

## Appendix A- Capital Maintenance Forecasting

### Process

#### Capital Maintenance Forecasting Process

#### Systems:

Life cycle estimates were calculated for each building/site system based on the age and anticipated lifespan of that system, through a cost per square foot analysis. This allows us to anticipate the cost and timeframe of system replacements on a higher level.

Building	Level	Original/ Addition	Square Feet	System Description	Cost Ft Sq	TARALifeCyc	Actual Last	TSD Next	Cost
High Plains	PK8	Original- 2016	63563	Building Exteriors(Walls&Windows)	\$ 7.69	30	2016	2046	\$ 488,799
High Plains	PK8	Original- 2016	63563	Built in Equipment/Specialties	\$ 2.27	25	2016	2041	\$ 144,288
High Plains	PK8	Original- 2016	63563	Elevators	\$ 6.00	25	2016	2041	\$ 381,378
High Plains	PK8	Original- 2016	63563	Fire Protection Specialties	\$ 0.53	20	2016	2036	\$ 33,688
High Plains	PK8	Original- 2016	63563	HVAC Equipment	\$ 15.10	30	2016	2046	\$ 959,801
High Plains	PK8	Original- 2016	63563	Interior Finishes(Partitions&Doors)	\$ 7.00	15	2016	2031	\$ 444,941
High Plains	PK8	Original- 2016	63563	Interior Finishes(Walls,Ceilings,Floors)	\$ 19.68	15	2016	2031	\$ 1,250,920
High Plains	PK8	Original- 2016	63563	Roofing	\$ 10.43	30	2016	2046	\$ 662,962
High Plains	PK8	Original- 2016	63563	Wiring, Lighting & Electrical Service Distribut	\$ 13.62	70	2016	2086	\$ 865,728
High Plains	PK8	Original- 2016	63563	Communications and Security	\$ 3.49	30	2016	2046	\$ 221,835
High Plains	PK8	Original- 2016	63563	Fire Sprinklers	\$ 4.35	40	2016	2056	\$ 276,499
High Plains	PK8	Original- 2016	63563	HVAC Controls	\$ 1.81	20	2016	2036	\$ 115,049
High Plains	PK8	Original- 2016	63563	HVAC Terminal and Package Units	\$ 20.74	30	2016	2046	\$ 1,318,297
High Plains	PK8	Original- 2016	63563	Plumbing Fixtures Other	\$ 0.39	25	2016	2041	\$ 24,790
High Plains	PK8	Original- 2016	63563	Plumbing(Fixtures,Domestic Water, Sanitary,	\$ 6.74	25	2016	2041	\$ 428,415

#### Components:

Comprehensive facility assessments were conducted at every building and site by each Facilities Services trade, including Electrical, Plumbing, Carpentry, Heating, ventilation, air conditioning (HVAC), Grounds, and Irrigation. These assessments are conducted on an at least annual basis, building upon needs previously identified, reevaluating, and updating.

The focus of this component analysis is immediate needs in the next 0-7 years.

## Appendix B- Learning Space Enhancements

### Facilitation Process

#### Co-Creative Workshops



Thompson School District engaged Cuningham Group Architecture, Inc. to facilitate a series of master planning workshops with the MPC. The workshops were typically held the first Monday of the month and occurred from January 2019 to May 2019. The intent of the sessions was to begin the next long-range facility master planning effort for the District.

Each workshop engaged the MPC in co-creative activities using design thinking through whole group and small group work.



January Workshop 01 - "Creating a Shared Vision"

February Workshop 02 - "Facility Principles + Standards"

March / Spring Break

April Workshop 03 - "Analyze the Gap"

May Workshop 04 - "Recommendations"

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### Facilitation Process

#### WORKSHOP 01 - Creating a Shared Vision

January 2019

##### Welcome and Introductions

Todd Piccone, Chief Operations Officer welcomed the MPC. Cuningham Group facilitated introductions where each MPC member shared one Highest Hope for the planning process.



##### Co-Creative Process + Commitments

Cuningham Group presented Ground Rules for co-creative work and described the nature of the Workshops.



##### Parallel Efforts

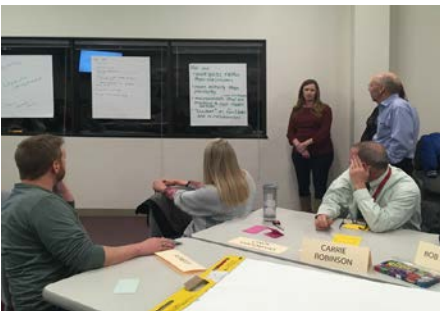
Brief updates on ongoing activities were provided by District personnel: the Strategic Plan, Bond Program, and building utilization and capacity studies, and growth analysis.

