



# 2019 MASTER PLAN **DOLORES SCHOOL DISTRICT**

Dolores, Colorado  
August 15, 2019



## ACKNOWLEDGMENTS

The information contained within this document is a compilation of the data and feedback provided by multiple stakeholder groups as part of an ongoing Master Planning Process. Dolores School District previously worked with Eidos Architects, PC to compile an initial Facilities Master Plan in February 2011, subsequently updated in February 2012. Portions of their research and analysis have been incorporated into this working document. Significant contributions were made by various stakeholder groups including the Dolores Board of Education, District administration, students, alumni, staff and various community members.

This Facilities Master Plan has been prepared by RATIO | HPA with support from Goff Engineering and Surveying, and Jaynes Corporation of Colorado. Individual key contributors to the 2019 Facilities Master Plan update are included below:

### **DOLORES SCHOOL DISTRICT**

Lis Richard – Superintendent

Phil Kasper – Interim Superintendent

### **DOLORES BOARD OF EDUCATION**

Kay Phelps – President

Casey McClellan – Vice President

Lenetta Shull Treasurer – Board Member

Deanna Truelsen – Board Member

Vangi McCoy – Board Member

### **DESIGN ADVISORY GROUP**

Alfonso Goad – Director of Facilities

Amber Rantz – Community Member/ Parent

Doreen Jones – Finance Director

John McHenry – Secondary School Teacher

Kelly Howerton – Elementary Dean of Students

Kevin Vaugh – Elementary Art Teacher

Lenetta Shull Treasurer – School Board Member

Michael Nielson – Secondary School Teacher

Patsy Sainz – Community Member

Phil Kasper – Interim Superintendent

Ryan Malony – Community Member/ Parent

Santiago Lopez – Community Member

Susan Lisak – Dolores Chamber of Commerce

Valiena Rosenkrance – Preschool Director

# ACKNOWLEDGMENTS

DOLORES SCHOOL DISTRICT MASTER PLAN

## **COLORADO DEPARTMENT OF EDUCATION**

Julia Fitzpatrick – Regional Program Manager  
Meg Donaldson – Regional Program Manager

## **RATIO | HPA**

Dennis Humphries – Principal in Charge  
Ashley Boyer – Project Manager  
Max McCloskey – Project Architect  
Alisa Penkala – Designer

## **GOFF ENGINEERING AND SURVEYING**

Tom Engel – Civil Engineer

## **JAYNES CORPORATION**

Ryan Sorensen – Chief Estimator

The authors and contributors of the following documents shall be credited for their contributions to this working document:

Master Plan Report Dolores RE-4A School District – Eidos Architects, PC - 2011  
Revised Master Plan Report Dolores RE-4A School District – Eidos Architects, PC - 2012

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DOLORS SCHOOL DISTRICT MASTER PLAN



## II. EXECUTIVE SUMMARY

### **FOREWARD**

This document is intended to identify the present campus conditions of Dolores RE-4A School District and to establish guidelines for facility upgrades or replacement choices which will enhance the campus safety and security and ensure the district's continued growth and success. This Master Plan is a result of the research and analysis of several entities, as noted within the Acknowledgment section.

### **BACKGROUND**

Dolores RE-4A School District has retained the services of RATIO | HPA with the support of Goff Engineering and Surveying, and Jaynes Corporation of Colorado to build upon their existing Master Plan and provide a new vision based on the current campus needs. This Master Plan outlines years of research and preparation to best articulate the health, safety, security, and technology needs of the District and shall serve as a basis for a potential 2020 Colorado Department of Education BEST Grant application, and an implementation guide for the recommendations to address short-term and long-term facility needs.

The previous Master Plan was successful in addressing critical and immediate safety and educational needs, however, the Dolores School District still consists of antiquated facilities in 2019, and therefore are forced to dedicate significant resources to maintain a campus that is unsafe for students while experiencing cycles of severe flooding. Compounding the concerns regarding the flooding; in 2015 FEMA re-drew the 100-year flood plain boundaries which now incorporates roughly 2/3rd of the campus. It is primarily due to the District's diligent maintenance and capital improvements plan that the campus is not in a state of disrepair. The direction the design team received from the District and community stakeholders for this Master Plan was to develop a holistic solution for the campus that would ensure students felt safe at school and allow the campus to remain in the heart of the Dolores community while providing the contemporary learning environments necessary for students to compete and succeed in a global society.

The Dolores RE-4A School District is located in the southwest corner of Colorado. The majority of facilities in the District are located on a single campus, which includes:

- Administration. Built: 1938 (not on main campus)
- Secondary School (Middle School/ High School). Built: 1954. Addition 1971.
- Varsity Gymnasium. Built: 1954.
- Dolores Elementary School. Built: 1968. Additions: 1991, 1996.
- Auxiliary Gymnasium. Built: 1990.
- Teddy Bear Preschool (not on main campus): Built 1993
- Commons (Library/ Cafeteria). Built: 1995
- Art / Wood Shop. Built: 2002.
- Band Room. Built: 1995.
- Science Building. Built: 2015.

# EXECUTIVE SUMMARY

## DOLORS SCHOOL DISTRICT MASTER PLAN

*\*The district also owns a bus maintenance facility located on Highway 184 as you enter town from the West.*

The District has verified with the Colorado Historical Society that none of the facilities are historically significant structures.

The student population in the Dolores School District has been stable for the last twenty years with an average enrollment between 650 and 720 students. The District has a history of academic excellence: the average graduation rate is 89.5% with 80% of graduates pursuing post-secondary educational opportunities. In recent years, the testing scores have gone down due to the declining facilities and reduced ability to provide the high academic programming within the existing buildings. After graduation, approximately 50% of these students return to the Dolores area. Statistically, Dolores School District is highly competitive amongst its peers:

- ACT scores are 10-30% above the State average.
- CSAP scores in Reading and Science are consistently 10-30% above the State average. The scores in Writing and Math typically meet or exceed the State average.
- This past year the District earned “Accredited with Distinction” due to high academic growth and post-secondary readiness under the new Accreditation system.

### PROCESS

The purpose of this Master Plan is to evaluate the existing facilities with respect to their overall condition, their adequacy from an educational standpoint and, their compliance with current building and life safety codes, security and potential energy conservation opportunities. In order to accomplish this, the Design Team first reviewed the Colorado Department of Education’s (CDE) Facilities Assessment Report conducted on May 29th, 2019 of the Dolores School Facilities. The team next conducted extensive walk-throughs of all the various facilities in order to examine and further assess the condition of the facilities.

To solicit stakeholder input, the Design Team developed DAGs (design advisory groups) comprised of parents, community members, town officials, administrators, teachers, and staff. The Design Team utilized the information received from the DAG meetings, along with the facilities observations, and advice of our consultants to make recommendations on how the campus facilities should either be remodeled, added onto or replaced. Multiple rounds of campus concepts were presented to the stakeholders and a final concept was voted on at a community meeting on July 16th, 2019 detailed in Section XVI “Strategic Plan for Implementation” in this report.

## **Dolores School District History**

The Dolores School District RE-4A has served the Dolores area since 1930. The schools are currently located within the Town of Dolores (Population 975) but the District's boundaries extend well into Montezuma County. Dolores School District has a vibrant preschool program that began in 1985 and continues to see yearly increases.

The Teddy Bear Preschool has attained NAEYC Accreditation, a national accreditation that only 3% of the preschools in the nation have attained. This accreditation is the mark of excellence and quality in early childhood education. Teddy Bear Preschool is a collaborative preschool that offers Head Start, Colorado Preschool Program and tuition. The preschool is currently out of space and operates on a consistent waiting list.

The Elementary School is the largest of the three schools with three cohorts of students at every grade level and continual growth concerns. The Elementary School staff are trained in Project-Based Learning methods and implement this with fidelity in grades 3-6. Assessments have proven that the foundational programs used in the lower elementary grade levels to be very successful. The staff and administration are committed to supporting the Secondary School (7th-12th grade) that has continually endeavored to keep abreast student needs.

The District has seen a consistent increase in student population since the 1970's, however student population at the secondary level has begun to decrease within the last ten years. One of the greatest deterrents to the secondary level growth is the safety concerns parents have in regard to the flood plain, security of the campus, and the declining state of the facilities.

Dolores School District has been a school of choice for many in the Montezuma County. The breakdown of current enrollment is as follows:

### **District-Wide:**

Dolores out-of-district students:	31.4%	or	229 out of 729
Dolores in-district students:	68.59%	or	500 out of 729

### **High School Only:**

Out-of-district High School students:	28.3%	or	51 out of 180
In-district High School students:	71.67%	or	129 out of 180

### III. HISTORY OF THE SCHOOL DISTRICT

Many parents have chosen Dolores School District because of the smaller class sizes, excellent performance of students, and quality of teachers. Other factors, including the smaller community environment, also appeal to parents in the area. Although demographics are provided for the Town of Dolores on the following pages, it is important to note that 31.4% of the current enrollment comes from surrounding areas. That number will increase when our buildings are able to meet safety standards and provide more conducive space for safety and learning.

The District currently has a state performance ranking of “accredited.” The Secondary School won the “Governor’s Distinguished Award” in 2019 for demonstrating such tremendous growth in assessments and participation. From 2014 to 2017, parents were not pleased with the state changes in assessments and standards, and were opting their students out of the assessments. This caused a decline in the ranking unfortunately. This was not due to student performance which remains above any national norms on all other assessments. Dolores is one of the higher-performing districts in the region.

Dolores High School is housed in the oldest building on campus and was built in 1954. The Colorado Historical Society has determined that this building does not have significant historical value. This is documented in an email from the 2012 Master Plan included in Appendix D of this Master Plan.

The Main Gymnasium was also constructed in 1954. In 1968, the northwest wing of the Elementary School was constructed and a few years later, the Middle School and High School received an addition (1971). The Main Gym added locker rooms in 1976. In 1990 and 1995, the southeast wing of the Elementary School was added, along with construction of the Band Room directly north of the Secondary School. The Wood Shop and Modular Building near the Elementary School were constructed in 2003. Ten years later, the Elementary School received another addition to the south providing more classrooms in response to the school’s steady growth in addition to the dedicated Science Building just north of the Wood Shop.

### IV. LOCATION OF SCHOOL DISTRICT

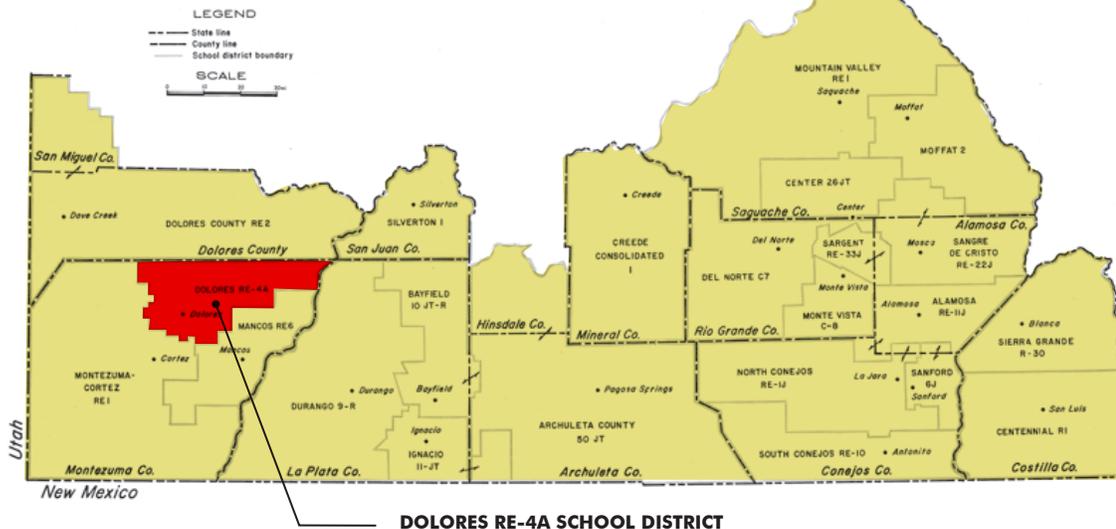
Dolores School District is located in the Southwest corner of Colorado in the town of Dolores, at an elevation of 6,980 feet. The District resides within the boundaries in Montezuma County. Montezuma County includes Mesa Verde National Park and Ute Mountain Reservation, and is bordered by Dolores, San Juan, and La Plata Counties, and New Mexico to the south, Utah to the West, and Arizona to the Southwest. The nearest major cities are Albuquerque, NM (256 miles), Denver, CO (381 miles) and Salt Lake City, UT (348 miles). The schools are located approximately 12 miles from Cortez, 45 miles from Durango, and 60 miles from Telluride.

The Regional Territory Maps depicted within this section indicate the regional location of the District as they relate to the Colorado Department of Education (CDE)'s Division of Construction Assistance Territory Maps.

