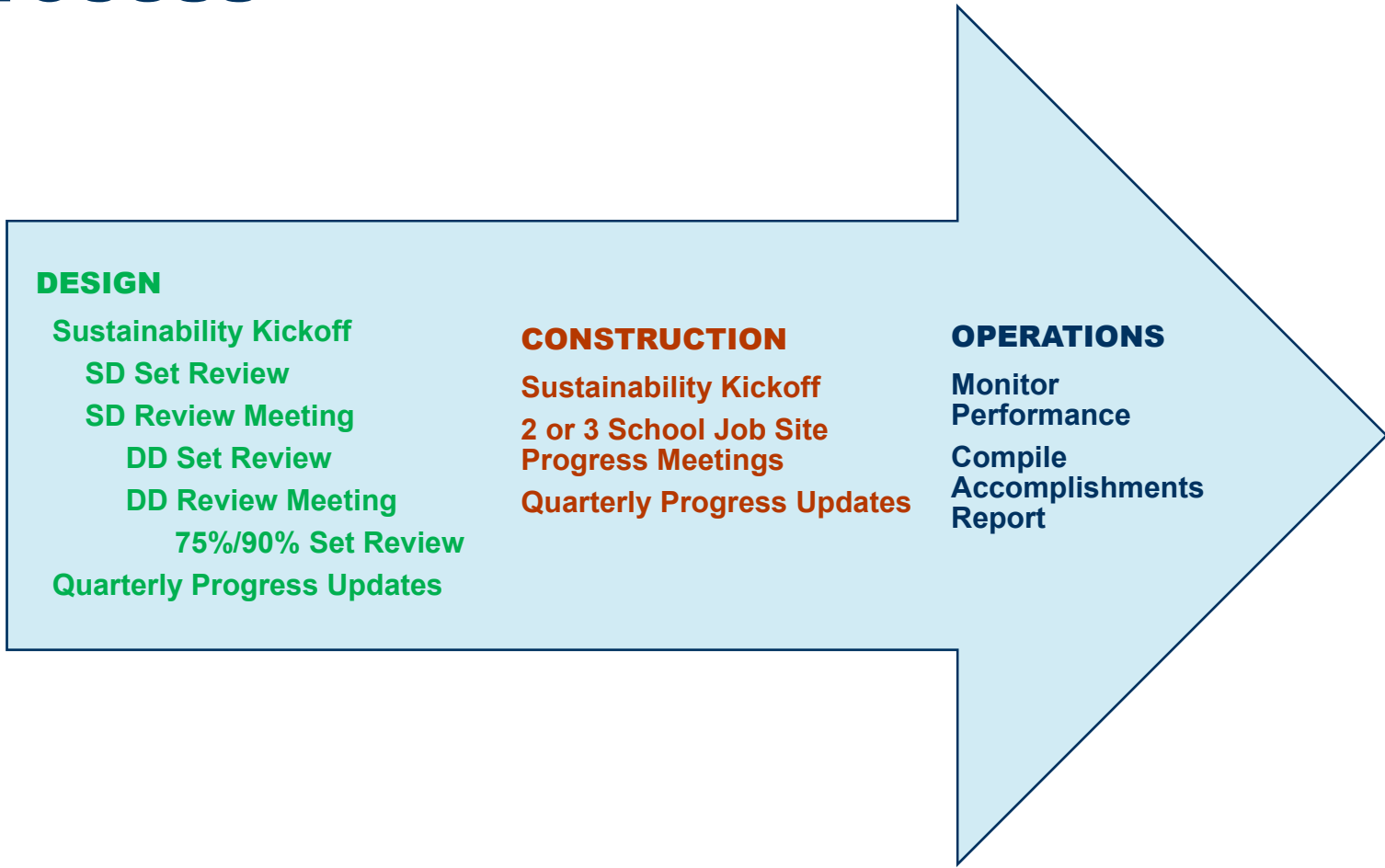
## Strategy

- "Tell the ASD bond sustainability story" throughout the process and in coordination with the City
- ASD and City CEAP staff coordinate on development, implementation, documentation and communications about school bond strategies and impacts

## Metrics

- ASD bond initiatives and accomplishments featured in City's communications (details TBD)
- ASD coordinate with City CEAP staff (specifics TBD)

# Process





# SUSTAINABLE DESIGN

Ashland School District has adopted the City of Ashland's Climate and Energy Action Plan (CEAP). The District hired Brightworks as their sustainability consultant after passage of the school bond. The two entities discussed which strategies of the CEAP were applicable for the bond projects. For the Helman project, Brightworks conducted a Sustainability Workshop to discuss these strategies with a Helman Elementary focus. The following are the strategies selected to further investigate and explore, as well as their status.

