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## **BOND UPDATE**

### **POLICY ISSUE/SITUATION**

In May 2014, voters approved a capital bond program for the students of the Beaverton School District. The Beaverton School District's resilience planning work for new school designs is receiving significant regional and national attention which the Board should be informed about. Staff prepare monthly performance and budget status reports regarding the implementation of the program. The July 2016 report is being provided to the Board.

### **BACKGROUND INFORMATION**

Designs for all of the seven new school buildings are responding to the Oregon Resilience Plan (ORP), which reported to the Oregon Legislature about the risks and challenges facing Oregonians from the next Cascadia Subduction Zone earthquake. Early in the planning work for the high school and middle school, BSD staff and our consultants studied the ORP and developed special design criteria, exceeding code requirements in key areas, and have implemented them for these buildings. While it would be cost prohibitive to retrofit existing buildings using these criteria, it has been estimated that the resilience features increased the cost of the high school and middle school by only about 1%. Excerpts from the BSD Resilience Planning report are attached. The full report can be found at:

[https://www.beaverton.k12.or.us/depts/facilities/Documents/150710\\_Beaverton%20School%20Report.pdf](https://www.beaverton.k12.or.us/depts/facilities/Documents/150710_Beaverton%20School%20Report.pdf)

The American Society of Civil Engineers (ASCE) reported on BSD's Plan in its newsletter and has requested a presentation at the ASCE National Convention in September. A presentation about the BSD Plan was provided at the Oregon Chapter of the American Public Works Association conference last April. OPB has hosted a panel discussion featuring the BSD Plan. School Board members from Lake Oswego and Tigard-Tualatin have inquired about the Plan's details. The State Architect and the Department of Geology and Mineral Industries (DOGAMI) have also commented positively about the Plan.

The July 2016 Bond report is attached and available for review. Significant changes from the June report have been annotated in the report to assist in focusing on key updates.

### **RECOMMENDATION**

It is recommended that the Beaverton School District Board of Directors review the BSD Resilience Planning report. It is also recommended that the July 2016 Bond Program Status Report be reviewed.

**District Goal:** WE empower all students to achieve post-high school success.

The Beaverton School District recognizes the diversity and worth of all individuals and groups. It is the policy of the Beaverton School District that there will be no discrimination or harassment of individuals or groups based on race, color, religion, gender, sexual orientation, gender identity, gender expression, national origin, marital status, age, veterans' status, genetic information or disability in any educational programs, activities or employment.

# Beaverton School District Resilience Planning

## Executive Summary



High School at South Cooper Mountain



Middle School at Timberland



*Report for the Beaverton School District from SEFT Consulting Group*

*Beaverton, Oregon  
July, 2015*

*Note: This Executive Summary selects from the large number of detailed recommendations in the chapters of the Beaverton School District Resilience Planning Report. The full report is available online at the Beaverton School District website: [https://www.beaverton.k12.or.us/depts/facilities/Documents/150710\\_Beaverton%20School%20Report.pdf](https://www.beaverton.k12.or.us/depts/facilities/Documents/150710_Beaverton%20School%20Report.pdf)*

# The Starfish Story

Once, on ancient Earth, there was a human boy walking along a beach. There had just been a storm, and starfish had been scattered along the sands. The boy knew the fish would die, so he began to fling the fish to the sea. But every time he threw a starfish, another would wash ashore. An old Earth man happened along and saw what the child was doing. He called out, “Boy, what are you doing?”

“Saving the starfish!” replied the boy.

“But your attempts are useless, child! Every time you save one, another one returns, often the same one! You can't save them all, so why bother trying? Why does it matter, anyway?” called the old man.

The boy thought about this for a while, a starfish in his hand; he answered, “Well, it matters to this one.” And then he flung the starfish into the welcoming sea.

— Loren Eiseley, *The Star Thrower* (1969)

## Foreword

At the behest of the State Legislature, the Oregon Seismic Safety Policy Advisory Commission completed *The Oregon Resilience Plan* in February 2013. This Plan outlines the risks and challenges facing Oregonians from the next Cascadia Subduction Zone mega-earthquake, which seismologists say is inevitable. The Plan provides very sobering predictions about the impacts from this earthquake, including durations for restoring the critical service lifelines of electricity, water, and highways ranging from months to a year or more in the Willamette Valley. *The Oregon Resilience Plan* is a call to action for all Oregonians, especially for those of us in public service.

Schools are different from most public facilities. Not only do they shelter thousands of our children, they are distributed in neighborhoods and walkable from homes nearby. With enlightened forward planning, they could be significant resources in helping their communities recover in the aftermath of the earthquake...if we plan.

Beaverton School District has a special opportunity—perhaps even a responsibility. Our community approved a very large capital construction bond program in 2014 that includes building three brand new school buildings and replacing four more. In order to better support our community during an emergency, our District has determined that we should build these seven schools to exceed building code requirements in certain critical aspects in order to respond to *The Oregon Resilience Plan*. Operating within a very compressed timeframe to keep our projects on schedule and within constrained budgets, we launched an effort to translate the concepts of the Plan for our first two schools into design criteria for our architects and engineers.

This report summarizes that effort and provides the conclusions we reached. It is imperfect, and will only affect seven of our 50 schools and only seven of the 1,200 public schools in Oregon. But we must start somewhere, with the hope that Oregon has decades to build many new schools and other public buildings before the mega-earthquake strikes. Beaverton School District hopes that publishing this report and sharing our work with other school districts will provide a beginning framework for creating a new standard for resilient school buildings.

Richard L. Steinbrugge, P.E.  
Executive Administrator for Facilities  
Beaverton School District



## Project Team

- Kent Yu, Principal-in-Charge, SEFT Consulting Group, Beaverton, Oregon
- Jim Newell, SEFT Consulting Group, Beaverton, Oregon
- Darren Beyer, SEFT Consulting Group, Beaverton, Oregon
- Chris Poland, Chris D Poland Consulting Engineer, Canyon Lake, California
- Jay Raskin, Jay Raskin Architect, Portland, Oregon

# Executive Summary

Oregon has come to understand that there is an uncomfortably high probability that a Magnitude 9.0 Cascadia Subduction Zone earthquake will occur off the coast, triggering strong ground shaking that will last for 3 to 5 minutes and generating a tsunami that will cover the coast line, not unlike what happened in Japan in 2011. Seismologists tell us that this type of event has occurred 41 times in the last 10,000 years and there is no reason to expect that it will not occur again. Fortunately, the recently published *The Oregon Resilience Plan* has provided a comprehensive evaluation of what will happen and what can be done in the short and long term to mitigate our state’s vulnerabilities to an acceptable level.

Elementary, middle, and high schools will have an important role in the response and recovery of the state from this catastrophic event. Because of their location and layout, they are perfectly suited to serve as emergency shelters and community resource centers within 72 hours after the event and during the response period. Once the initial response period passes in a few weeks, schools need to re-open and contribute to their communities return to normalcy. For this to occur, the school buildings need to be “safe and usable” immediately after the event and served by the infrastructure systems they depend on (including transportation, energy, water, wastewater, communication, and information systems). Unfortunately, current design standards and codes do not provide for this level of performance.

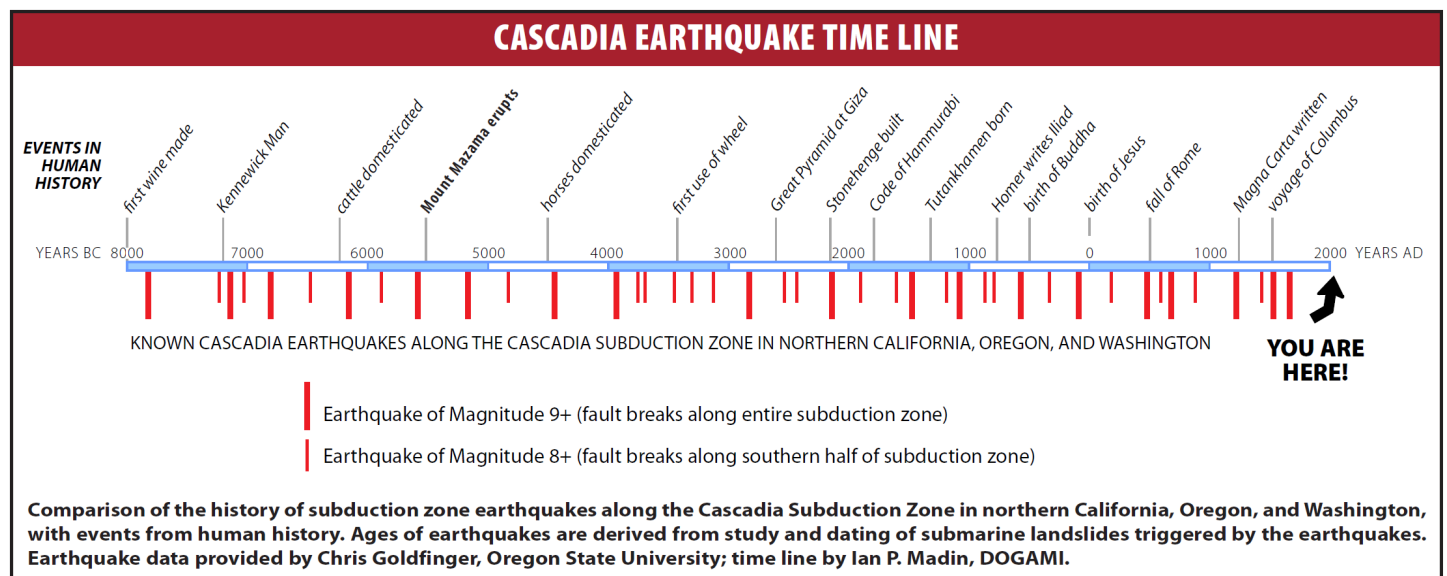
In February of 2013, the Oregon Seismic Safety Policy Advisory Commission submitted a report to the 77<sup>th</sup> Legislative Assembly entitled *The Oregon Resilience Plan: Reducing Risk and Improving Recovery for the Next Cascadia*

*Earthquake and Tsunami.* The report discusses the risk that is faced by the citizens of Oregon from an impending Cascadia Subduction Zone earthquake and accompanying tsunami, and the gaps that exist between the current state of Oregon’s infrastructure and where it needs to be. *The Oregon Resilience Plan* goes on to outline steps that can be taken over the next 50 years to bring the state closer to resilient performance through a systematic program of vulnerability assessments, capital investments in public infrastructure, new incentives to engage the private sector, and policy changes that reflect current understanding of the Cascadia threat.