#### CDE REGIONS



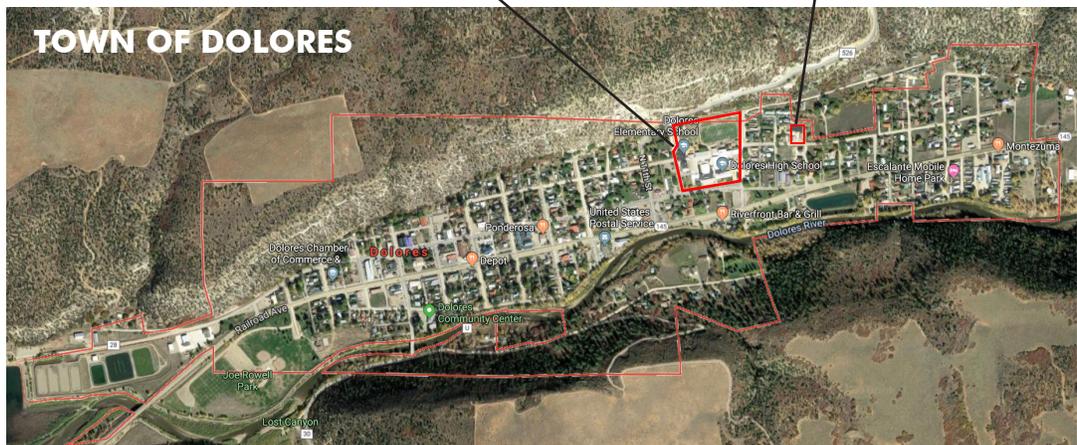
#### SOUTHWEST REGION



# LOCATION OF SCHOOL DISTRICT

## DOLORES SCHOOL DISTRICT MASTER PLAN

As of 2018, Dolores School District educates on average a total of 745 students in grades PK-12. The District includes a Elementary School, Middle School, High School, and Preschool, for a total of four schools. Currently all schools (except the Preschool) are housed on the same property located in the heart of Dolores, and the Preschool two blocks away.



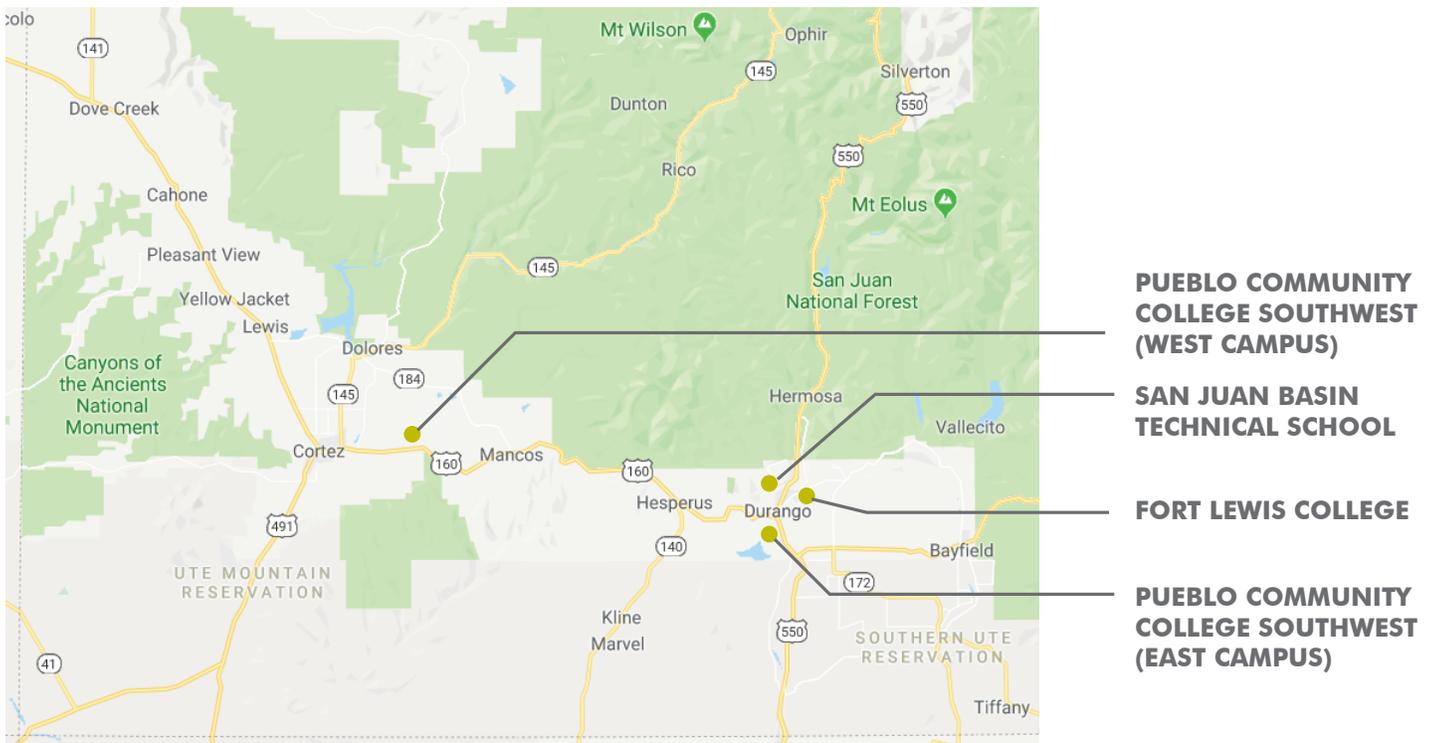
### PROXIMITY TO HIGHER EDUCATION

Nearby institutions of higher learning include:

**Ft. Lewis College**, located on a mesa overlooking downtown Durango, serves roughly 3,300 students and provides numerous educational and cultural advantages to the region.

The **East Campus of Southwest Colorado Community College** is located in Downtown Durango, and serves approximately 800 students. The SCCC is a subsidiary of Pueblo Community College, providing educational opportunities for residents of Archuleta, Dolores, La Plata, Montezuma and San Juan Counties. A second campus (West Site) is located nearby in Mancos, CO.

**San Juan Basin Technical College**, located just outside of Cortez, CO, offers classes to nearly 11,641 students (as documented in the 2016-2017 Annual Report Data).



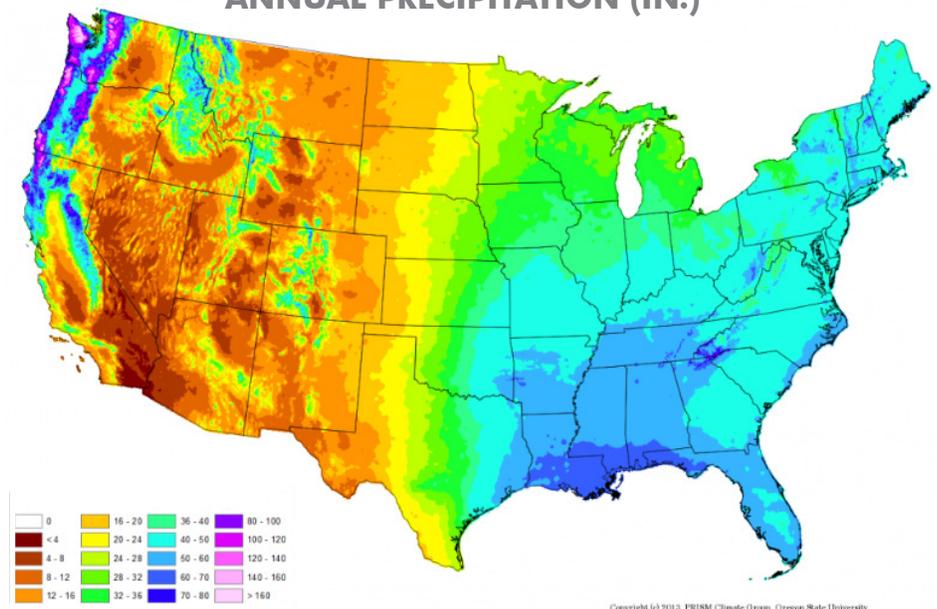
# LOCATION OF SCHOOL DISTRICT

## DOLORS SCHOOL DISTRICT MASTER PLAN

### CLIMATE

In conjunction with the picturesque landscapes, the four-season climate and moderate temperatures found in the semi-arid southwest region of Colorado make it a destination place for outdoor enthusiasts. Dolores is located at an elevation of 6,980 feet above sea level. The altitude plays a significant role in the potential temperature variations between night and day. These fluctuations can range from 36 degree swing during the summer months and a 28 degree swing in the winter months. Summer high average temperatures are about 85°F, peaking in July. While known for moderate temperatures year round, winter lows can drop as low as 12.4°F in January. Total annual precipitation is roughly 18 inches and spread fairly evenly throughout the year. The rainiest month is August at an average of 1.9 inches, while June's average of 0.6 inches demarks the driest month. Winter temperatures range from 12.4 to 42.3 degrees with average annual snowfall of 66 inches.

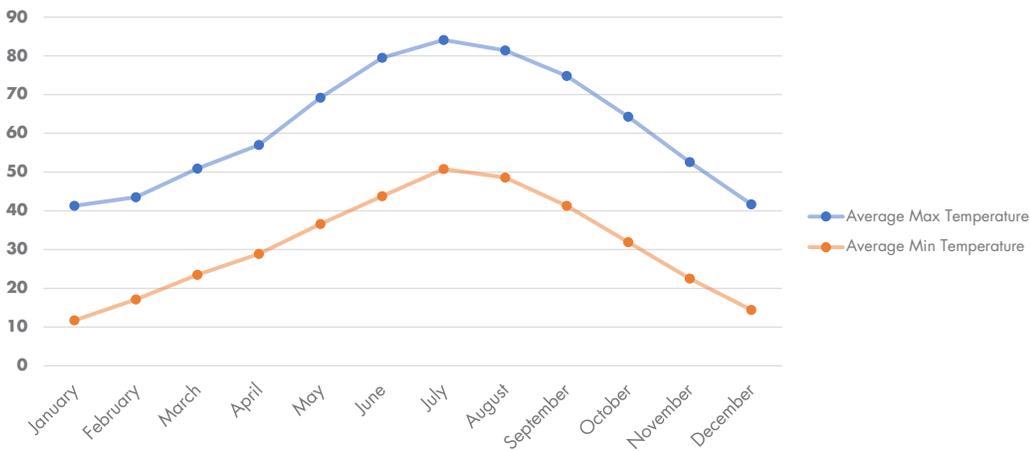
### ANNUAL PRECIPITATION (IN.)



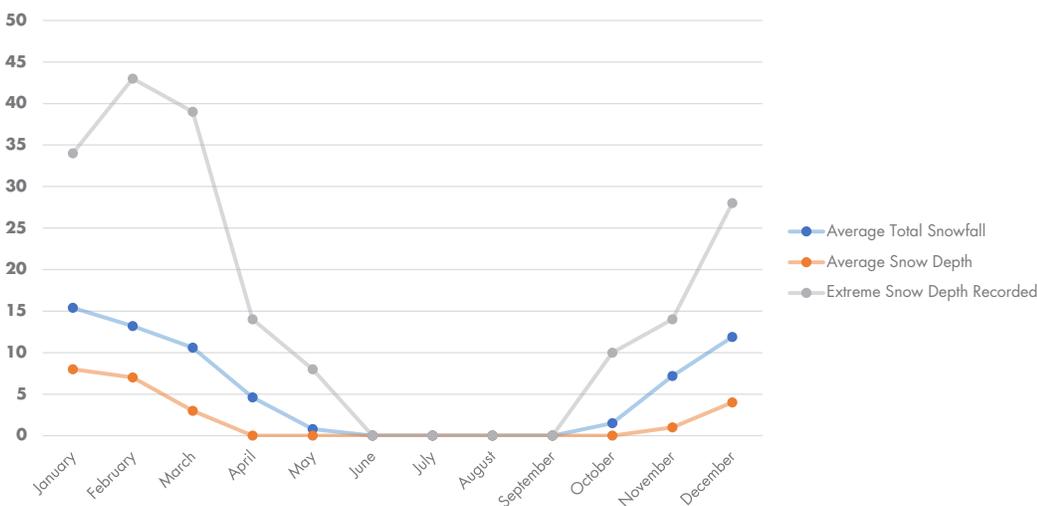
Dolores has a moderate climate in the late spring, summer and fall months and experiences severe weather in the winter. Extreme snow events cause major disruptions in facilities maintenance and operations. Building envelopes have experienced substantial deterioration from snow melt over the years. Due to the moderate summer climate, the mechanical systems in the majority of the facilities are heating and ventilating units with only limited cooling capabilities through the use of swamp coolers in some areas of the campus.

The potential for the use of renewable energy savings was examined by the mechanical and electrical engineers as part of the 2011 Master Plan. The findings noted that the initial cost of systems such as a geothermal system and photo-voltaic systems were expensive and would require paybacks in the range of 25 to 30 years for a geothermal system and 15 to 20 years for a photo-voltaic system. The use of an active solar domestic water heating system was also examined and would result in paybacks ranging in the 10 to 15 year time-frame. The volume of water utilized by the District however, does not justify this system. Because Dolores is located in a valley, the wind speeds noted in the area are at or below average.

### AVERAGE TEMPERATURE IN DOLORES (°F)



### AVERAGE SNOWFALL IN DOLORES (INCHES)



The above monthly weather average graphs reference the Western Regional Climate Center (WRCC).