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## ASD Bond - Climate & Energy Action Checklist Helman Elementary

October 31, 2019

Based on City of Ashland's Climate and Energy Action Plan  
[https://www.ashland.or.us/SIB/files/CEAP\\_WithAppendices.pdf](https://www.ashland.or.us/SIB/files/CEAP_WithAppendices.pdf)

	Ashland's CEAP Strategies	ASD Bond Scope Approach	Project Metrics	Status of Strategy and Associated Documentation
Required	BE-1-2 <b>BUILDINGS + ENERGY:</b> Support cleaner energy sources Promote switching to low and non-carbon fuels	a. For all major MEP system replacements, stated preference for all-electric powered. Define a life-cycle benefit-cost standard for any proposed exceptions for fossil-fuel-based systems (accounting for O&M costs, equipment lifespan, etc.)	School's forecasted energy loads: — kWh/year — therms/year — % fossil-fuel-free	Continued use of existing boilers will make mechanical efficiency a challenging. The old boilers are also challenge for the goal of moving toward low- and non-carbon fuels. Additional info about the condition of the boilers will be available after a site walk and the Systems Options Workshop on 11.14.19.
Required	BE-1-3 <b>BUILDINGS + ENERGY:</b> Support cleaner energy sources Facilitate and encourage solar energy production	a. Meet all 1.5% Green Energy Technologies requirements  b. All roof replacements and major electrical upgrades, design and build to solar-ready (define an exception standard for associated roof structural improvements)  c. Explore architecturally functional solar installations (building facade shading, covered walkways "roofing", etc.)  d. Explore additional potential solar funding sources (ODOE RED, BEF Solar4RSchools, PPA, others)	Dollars allocated to solar and forecasted solar kW a. 1.5% budget = \$ → = kW solar array → = kWh/year  b. Solar-ready roof square footage  c. Solar ready architectural element square footage  d. Dollars for solar secured from non-Bond sources	1.5% of HES budget is roughly \$244,000. <b>HMK to coordinate solar efforts district-wide to leverage scaling opportunities. HMK to confirm the details of strategies that are eligible for 1.5% GET funds, such as informational dashboards, "green" natural gas and diesel, others.</b>  Solar panels currently located on library building roof are not being used. <b>BBT team to confirm status of issues with existing array. BBT to design for solar-ready on appropriate existing rooftops and new addition.</b>  Additional solar-ready opportunities may be incorporated into the design of bike storage area (covered); creation of new parking (covered) and central courtyards (covered shade).  <b>HMK to coordinate additional potential solar funding sources such as Bonneville Environmental Foundation, ODOE, Ashland co-op micro-grants and possibly other.</b>
Required	BE-2-1 <b>BUILDINGS + ENERGY:</b> Encourage increased energy efficiency and conservation Expand participation in energy efficiency programs & promote climate-friendly building/construction	a. Ensure ASD is enrolled and taking advantage of all applicable energy efficiency incentive programs (Ashland Electric, ODOE, others)  b. Explore installation of energy usage "dashboards" in schools	a. Total incentive dollars expected/ secured  b. Incorporation of educational energy "dashboard" program (Y/N)	<b>Robby of ASD has identified rebates and is currently in process of enrolling in applicable incentives. Brightworks to reach out to Energy Trust of Oregon for incentives -- related only to natural gas savings -- and report back on opportunities.</b>  ASD is very interested in the use of dashboards in schools, web-based programs school to engage and educate students and to showcase sustainability strategies. <b>BBT-HMK-ASD to determine approach.</b>
Required	BE-2-2 <b>BUILDINGS + ENERGY:</b> Encourage increased energy efficiency and conservation Require building energy scores to identify and incentivize cost-effective energy efficiency improvements	a. Benchmark and monitor actual energy and water usage of each ASD school using ENERGY STAR Portfolio Manager  b. Energy analysis (modeling or prescriptive) to inform Energy Efficiency Measures pursued	a. Establish on ESPM a project profile; benchmark historical energy usage; complete a Target Finder for future Energy Usage Intensity (EUI) and Water Usage Intensity (WUI)  b. Report of EEMs considered, associated savings, ROIs and forecasted post-bond energy and waste usage and utility costs	<b>ASD is in the process of compiling historical utility electricity, natural gas and water, and setting up the schools -- including Helman -- in ENERGY STAR Portfolio Manager. Brightworks to assist in this effort, if needed.</b>  BBT provided in its proposal to HMK energy modeling as an add service. Brightworks highly recommends using energy modeling as a tool to inform and validate design decisions. <b>HMK and ASD to determine go/no-go with energy modeling.</b>