##### Forces of Change

Cuningham Group facilitated a whole-group discussion to identify forces of change for education and the District over the next 10-20 years.

##### Planning Provocation

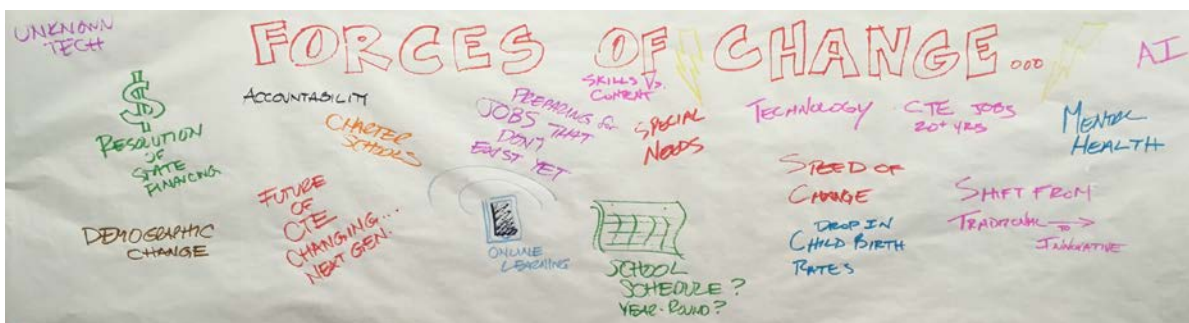
The MPC watched a video of the talk given by Sir Ken Robinson entitled, "Changing Paradigms." Reflections were shared openly by the group.



##### Creating a Shared Vision

Cuningham Group asked, "Imagine it's the year 2030, and your school facilities have evolved to adapt to the effects of changing educational practices. You are leading a tour of your facilities for a regional tem of educators....What do you see?"

The MPC first worked individually, then in their table groups to identify, share, and sort their "I See" statements. Then the small groups collaborated to draft "We See" statements. Each group presented. Volunteers from each group were asked to create one, unified Shared Vision Statement to present at Workshop 02.



\*A full copy of the Workshop presentation is available on the District web site.

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### WORKSHOP 02 - Facility Principles + Standards

February 2019

#### Welcome back!

Workshop 02 began with highlights from Workshop 01, including review of the Purpose, Ground Rules, and Co-Creative Process and Commitments.

The small group of volunteers offered the Shared Vision statement:

*"We see learning spaces that are **safe, innovative, flexible, equitable and engaging** for all students, staff and community. We see environments that are **healthful, naturally bright, comfortably conditioned and designed for longevity, durability and sustainability**. We see facilities that adapt to our ever-changing world and provide learning systems for our students that empower to learn, challenge to achieve and inspire to excel through relevant **technology, collaboration and creative experiences.**"*

#### Limiting Beliefs

The group discussed the kinds of limiting beliefs they or others may have that could discourage making change.

#### Guiding Principles for Facilities Planning

Cunningham Group proposed six facility principles. Each table was assigned one to review and define for TSD. Each group reported their conclusions and recommended edits.

#### Facility Standards

A list of 40 Facility Standards were distributed by Cunningham Group for MPC review. A few refinements were requested. The final Facility Standards list forms the basis of the Gap Analysis. Following the workshop, a Gap Analysis was completed by each school Principal, looking at the gap between the facilities they have and what they could be.

#### Facility Assessment Process Updates

Kristen Battige, Director of Operations, introduced the new Building Preservation Criteria, with a scoring system from 1 to 5 and High to Low Priorities. The criteria will be used for all educational buildings in the District.

#### Looking Ahead

Small groups did an exercise called "Packing for the Future" where each table responded to three questions and presented their answers:

1. What is important to bring along with you?
2. What can you let go of?
3. What might you need to add?

The TSD planning timeframes were defined as:

- **SHORT-term (1-2 years):** 2018 Bond Projects; immediate needs
- **MID-term (3-7 years):** next significant bond investments
- **LONG-term (7-10+ years):** implementation of the Shared Vision



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### Facilitation Process

#### WORKSHOP 03 - Analyze the Gap

April 2019

##### Welcome back!

Workshop 03 began with highlights from Workshops 01 and 02. The Purpose, Ground Rules, Co-Creative Process, and the Shared Vision statement were reviewed as the foundation of the MPC's work. "Limiting Beliefs" and "Packing for the Future" activities were reflected upon.