# LOCATION OF SCHOOL DISTRICT

## DOLORS SCHOOL DISTRICT MASTER PLAN

### RENEWABLE RESOURCE POTENTIAL

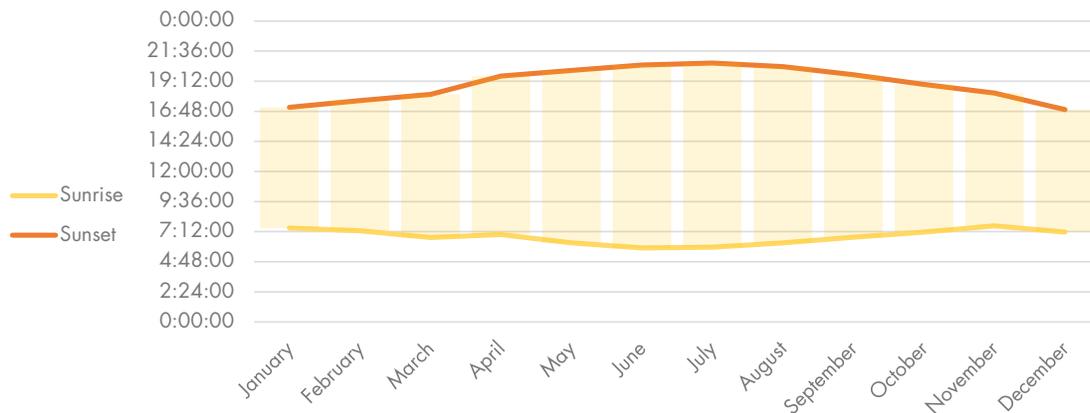
Montezuma County produced 162,469,946 MCF (1,000 cubic feet) of gas in 2017, the second highest county of gas production in the State of Colorado. Over the past 10 years, Montezuma County has also slightly increased their oil production to 76,315 barrels of oil in 2017. Both resources have contributed to the state’s collected revenue from resource extraction of \$494.6 million in addition to collecting and distributing these revenues within Montezuma County.

The potential for harnessing renewable resources in the area are high for solar and photo-voltaic applications as well as for geothermal. There is a great deal of solar exposure during the course of the year. There are known hydrothermal energy sites in the area, although harnessing this resource is likely cost-prohibitive for a small school project. The potential for wind and for biomass applications are very poor in Southwest Colorado. Ground-source energy in a heat pump loop could be a possibility pending soils tests, however, it is not anticipated at this time to be likely because of rocky soils and sloped terrain.

### Opportunities for Solar

Southwest Colorado has excellent solar potential, with nearly 300 days of sunshine annually. The length of the days varies over the course of the year. In 2019, December 21 will have 9 hours and 34 minutes of daylight, while June 21 had 14 hours and 45 minutes. The location is largely dominated by heating degree days, with around 900 heating degree days in peak December and January. The yearly average is 392 heating degree days per month. In 2009, Montezuma County Green Power sold 2,563,000 kWh, and 108,500 kWh were produced from solar power grid tied systems.

### DAYLIGHT HOURS IN DOLORS





# DISTRICT DEMOGRAPHICS

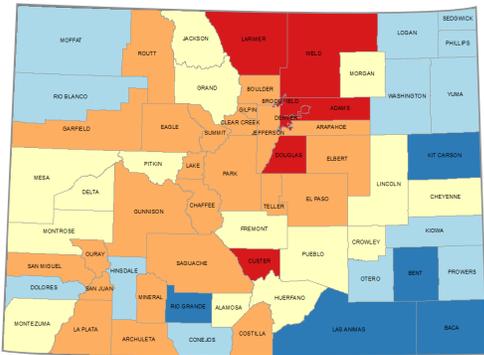
## DOLORES SCHOOL DISTRICT MASTER PLAN

### V. DISTRICT DEMOGRAPHICS

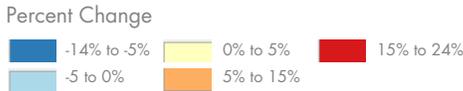
The population of Montezuma County has grown by 2.4% between 2000 and 2018, for a total of 26,158 residents. The population has been stable for the past ten years with minimal growth in the county. The Town of Dolores, Colorado had a population 936 in the 2010 census and had an estimated population of 959 residents as of 2017 with a 2.4% increase, reflecting the same as the rest of Montezuma County.

In Montezuma County, there is a slightly smaller percentage of school-aged children (18 years old and under) than there is in Cortez or in La Plata County, but there is a slightly larger percentage of the population that is greater than 65 years old.

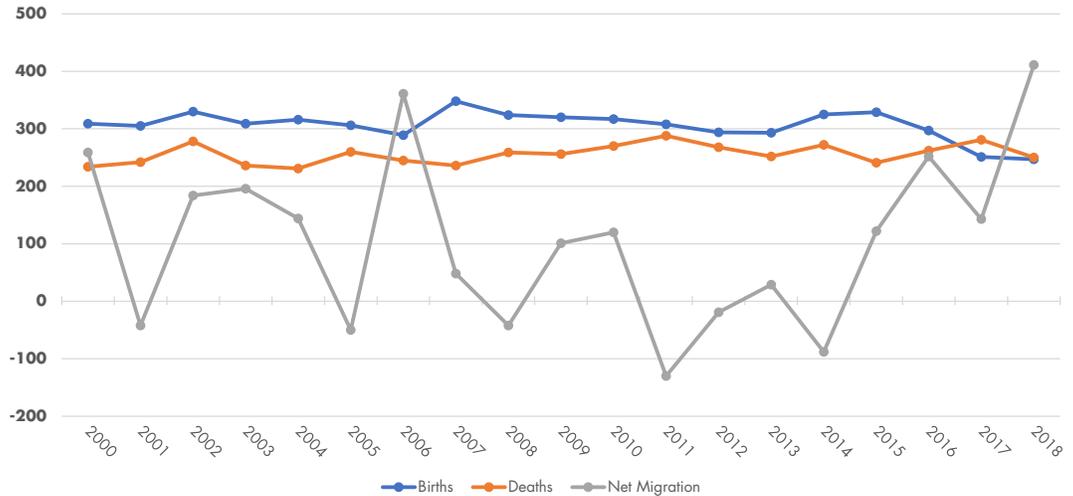
**COLORADO PERCENT POPULATION CHANGE 2010-2018**



**Population in Dolores (2000 Census): 857**  
**Population in Dolores (2010 Census): 936**

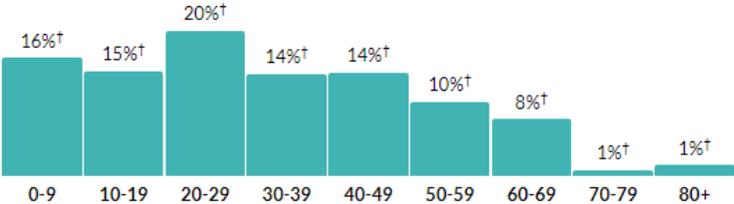


**BIRTHS, DEATHS & NET MIGRATION IN MONTEZUMA COUNTY**



The population is stable with a median resident age of 30 years old.

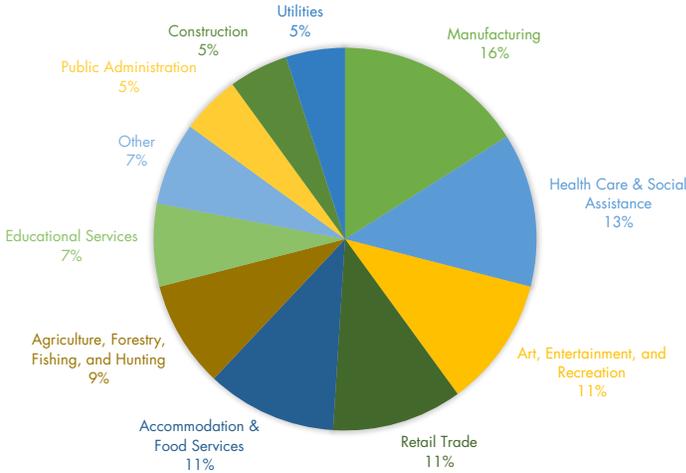
Population by age range



The primary industries within the district boundary include:

- Manufacturing
- Health care and social assistance
- Arts, entertainment, and recreation
- Retail trade
- Accommodation and food services
- Agriculture, forestry, fishing, and hunting
- Educational services
- Other
- Public administration
- Construction
- Utilities

DOLORES CAREERS



**REGIONAL ECONOMICS & COMMERCE**

The Dolores community is composed of business, agricultural, and service industry residents. The primary industries in and around Dolores and Montezuma County are made up of Healthcare, Retail, Manufacturing and Transportation. The tourism industry, including accommodation and food services account for a large economic contribution. The Southern Ute Indian Tribal activity, including gaming, real estate and oil & gas production, makes significant contributions to the economic activity of Montezuma County. Economics in the area are stable to strong. Access to technology and telecommunications in the area is strong for business and educational purposes.

# DISTRICT DEMOGRAPHICS

## DOLORES SCHOOL DISTRICT MASTER PLAN

### ECONOMY & INCOME

The median household income in the District is \$54,404 per year with an average age of 29.7 years old. 84.8% of the employed are in the labor force. 81.5% of residents live in a single-family home and 18.6% live in multi-family housing or other. 32.3% of the current housing stock was built prior to 1970, 51.6% was built between 1970 – 1999, and 16.1% was built after 2000.

#### Student Population:

1980	488 Students
1990	554 Students
2000	692 Students
2010	689 Students
2018	724 Students

#### Actual Student Counts:

FY	2006-2007	756
FY	2007-2008	734
FY	2008-2009	735
FY	2009-2010	710
FY	2010-2011	689
FY	2011-2012	722
FY	2012-2013	784
FY	2013-2014	775
FY	2014-2015	796
FY	2015-2016	790
FY	2016-2017	733
FY	2017-2018	749
FY	2018-2019	724

### POPULATION RACE & ORIGIN DEMOGRAPHICS

The following table reflects the population Race & Origin statistical data, as reported by the US Census Bureau for both Montezuma County and La Plata County.

	Montezuma	La Plata
White	82.4%	78.6%
Black / African American	0.5%	0.6%
American Indian & Alaskan Native	13.7%	7.4%
Asian	0.6%	0.8%
Native Hawaiian / Pacific Islander	0.1%	0%
Hispanic or Latino	12.6%	12.8%
Two or more races	2.6%	2.6%

## VI. HISTORICAL SIGNIFICANCE

The Dolores High School building was built in 1954. The District and the Colorado Department of Education (CDE) contacted the Colorado Historical Society and determined the building is not historically significant.

(Refer to the email included in the appendix)

## VII. BEST FACILITY ASSESSMENTS

The Colorado Department of Education conducted a Facilities Assessment Report of the Elementary School and Secondary School buildings on March 17, 2015, updated on May 29, 2019. The report was then revised on August 9, 2019 based on the Design Team's evaluation of the facilities of the Secondary School building and the Elementary School building. The Preschool building was also assessed at this time by the CDE.

To supplement the CDE Assessment and understand the realities of the day-to-day operations of maintaining the aging campus and building systems, the Design Team held a meeting with the Director of Maintenance, Alfonso Goad and his team on May 2, 2019 in which we had a detailed conversation about the mechanical, electrical, heating and cooling, IT, building envelope, and site maintenance deficiencies. The Mechanical, Plumbing, and Electrical engineering reports provided in the 2012 Master Plan were presented to the facilities team to confirm if any improvements had been made to the systems identified as deficient at that time. In general, a large majority of the deficiencies remain and have increased in severity in the last seven years. The meeting minutes and 2012 engineering reports are included in the appendix of this report. Items listed in the CDE 2015 Assessment the District has addressed include:

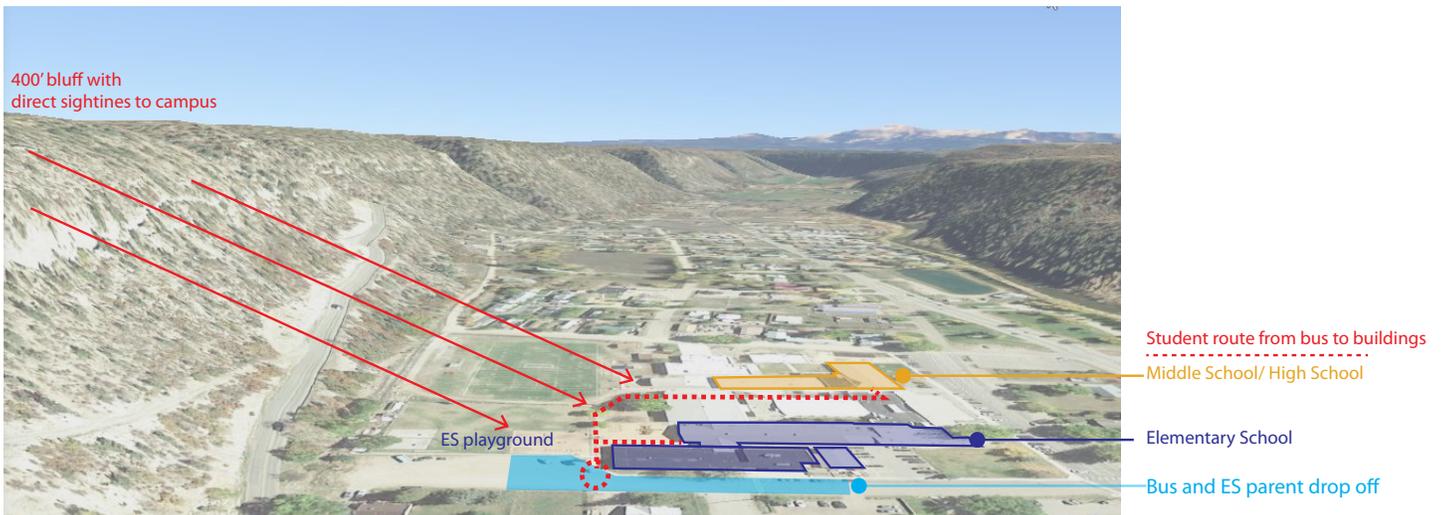
- Upgraded the IT capabilities in all the buildings.
- Replacement of several sidewalks which were badly spalling and damaged.
- Corrected structural concerns at the glulamined arches on the original Gym.
- Gym roof replacement.