Ashland's CEAP Strategies		ASD Bond Scope Approach	Project Metrics	Status of Strategy and Associated Documentation
Required	BE-5-1 <b>BUILDINGS + ENERGY:</b> Prepare and adapt building for a changing climate Encourage heat-tolerant building approaches such as cool roofs and passive cooling	a. For major roofing material replacements and installations/installations, select materials with high SRI (84 for flat roofs) b. For major hardscape material replacements/ installations, select materials with high SRI (29 for hardscape (new concrete = 26))	a. Total roof square footage and "cool" roof square footage b. Total site hardscape square footage and "cool" hardscape square footage	Existing roof to remain on pods is light/white roof; gym, cafeteria, and library are "grey" roof color with dark structure containing solar panels (not in use). <b>BBT to design HES new addition will have a new, high-SRI (84+) roofing material.</b>  No significant asphalt additions; some parking spaces may be relocated. Total site hardscape additions/changes TBD. <b>Brightworks to advise team further on no-cost/low-cost opportunities for selecting building materials (including hardscape) with relatively low-embodied carbon. Relates to CM-5-1 (below)</b>
Required	CM-3-1 <b>CONSUMPTION + MATERIALS MANAGEMENT: Reduce consumption of carbon-intensive goods and services</b> Implement an education campaign for waste and consumption reduction strategies	a. During all school programming phases, plan for ample square footage for storage and collection of recyclables and compostables	a. Design for exemplary waste management during operations with an on-going diversion rate of 75% or more	Programming phase for space needs will be complete early November and the recycling, storage and collection areas will be resourced. An exemplary waste program, however, is contingent upon student, faculty and staff engagement. <b>ASD (Steve), HMK (Chris), City (Stu) and Brightworks to support Helman ES Site Council to plan for successful sustainable operations (waste mgmt and other)</b>
Required	CM-3-1 <b>CONSUMPTION + MATERIALS MANAGEMENT: Expand community recycling and composting</b> Improve recycling programs, implement new education and outreach, and expand public space recycling	a. As stated above, ensure ample square footage for storage and collection of recyclables and compostables to serve all school occupants and haulers	a. Design for exemplary waste management during operations with an on-going diversion rate of 75% or more	HES has interest in composting food waste and yard debris but currently has no infrastructure. Steve of ASD suggested the completion of an impact statement on current waste operations in house, to analyze feasibility of in-house composting. There's a need for increased buy-in of student body to conduct waste sorts, present challenges and solutions to school board, while being sensitive to staffing duties and workload if compost were to be brought on.  <b>ASD currently trying to understand internal challenges and opportunities related to waste management.</b>
Required	CM-3-3 <b>CONSUMPTION + MATERIALS MANAGEMENT: Expand community recycling and composting</b> Strengthen the Demolition Debris and Diversion ordinance to enhance enforcement, diversion, and reuse	a. For all school scopes, require development and implementation of construction and deconstruction/demolition waste management planning (Demolition Debris and Diversion ordinance), implementation and documentation of achievement of project diversion rates of at least 75%	a. Total tons waste generated, total tons waste diverted, percent diversion	There's strong interest in reuse and preservation of murals as much as possible, including Henry the dragon, but it is anticipated there's limited if any meaningful opportunities for deconstruction/reuse of other materials at Helman site.  <b>Adroit to assess and forecast material waste stream types and quantities for the project. Adroit to price and report back to the team on C&amp;D waste management approaches and associated cost deltas: all on-site source separation, all commingled (and sorted offsite), and some combination of on-site source separation at strategic times in the schedule. compare on-site source separated versus commingled disposal.</b>
Required	CM-5-1 <b>CONSUMPTION + MATERIALS MANAGEMENT: Improve the sustainability of City operations and purchases</b> Introduce, revise, and/or update ASD Design Standards to include environmentally preferable purchasing (EPP) guidelines	a. Use of low-emitting materials (paints, coatings, flooring composite woods, thermal insulation, acoustic insulation, ceilings, furniture, adhesives, sealants) b. Preference for strategic use of low-embodied carbon materials: post-recycled content FSC-certified wood US-, OR-made products other attributes valuable to ASD	a. -- 100% of on-site wet-applied products meet VOC limits (LEED). -- 80% by SF of products meet emissions testing standards (LEED)  To be defined: (Brightworks to support the development of a carbon smart materials palette)	Brightworks has provided to HMK (in June 2019) comments on the ASD Design Standards to comprehensively require low-emitting materials. Related arkitek is supporting the development of updated ASD interior finish materials. Matthew leads BBT's practice area focused on the use of healthy and sustainable materials, as possible. <b>Brightworks, HMK, BBT and arkitek to collaborate ensure these related efforts are in synch. Relates to CM-5-1 (below)</b>  Brightworks has offered to lead a follow-up meeting to introduce further the topic and the importance of embodied carbon in selected building materials, and to present its recommendations for ASD's implementation. <b>Brightworks and HMK to coordinate to schedule this meeting. Brightworks to look into embodied carbon tools/resources developed by Oregon DEQ (Jordan Palmari). Relates to CM-5-1 (above)</b>
Required	NS-2-2 <b>NATURAL SYSTEMS:</b> Manage and conserve community water resources Explore water-efficient technologies on irrigation systems and consider requiring them during permitting	a. Design landscape for minimal or no permanent irrigation. For each school with site landscape work, use water-efficient, smart irrigation technologies b. Landscape with trees on the City of Ashland's Tree List	a. Reduce landscape water requirement by at least 50% compared to US EPA WaterSense Water Budget Tool (LEED) b. 100% of new trees are on the City's Tree List	The HES design team will design to meet 50% water use reduction. Landscape design will include a balance of plantings requiring little irrigation and high efficiency irrigation system. The team is exploring creative educational ways to integrate UID stormwater management techniques, possibly with a winter water garden honoring the "toes of the hills" and flowing water.  <b>Powell Engineering to look into Rogue Valley Sewer Services water savings grant applicability.</b>  Project team will review and consider species from the City's Tree List.