*The Oregon Resilience Plan* established a goal of opening shelters almost immediately and re-opening schools within 30 days following a large earthquake. The plan estimates that Oregon’s existing school buildings and emergency shelters may take up to 18 months to reopen in the Coast and Valley regions.

In 2014, voters within the Beaverton School District passed a major bond measure to help reduce school overcrowding and modernize schools. This has provided the District a unique opportunity to not only address daily operational needs, but also respond to the findings of *The Oregon Resilience Plan*. This effort is establishing the Beaverton School District as a leader in the design and construction of disaster resilient schools that are also capable of supporting their surrounding communities as emergency shelters.

This report summarizes resilience planning activities that have been conducted in support of the design of the new High School at South Cooper Mountain and the new Middle School located at the Timberland Development. SEFT Consulting Group has coordinated with the Beaverton School District, various stakeholder groups (city and county emergency managers, American Red Cross, Portland General Electric, Tualatin Valley Water District, Clean Water Services,



Historic Cascadia Subduction Zone Earthquake Timeline (Source: Oregon Department of Geology and Mineral Industries)

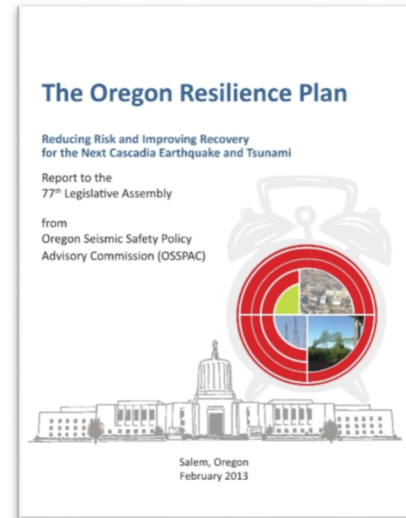
etc.) and the design teams (led by Boora Architects and Mahlum Architects) for the two new schools to establish resilient design features that can reasonably be incorporated in design and construction, given project schedule and budget limitations.

It was determined that an emergency shelter at the high school could accommodate approximately 860 people and at the middle school could accommodate approximately 725. This represents a significant population that can remain in their neighborhood and speed the return of the neighborhood to normalcy after the earthquake.

The stakeholder workshop and subsequent meetings identified a wide variety of features that could be added to the projects that would improve the school's ability to be used as shelters and re-open in a few weeks for teaching. The American Red Cross made it clear that, as a minimum, they only need a willing building owner and a secure facility that could be naturally ventilated, would get people out of the weather and keep them warm. Beyond that, the availability of electricity for lighting and cooking, water and removal of waste water would be significant additions that would improve the efficiency and livability for the shelter.

The key resilience features that are recommended for both schools to support that population and allow the schools to re-open quickly include the following. These recommendations represent an affordable balance between permanent and temporary (brought in after the earthquake) solutions:

- Design structural systems of the schools as essential facilities (Risk Category IV) resulting in improved seismic performance over typical Risk Category III school design (which is intended to achieve life-safety performance, and will likely require lengthy and costly repair prior to re-occupation);
- Design seismic bracing or anchorage for nonstructural components per Risk Category III requirements, provided that those components needed for use of the school as an emergency shelter satisfy Risk Category IV seismic design requirements;
- Confirm equipment that is expected to be operational after an earthquake (emergency generator, automatic transfer switch, ventilation fans, etc.) satisfy the special certification requirements of Section 13.2.2 of ASCE 7-10: *Minimum Design Loads for Buildings and Other Structures* (i.e., seismic rated);
- Increase the size and fuel capacity of the emergency generator to the level needed to support shelter operations including additional outlets in the kitchen;



(Source: Oregon Seismic Safety Policy Advisory Commission)

- Provide building connection points to hook up an external water supply tank, in lieu of adding bulk water storage on site;
- Provide water piping from the school building to the utility piping that is better able to resist earthquake ground displacement to allow water to be supplied to the school more reliably after water utility system resilience improvements are completed;
- Provide wastewater piping from the school building to the utility piping that is better able to resist earthquake ground displacement to allow wastewater to be discharged into the wastewater utility system and minimize the need for holding tanks; and
- Plan for the use of open areas on the grounds to support community relief efforts.

The cost of these additions was estimated to be about \$900,000 for the high school and \$750,000 for the middle school.

The report goes on to recommend that (1) all new and existing Beaverton School District campuses undergo the same type of stakeholder resilience planning workshop, (2) reasonable resilience features be implemented with a proper design, detailed peer review and plan check during design, and comprehensive inspection during construction, and (3) Beaverton School District develop a site-specific post-event inspection procedure that allows the rapid and conclusive assessment of the buildings. New schools should have similar features added to the project scope and existing schools should be retrofitted to these performance levels during their eventual rehabilitation. The report also recommends continued collaboration with the various stakeholder groups including the development of memorandum of understanding with each utility provider regarding the timing for the restoration of service.

## About the Report

A resilience planning approach looks not just at the individual needs of a building or community, but looks at dependencies that underlie these needs. Being able to use a building following an earthquake depends not just on the building performance being structurally adequate, but also the various systems in the building need to survive and be usable. But even this is not sufficient for the building to be usable. A community still needs to be able to travel to and from the site, as well as provide water, eliminate waste, and provide power and telecommunications. This means that it is necessary to look outside to the utility providers to understand how they provide these services to the site/building. The impacts of the damage to roads, bridges, fuel distribution, and other infrastructure systems also need to be taken into account.

Since knowledge of the risk of a Cascadia earthquake is recent, most of Oregon’s infrastructure systems were not designed and built with this in mind. This means that our current vulnerabilities are quite high. With the current low resilience level, the *Oregon Resilience Plan* estimated that if the Cascadia event occurs in the near-term, then there will be a need for emergency shelters for a significant portion of the population. It set a 50-year time frame for Oregon to become resilient, at which time the need for emergency shelters would be reduced because the majority of individuals would be sheltering in-place in their homes. These two Beaverton School District projects are two small but significant steps in providing the shelters that are needed now.

Due to the expected variability in community resilience and shelter demands over the next 50 years, this resilience planning project for the Beaverton School District has considered short-, intermediate-, and long-term strategies for emergency shelter needs. In the short-term, before significant resilience improvements have been made to utility

systems, the plan assumes that the school building will be safe to use as a shelter, but utility services and other necessities will need to be provided by emergency management agencies. In the long-term, after the 50-year resilience targets are achieved, the school building will be safe to use as a shelter and utility services are expected to be quickly restored to the shelter. This approach is intended to strike a balance between current and future emergency shelter needs of the community, and limited economic resources available to invest in resilience improvements.

The resilience planning process conducted as part of this project has involved four key steps: (1) work with BSD to determine the appropriate performance goals and functional recovery for Beaverton School District school buildings; (2) coordinate with the county and surrounding cities to determine desirable emergency shelter needs; (3) work with the Beaverton School District to explore potential funding sources to cover the financial gap between a standard school design and the community emergency shelter needs; and (4) coordinate with the infrastructure systems to understand their resilience plan and assist the Beaverton School District to develop a long-term strategy and an interim solution. It will require a community partnership among the county, the cities, and infrastructure system providers to meet the needs for school buildings to be effectively used as emergency shelters.

To serve as a shelter, a building needs to meet certain requirements established by the shelter provider. The essential requirement is that the building be safe and usable. One approach that may be used to provide a high probability that the building will be safe to occupy after a large earthquake, is to design the building as an essential facility (Risk Category IV) per the requirements of the currently adopted Oregon Structural Specialty Code (OSSC). Schools are currently required to meet Risk Category III seismic design standards. The school buildings are intended to achieve life safety performance objective (i.e., ensuring building



(Source: National Institute of Standards and Technology)



Red Cross Shelter in Gymnasium (Source: American Red Cross)

occupants will not suffer life-threatening injuries), and will likely be damaged and may not be usable without potentially lengthy and costly repair. While making the full building meet Risk Category IV is preferred, one option is to only upgrade common spaces to meet this standard, and count on using only these areas for shelter use. This option would only be possible if the facility was divided into multiple buildings separated by seismic joints that permit relative movement between the individual buildings.