While the CDE Facilities Assessment captures a large portion of the current deficiencies within the buildings and on the site, the Design Team has shared the following priority one deficiencies with the CDE and their assessment team has adjusted the FCI Scores provided in the March 2019 assessment report:

### SITE

#### Bus Drop-off:

1. The Assessment identifies that the bus loading and unloading zones do not meet CDE guidelines, and confirmed the parent drop-off zone is located on-site. In fact, the mixing of parent drop-off, staff parking, and bus drop-off all occur simultaneously on the public street at the Elementary and Middle School/ High School and poses a safety hazard to students walking to and from school from the adjacent neighborhood and requires school staff resources to coordinate traffic within the congested public right-of-way.
2. There is not a security system around the campus and there is minimal site lighting. For a larger campus with a significant amount of entry points into each building in which students and staff are constantly traveling between, this also generates a threat for outsiders to enter the campus unidentified



# BEST FACILITY ASSESSMENTS

## DOLORES SCHOOL DISTRICT MASTER PLAN



### Athletic Fields:

1. The Adequacy Assessment states that the athletic fields meet CHSAA standards, however the grading does not. During storm events large areas of ponding are visible across the football field playing surface. Additionally, the football field and Elementary School play fields are in full view of the bluff to the North putting students at risk during athletics and recess.
2. The Adequacy Assessment states that “most of the site incorporates responsible storm water management and treatment design,” yet there have been significant drainage issues identified by the Civil Engineer across the campus. The quad between the Art/ Wood Shop building and the Secondary School experiences frequent ponding that backs up onto sidewalks and into the Band Room. This courtyard is one of the only open areas on campus with permeable surface to store snow increasing the amount of snow melt that must run through the 6” storm pipe which drains this courtyard. The ponding can sit for weeks in the winter consistently freezing and presenting a safety hazard for students who must travel through the courtyard to get to class.
3. The hard surface walkways noted in item 010.0 of the Adequacy Assessment frequently experience icing despite consistent maintenance from facilities staff due to poor roof drainage design at the Auxiliary Gym, Varsity Gym and Secondary School. This was also noted in the 2015 Master Plan.
4. The Facilities Assessment Report contains no mention of the site snow removal challenges. Due to the number of alleys and corridors between buildings, the maintenance staff must begin snow removal operations at 4:00 am during a snow event to open the campus by the start of school. There are minimal locations on campus to store all the snow. The new membrane roof on the Varsity Gym sheds snow directly onto one of the main campus paths and with minimal space to move snow the maintenance staff has to pile it against the gym walls to keep a clear egress route.
5. Staff and visitor parking is scored as “yes” within the Adequacy Assessment but the District is forced to lease two adjacent dirt lots as there are currently not enough parking spots on campus to accommodate all students, staff and visitors. These lots have no designated handicap stalls.

### Varsity Gymnasium:

1. It should be taken into consideration that the Varsity Gymnasium - built in 1954 was combined with the recently constructed Band Room, Art / Wood Shop Building, and Science Building all under the same FCI score. This building has substantially more deficiencies than the more recently constructed facilities it is grouped with in the state assessment.
2. Finish grade around the gym is below the FEMA flood plain, and the court surface is recessed roughly 3' from finish grade making it well below the flood plain. The hardwood court was ruined in the spring of 2019 due to flooding. The proximity of the water table makes this an on-going conflict with the existing facility. There is no cost effective solution to resolving this issue.
3. Multiple ADA conflicts exist in the facility and there are no spaces provided in seating for wheelchairs.
4. Lighting does not meet CHSAA Basketball standards.
5. Acoustics are highly deficient for this building to be used as a performance space.
6. Concrete buttresses that support the roof structure are deteriorating.
7. A new membrane roof was installed in 2015 to address areas of leaking. The adverse effect is all the snow captured on the roof slides off onto the concrete walkways around the gym causing maintenance and safety issues.



Ice on Flat-work



Snow at Gym Membrane Roof

### Auxiliary Gymnasium:

1. No ADA access is provided to wrestling room on upper level.
2. The facility lacks any secure entry vestibules. Students use the building as a connector to other areas of the campus regularly walking across the playing surface.
3. The Building Condition Details for the hardwood floor suggest the flooring is functioning and should be replaced within five years. Athletics staff noted the hardwood has multiple dead-spots with insufficient support below playing surface creating safety risks to student athletes.

# BEST FACILITY ASSESSMENTS

## DOLORES SCHOOL DISTRICT MASTER PLAN

4. The roof drainage system is comprised of aluminum gutters and downspouts and are not sufficient to handle the snow and ice loads on the standing seam metal roof. Maintenance staff regularly replace gutters that have been destroyed due to ice fall. During periods of snow melt, the volume of water exceeds the capacity of downspouts and they become encased in a thick layer of ice. The drainage issue is especially concerning on the North side of the building along the student route from the bus drop-off. The Building Conditions Detail suggests the system is functioning, yet it is beyond its life expectancy.

### Elementary School:



1. At an average of 380 sf per room, the Elementary School special education classrooms are far short of the CDE minimum space standards of 675 sf and are inadequate for the learning needs of special education. Students do not have proper space to move about the room and teachers are unable to safely handle any incidents during a full class. The smallest SPED Classroom only allows for 8 students based on the 37 sf requirement designated by the CDE, the largest SPED Classroom Size is 10 students. These classrooms are not all equipped with functioning sinks, further hindering teacher's ability to address classroom incidents.
2. Title-1 and BOCES programs are isolated from the rest of the Elementary School in a modular classroom built in 2003 and locate on the South side of the Elementary School entrance. Up to 15 students at a time must exit the school throughout the day exposing these students to outside threats on their way to the modular facility. This space is also used as a teacher conference room given that the Elementary School has an undersized teacher work room and no dedicated meeting space.



### Secondary School (MS/ HS):

1. Item B10 on the Building Condition Detail indicates steel roof structure with a suggested renewal of 2029. The roof structure is wood and shows signs of rot at the exterior joist tails.
2. Item B2010 on the Building Condition Detail indicates replacement of the brick veneer in 2029. This veneer should be replaced as soon as possible as it has experienced years of freeze thaw cycles, evident by areas of deterioration and extensive efflorescence. Water runs down the face of the brick from downspouts, through wall cooling units, and ice damming at roof valleys.

3. Item B2020 on the building condition detail indicates replacement of aluminum windows in 2030. In most cases, the wood head, sill, and jamb around the windows are significantly deteriorated compromising the entire opening.
4. The canopy above the east entrance to the Middle School is severely damaged from years of moisture infiltration. It is visibly sagging, raising concerns about its long-term structural integrity.
5. Student re-entry to buildings has become a large issue during the school day. For safety, exterior doors remained locked all day but this has an adverse affect for students who are locked out of the building and exposed to exterior threats. The access control strategy for the High School and Middle School building forces students to travel long distances outside to get to class or knock on exterior doors until a staff member can let them in. A teacher must interrupt instruction to open the door.
6. The classrooms in the High School and Middle School building have casework along some of the walls. Some of the power supplied to these rooms are through the casework with exposed wires or conduit, posing a safety concern to the students. The casework has also been noted by the teachers that they are not a sufficient amount of space. The CDE Requirements outline that each teacher should have 50 square feet of storage. These teachers limit the amount of supplies they have available to their students, constraining the learning materials and environment. Teachers do not have enough available space to display or hold projects for students to continue to work on or inspire other learners.
7. The classrooms in the High School and Middle School building do not meet CDE Requirements. The school has indicated that they will have at most 28 students in a given class. In the northern half, are two classrooms used for science in this building that are not adequately sized for 28 students at 44 square feet per student as required by the CDE. Additionally, the other standard classrooms are also shy of having adequate space for 28 students in their classrooms at 28 square feet per student.



## VIII. EDUCATIONAL PROGRAMMING & ADEQUACY

### Colorado Model Content Standards

In 2009, the Colorado State Board of Education adopted new academic standards for ten content areas that support all students in mastering the concepts and skills necessary for college, career and civic life. The content areas that are not assessed by the state but are required by law, to be part of the district’s preschool through High School standards-based curriculum are included here on the “Courses” tab. The percentages included in the courses tab data refer to the number of schools reporting, not the number of courses offered per school. Please note that the information provided by the district and school is simply whether or not the district or school offers a course in the content area for which the state has adopted academic standards.

	Courses			
	2016-17		2017-18	
	%	#	%	#
<b>Civics</b>	75	3	75	3
<b>Comprehensive Health Education</b>	75	3	75	3
<b>Dance</b>	25	1	25	1
<b>Drama or Theater</b>	50	2	50	2
<b>Economics</b>	25	1	25	1
<b>Geography</b>	75	3	75	3
<b>History</b>	75	3	75	3
<b>Music</b>	75	3	75	3
<b>Physical Education</b>	75	3	75	3
<b>Visual Art</b>	75	3	75	3
<b>World Languages</b>	50	2	50	2

### Drama and Theatre Arts

Only held at the High School Level. There is a great interest and lots of talent in the student population for a larger program, but their facilities do not provide sufficient space. The stage connects the Varsity Gym to the Commons, and the Varsity Gym is used as the Auditorium. The Gym was not designed for it to be an auditorium, resulting in terrible acoustics. The District would like to expand and provide additional opportunities for more performances and engage the younger grade levels, but as it is, the District does not have the available space to do so. The science classrooms frequently become practice spaces, and places to create and store props until the performance. Despite the challenges the District has with adequate time and space dedicated to Drama and Theater Arts, there is a great level of dedication to the program by staff and students.

## **Dance & Comprehensive Health & Physical Education**

Dolores has one main Varsity Gym that also serves as a performance area, one Auxiliary Gym, a Wrestling Room, and a Weight Room. The Elementary School also has a small gym in the West Wing. The Varsity Gym sits below grade and consistently floods, causing the floor to warp. The acoustics in the Varsity Gym are also not great for performances. Theater Arts and Athletics are constantly trying to make ends meet with providing the adequate amount of time with the limited space they have.

## **English Language Proficiency**

There are no facility deficiencies which prohibit teaching this curriculum.

## **Mathematics**

The Secondary School Math Classrooms in the northern hallway of the Secondary School is slightly smaller than the CDE Requirements limiting the teachers to facilitate specific activities throughout the school year.

## **Reading & Writing and Communication**

There are no facility deficiencies which prohibit teaching this curriculum.

## **Music**

Elementary School Music classes are held in the music room in the Auxiliary Gym Building, although the room has leaking windows, the space is sufficient for the District's needs. The Secondary School students attend band classes in the Band Room Building located to the north of the Secondary School Building. The constant walking between buildings become a safety and security threat to the students. The building does not have any restrooms and students must walk across to the locked Secondary School Building, knock, and wait for a teacher, who is in the middle of teaching class, in order to use the building. This building has flooded numerous times.

## **Science**

In the Elementary School, teachers have expressed that it is difficult to facilitate various projects because not all of the classrooms have sinks, and the ones that have unreliable water temperatures. The Secondary School has a building dedicated to Science and VoAg Classrooms and facilities and have some classrooms in the northern hallway of the Secondary School but are roughly half the size of CDE Science Classroom Requirements.

# EDUCATIONAL PROGRAMMING & ADEQUACY

## DOLORS SCHOOL DISTRICT MASTER PLAN

### **Social Studies**

The Secondary School Social Studies Classrooms in the northern hallway of the Secondary School is slightly smaller than the CDE Requirements and with the Schools Project Based Learning Goals, the classroom space limits the teachers to facilitate specific projects throughout the school year.

### **Visual Arts**

The Elementary School has an Classroom dedicated to Art Classes, but there is a lack of storage for the amount of supplies desired for the program. The Secondary School has a dedicated Art Classroom with a Kiln in the Wood Shop Building.