Ashland's CEAP Strategies		ASD Bond Scope Approach	Project Metrics	Status of Strategy and Associated Documentation
Required	NS-2-3 <b>NATURAL SYSTEMS:</b> Manage and conserve community water resources Expand water conservation outreach and incentive programs for residents and businesses	a. Enroll ASD in applicable water efficiency incentive programs (Ashland Water Dept.) b. Install fixtures from (updated) ASD Design Standards to US EPA WaterSense-labeled: Water Closets - 1.28 gpf max. Urinals - 0.5 gpf max. Lavs - 0.5 gpm max. Showerheads - 2.0 gpm Pre-rinse valves - 1.0-1.28 gpm Breakroom/Kitchen faucets - 1.5 gpm	a. Total water-savings incentive dollars  b. -- Annual fixture water usage -- Annual water/sewer costs -- Pre-bond to Post-bond annual water usage and costs	ASD is not aware of water-related incentives in the Ashland area. Brightworks will explore any applicable incentives and provide an update to ASD.  <b>Brightworks to support ASD in set up of ENERGY STAR Portfolio Manager and referencing WaterSense-labeled fixtures as a standard for selection. Relates to BE-2-2 (above), benchmarking schools on ENERGY STAR Portfolio Manager</b>
Required	PHSW-1-1 <b>PUBLIC HEALTH, SAFETY + WELL-BEING:</b> Manage ecosystems and landscapes to minimize climate-related health impacts Promote the expansion of tree canopy in urban heat islands or areas that need air conditioning	a. Design landscaping to optimize trees offering canopy shade for buildings, playground hardscape, and/or parking areas to reduce heat island effect, and adaptability to thrive in changing local climate. Design to minimize leaf debris on roofs and gutters and associated maintenance b. Landscape with trees on the City of Ashland's Tree List	a. Square footage of tree canopy shading (anticipated after 5 years) buildings, playground hardscape and/or parking b. 100% of new trees are on the City's Tree List	Site landscaping design will align with FireWise standards, which requires conifer trees and shrubs to at least 30' from all structures. Quality views and seasonal integration in landscaping is valued by ASD.  <b>As possible, Helman team will integrate into the landscape design (low water-demanding) trees offering canopies and shading.</b>  Project team will review and consider species from the City's Tree List.
Required	PHSW-3-2 <b>PUBLIC HEALTH, SAFETY + WELL-BEING:</b> Minimize public health impacts Identify and minimize potential urban heat impacts	a. Design for schools to potentially serve as community cooling centers. Address associated school security issues	a. Occupancy capacity of school as an emergency community cooling center	Based on its location within the city, Helman is not a good candidate school-as-community-center location. (This strategy is most relevant for the AMS and AHS.) Nonetheless, security implications are still a concern -- how to safely implement cooling strategies in unique Helman multiple building campus. There is an opportunity for additional passive cooling than is in place -- current site contains courtyards that have cooling effect with vegetation.
Required	ULT-2-1 <b>URBAN FORM, LAND USE + TRANSPORTATION: Make Ashland more bike- and pedestrian-friendly</b> Implement bicycle- and pedestrian-friendly actions in the Transportation System Plan and Downtown Parking Management Plan	a. Install secure bicycle racks to accommodate at least 5% of all faculty, staff and students b. Engage Safe Routes to School program and students to understand, explore and address barriers and opportunities biking and walking	a. Capacity of bike rack installations b. Ultimately, increased biking and walking mode-share and eliminated vehicle miles driven and vehicle emissions	Current bike spaces located on perimeter of school has significant security and theft issues. BBT is considering designing a covered/enclosed bike storage in more visible interior areas of site, and it could double as a cool, shaded space to escape summer heat.  BBT is just beginning its site planning effort. There is some connectivity with pathways to the surrounding neighborhood. This is an issue needing involvement of Helman ES community. Some potential ideas: commuter survey, bike-to-work incentives, explore Safe Routes to School support.
Required	CC-1-1 <b>CROSS-CUTTING STRATEGIES:</b> Educate and empower the public Create a formal public outreach and education plan to inform the community about climate actions	"Tell the ASD bond sustainability story" throughout the process and in coordination with the City	ASD bond initiatives and accomplishments featured in City's communications (details TBD)	ASD, HMK, Brightworks and BBT to collaborate on communications about Helman's sustainability program and accomplishments, as well as transparency about the rationale for decisions (which will inevitably have some variation from school to school). HMK has a communications strategies to support this effort, with expertise in social media, videos, etc.. The City is very interested in ASD's work on the Climate and Energy Action Plan and supporting associated communications.  These efforts should have focus at milestones during design process.
Required	CC-1-2 <b>CROSS-CUTTING STRATEGIES:</b> Educate and empower the public Support capacity of community groups, including schools, to implement climate mitigation and adaptation initiatives	ASD and City CEAP staff coordinate on development, implementation, documentation and communications about school bond strategies and impacts	ASD coordinate with City CEAP staff (specifics TBD)	See CC-1 above.
Optional	BE-4-1 <b>BUILDINGS + ENERGY:</b> Improve demand management Expand the current net meter resolution to include and incorporate virtual net metering	For all meter replacements, consider/require virtual net metering, depending on contracts with utility		TBD No/Go