##### TSD Parallel Efforts & Updates

Updates were provided for the Bond project status and Strategic Plan. Skip Armatoski, Planning Manager presented updates on anticipated District-wide growth or change, as well as current building utilization and capacity analysis. Each quadrant of the District was reviewed individually, as well as some overall trends and scenarios.

##### Gap Analysis Review

The process of requesting and gathering responses to the Gap Analysis was described. The Facility Standards refined at Workshop 02 were organized into a list that was distributed to the Principals at each school site. Principals were asked to rate their school against the Facility Standards on a scale of 1 (lowest, does not meet standard) to 5 (highest, meet standard). Prior to Workshop 03, Cunningham Group compiled the responses into one large matrix, so that the data could be analyzed by school, or type, or standard. The MPC worked in small groups at their tables to review and shared observations with the whole group. More information about the results is included in the Improving Educational Spaces section of this document.

##### Facility Assessment Process

Kristen Battige, Director of Operations, provided an update on the status of District facility assessment using the new Building Preservation Criteria.

##### Looking Ahead

In preparation for making recommendations at Workshop 04, the MPC was reminded that the TSD Master Plan will generally be framed as follows: SHORT-term (1-2 years), MID-term (3-7 years), and LONG-term (7-10+ years).



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### Facilitation Process



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### WORKSHOP 04 - Recommendations

May 2019

#### Welcome back!

Workshop 04 began with brief highlights from the three previous sessions.

#### Planning Department Recommendations

Skip Armatoski presented recommendations for anticipated growth. He reviewed the District's Obligated Sites, as well as unutilized and utilized land.

#### Maintenance Forecasting

Kristen Battige presented the results of the Maintenance Forecasting efforts and summarized how the information will be used.

#### Video Provocation

"Where joy hides and how to find it", a TED Talk by Ingrid Fetell Lee was played and reflections were shared by the whole group.

#### Revisiting and Prioritizing the Gap Analysis

Each table was asked to revisit the Gap Analysis and identify their top 3-5 priorities to address. The results were reported out to the whole group.

#### Initial Master Plan Offering

An initial Master Plan Offering was provided, organized in the categories of: ALL Schools, 3-7 years, 7-10+ years and 0-10 years. The MPC was asked what questions they had and what advice they would give the District:

- Use the long range planning committee report for communication!
- Gratitude and appreciation!
- Joy
- Advise: communicate regularly (quarterly) about facility needs!
- Increase signage/visible reminders of bond investment
- Continue with voter education efforts
- What is the future of Loveland HS? (Capacity Issue)
- 0-10-year designation is confusing
- Monitor as separate category?
- When is the next bond? Build on trust created with current bond? Possible in 2021?
- Sustain/maintain public outreach
- Involve students and teachers in communication!

#### Conclusions & Next Steps

Cunningham Group thanked the MPC for their work and reviewed the next steps to document the process and finalize the recommendations for presentation to the Board of Education.

# Appendix B- Learning Space Enhancements

## Facility Standards



### BUILDINGS

#### 1. Basic Learning Space

Design with finishes and fixtures that promote collaborative and creative project work and allow for the design of learning experiences. Basic Learning spaces, at all levels, will be generously sized for variable teaching layouts, technology and individual or group arrangements.

#### 2. Varied Space for Program Delivery

Provide a variety of sizes and character of learning space for different teaching and learning modes. Each school should have a variety of spaces to serve different purposes and group sizes, and that can be laid out in a variety of ways.

#### 3. Student Gathering Space

A student's social development is part of their education and growth. The school facility will provide spaces for class groups and students to gather, and to interact and study in safe, manageable forums.

#### 4. Whole-School Assembly Space

Each school will have a space which allows gathering of the entire student and staff population, thereby supporting and strengthening school community spirit. Design for multiple uses (e.g. a high school double gym used for speakers and events as well as games).

#### 5. Interdisciplinary Learning

The school organization and its individual spaces will be designed to allow interdisciplinary teaching and teaming, and strengthen natural connections between subject areas. Learning Spaces grouped with other facilities allow teachers of different subjects to work together with an identified group of students.

#### 6. Specialized Lab Space for Program Delivery

Each school will have specialized lab/studio spaces for programs whose needs cannot be provided in a Basic Learning Space. All labs/studios will be designed with adaptability and flexibility in mind, so that site-based decisions about yearly program offerings are supported, and so that the spaces may be usable by students and community.