### **World Language**

The Secondary School Spanish Classroom in the southern hallway of the Secondary School is smaller than the CDE Requirements, with a square footage of less than 600 SF.

# COMPLETE INVENTORY OF FACILITIES

## DOLORES SCHOOL DISTRICT MASTER PLAN

### IX. COMPLETE INVENTORY OF FACILITIES

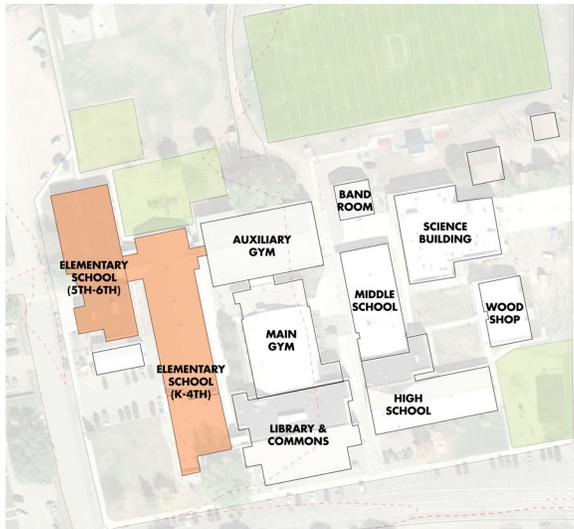
The primary academic and athletic facilities for the District are all located on the main campus and listed in the table below. The other facilities that exist in the District are the Teddy Bear Preschool located at 1550 Hillside Ave., three blocks east of the main campus. The District Administration offices located at 100 N. 6th St. six blocks west of the main campus and the District's storage/warehouses and bus facilities located on Highway 184 before you enter Dolores from the east. All facilities are located on land owned by the District.

ORIGINAL BUILDING						ADDITIONS	
Name	Address	Use	SF	Year Built	Construction Type	SF	Year Built
DOLORES ELEMENTARY SCHOOL	12th & Hillside Dolores, CO 81323	Elementary Classrooms, Elementary Administration, Elementary Art, Gymnasiums	25,150	1968	Brick and block masonry, open web truss/joist roof, timber pile system, slab- on-grade, EPDM single-ply membrane roof	12,000	1990
						27,452	1995
						5,452	2013
VARSITY GYMNASIUM	1301 Central Ave., Dolores CO 81323	Athletics/ Performance  *Locker Rooms	11,000	1954			
			1,710	1976			
CAMPUS COMMONS	1301 Central Ave., Dolores CO 81323	Performance, Cafeteria, Library	14,700	1995	Stucco on metal stud framing. Slab-on-grade w/ spread footings. Membrane roof.		
DOLORES SECONDARY SCHOOL	1301 Central Ave Dolores CO 81323	High School and Middle School Classrooms, High School and Middle School Administration	8,513	1954	Load bearing masonry with wood structure.	11,476	1971
BAND	1301 Central Ave., Dolores CO 81323	Band Room	1,870	1995	Stucco on metal stud framing. Slab-on-grade w/ spread footings. Standing seam metal roof.		
ART/WOOD SHOP	1301 Central Ave., Dolores CO 81323	Art / Wood Shop	4,808	2003	Corrugated metal siding on metal stud framing. Slab-on-grade w/spread footings. Steel structure with standing seam metal roof.		
SCIENCE/VO-AG	1301 Central Ave., Dolores CO 81323	Science and Vo-Ag Classrooms	11,209	2013	Stucco on metal stud framing. Slab-on-grade w/ spread footings. Membrane roof.		
DISTRICT ADMINISTRATION OFFICES	100 N. 6th Street, Dolores CO 81323	Administrative offices, board room	2,097	1938	Adobe load bearing walls with wood joist floor system. Basement with slab-on-grade. Foundation information unavailable.		
BUS FACILITY	17631 Hwy. 145, Dolores CO 81323						

RATIO | HPA

# COMPLETE INVENTORY OF FACILITIES

## DOLORES SCHOOL DISTRICT MASTER PLAN



### ELEMENTARY SCHOOL

The original building is brick and block masonry, load bearing walls with an open web truss/joist roof. The foundation is a timber pile system. The floor in the facility is a slab-on-grade and the existing roof is an EPDM single-ply membrane roof. At multiple locations around the perimeter of the original building storm runoff from the roof is draining back toward the foundation due to poor grading.

The additions to the facility in 1991 and 1996, which form the south and east wings of the Elementary School, are steel frame structures with a brick exterior on the south addition and a stucco exterior on the east. A shallow spread footing foundation system, a slab-on-grade floor and a standing seam metal roofing system were utilized on the east addition.



The mechanical systems in the original building were replaced in 2007 with individual high efficiency natural gas fired forced air furnaces which have a useful life of approximately 10-15 years. In 2009 the District upgraded all of these with computerized controls to provide for fresh air and a night purge to assist with cooling. The system works well and allows the various areas to be zoned easily. The units are also readily available and easy to replace as the need arises. The original building is not air conditioned or sprinkled. The 1996 addition uses a central boiler and individual classroom controls for heat. This system was recommissioned with grant funds in 2009 to allow it to work as it was designed. This wing is also equipped with swamp coolers using a centralized plenum and includes a building fire sprinkler system.



The envelope insulation in the original building does not meet current energy code standards. The new additions have appropriate insulation levels and efficient window units. Finishes in both wings are in good condition with the exception of the carpeting.



# COMPLETE INVENTORY OF FACILITIES

## DOLORES SCHOOL DISTRICT MASTER PLAN

Due to lack of classroom space, the District utilizes a modular facility on the south side of the school to accommodate the BOCES and Title programs.

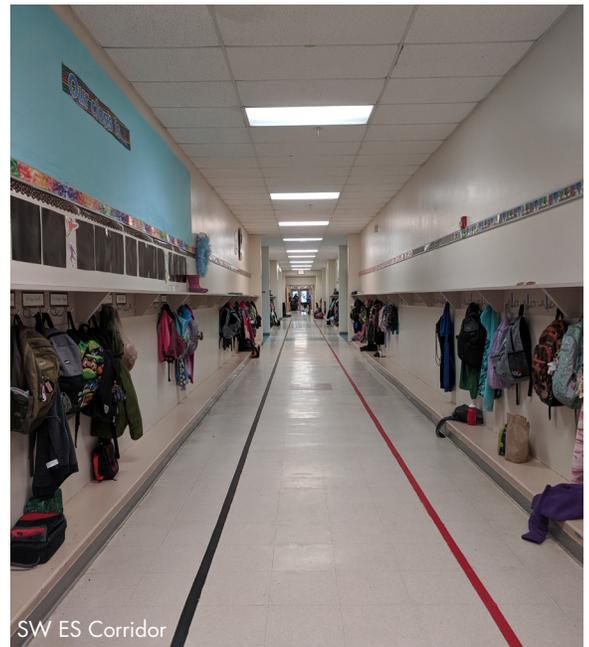
The plumbing infrastructure is primarily original construction, however it is functioning adequately. Some fixtures were updated based on recommendations from the 2012 Master Plan. There are no sinks in the classroom areas. The hot water heater is not able to keep up with demand during high use periods and sinks furthest from the heater produce lukewarm water consistently.

The electrical service is part of the original construction and the oldest on campus. It is operating adequately but has been added onto many times and is at capacity. The quantity of outlets in classrooms is deficient for contemporary education needs. It would be desirable to replace the electrical service as replacement parts are becoming harder to attain for the service. This would also give the District the capability, in the future, of adding electrical capacity as need increases or the building grows. All lighting fixtures were replaced in 2009 with high efficiency units under the Colorado State Governor's Energy Assistance Program.

The various areas of the Elementary School, including the restroom facilities, are accessible to the physically handicapped.



Typical NW ES Classroom Casework



SW ES Corridor



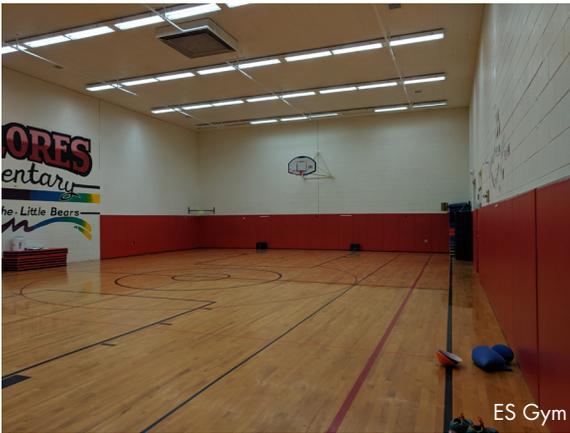
ES Art Classroom

# COMPLETE INVENTORY OF FACILITIES

## DOLORES SCHOOL DISTRICT MASTER PLAN



Corridor Connecting East & West ES Wings



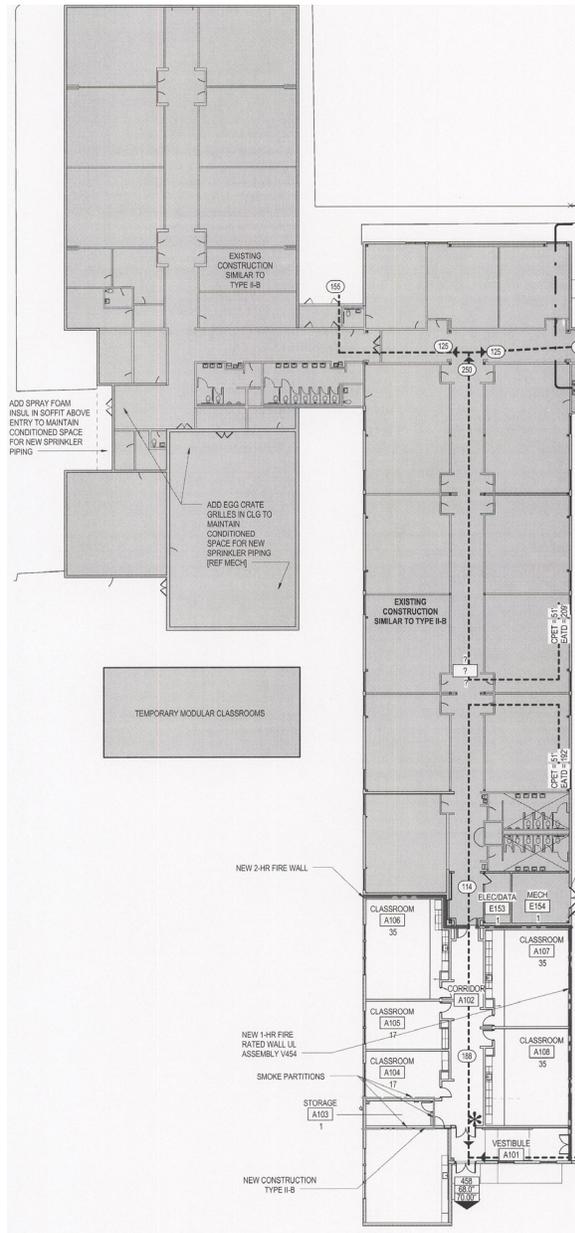
ES Gym



New S Addition Typical Classroom



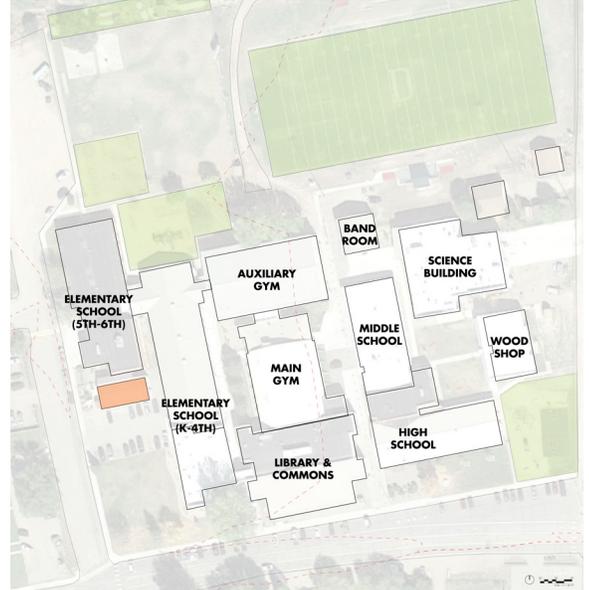
Typical SW ES Classroom



### TEMPORARY MODULAR ELEMENTARY SCHOOL BUILDING

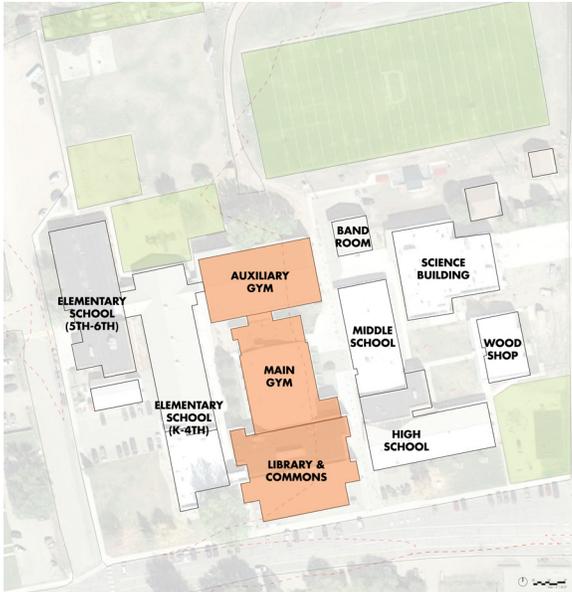
The District purchased a 1,680 sf two-room modular building unit, located on the south side of the Elementary School, to house the BOCES and Title programs due to lack of classroom space in the Elementary School Building.