It is also important that non-structural components (building skin, partition walls, ceiling systems, storage cabinets, mechanical equipment, electrical equipment, plumbing equipment, etc.) be adequately braced or anchored. Components that are required for use of the school as an emergency shelter should satisfy Risk Category IV requirements. Equipment that is expected to be operational after an earthquake (emergency generator, automatic transfer switch, ventilation fans, etc.) should satisfy the special certification requirements of the current edition of *ASCE 7: Minimum Design Loads for Buildings and Other Structures*, referenced by the OSSC. Appendix B of the full report describes the differences in seismic design requirements for nonstructural components in Risk Category III (i.e. school) and Risk Category IV (i.e. emergency shelter) buildings.

Achieving a safe and usable performance level in these buildings requires identifying an appropriate performance-based design criteria (as stated above) along with a proper design, detailed peer review and plan check during design, and comprehensive inspection during construction. The need for this multi-faceted process is illustrated in every major earthquake when it is observed that excessive damage is caused by a deficiency in one or more of these areas.

The American Red Cross indicated that once the question of a having a safe and usable building is addressed, the minimum shelter requirements are very basic:

- Thermal Comfort: A wide temperature range is acceptable.
- Natural Ventilation: Being able to bring in fresh air is important.
- Lighting: They can make do with battery lanterns and flashlights if necessary.

Other desirable shelter features include:

- Emergency Power: A source of electricity for lighting, powering medical devices and recharging personal electronic devices.
- Water Supply: A source of water for drinking and personal hygiene.
- Wastewater: An operating wastewater system or holding tank if building restroom and shower facilities are being utilized.

Due to budget and design schedule limitations, not all the resilience features that were discussed as part of this project could be incorporated into the design, construction, and operation of the High School at South Cooper Mountain and the Middle School at Timberland. The resilience features that have been adopted are summarized in the following tables. The intent behind these selected options was to build-in as much flexibility as possible in order to facilitate future resilience upgrades as funding becomes available.

The resilient design features being implemented as part of this project are intended to provide a building structure that is safe to occupy after a large earthquake and that incorporates certain features (limited emergency power, ventilation fans in common areas, building connections for portable water tanks, etc.) that will reasonably facilitate use of the High School at South Cooper Mountain and the Middle School at Timberland as emergency shelters.

As additional funding becomes available or the cost of certain technology (photovoltaics, inverters, storage batteries, etc.) decreases, it may be possible to provide additional resilience features that will make using the school as an emergency shelter easier or enable additional services to be provided by the shelter.

“We cannot solve our problems with the same thinking we used when we created them.” — Albert Einstein

<b>Adopted Resilience Design Features – High School at South Cooper Mountain</b> <i>(330,000 SF, 2,200 students, 3-story plus partial basement, building cost: \$98M)</i>	
<b>Resilience Feature</b>	<b>Cost Estimate</b>
1) Design building structure’s lateral-force resisting system for seismic Risk Category IV	\$500,000
2) Provide 500 kW emergency generator with 96-hour run time fuel storage. Emergency generator, switch gear, ventilation fans, and other equipment that is expected to be operational after an earthquake should satisfy the special certification requirements of ASCE 7-10, which is referenced by the OSSC	\$330,000
3) Provide electrical service to power lighting and ventilation fans in common areas and gymnasium on emergency power; does not provide heated or conditioned air	\$8,000
4) Provide stub-outs at building exterior to allow use of portable water tank and associated pump to supply water to key building areas: kitchen, locker rooms & showers, drinking fountains in common spaces and restrooms serving the Dining Commons	\$15,000
5) Provide two electrical outlets in kitchen on emergency power to allow hot plates for water boiling, etc.	\$5,000
6) Provide natural gas seismic shutoff valve at meter	Negligible
7) Provide hardened water service line from the Beaverton Water District (BWD) water line to building	TBD
8) Provide hardened sanitary sewer service line from Clean Water Services (CWS) sewer line to building	TBD
9) Provide seismic bracing/anchorage design of nonstructural components based on Risk Category III requirements except that those components required for use of the school as emergency shelter (as specified in Sections 5.5 and 5.6) satisfy Risk Category IV requirements	Negligible
<b>Approximate Total</b>	<b>\$900,000</b>



Middle School Aerial View – 12/30/15 (Courtesy BSD)



High School Aerial View - 3/7/16 (Courtesy BSD)

<b>Adopted Resilience Design Features – Middle School at Timberland</b> <i>(165,000 SF, 1,100 students, 2-story, building cost: \$43M)</i>	
<b>Resilience Feature</b>	<b>Cost Estimate</b>
1) Design building structure’s lateral-force resisting system for seismic Risk Category IV	\$310,000
2) Provide 450 kW emergency generator with 96-hour run time fuel storage. Emergency generator, switch gear, ventilation fans, and other equipment that is expected to be operational after an earthquake should satisfy the special certification requirements of ASCE 7-10, which is referenced by the OSSC	\$400,000
3) Provide electrical service to power lighting and ventilation fans in common areas and gymnasium on emergency power; heating is only provided for the commons, gymnasium, administrative wing and locker room area, does not provide conditioned air	Included in Total
4) Provide quick-connect stub-outs at building exterior to allow use of portable water tank and associated pump to supply water to key building areas: kitchen, locker rooms & showers, and drinking fountains in common spaces	\$20,000
5) Provide two electrical outlets in kitchen on emergency power to allow hot plates for water boiling, etc.	\$5,000
6) Provide natural gas seismic shutoff valve at meter	Negligible
7) Provide hardened water service line from Tualatin Valley Water District (TVWD) water line to building	TBD
8) Provide hardened sanitary sewer service line from Clean Water Services (CWS) sewer line to building	TBD
9) Provide seismic bracing/anchorage design of nonstructural components based on Risk Category III requirements except that those components required for use of the school as emergency shelter (as specified in Sections 6.5 and 6.6) satisfy Risk Category IV requirements	Negligible
<b>Approximate Total</b>	<b>\$750,000</b>



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### References

#### Appendix A: US and International Examples of Schools as Emergency Shelters

- US Examples
  - Hurricane Sandy (2012)
  - Florida Enhanced Hurricane Protection Areas
  - California Planning Guide
  - Anchorage School District
- International Examples
  - Great Sumatra Earthquake and Tsunami (2004)
  - Tohoku Earthquake and Tsunami (2011)
  - Nepal Earthquake (2015)
- References

#### Appendix B: Seismic Design Requirements for

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#### Appendix C: Workshop Attendees and Meeting Minutes

## Acknowledgements

We would first like to acknowledge the Beaverton School District for their courageous response to *The Oregon Resilience Plan* and the challenge of a Cascadia Subduction Zone earthquake. Stepping up to this challenge, they are seeking to make their schools safe, be available as a community shelter, and be ready to re-open schools within 30 days following the earthquake. The District's willingness to engage community stakeholders such as the city and county emergency management agencies, Tualatin Valley Fire & Rescue, American Red Cross, and others has initiated a unique and useful collaboration that will bear fruit in the years to come.

We have appreciated the participation and contributions by the design teams (led by Boora Architects for the new High School at South Cooper Mountain and Mahlum Architects for the new Middle School at Timberland) and the Beaverton School District project management teams for both schools (Richard L. Steinbrugge, David Etchart, Leslie Imes, Patrick O'Harrow, Scott Johnson, and Ryan Hendricks). The goal of making the high school and middle school resilient was introduced to them after the start of the design process. Their participation and feedback allowed us to incorporate resilient design features that will make a difference.

As part of this project, the Beaverton School District convened a resilience workshop to bring together the various stakeholders to discuss what would be necessary to achieve the goals of utilizing the new high school and new middle school as emergency shelters and to generally improve the disaster resilience of Beaverton schools. We would like to thank the workshop participants and the organizations they represent for their time and participation in this groundbreaking resilience planning effort. Workshop participants included:

Jerry Abdie	KPFF Consulting Engineers
Bruce Barney	Portland General Electric
Aaron Boyle	Beaverton School District
Mike Britch	Tualatin Valley Water District
Brian Butler	Interface Engineering
David Chesley	Interface Engineering
Nate Cullen	Clean Water Services
Tiffany Delgado	Portland General Electric
David Etchart	Beaverton School District
Clint Fella	Oregon Office of Emergency Management
Karl Granlund	Beaverton School District
Jim Harold	Boora Architects
Scott Holum	Interface Engineering
Leslie Imes	Beaverton School District
Ruwan Jayaweera	PAE Engineers
Scott Johnson	Beaverton School District
Siobhan Kirk	Tualatin Valley Fire & Rescue
Michael Kummerman	NW Natural
Bobby Lee	Portland Metro Regional Solutions
Steve Muir	Washington County Emergency Management Cooperative
Michael Mumaw	City of Beaverton
Patrick O'Harrow	Beaverton School District
Curtis Peetz	American Red Cross
Scott Porter	Washington County Emergency Management Cooperative
Jeff Rubin	Tualatin Valley Fire & Rescue
Dick Steinbrugge	Beaverton School District
Brandon Watt	PAE Engineers
Dave Winship	City of Beaverton
Kurt Zenner	Mahlum Architects

Tualatin Valley Fire & Rescue graciously provided access to their Command & Business Operations Center to host the resilience workshop convened as part of this project. We would like to thank Deputy Chief Dustin Morrow and Tualatin Valley Fire & Rescue for their support.

Washington County is very interested in improving the resilience planning process by continuing the efforts to breakdown the silo mentality, as initiated by this project. We would like to thank the Assistant County Administrator for Washington County, Don Bohn and Washington County for their active engagement in this project.