## Appendix B- Learning Space Enhancements

### Facility Standards



#### 7. Shared Space for Programs

Shared use of learning spaces, labs, activity areas, and grounds is required for many programs e.g. electives, Community Education and after school child care. Design facilities to intentionally support this sharing while recognizing need for security.



#### 8. Special Services Needs

Provide space in each facility to support all students with special needs. Space is needed both to facilitate inclusion within the classroom and for special services in specific settings. Design an atmosphere conducive to learning, near other learning spaces, to meet the student's special physical, sensory, and emotional needs. Standards should be developed for spaces so as not to sacrifice for the needs of other spaces.



#### 9. Space for Young Children and Parents

The school system serves its learners well by reaching them at an early age. Provide facilities that address the specific needs of young learners, including adequate support space.



#### 10. Places for the Individual

Design facilities that support efforts to personalize learning for all students. Recognize learner needs for places that allow them to take initiative and explore their interests, and for a place they can make their own. Consider a range of functions and types - perhaps not all at every location.



#### 11. Space for Enriching Activities/Athletics/Arts

Because participation in co-curricular activities enhances the personal development of the participants, modern facilities with adequate space will be provided to support these activities. Activities include Athletics, Performing and Visual Arts, and Student Activities such as publications and clubs.



## Appendix B- Learning Space Enhancements

### Facility Standards



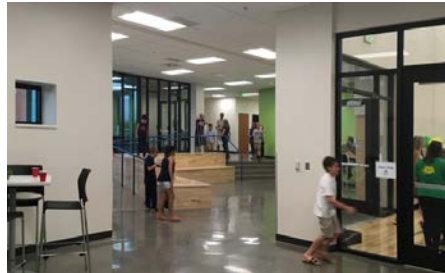
#### 12. Staff Resource and Collaboration Space

Provide staff space that will encourage collaboration, support interdisciplinary teaching and teaming and reduce staff isolation. Adequate and functional space for teachers to meet, plan and work are essential to successful educational service. Locate work/planning spaces to allow natural connections between students and staff.



#### 13. Daylighting and Views

Rooms that house people should have windows for connection to the outside and for natural light. Designs must consider security and control of light, glare and heat gain/loss. Incorporate windows to other spaces for distribution of light and visual connections.



#### 14. Accessible Buildings

Each facility should apply the concepts of Universal Design as well as meeting ADA requirements, to make accessible features useful for all. Modify existing buildings to remove barriers to public spaces and provide convenient access to all levels as a first priority.



#### 15. Community Services Centers

Facilities will be designed to allow cooperation with local organizations and government agencies, along with the District, to provide important services for students and the community. Programs may include community education, adult education, health services, English Language Learning (ELL), alternative programs, parenting classes, extended day/ summer programs and school- age childcare options.



#### 16. Safety

Design schools to provide a safe and secure environment. Students, staff, visitors and the community should be able to regard the school as a safe haven in which to meet, learn and work.



#### 17. Clear Main Entry

Create a clear, identifiable main entry with direct access to the main office. Consider the concept of a “welcome center” to orient visitors and control access.

## Appendix B- Learning Space Enhancements

### Facility Standards



#### 18. Welcoming and Respectful Main Office

The administration and reception functions of each school will be housed in pleasant, comfortable spaces to welcome visitors and the public, as well as the school's students and staff.



#### 19. Health Services Space

Health Services within the schools address basic needs for physical health through direct and educational/preventative services.



#### 20. Facilities for Media Centers

The media center mission is to ensure that all students and staff are effective users of information. Design media space to support learning and instruction for students and staff in informational literacy and information technology skills



#### 21. Food Service

Food Service areas will include space for efficient production and serving of nutritious, healthy food. Accommodate the shift to greater preparation from fresh ingredients to support the focus on health and wellness. In addition, they should be designed to be appealing to students and others in the buildings.



#### 22. Technology Space

*Incorporate space for current and future technology infrastructure and equipment into the design of buildings, with space for student/staff/ community use.*



#### 23. Storage Space

Provide dedicated interior storage space at each school, designed for large and small items. In addition, locate enclosed storage convenient to activity fields and/or paved areas for maintenance and play equipment.



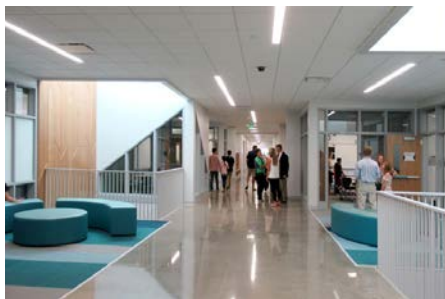
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#### 24. Plumbing Core

Adequate restrooms, drinking water, laundry, and custodial closets are critical to a well-run school facility. Restrooms must be in good condition and distributed in locations allowing convenient use. Restrooms meet ADA requirements.