The envelope and systems are in good condition, but the building does not have plumbing and presents safety and security risks for students having to travel outside the Elementary School to use the facility.



# COMPLETE INVENTORY OF FACILITIES

## DOLORES SCHOOL DISTRICT MASTER PLAN



### COMMONS, LIBRARY, & GYMNASIUM BUILDINGS

Varsity Gymnasium: 1954, 9,480 sf  
Auxiliary Gymnasium: 1990, 11,600sf  
Commons and Library: 1995, 15,600 sf  
Locker Rooms: 1976, 3000 sf

#### Varsity Gymnasium

The original gymnasium is a glu-laminated wood barrel-vaulted structure supporting a wood deck. The foundation system consists of spread footings foundation with exterior buttresses supporting the wood arches and a slab-on-grade. The finish floor is roughly three feet below the FEMA flood plain boundary and the hardwood basketball court has been damaged by groundwater and replaced multiple times—most recently in May 2019.

The exterior walls are cast-in-place concrete. An EPDM membrane roof was installed in 2015. Snow slides off the barrel vault and piles up on adjacent walkways and against the exterior walls causing building damage and safety issues. The roof has no drainage system or snow guards.

The mechanical system in the building is natural gas fired radiant heat tubes. There is no cooling. The florescent fixtures are scheduled to be replaced with LEDs in the summer of 2019.

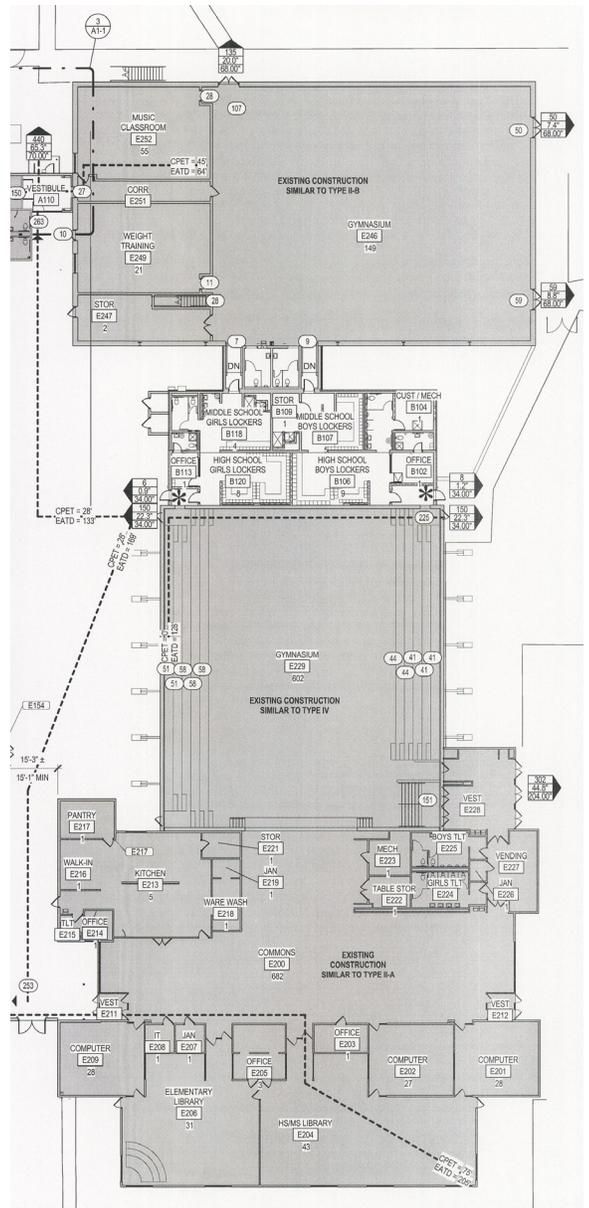
A new secure entry vestibule with accessible restrooms was added onto the gymnasium as part of the 1995 Commons addition. Handicapped access to the gymnasium floor is provided through a lift. The bleacher seating does not have code required spaces for wheelchair seating.



### Locker Rooms

The locker rooms connect the Varsity and Auxiliary Gymnasiums. The building was renovated in 2015 to provide two rooms for each gender, with updated finishes and meeting the accessibility requirements. The building is comprised of a spread footing foundation with masonry block walls and a slab-on-grade floor at the same level as the Varsity Gymnasium. The facility includes an accessible ramp to connect to the higher finish floor level of the adjacent Auxiliary Gymnasium. The roof is composite shingle with aluminum gutters and downspouts.

The forced air mechanical system was not updated with the renovation and consists of one roof top unit. New gas, plumbing, and fire suppression were provided with the renovation. The electrical service was not updated; fixtures and branch wiring was updated in 2015, but the service was not.



Newly Renovated Locker Rooms

# COMPLETE INVENTORY OF FACILITIES

## DOLORS SCHOOL DISTRICT MASTER PLAN



Access to Second Floor



Exposed Electrical Lines



Ice at Downspouts and Sidewalks

### Auxiliary Gymnasium

The Auxiliary Gymnasium is a pre-engineered metal building with a spread footing foundation and a slab-on-grade floor with split face masonry block on the exterior walls up to 10' and corrugated metal on metal studs above. The roof is a standing seam metal system with aluminum gutters and downspouts.

The lighting, electrical and mechanical systems in this building are in good condition and the building is sprinkled. All lighting fixtures were replaced in 2009 with high efficiency units under the Colorado State Governor's Energy Assistance Program. The building also includes a two-story area with a classroom and an equipment storage area on the main level and a non-ADA compliant wrestling room on the upper level.



Second Floor Wrestling Room

# COMPLETE INVENTORY OF FACILITIES

## DOLORES SCHOOL DISTRICT MASTER PLAN

### Commons and Library

Constructed as an addition to the Varsity Gymnasium in 1995 this building is a steel framed structure with spread footing foundations and a slab-on-grade floor. Large cracking is visible in the Commons area on the slab and walls. The envelope consists of stucco on metal studs. The windows are aluminum thermal break systems with insulated glazing. The windows in the library are leaking. The east and west elevations of the commons contain storefront walls which are showing moisture infiltration due to the cracking. The roofs on these facilities include a single-ply membrane EPDM roof on the Commons and standing seam metal roof on the Library. The drainage system includes internal roof drains on the commons and aluminum gutters and downspouts on the Library. The insulation levels in the buildings are adequate.

The mechanical system includes a large heating and ventilating unit mounted on the roof. Cooling is provided with a swamp cooler. The electrical supply is sufficient, but the number of outlets in both spaces is greatly lacking for contemporary educational environments. The lighting fixtures were replaced with high efficiency units in 2009 under the Colorado State Governor's Energy Assistance Program. There is a commercial kitchen located in the Commons. The building is sprinkled and ADA compliant throughout.



Library Entrance at Central Avenue



Children's Library



Back of Performance Space



Commons



Performance Space

# COMPLETE INVENTORY OF FACILITIES

## DOLORES SCHOOL DISTRICT MASTER PLAN

### SECONDARY SCHOOL

Middle School: 1954, 11,800 sf  
High School: 1954, 8,650 sf  
Additions: 1971

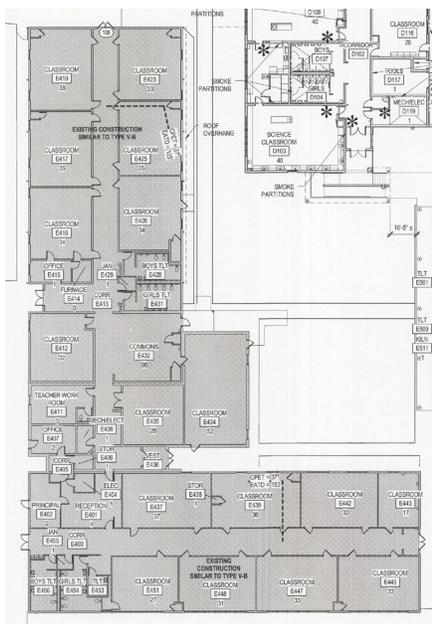
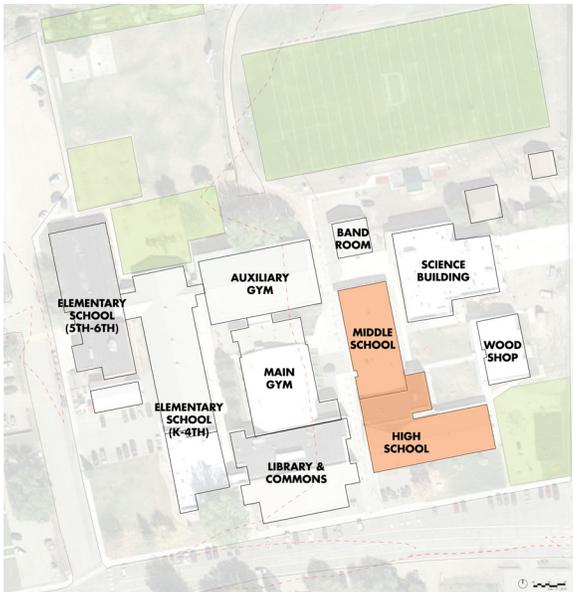
The structure is masonry bearing exterior walls with brick veneer, wood beams and interior masonry block walls. Because there are limited drawings available on the 65-year-old building, the foundation systems are unknown. The High School roof is a standing seam metal system, and the Middle School roof is built-up bitumen. The High School roof sheds water directly to the ground with no roof drainage system in place. The Middle School sheds water to aluminum gutters and downspouts.

The exterior windows are severely deteriorated aluminum frames. Some windows are single-pane glazed and some are double-pane insulating glass. In general, the exterior walls and roof are compromised and show signs of deterioration due to years of moisture infiltration. This condition is addressed in detail in "Section X. Facility Evaluation and Future Use Analysis."

The mechanical systems include natural gas-fired furnaces between adjoining classrooms. The controls were upgraded in 2009 to include ventilation and night purging for cooling. The system functions adequately, however, the 2012 Master Plan recommended replacement of some units.

All lighting fixtures were replaced in 2009 with high efficiency units under the Colorado State Governor's Energy Assistance Program. There is a need for more electrical outlets in the classroom areas and increased IT capabilities. Classrooms were retrofitted for projection and sound enhancement systems in 2010.

The water heater was replaced in 2017 and the plumbing infrastructure is original construction. The 2012 Master Plan recommended a fixture replacement plan but no action has been taken. The building is sprinkled. No accessibility violations were observed during building observation.



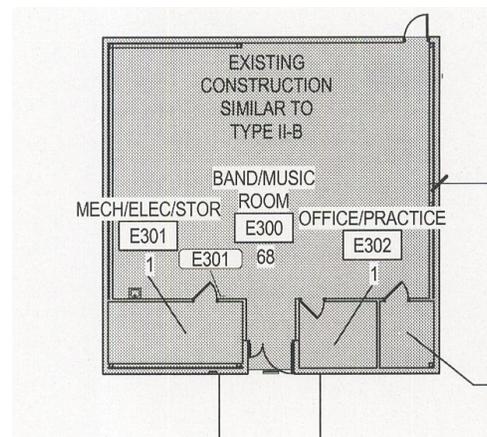
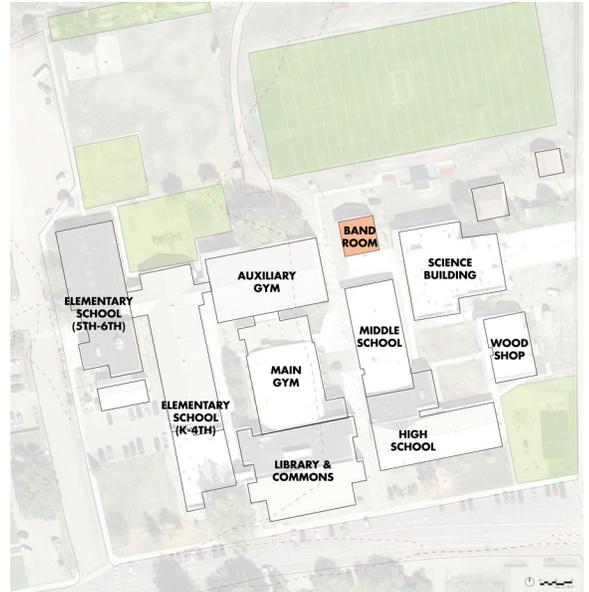
### BAND ROOM BUILDING

Year Built: 1995

Size: 1,870 square feet

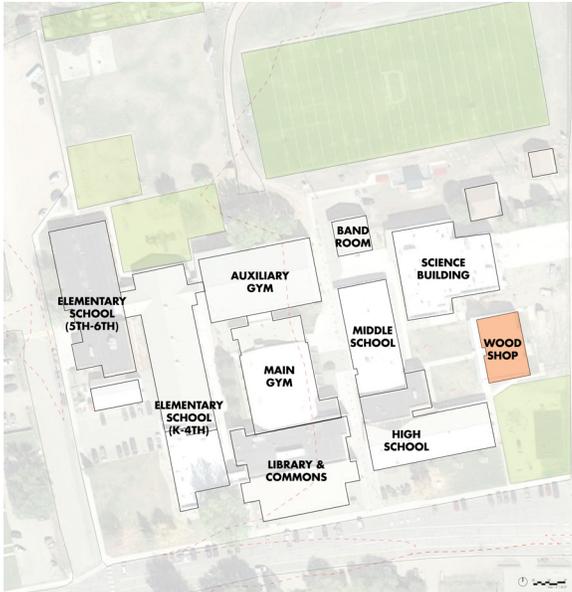
The music/band building was built as a separate building in 1995. The building contains a spread footing foundation with a slab-on-grade floor and metal stud walls with a stucco veneer and no windows. The roof structure is a gable standing seam metal roof with aluminum gutters and downspouts.