Lastly, we would like to thank State Representative Tobias Read for his overwhelming support of this project and the goal of improving the resilience of Beaverton schools.

Note: The full Beaverton School District Resilience Planning report is available online at the Beaverton School District website:

[https://www.beaverton.k12.or.us/depts/facilities/Documents/150710\\_Beaverton%20School%20Report.pdf](https://www.beaverton.k12.or.us/depts/facilities/Documents/150710_Beaverton%20School%20Report.pdf)



# Bond Program Status Report To the Business Office

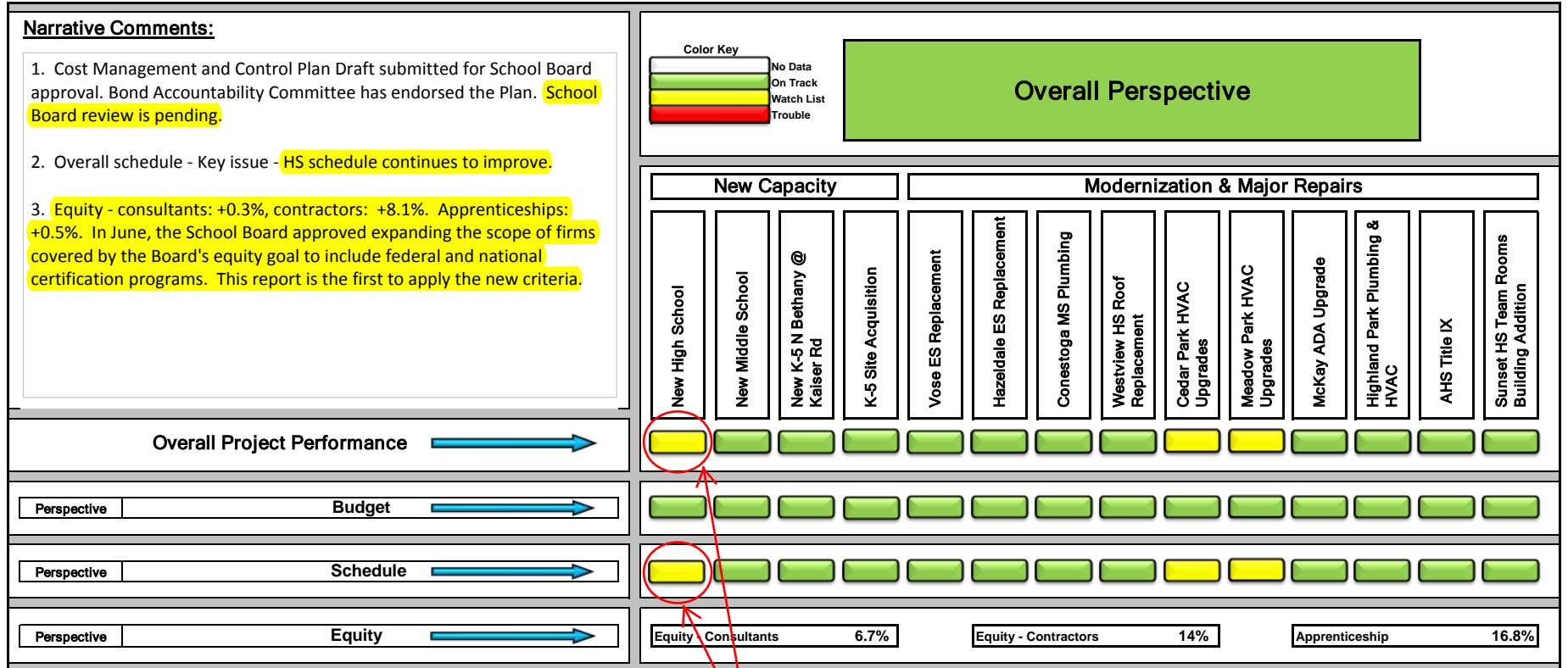
Through July 2016

Annotated Version

# 2014 Bond Construction Program

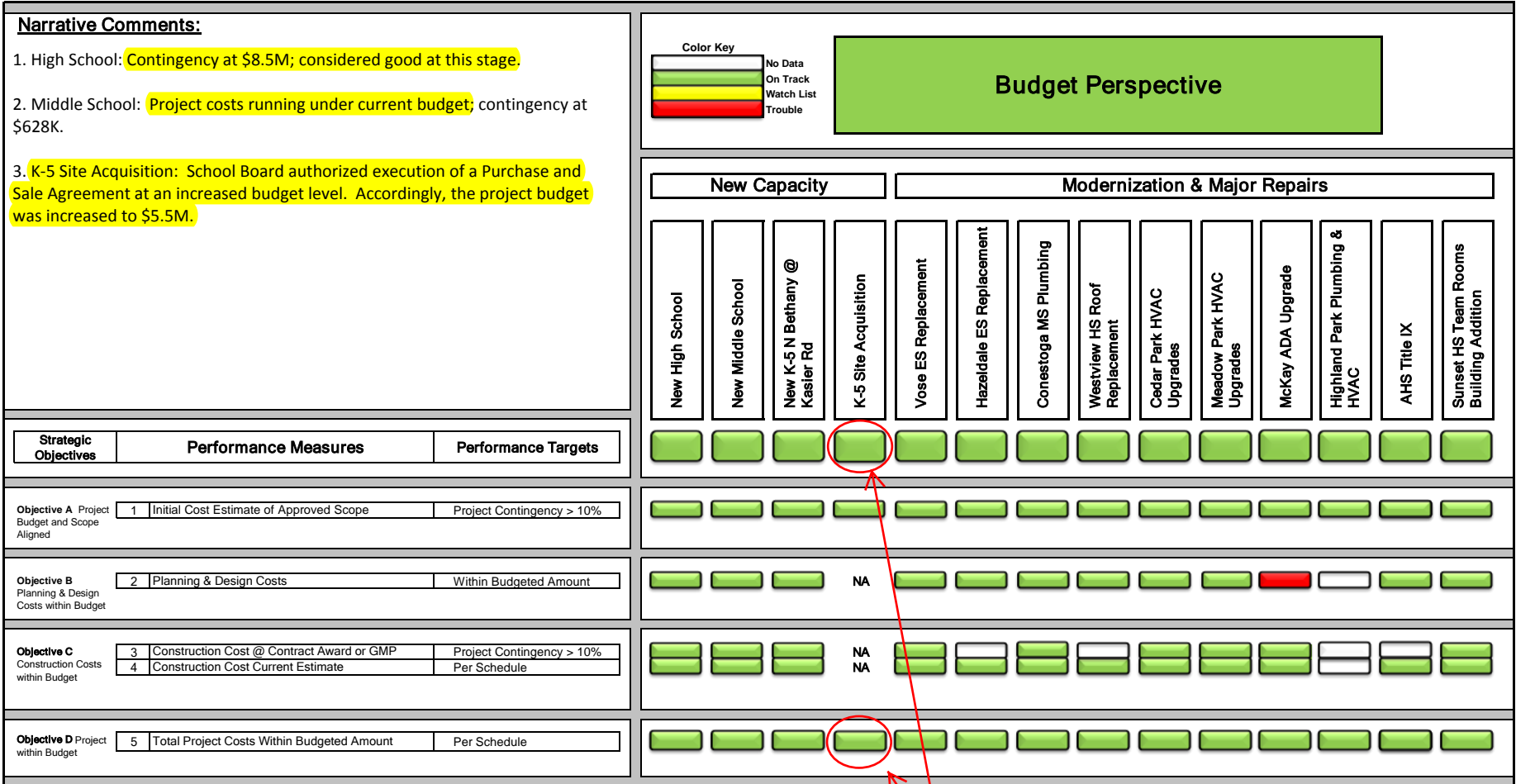
## Overall Performance

### July 2016 Report



# 2014 Bond Construction Program

## Budget Perspective July 2016 Report

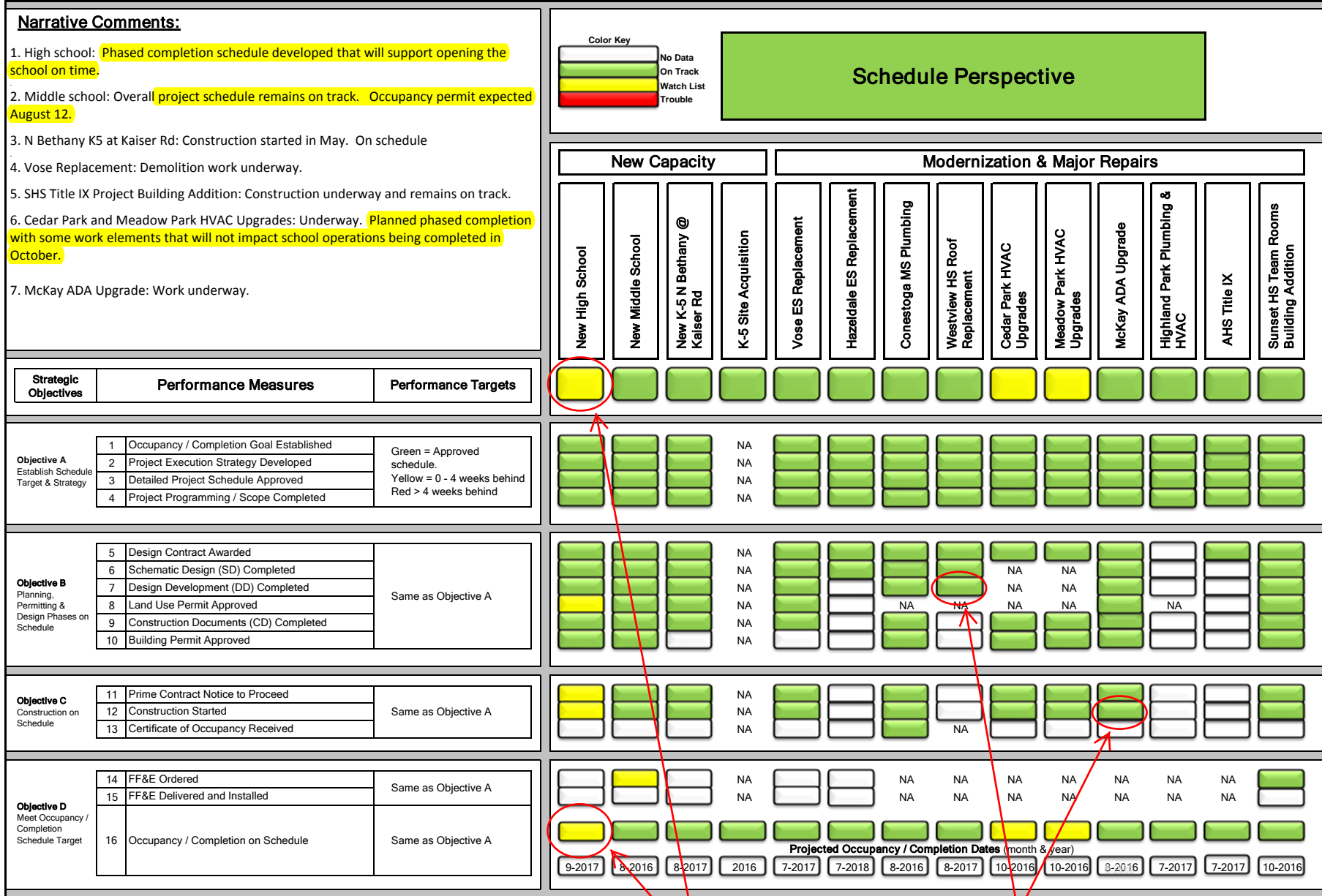


Budget Increase  
Approved by Board  
Aug 1, 2016

# 2014 Bond Construction Program

## Schedule Perspective

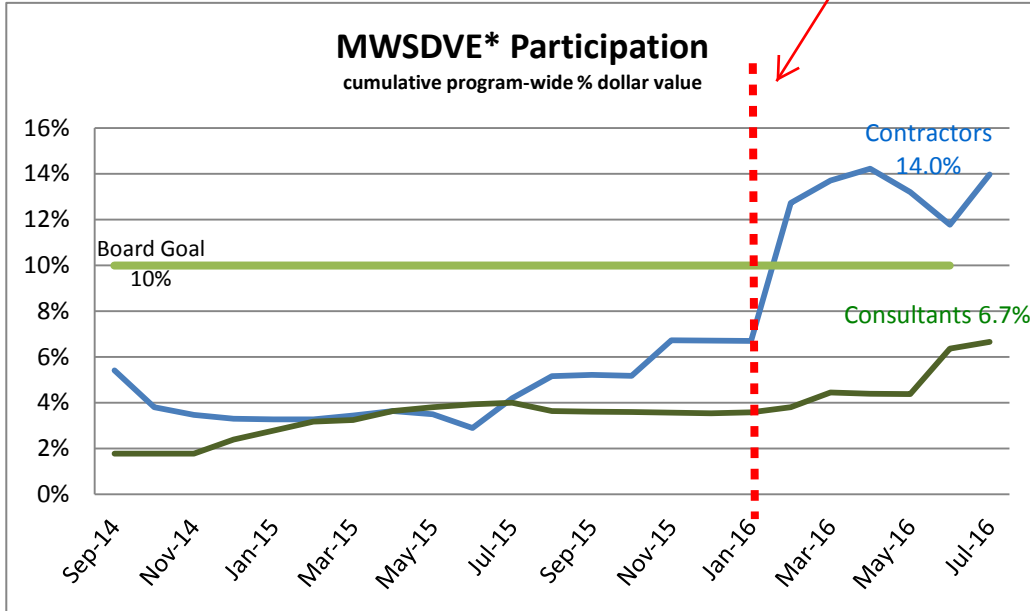
July 2016 Report



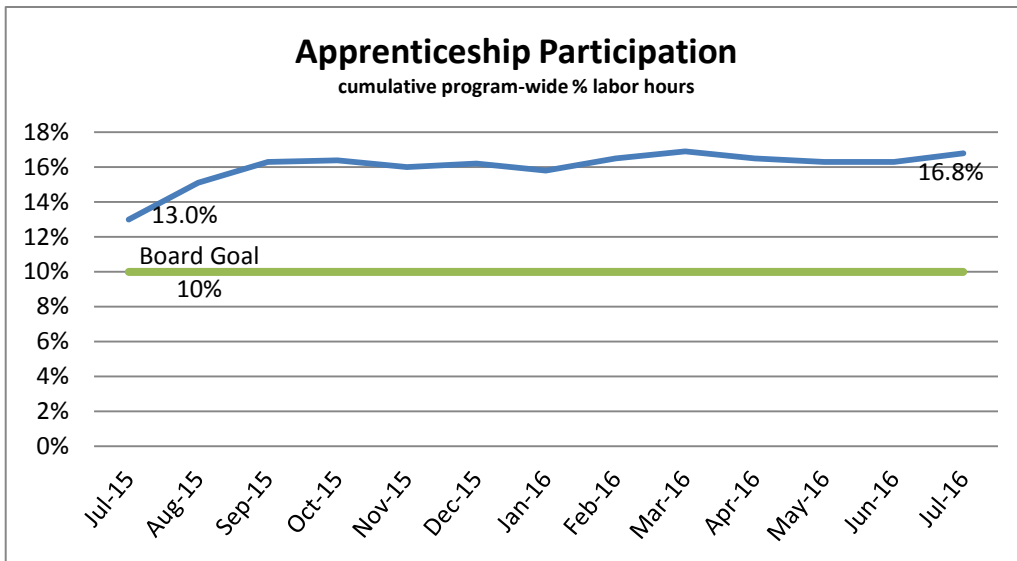
# 2014 Construction Bond Program

Equity Performance  
July 2016 Report

New MWSDVE  
Criteria Applied



\*Minority, Women and Service Disabled Veteran Owned Enterprises



## 2014 Bond Financial Summary

### Overall Program Cost Forecast and Available Funding

Project List	Original Funding Allocations	Funding Increases Available to Bond Program	Construction Cost Updates & Escalated for Inflation	
ACMA Replacement	\$ 28,300,000		\$ 39,048,849	(RLB 1/16 + soft costs)
AHS Title IX Compliance	\$ 2,000,000		\$ 2,406,800	
Capital Center Improvements & Data Center	\$ 5,000,000		\$ 12,963,782	(eB 7/29/16 EAC)
District-Wide ADA Compliance	\$ 2,000,000		\$ 2,000,000	