Ashland's CEAP Strategies		ASD Bond Scope Approach	Project Metrics	Status of Strategy and Associated Documentation
Optional	BE-4-2	<b>BUILDINGS + ENERGY:</b> Improve demand management Implement utility-level smart grid technologies to facilitate efficiency and distributed energy solutions	For all meter replacements, consider/require smart metering	TBD No/Go
Optional	CM-1-2	<b>CONSUMPTION + MATERIALS MANAGEMENT:</b> Reduce consumption of carbon-intensive goods and services Support "collaborative consumption" community projects	During all school programming phases, consider designating ample square footage for storage and operations for "tool libraries," "recreational equipment libraries," etc.	TBD No/Go
Optional	CM-1-3	<b>CONSUMPTION + MATERIALS MANAGEMENT:</b> Reduce consumption of carbon-intensive goods and services Determine and implement effective ways to reduce and track consumption based emissions	Student engagement and experience opportunity	TBD No/Go
Optional	CM-2-1	<b>CONSUMPTION + MATERIALS MANAGEMENT:</b> Support sustainable and accessible local production and consumption Partner with nonprofit organizations to promote the purchase of climate-friendly food and products	Student engagement and experience opportunity	TBD No/Go
Optional	CM-2-2	<b>CONSUMPTION + MATERIALS MANAGEMENT:</b> Support sustainable and accessible local production and consumption Expand community gardening and urban agriculture	During the programming phase of all schools with site improvement scopes, consider allocating site area for school/community gardens	HES has strong interest in integrating gardening, food growing education, and water catchment/irrigation features that integrate the community; must consider security issues. Discussion on locating community garden near campus and requesting parks department to manage said dedicated garden, or an HOA such as nearby Verde village
Optional	CM-4-1	<b>CONSUMPTION + MATERIALS MANAGEMENT:</b> Reduce food waste Support edible food donation	Explore edible food donation opportunities by ASD schools	TBD No/Go
Optional	CM-4-2	<b>CONSUMPTION + MATERIALS MANAGEMENT:</b> Reduce food waste Provide a best practices guide to help households and businesses reduce food waste and consumption	School operations improvement opportunity and student academic and experience opportunity	TBD No/Go
Optional	CM-4-3	<b>CONSUMPTION + MATERIALS MANAGEMENT:</b> Reduce food waste Evaluate opportunities for recycling of commercial food waste	Student academic and experience opportunity	TBD No/Go