There are no plumbing fixtures and no restroom facilities in the building. The mechanical, heating and ventilation systems in the building are in good condition. All lighting fixtures were replaced in 2009 with high efficiency units under the Colorado State Governor's Energy Assistance Program. The building is sprinklered and ADA accessible.



# COMPLETE INVENTORY OF FACILITIES

## DOLORES SCHOOL DISTRICT MASTER PLAN



### WOOD SHOP/ ART BUILDING

Year Built: 2002

Size: 4,808 square feet

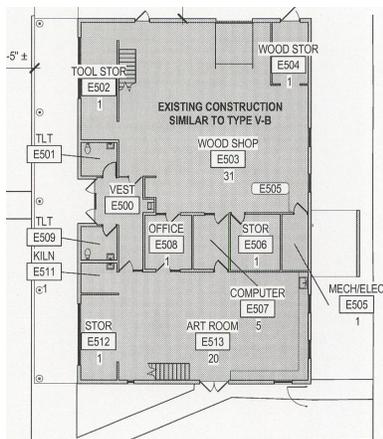
The Wood Shop and Art facility is a steel framed structure with spread footing foundations and a slab-on-grade floor. The exterior envelope is comprised of metal stud framing with corrugated metal panel siding. Windows on the facility are insulated and are aluminum thermal break units with insulated glazing. The building has a standing metal seam shed roof without a drainage system.

The building contains one art classroom, one administration office, a computer lab, and shop space for wood working.

The heating in the building is provided by a small boiler with hot water pipes to unit heaters in the spaces. Ventilation is not adequate, and a unit ventilator and exhaust was recommended in the 2012 Master Plan but not installed.

The dust collection system in the wood shop is located in the electrical/mechanical room and was recommended in the 2012 Master Plan to be relocated outside the building to due code requirements. The plumbing and electrical systems in the building are adequate, the building is sprinkled and ADA accessible.

The building is accessible to the physically handicapped and contains accessible restroom areas.



### SCIENCE BUILDING

Year Built: 2015

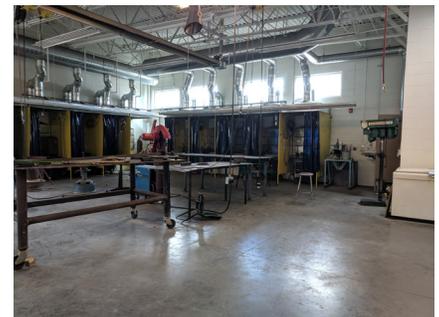
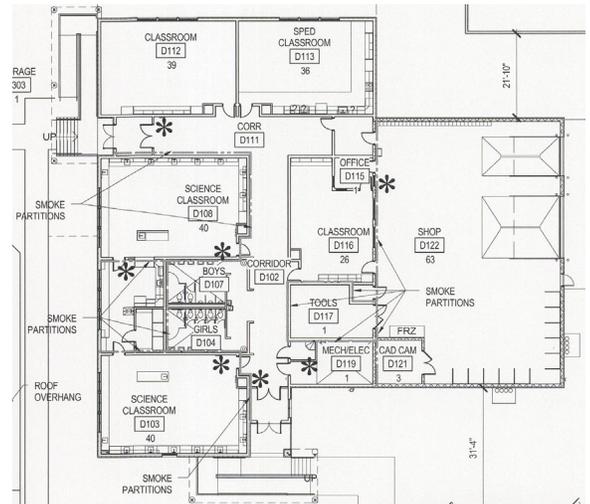
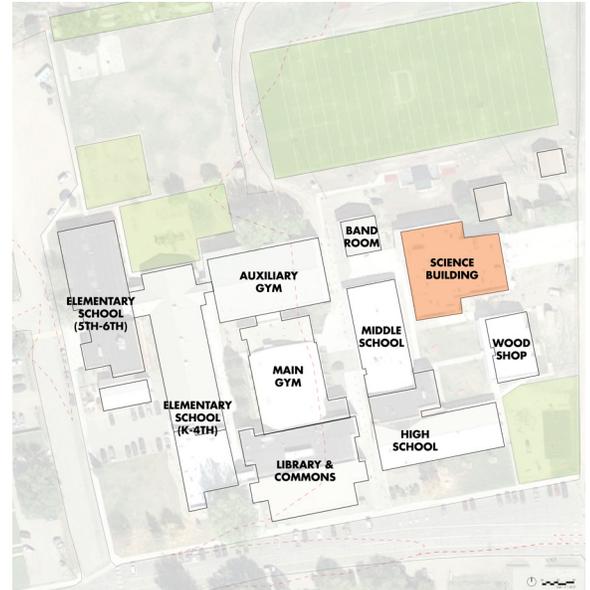
\*CD indicates 2013, but the Construction Documents show 2015

Size: 11,209 square feet

The building contains science classroom and lab spaces, and shop space for metal work and welding. It is comprised of a spread footing foundation system with a slab-on-grade floor system. The exterior envelope is a combination of stucco veneer of concrete block and stucco on metal studs. All the insulation appears to comply with current energy code minimums. Windows on the facility are insulated and are aluminum thermal break units with insulated glazing. The roof is a membrane system with internal drainage.

The HVAC system includes three rooftop units and operable windows in classrooms. The plumbing and electrical systems are adequate and the building is sprinklered.

Due to the fact the building was constructed subsequent to the FEMA floor plain being re-drawn, the finish floor sits roughly three feet above finish grade. ADA accessibility is achieved through ramping at the building egress routes.



# COMPLETE INVENTORY OF FACILITIES

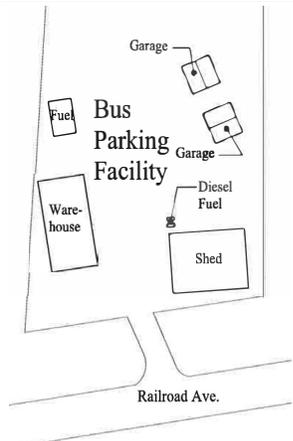
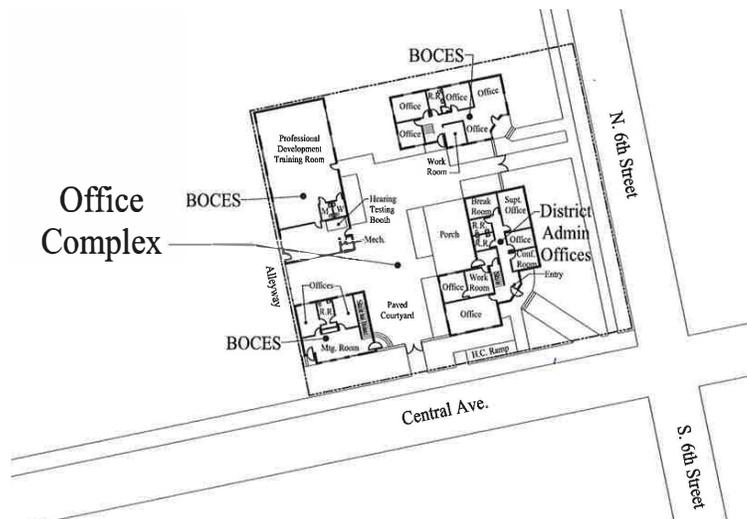
## DOLORES SCHOOL DISTRICT MASTER PLAN



### DISTRICT OFFICES

Year Built: 1938  
 Size: estimated at 2,097 sf

The property was purchased by the District from the U.S. Forest Service to house the main District Administration offices. The facility is located off campus at 100 N. 6th Street. Due to its age and multiple owners, systems information and existing drawings are not available. At the time of this report, the District is in negotiations with the Town of Dolores to acquire a parcel adjacent to the main campus to the east for the potential of consolidating all the Administration offices within one new facility.

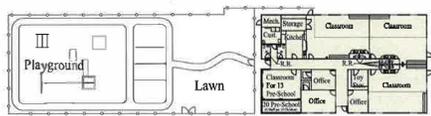


### BUS STORAGE/ MAINTENANCE FACILITY

The Bus Facility is located along Highway 184 just before you enter Dolores from the west. The facility recently received an addition and renovation. This building was not part of this Master Plan effort.

### TEDDY BEAR PRESCHOOL:

Year Built: 1993  
 Size: 5,580 sf



Preschool Complex

The Preschool is located on Hillside Ave near 16th St and is a single-story masonry structure with a raft slab foundation system. The roof is wood trusses held up by perimeter and interior bearing walls. The building is sprinklered and has mostly fluorescent fixtures.

## X. FACILITY EVALUATION & FUTURE USE ANALYSIS

### **EVALUATION**

In order to develop the Master Plan for the District, the facility assessment prepared by the Colorado Department of Education in 2019 was reviewed and used as a guideline for the assessment of the District facilities. Additional items were added to the list to include feedback from administrators, staff, parents, and various community members during the Design Advisory Group meetings. The outcome of these efforts, which are addressed in Section XVI Strategic Plan for Implementation include:

#### **Facilities Snapshot**

- An unsecured campus with multiple points of entry that requires constant travel between buildings with a major safety concern from the bluff to the North.
- A campus that exists within the boundaries of a FEMA flood plain and has experienced recent flooding events across multiple facilities.
- Multiple areas of pedestrian and vehicular conflict including the Elementary School and Preschool.
- An antiquated varsity Gymnasium that is three feet below grade and recently had all the basketball hardwood ruined due to a flood event.
- A Secondary School that is undersized for the needs of the curriculum and contains building systems beyond their projected lifespan and an exterior envelope that is rapidly deteriorating.
- A Preschool facility that must share campus resources but is located off campus at the base of a natural drainage.
- Facilities that have been piece-mealed together over multiple decades to create a campus comprised of unsafe pedestrian corridors and maintenance requirements that are unsustainable.

# FACILITY EVALUATION & FUTURE USE ANALYSIS

## DOLORES SCHOOL DISTRICT MASTER PLAN

### SITE



- The most pressing needs for the campus are to secure the perimeter, reduce campus access points, increase interior circulation between facilities, and plan for future buildings that will obstruct site lines from the bluff. Campus access should be reduced to three locations adjacent to administration offices to allow easy monitoring. Campus lighting and fencing should be added to increase security.
- Over decades, buildings have been constructed to create a campus that is comprised of unsecured pedestrian corridors and fragmented areas of open space. The layout creates multiple opportunities for an individual wishing to cause harm to hide in place, and does not allow for clear egress routes. Replacing deteriorating facilities with strategically-located new construction would enable the campus to develop a secure perimeter through the use of buildings that frame a safe and secure open quad at the center of the campus.
- Dolores experiences significant snow and ice for four to five months per year. Students and staff are regularly injured due to slips and falls caused by snow and ice conditions as they walk across campus to attend class, eat in the commons, or use the library.
- The football field and play fields sit on the north edge of the campus and one fully exposed to any threat from the bluff. There is no room for a track, and the field grading does not meet CHSAA standards. Ponding occurs on the playing surface during rain events. Moving the football field off-campus would eliminate the security risks to athletes and fans from the bluff, allow for a much needed joint-use athletic facility for the community, and ensure the district has needed to accommodate future growth on the current campus. (The relocation of the football is not being considered for BEST grant funding)
- The bus drop-off strategy is a safety risk to students arriving and departing from school. It does not meet code or CDE requirements. It should be removed from the public street and separated from vehicular parking/ drop-off.
- Site drainage must be updated to eliminate the flooding experienced during weather events on the East side of campus.
- Current facilities are in violation of construction within the FEMA flood plain. A solution that enhances campus security while ensuring buildings are elevated above the flood level is critical to keeping the campus in the heart of Dolores.