District-Wide Communication System	\$ 7,200,000		\$ 5,435,200	(eB 7/29/16 EAC)
District-Wide Facility Repairs	\$ 98,000,000		\$ 96,892,695	
District-Wide HVAC Controls	\$ 800,000		\$ 800,000	
Domestic / Fire Line Separation	\$ 800,000		\$ 977,120	
Five Oaks MS Renovation & Expansion	\$ 21,100,000		\$ 32,401,576	(RLB 1/16 + soft costs)
Green Energy Technology	\$ 5,000,000		\$ 3,010,000	
Hazeldale K-5 Replacement	\$ 24,600,000		\$ 35,484,698	(Vose estimate + inflation)
IT Data Center @ Capital Center	\$ 2,900,000		(Costs Moved to CC Project)	
Kitchen Improvements	\$ 800,000		\$ 977,120	
Land for new K-5 @ So. Cooper Mountain	\$ 3,000,000		\$ 5,500,000	School Board Approved 8/1/16
Maintenance Facility Improvements	\$ 10,000,000		\$ 12,383,615	(RLB 1/16 + soft costs + \$675K property + \$ parking lot work)
McKay ADA Improvements	\$ 400,000		\$ 692,000	(eB 7/29/16 EAC)
New HS @ South Cooper Mountain	\$ 109,000,000		\$ 184,654,450	(HCC GMP + soft costs)
New K-5 @ North Bethany	\$ 25,000,000		\$ 37,975,000	(GMP + soft costs)
New MS @ Timberland	\$ 51,600,000		\$ 60,919,652	(eB 7/29/16 EAC)
Raleigh Hills K-8 Improvements	\$ 9,700,000		\$ 12,295,720	
Security Upgrades	\$ 10,000,000		\$ 10,000,000	
Seismic Upgrades	\$ 4,200,000		\$ 5,206,740	
SHS Title IX Compliance	\$ 2,000,000		\$ 4,324,288	(eB 7/29/16 EAC)
Springville K-8 Improvements	\$ 2,000,000		\$ 510,016	Completed

Color Key

Final Cost Estimate	
Fixed Cost	
Estimate Update	(Based upon ongoing work)
Inflation Projection	(Prior to work starting)

**Abbreviations:** RLB = Rider Levett Bucknall  
 eB = eBuilder proj. mgmt info system  
 EAC = \$ Estimate at proj. completion  
 HCC = Hoffman Construction Co.  
 GMP = Guaranteed Max. Price