Ashland's CEAP Strategies		ASD Bond Scope Approach	Project Metrics	Status of Strategy and Associated Documentation
Optional	NS-1-2	<b>NATURAL SYSTEMS:</b> Promote ecosystem resilience Use green infrastructure such as bioswales, permeable pavements, other pervious surfaces to reduce flood risk and minimize sediment entry into creeks from trails and roads	For each school with site work with stormwater management opportunities, design for green infrastructure and on-site stormwater management	Constrained opportunities for stormwater management improvements at HES; however, strong desire to pursue. How to incorporate nearby wastewater treatment facility and proximity to Ashland pond -- increase area of pond for shallower depth, use percolation pipes for stormwater flow from school to pond, create a boardwalk for student, and change vehicle traffic area. Powell Engineering and Landscape to follow up on this optional strategy.
Optional	NS-1-4	<b>NATURAL SYSTEMS:</b> Promote ecosystem resilience Map and protect areas that provide ecosystem services	Student academic and experience opportunity	TBD No/Go
Optional	PHSW-2-1	<b>PUBLIC HEALTH, SAFETY + WELL-BEING:</b> Promote a sustainable local economy that minimized emissions and vulnerability Engage leading employers in a dialogue on climate action	Not specifically applicable to school bond. Student academic and experience opportunity	TBD No/Go
Optional	PHSW-2-2	<b>PUBLIC HEALTH, SAFETY + WELL-BEING:</b> Promote a sustainable local economy that minimized emissions and vulnerability Support organizations, such as SOU, in evaluating risks to local food sources under climate change	Not specifically applicable to school bond. Student academic and experience opportunity	TBD No/Go
Optional	PHSW-3-1	<b>PUBLIC HEALTH, SAFETY + WELL-BEING:</b> Minimize public health impacts Work with vulnerable populations to create specific adaptation strategies that address public health	During school programming phases, consider designing for schools as emergency cooling centers	TBD No/Go
Optional	PHSW-3-3	<b>PUBLIC HEALTH, SAFETY + WELL-BEING:</b> Minimize public health impacts Develop or enhance heat-warning systems for employees and the public	As part of technology, security and communication systems scopes, consider inclusion of heat-warning capabilities	TBD No/Go
Optional	PHSW-4-1	<b>PUBLIC HEALTH, SAFETY + WELL-BEING:</b> Minimize public health impacts Update the City's emergency response plan and ensure that preparation and updates recognize and address likely climate change impacts	ASD operations opportunity	TBD No/Go



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EcoWell Screens



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