#### 25. Internal Circulation

Spaces for movement between and among learning settings are integral to the learning experience, in support of the learning “anytime, anywhere” philosophy. They must support flow in a respectful and safe manner, while maximizing the opportunities for even corridors to be places of learning and collaboration.

### INTERIORS AND FINISHES



#### 26. Flexible/Adaptable Space

Design learning environments to address short and longer term modifications in response to educational program - hourly/daily and longer term/yearly changes in use.



#### 27. Signage and Display

Provide multiple opportunities for display of information and 2 & 3 dimensional student work. Design directional signage for the school that clearly identifies school spaces and organization. Use opportunities offered by directional signage to add to facility identity; displays can “advertise” the school and events. Reflect diversity of community.



#### 28. Furniture and Finishes for Learning

Select colors, interior finishes and furniture which contribute to the quality of the learning environment and are appropriate to the use of the space.

### SYSTEMS



#### 29. Quality HVAC/Plumbing

Heating, ventilating, air conditioning and plumbing systems should be designed to support student learning and the health and comfort of school users. Provide energy efficient, dependable HVAC systems that allow some control by the users of any given space.



## Appendix B- Learning Space Enhancements

### Facility Standards



#### 30. Ample Electrical Service and Systems & Lighting

*Power capabilities of all schools will include sufficient, distributed electrical outlets and clean power to support anytime/anywhere learning. Lighting will provide multiple light multiple levels for efficiency and function.*



#### 31. Technology Infrastructure and Hardware

*Technology systems are a key tool for learning and in communications among staff, administration, students and parents. Technology system/network access in the school will be distributed throughout the schools and allow for expansion and change.*



#### 32. Technologically Enhanced Building Systems

*Digital controls for ventilation, lighting and power systems allow for central control/monitoring and improved energy efficiency.*



#### 33. Safe and Accessible

*The design of surfaces, walks, ramps, plantings and drainage systems for a site contributed to user well-being. Design a ground plane that assists rain water control, supports maintenance, and applies the concepts of Universal Design as well as meeting ADA requirements.*



#### 34. Traffic Control

*Reduction of traffic conflicts between buses, cars, bicycles and pedestrians is a critical component of site safety. Operational management is critical: publish and enforce rules for safe student drop-off areas. Locate bus pick-up and drop zones separate from parent pick-up and drop zones, and size the bus area to handle the full number of buses at each school. Define and control pedestrian and bicycle walkways on the site. Design visitor parking areas to coordinate with parent pick-up zones.*



#### 35. Parking and Service Access

*Design adequate, safe and well-lit car and bike parking for visitors, staff and students. Provide adequate, safe and screened service and delivery areas.*

## Appendix B- Learning Space Enhancements

### Facility Standards



#### 36. Landscape Character

*Attractive, developed landscaping adds significantly to character, quality, sustainability and identity of any site and can improve student and community respect for the school. Maintain quality landscape and maintenance program at each facility.*



#### 37. Safe and Accessible Outdoor Play

*Physical activity is a key part of a healthy school experience, therefore play grounds, play fields and athletic fields must be available for student use during and after school. Safety, security, accessibility will be considered.*



#### 38. Outdoor Learning Settings

*Outdoor environments can add valuable space for learning, and help students make connections between their studies and the physical environment.*

*Each site will strive to have at least three types of outdoor learning settings: gardens, small and large gathering spaces and outdoor "classrooms."*



#### 39. Permanent Facilities

*Protect community's investment in schools by locating and designing buildings for long term use. Use materials, construction methods and details for durability, efficiency, sustainability and institutional quality.*



### COMMUNITY / OFF-SITE

#### 40. Community/Off-Site Learning Settings

*Explore opportunities with the community for off-site learning settings to augment the curriculum and school facilities. Recognize that community connections are a resource for students, staff and the broader community. Design school for connections to significant local resources, such as government, businesses, arts institutions, higher education.*



#### 41. Joint-Use Facilities

*Explore the possibility at each site of creating facilities that will be jointly used, operated and funded by the School District and another organization (e.g. City, YMCA, areas of worship). Develop a management plan to establish mutually beneficial design and operation terms that include safety, security, access, parking and liability issues as well as concerns of partners. Benefits go beyond financial support for additional facilities to increased community participation in schools.*