+\$1.1 M

## 2014 Bond Financial Summary

### Overall Program Cost Forecast and Available Funding

Project List	Original Funding Allocations	Funding Increases Available to Bond Program	Construction Cost Updates & Escalated for Inflation	
Vose K-5 Replacement	\$ 24,800,000		\$ 33,794,951	(eB 7/29/16 EAC)
William Walker K-5 Replacement	\$ 24,600,000		\$ 35,557,354	(Vose estimate + inflation)
Added Projects	\$ -		\$ 2,005,736	
Program Contingency	\$ 45,400,000			
Program Inflation	\$ 52,800,000			
Pre-Bond Expenditure Reimbursements	\$ 1,000,000		\$ 998,828	
Bond Management Costs	\$ 20,000,000		\$ 28,000,000	
Bond Issuance Costs	\$ 6,000,000		\$ 6,000,000	
<b>Construction</b>	<b>\$ 600,000,000</b>		<b>\$ 673,216,190</b>	
Learning Technology	\$ 56,000,000		\$ 56,000,000	
Critical Equipment	\$ 24,000,000		\$ 24,000,000	
<b>Tech &amp; Equip Subtotal</b>	<b>\$ 80,000,000</b>		<b>\$ 80,000,000</b>	
<b>Total Original Funding</b>	<b>\$ 680,000,000</b>			
<b>Total Cost Projection</b>			<b>\$ 753,216,190</b>	
2006 Bond Remaining Balance		\$ 576,615		
Capital Center Rent Revenue		\$ 433,385		
Construction Excise Tax Revenue		\$ 1,130,655		
Interest Earnings 1st Bond Sale		\$ 5,156,948		
Bond Premium 1st Bond Sale		\$ 63,295,961		
Construction Excise Tax Rev Thru 2021		\$ 5,401,000		
Other (estimated) *		\$ 5,000,000		
<b>Total Funding Available</b>		<b>\$ 760,994,564</b>		
<b>Total Cost Updates</b>			<b>\$ 753,216,190</b>	
<b>Funding Balance Vs. Cost Updates</b>				<b>\$ 7,778,374</b>

* Potential other revenues		
THPRD reimb.	\$449,783	Actual
SB 1149 reimb.	\$1,881,000	Estimate
ETO reimb.	\$11,410	Actual
Facility grants	\$2,500,000	Estimate
Seismic grants	\$1,000,000	Estimate
	\$5,842,193	



# 2014 Bond Financial Summary

Project List	Original Budget Allocations	Added Funding to Bond Program	Revised Approved Current Budget	Jun-16 Est @ Comp.	Jul-16 Est @ Comp.	Net Contingency Balance	
						\$	%
ACMA Replacement	\$ 28,300,000		\$ 39,048,849	\$ 39,048,849	\$ 39,048,849		
AHS Title IX Compliance	\$ 2,000,000		\$ 2,406,800	\$ 2,406,800	\$ 2,406,800		
Capital Center Improvements & Data Center	\$ 5,000,000		\$ 12,965,135	\$ 12,965,135	\$ 12,963,782	\$ 100,387	0.8%
District-Wide ADA Compliance	\$ 2,000,000		\$ 2,000,000	\$ 2,000,000	\$ 2,000,000		
District-Wide Communication System	\$ 7,200,000		\$ 5,518,030	\$ 5,517,170	\$ 5,435,200	\$286,292	5.5%
District-Wide Facility Repairs	\$ 98,000,000		\$ 96,892,695	\$ 96,810,725	\$ 96,892,695		
District-Wide HVAC Controls	\$ 800,000		\$ 800,000	\$ 800,000	\$ 800,000		
Domestic / Fire Line Separation	\$ 800,000		\$ 977,120	\$ 977,120	\$ 977,120		
Five Oaks MS Renovation & Expansion	\$ 21,100,000		\$ 32,401,576	\$ 32,401,576	\$ 32,401,576		
Green Energy Technology	\$ 5,000,000		\$ 3,010,000	\$ 3,010,000	\$ 3,010,000		
Hazeldale K-5 Replacement	\$ 24,600,000		\$ 35,484,698	\$ 35,484,698	\$ 35,484,698	\$ 3,225,870	10.0%
IT Data Center @ Capital Center	\$ 2,900,000		(Budget Moved to CC Project)				
Kitchen Improvements	\$ 800,000		\$ 977,120	\$ 977,120	\$ 977,120		
Land for new K-5 @ So. Cooper Mountain	\$ 3,000,000		\$ 5,500,000	\$ 4,367,000	\$ 5,500,000	*	
Maintenance Facility Improvements	\$ 10,000,000		\$ 12,383,615	\$ 12,383,615	\$ 12,383,615		
McKay ADA Improvements	\$ 400,000		\$ 692,000	\$ 692,000	\$ 692,000	\$ 38,801	5.9%
New HS @ South Cooper Mountain	\$ 109,000,000		\$ 184,654,450	\$ 184,654,450	\$ 184,654,450	\$ 8,549,937	4.9%
New K-5 @ North Bethany	\$ 25,000,000		\$ 37,975,000	\$ 37,975,000	\$ 37,975,000	\$ 2,866,666	8.2%
New MS @ Timberland	\$ 51,600,000		\$ 60,919,652	\$ 60,919,652	\$ 60,919,652	\$ 627,911	1.0%
Raleigh Hills K-8 Improvements	\$ 9,700,000		\$ 12,295,720	\$ 12,295,720	\$ 12,295,720		
Security Upgrades	\$ 10,000,000		\$ 10,000,000	\$ 10,000,000	\$ 10,000,000		

Per Board Approval

(\$287K)

(\$188K); permits & fees

(\$246K)

\$1.367 M shortfall eliminated

(\$86K)

# 2014 Bond Financial Summary

Project List	Original Budget Allocations	Added Funding to Bond Program	Revised Approved Current Budget	Jun-16 Est @ Comp.	Jul-16 Est @ Comp.	Net Contingency Balance	
						\$	%
Seismic Upgrades	\$ 4,200,000		\$ 5,206,740	\$ 5,206,740	\$ 5,206,740		
SHS Title IX Compliance	\$ 2,000,000		\$ 4,324,288	\$ 4,324,288	\$ 4,324,288	\$ 46,592	1.1%
Springville K-8 Improvements	\$ 2,000,000		\$ 510,016	\$ 510,016	\$ 510,016	Completed; Final Cost	
Vose K-5 Replacement	\$ 24,800,000		\$ 33,794,951	\$ 33,794,951	\$ 33,794,951	\$ 2,844,782	9.2%
William Walker K-5 Replacement	\$ 24,600,000		\$ 35,557,354	\$ 35,557,354	\$ 35,557,354	\$ 3,251,410	10.1%
Added Projects			\$ 2,005,736	\$ 2,005,736	\$ 2,005,736		
Program Contingency	\$ 45,400,000						
Program Inflation	\$ 52,800,000						
Pre-Bond Expenditure Reimbursements	\$ 1,000,000		\$ 998,828	\$ 998,828	\$ 998,828	Completed; Final Cost	
Bond Management Costs	\$ 20,000,000		\$ 28,000,000	\$ 28,000,000	\$ 28,000,000		
Bond Issuance Costs	\$ 6,000,000		\$ 6,000,000	\$ 6,000,000	\$ 6,000,000		
<b>Construction</b>	<b>\$ 600,000,000</b>		<b>\$ 673,300,373</b>	<b>\$ 672,084,543</b>	<b>\$ 673,216,190</b>		
<b>Learning Technology</b>	<b>\$ 56,000,000</b>		<b>\$ 56,000,000</b>	<b>\$ 56,000,000</b>	<b>\$ 56,000,000</b>		
<b>Critical Equipment</b>	<b>\$ 24,000,000</b>		<b>\$ 24,000,000</b>	<b>\$ 24,000,000</b>	<b>\$ 24,000,000</b>		
<b>Tech &amp; Equip Subtotal</b>	<b>\$ 80,000,000</b>		<b>\$ 80,000,000</b>	<b>\$ 80,000,000</b>	<b>\$ 80,000,000</b>		
<b>Grand Totals</b>	<b>\$ 680,000,000</b>		<b>\$ 753,300,373</b>	<b>\$ 752,084,543</b>	<b>\$ 753,216,190</b>	<b>\$ 21,838,649</b>	
Interest Earnings		\$ 5,156,948					
Bond Premium		\$ 63,295,961					
Other Additional Funding (see Tab)		\$ 12,541,655					
<b>Total Added Funding</b>		<b>\$ 80,994,564</b>					
<b>GRAND TOTAL 2014 BOND FUNDING</b>		<b>\$ 760,994,564</b>					
<b>Funding Balance vs. Approved Budgets</b>			<b>\$7,694,191</b>				
<b>Funding Balance vs. Current Cost Estimates</b>				\$ 8,910,021	\$ 7,778,374		

(\$174K); asbestos

+\$1.1M

+\$373K

(\$1.1M)

(\$1.1M)

# 2014 Bond Program Financial Status Report

## Green Energy Technology Fund Transfers

Data as of 7/29/2016

<b>Funding Allocations from Green Energy Technology</b>			
Project	Transfers into Projects	Bond Budget Balance	Comments
		<b>\$ 5,000,000</b>	
New High School	\$ 1,990,000	\$ 3,010,000	288 kW solar PV panels
New Middle School			Preliminary estimate: \$850,000
Kaiser K5			
Vose Replacement			
Hazeldale			
William Walker			
ACMA			
<b>TOTAL</b>	<b>\$1,990,000</b>	<b>\$ 3,010,000</b>	

Added Projects	Approved by	Original Budget	Revised Approved Current Budget	Jun-16 Est @ Comp.	Jul-16 Est @ Comp.	Net Contingency Balance	
	& Date					\$	%
Seclusion Rooms Alterations	Safety Comm 5/19/14		\$ 99,368	\$ 99,368	\$ 99,368		Completed
Portable Relocations 2014	Sr LT 5/20/14		\$ 592,111	\$ 592,111	\$ 592,111		Completed
Portable Relocations 2015	Sr LT 3/2015		\$ 294,257	\$ 294,257	\$ 294,257		Completed
Title IX Projects - Group II	Sr LT 3/2015		\$ 1,020,000	\$ 1,020,000	\$ 1,020,000	\$ 15,034	1.5%
(Projects Financially Complete)							
<b>Added Projects Total</b>		\$ -	\$ 2,005,736	\$ 2,005,736	\$ 2,005,736	\$ 15,034	

Project	Initial Budget (from BCA List)	Revised Approved Current Budget	Jun-16 Est @ Comp.	Jul-16 Est @ Comp.	Net Contingency Balance	
					\$	%
AHS Turf Replacement	\$ 653,017	\$ 970,853	\$ 970,853	\$ 970,853		Completed
SHS Roof Replacement	\$ 2,181,226	\$ 5,126,133	\$ 5,126,133	\$ 5,126,133		Completed
SHS Chiller	\$ 188,549	\$ 63,997	\$ 63,997	\$ 63,997		Completed
Five Oaks Phase I: Chiller Replacement	\$ 167,734	\$ 92,397	\$ 92,397	\$ 92,397		Completed
SHS Stadium Turf Replacement	\$ 1,000,000	\$ 1,243,776	\$ 1,243,776	\$ 1,243,776		Completed
JW/SM Fire Alarm Systems	\$ 231,727	\$ 481,389	\$ 481,389	\$ 481,389		Completed
SHS Auditorium Upgrades Phase I - Emerg Elec	\$ 745,833	\$ 807,355	\$ 797,413	\$ 797,413		Completed
WHS Roof Replacement	\$ 2,055,558	\$ 3,201,673	\$ 3,201,673	\$ 3,201,673	\$ 319,555	11.1%
Conestoga Roof Replacement	\$ 2,157,350	\$ 3,273,481	\$ 3,273,481	\$ 3,273,481	\$ 841,020	34.6%
Capital Center - HVAC System, West side	\$ 2,280,000	\$ -				Moved to CC project
Capital Center - Refund to BCA for Westside scope cut	\$ (1,090,725)					
CP/MP HVAC Upgrades	\$ 2,874,409	\$ 7,287,567	\$ 7,205,597	\$ 7,287,567	\$ 480,033	7.1%
Conestoga Plumbing & Water Int Repair	\$ -	\$ 4,312,000	\$ 4,312,000	\$ 4,312,000	\$ 1,877,484	77.1%
Highland Park Plumbing & HVAC	\$ 2,915,180	\$ 2,915,180	\$ 2,915,180	\$ 2,915,180	\$ 300,000	11.5%
District-Wide Auditorium Upgrades (A/E only)	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000		
Maint Dept Repair & Improvement Projects*	\$ 4,053,278	\$ 3,567,071	\$ 3,529,832	\$ 3,567,071		
(Projects Financially Complete)						
<b>Repair Projects Total</b>	<b>\$ 20,563,136</b>	<b>\$ 33,492,872</b>	<b>\$ 33,363,721</b>	<b>\$ 33,482,930</b>	<b>\$ 3,818,092</b>	
<b>Repair Program Balance Available</b>	<b>\$ 77,436,864</b>	<b>\$ 63,399,824</b>	<b>\$ 63,528,974</b>	<b>\$ 63,409,765</b>		
Repair Program Less Transfers	\$ 96,892,695					

\*Budget and Est @ Comp. will increase each month as additional Maintenance Dept. managed Repair Projects are scheduled.

# 2014 Bond Program Financial Status Report

## Security Upgrades

Data as of 7/29/2016

Security Upgrades	Approved by	Initial Budget	Revised Approved Current Budget	Jun-16 Est @ Comp.	Jul-16 Est @ Comp.	Net Contingency Balance	
	& Date					\$	%
Greenway ES Interior Door Locks, etc.	Dep Sup; 10/14/14	\$ 2,000	\$ 1,693	\$ 1,693	\$ 1,693		
Phase 1 & 1A: Building Perimeter Security	Safety Comm	\$ 5,600,000	\$ 7,160,162	\$ 7,160,162	\$ 7,160,162	\$ 282,659	4.1%
<b>Security Projects Total</b>		<b>\$ 5,602,000</b>	<b>\$ 7,161,855</b>	<b>\$ 7,161,855</b>	<b>\$ 7,161,855</b>	<b>\$ 282,659</b>	
<b>Security Program Balance Available</b>		<b>\$ 4,398,000</b>	<b>\$ 2,838,145</b>	<b>\$ 2,838,145</b>	<b>\$ 2,838,145</b>		

**2014 Bond**  
**Learning Technology/Classroom Systems**  
**and Critical Equipment Purchases**  
**July 31, 2016 Report**

Learning Technology/Classroom Systems - \$56 Million				
	Project To Date Expenditures	2016-17 Budget	2016-17 Expenditures as of 7/31/16	Quarterly Description of Expenditures
Positive Change Grants	\$ 2,777,056	\$ 93,493	\$ 393	Student computing devices have been purchased and deployed with 17 Teacher teams at all levels across the district.
Technology Infrastructure	\$ 5,276,795	\$ 2,217,679	\$ -	District Firewall, filters, core routers, and other critical networking equipment has been replaced. Enterprise wireless project in process to upgrade all schools wireless capacity.
Future Ready Schools	\$ 10,748,022	\$ 4,851,576	\$ 1,940	Purchase and implementation of technology device integration with instructional practices. All schools will be Future Ready by 2017-18.
Digital Curriculum Development	\$ 1,303,769	\$ 603,060	\$ -	Salary for six curriculum developers (5.0 FTE); Textbook purchases to support the ELA adoption; Payment for TeacherSource Enhancements on the professional development module and Lesson Plan design.
Other Technology/ Curriculum Projects	\$ 3,953,332	\$ -	\$ -	Completed Technology/Curriculum Projects. Includes: student laptop replacements in 2014-15, high school science technology in 2015-16.
<b>Total</b>	<b>\$ 24,058,974</b>	<b>\$ 7,765,808</b>	<b>\$ 2,333</b>	
<b>Total Bond Funds Remaining</b>			<b>\$ 31,941,026</b>	

**2014 Bond**  
**Learning Technology/Classroom Systems**  
**and Critical Equipment Purchases**  
**July 31, 2016 Report**

**Critical Equipment - \$24 Million**

	Project To Date Expenditures	2016-17 Budget	2016-17 Expenditures as of 7/31/16	Quarterly Description of Expenditures
Buses \$16,000,000	\$ 6,236,906	\$ 2,008,153	\$ -	Approximately \$2 million/year over eight years. In first year, \$4.25 million will be spent and \$2million/year will be spent in years two through seven. \$0 will be spent in the eighth year.
Copiers \$3,605,523	\$ 634,417	\$ 350,000	\$ -	Approximately \$250,000/year over eight years.
Scoreboard Replacements \$342,680	\$ 79,487	\$ 263,193	\$ -	\$67,000/high school to replace scoreboards. Beaverton High School to be completed in year 2. Remaining high schools are scheduled to be completed in 2016-17 (year 3).
FF&E for FD Kindy/ Additional Teachers \$2,657,596	\$ 1,397,596	\$ 460,000	\$ -	Furniture, fixtures & equipment, including technology, for full day kindergarten and additional teachers K-5.
Athletic Equipment \$224,030	\$ -	\$ 124,030	\$ -	Approximately \$100,000/year over three years beginning in year 2. \$75,970 was transferred in year 2 to the Scoreboard Replacements Project for the 4 remaining high schools (Approximately \$19,000/remaining high school).
Maintenance Equipment \$600,000	\$ 184,000	\$ 121,000	\$ -	Approximately \$120,000/year over five years beginning in year 2. Year 2 will have \$185,000. Year 6 will only have \$55,000.
THPRD SW Quadrant Park \$121,066	\$ 121,066	\$ 121,066	\$ 121,066	BSD portion of 50% of shock pad installation at SW Quadrant Park (Mountain View Middle School).
Other Equipment Purchases \$449,105	\$ 449,105	\$ -	\$ -	Other critical equipment purchases as needed. Purchase of \$15,000 towards new locker banks at Stoller in 14-15, \$250,000 towards new musical instruments in 14-15 and 15-16, and \$184,050 for cafeteria table replacements in 15-16.
<b>Total</b>	<b>\$ 9,102,577</b>	<b>\$ 3,447,442</b>	<b>\$ 121,066</b>	
<b>Total Bond Funds Remaining</b>			<b>\$ 14,897,423</b>	



**2014 Bond  
Learning Technology/Classroom Systems  
and Critical Equipment Purchases  
GL to JL Reconciliation  
July 31, 2016**

Project #	Description	GL Key	2016-17 Budget	Encumbered	YTD Actuals	Balance
0102	Positive Change Grants	415.689.4189-xxxx	\$ 93,493	\$ 5,027	\$ 393	\$ 88,073
0103	District Wireless Infrastructure	415.689.4182-xxxx	2,217,679	113,541	-	2,104,138
0104	Curriculum	415.551.4110-xxxx	537,569	537,569	-	-
0104	Curriculum	415.551.4182-xxxx	65,491	-	-	65,491
			603,060	537,569	-	65,491
0110	Future Ready	415.689.4185-xxxx	4,851,576	13,067	1,940	4,836,569
<b>Total Learning Technology/Classroom Systems (\$56M)</b>			<b>\$ 7,765,808</b>	<b>\$ 669,204</b>	<b>\$ 2,333</b>	<b>\$ 7,094,271</b>
Project #	Description	GL Key	2016-17 Budget	Encumbered	YTD Actuals	Balance
0106	Buses	415.625.2552-0564	2,008,153	1,976,317	-	31,836
0107	Copiers	415.651.4189-0541	350,000	10,536	-	339,464
0108	Scoreboard Replacement	415.420.4150-0541	65,429	58,029	-	7,400
		415.430.4150-0541	63,683	56,163	-	7,520
		415.460.4150-0541	72,888	57,703	-	15,185
		415.480.4150-0541	61,193	53,893	-	7,300
			263,193	225,788	-	37,405
0111	Classroom Furniture & Equipment	415.499.4184-0461	460,000	-	-	460,000
0113	Athletic Equipment	415.555.4189-0460	124,030	-	-	124,030
0114	Maintenance Equipment	415.641.4189-0541	121,000	61,437	-	59,563
0115	THPRD SW Quadrant Park	415.351.4150-0531	121,066	-	121,066	-
<b>Total Critical Equipment (\$24M)</b>			<b>\$ 3,447,441</b>	<b>\$ 2,274,077</b>	<b>\$ 121,066</b>	<b>\$ 1,052,298</b>

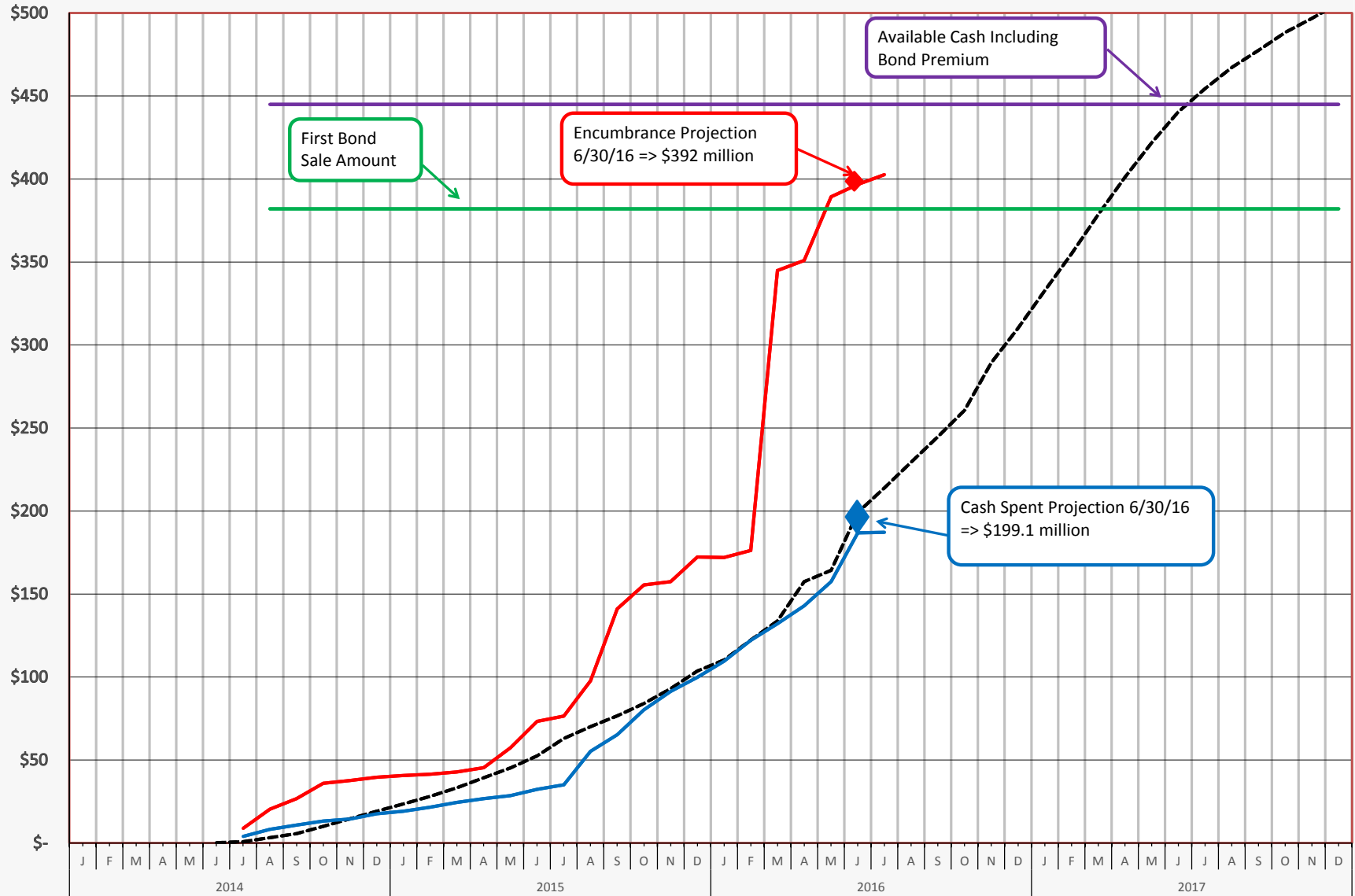
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\*\* Encumbered amount is remaining salary budget.

# BOND PROGRAM CASH FLOW

\$ MILLION

— Cash Plan      — Cash Actual      — Encumb      — 1st Bond Sale      — 1st Bond Sale w/Prem



First Bond Sale Amount

Encumbrance Projection 6/30/16 => \$392 million

Available Cash Including Bond Premium

Cash Spent Projection 6/30/16 => \$199.1 million

- Watch our progress on the web cam: <http://dwpwebcams.com/scmhs/>
- Hoffman has worked 181,000 hours to date
- Structural steel work in the auditorium continues
- Stairwell masonry nearly complete
- Masonry in gymnasium ongoing
- Fireproofing and exterior stud framing work in classroom wing in process
- Interior framing continues in the classroom wing
- Roofing in classroom wing underway
- Upper retaining wall on Scholls Ferry nearly complete
- Grading of athletic fields underway
- Structural steel framing of administration area continues

General Contractor: Hoffman Construction



Site View - looking northwest



Steel going into Auditorium - looking southeast



Administration/Auditorium - looking northeast



Commons/Classroom wing - looking east



Classroom wing framing

Information from the Beaverton School District

July 2016

- North parking lot paving underway
- Netting in covered play area complete
- Pouring cement sidewalk along NW Stone Mountain
- Partitions and mirrors in the restrooms nearly complete
- Appliance installation underway
- Casework in commons area underway
- South parking lot complete
- South parking lot bus loop nearly complete
- Mirror installation in multi-purpose room
- Auxiliary and main gym floor installation continues
- Athletic field work begins
- Cement pour of ADA ramp at south entry complete
- South plaza grading and paving underway
- Light fixture installation continues
- Cabinet installation in media center continues
- Crosswalks at NW Holly and 118<sup>th</sup> underway

General Contractor: Skanska USA



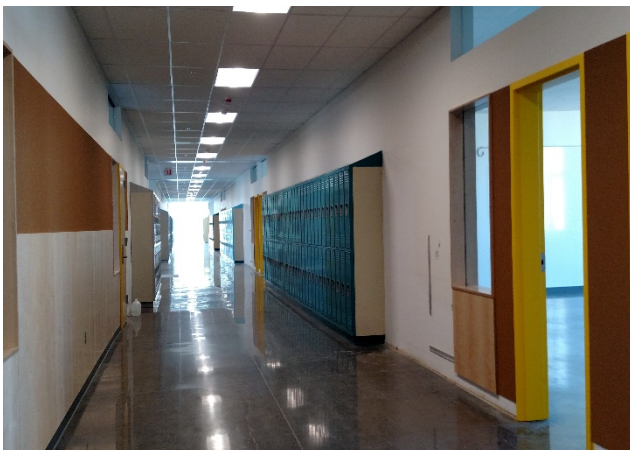
Site view aerial - looking northeast



Media Center/Hallway



Multi-purpose room



Lockers in the classroom wing



Kitchen/Food Prep

**Information from the Beaverton School District** **July 2016**

- Storm water system excavation continues
- Foundations excavation and footing formwork continues
- Pouring of concrete footings underway

General Contractor: Skanska USA



Footings - looking west



Concrete footings - looking northeast



Parking lot scraping - looking northwest



Footing excavation - looking northwest



Storm water system - looking west

**Information from the Beaverton School District**

**July 2016**

- Gas, electric, and communications are shut off
- Moving crews have packed up entire school
- Building equipment salvaged for reuse
- Construction fence installed
- Portable demolition complete
- Sequoia removed, sent to mill for repurposing

**General Contractor: Triplett Wellman**



Sequoia Tree Repurposing



Site View



Demolition



Demolition



Architect Rendering