### **PRESCHOOL**

#### **Architectural Review**

- The most pressing need at the Preschool is to relocate the facility onto the main campus. The most vulnerable population within the District is required to walk approximately a quarter mile each day along dirt streets with no sidewalks to utilize the library. A new Preschool building should be constructed on the northwest corner of the site out of the flood plain boundary and adjacent to the Elementary School.
- The north side of the facility backs up to a major drainage off the bluff. Minor concrete diversions have been installed to keep water away from the building envelope but this is unsuccessful during spring runoff. During the winter, the north elevation experiences major ice damming.
- The Preschool has an extensive waiting list for new students due to the lack of space in the building. Expansion was also recommended in the 2012 Master Plan.
- The District has been forced to add a modular classroom on site to help support the demand.
- The dirt parking lot is undersized and creates safety conflicts with vehicle and bus parking.
- The dirt parking lot becomes a maintenance challenge in the winter.
- The playground has no protection from the bluff to the north.
- There is no recess between the parking lot and building entry presenting a safety issue.
- Access control into the building is adequate.

#### **Structural Review**

- The original building and the additions are structurally sound with no noted deficiencies.

#### **Building Envelope**

- The proximity of a drainage path to a retaining wall is a concern from both the District and Civil Engineer that this will erode and compromise the building foundation over time.

# FACILITY EVALUATION & FUTURE USE ANALYSIS

## DOLORES SCHOOL DISTRICT MASTER PLAN

### Mechanical/ Electrical/ Plumbing Review

- The three rooftop units are original and 28 years old with a manufacturer lifespan of 15 years. These units are at risk of failure due to age and inability to find replacement parts
- Light fixtures were upgraded to more efficient lamps in 2009.
- The classrooms are deficient in electrical receptacles. Teachers utilize extension cords to charge devices, creating a safety issue with young students.
- The facility is deficient in number of restrooms for the quantity of students.
- Water heater is unable to keep up with demand.

### ELEMENTARY SCHOOL

#### Architectural Review

- The most pressing needs at the Elementary School is additional classroom space to bring current classrooms to the right size and prepare for the future use of the building with student population growth. Two additional core classrooms should be included in a future building addition.
- The Special Education classrooms do not meet the CDE minimum space standards of 675 sf and are inadequate for the learning needs of special education. Teachers are unable to safely handle incidents during a full class. An addition would allow these classrooms to grow to the appropriate area by moving other programs into the new construction.
- The use of the modular classroom for the BOCES and Title programs is a temporary solution that has become permanent due to lack of classroom space in the building. Students are escorted outside to the modular building multiple times a day to attend class, and due to lack of plumbing have to be escorted back to the Elementary School to use the restroom. This presents daily safety and security risks to students and staff and an addition should be built on the Elementary School to bring these spaces back into the building.
- Multiple classrooms have no sink.
- The main entry on the west side of the building contains no waiting area or secondary security check-point. A small addition at the entry will resolve this and create a more efficient administration area.
- The playground and fields are located on the north side of the school directly adjacent to the bluff posing safety threats to students. A new vision for the campus will locate outdoor play space within a secure quad in the center of campus.
- Access control to the building is challenging due to the length of the hallways and long travel distance between entry points.



## Structural Review

- The original building and the additions are structurally sound with no noted deficiencies.

## Building Envelope

- Roof downspouts in the original building are draining back toward the building foundation in various locations.
- The membrane roof on the original (west) wing of the school is past its useful lifespan but maintenance staff has maintained it well. The standing seam metal roof on the additions is in good condition.
- Efflorescence is visible in various locations on the brick masonry at the original building.
- Stucco shows signs of deterioration due to freeze and thaw within the wall assembly. Insulation is exposed at a small number of locations on the addition.
- Areas of south addition membrane roof delamination (see image on right).

## Mechanical/ Electrical/ Plumbing Review

- Swamp coolers on the original building should be replaced immediately. There is no cooling in the addition and is top complaint for staff.
- Rooftop air handlers are nearing the end of their useful lifespan and maintenance staff struggle to find replacement parts for repairs.
- The electrical system is original and at capacity. The CDE assessment recommended replacement in 2022, however circuits are regularly tripped. Parts are not available and an outage would cause a major security event.
- The classrooms in the original building are not adequate for current educational needs and are severely deficient in electrical receptacles. Teachers utilize extension cords to charge devices creating a safety issue with young students.
- Two high efficiency condensing boilers were installed in 2014 and are functioning adequately.
- Water heaters are recommended for replacement in the CDE assessment in 2022, and facilities staff indicate fixtures at the end of line struggle to produce hot water.
- Plumbing infrastructure is original and backups occur at the addition vestibule to the cafeteria.
- The fire alarm system works accurately and the entire facility is sprinklered.



ES Leaking Windows



ES Roof Delamination

# FACILITY EVALUATION & FUTURE USE ANALYSIS

## DOLORES SCHOOL DISTRICT MASTER PLAN



## SECONDARY SCHOOL

### Architectural Review

- The Secondary School pedagogy is centered on project-based learning (PBL) which requires large amounts of space for storage and dedicated areas for group work. With twelve traditional classrooms between the High School and Middle School, at an average of 670 sf per room, the existing learning spaces fail to meet CDE minimum standards and are far below the recommended 800 sf of space needed for PBL environments.
- There is currently no space in the building for group work (a fundamental component of PBL). Projects are piled up in undersized classrooms, forcing students to spill into the narrow hallways for group work. The school should have flexible break-out spaces of 300 sf shared by clusters of up to three classrooms to properly support project-based learning.
- Classroom technology is limited to projectors and student tablets. The appropriate classroom technology to support PBL curriculum would include items such as interactive smart-boards, video editing / instruction capability, and Learning Management Systems (LMS).
- The Middle School administration area has no sight lines to the building entrance, is overcrowded, congested, and poorly laid out.
- The Middle School is designed as one long narrow double loaded corridor which is congested with students who use the circulation space for group work due to deficient classroom sizes. This is detrimental to the quality of education and creates long distances between building egress points.
- Street facing windows in High School classrooms pose security threat to students and staff.
- No student access through north doors of Middle School putting students at risk as they are required to walk south around the building to enter at the High School or wait outside the north entrance while a teacher interrupts instruction to let them in. This problem is compounded by the fact the band room (adjacent to the north MS entrance has no restroom facilities).
- The educational spaces are antiquated and not supportive of contemporary learning.
- High levels of noise pollution in classrooms from outdated HVAC systems.
- Classrooms contain small windows and low ceilings allowing for minimal natural light.
- The High School administration office location does not allow for sight lines to the main entrance, requiring a dedicated staff member to buzz people into the building. This space should be redesigned and relocated adjacent to the entry.

- The High School administration office has no conference room for teacher or parent meetings.

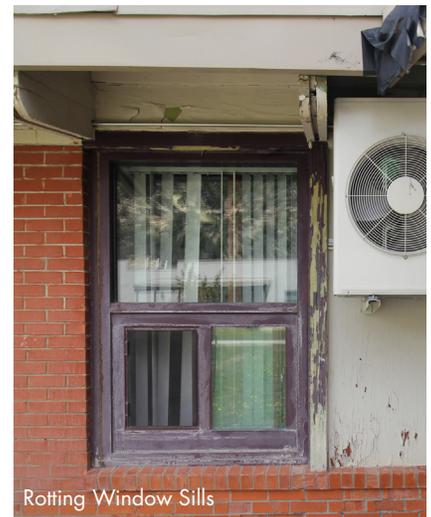
### Structural Review

- Appears to be wood structure on load bearing exterior masonry walls, with load bearing interior concrete block walls. Original drawings do not exist.
- Exposed wood joist tails and wood soffits are rotted.

### Building Envelope

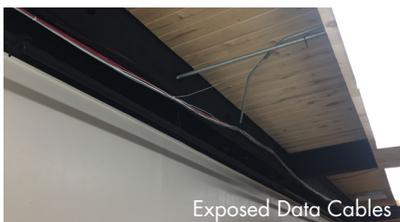
*\*The condition of the masonry envelope was discussed with the Rocky Mountain Masonry Institute on 05/01/19. The issues described below are a combination of field observation on input from the RMMI technical consultant.*

- The exterior envelope has minimal to no insulation and is not compliant with current energy codes.
- Aluminum windows are generally deteriorated beyond repair and at a minimum should be replaced with new thermally broken glazing units.
- Wood sills and heads at masonry openings are exposed and show signs of rot.
- Brick at masonry openings has deteriorated, signaling years of freeze-thaw damage.
- The covered breezeway at the east entrance to the Middle School develops large snow loads despite constant attention from facilities staff, which then creates ice damming that melts and freezes on the concrete flat-work creates an extremely dangerous entrance to the building.
- Due to the year of school construction, it is highly likely lead based paint was used in the building and has the potential of still being present. Lead based paint was regularly used until 1978. Given that the paint is chipping at multiple locations on the envelope, there is an opportunity for the existing lead-based paint to be exposed, providing a severe health risk to young students.
- Extensive efflorescence and deterioration of brick suggests years of water infiltration into the building envelope. Freeze/ thaw cycles with moisture present in the walls will continue to damage the envelope beyond repair.
- The District should consider tests, such as a key test to test mortar strength impact, a hammer test to analyze brick strength, or an infrared camera test to detect moisture in wall.
- At through wall cooling unit penetrations, moisture is visibly running down the face of brick.



# FACILITY EVALUATION & FUTURE USE ANALYSIS

## DOLORES SCHOOL DISTRICT MASTER PLAN



### Mechanical/Electrical/Plumbing Review

- Scarcity of electrical receptacles in classrooms forces teachers to use power strips, to charge devices and students to sit at perimeter of classroom to use electronic devices.
- Students charge Chrome Books on carts located in each classroom.
- Florescent lighting is throughout. The building ballasts are failing and should be upgraded to LED.
- Main power supply to the Middle School is deficient. Due to quantity of loads from devices, breakers are regularly tripped. Any additional mechanical loads would require additional or new service.
- Furnaces that serve classrooms are due for replacement in 2022.
- Classrooms lack cooling.
- Maintenance staff recommends full replacement of plumbing system as it is original. They anticipate significant failure.
- Plumbing fixture replacement was recommended in the 2012 Master Plan and has not been pursued. Fixtures are outdated.
- Exposed data cabling runs through the building and data flow is compromised by electro-magnetic forces from other equipment such as HVAC and lighting. This results in slow Internet speeds, lost information and is detrimental to the technology needs of PBL.

### CAMPUS COMMONS (LIBRARY & CAFETERIA)

#### Architectural Review

- The most pressing needs at the Commons building is structural remediation to prevent further foundation settlement and an interior renovation to provide a more efficient, secure layout.
- The direct adjacency of the Library computer labs and kitchen deliveries creates a safety and security conflict with Elementary students queuing to use the labs.
- The cafeteria is widely used as a connector to get across campus and is not functional as a communal space, yet it is the only dedicated performance space on campus. This space should be renovated to better serve it's intended purpose and enhance security within the building.
- In multiple areas the VCT flooring is damaged or cracked and should be replaced.
- The commercial kitchen functions well and is sized adequately. A renovation should seek to re-use this space to save cost.

- The library is used by all District students and is generously sized. The space should be renovated to include contemporary school library functions.
- Large street-facing windows on the south wall of the library should be considered for strategies that obscure site lines directly into the space.
- Access control to the building is successful other than the issue with kitchen deliveries.



### Structural Review

- Foundation settlement and visible cracking is a primary concern of the building.

### Building Envelope

- Cracking in the slab and exterior walls is visible in the cafeteria. Structural remediation should occur at the foundation to prevent further damage.
- Storefront window systems are compromised due to settlement and moisture is visible in between glazing.
- Library windows on the south wall show signs of leaking at the sill and continue to damage finishes. This should be resolved as part of a renovation.
- Areas of deterioration are visible on the stucco due to water infiltration.
- The standing seam Library roof appears to be in good condition. Aluminum gutters are regularly destroyed due to snow sliding off the roof.
- The Cafeteria membrane roof is beyond its functional lifespan and showing signs of deterioration.
- The top of wall coping is corroded and the sealant is failing.



### Mechanical/ Electrical/ Plumbing Review

- Rooftop units are beyond the manufacturer lifespan and components are corroded.
- Heat exchangers are corroded.
- The swamp cooler is undersized and does not adequately serve the space.
- Number of electrical receptacles in Cafeteria and Library is deficient. Receptacles on east wall of Cafeteria and south wall of Library do not work.
- Number of receptacles in the two Library computer labs is severely deficient. Power strips are connected to the limited receptacles in order to power the number of computers necessary for large class sizes.



# FACILITY EVALUATION & FUTURE USE ANALYSIS

## DOLORES SCHOOL DISTRICT MASTER PLAN

- The location of receptacles in the two Library computer labs force workstations against the perimeter of the room, which has a negative effect on instruction by not allowing students to connect with the teacher. This space should be renovated to create a more supportive learning environment.

### VARSITY GYMNASIUM

#### Architectural Review

- Due to its age, this building has become poorly suited to support the safety of students or the programmatic demands of the District.
- The entry to the building is located at finish grade within the FEMA flood plain. The basketball playing surface is roughly three feet lower which presents a constant conflict with the high water table in the Dolores Valley. The basketball court was replaced in 2010 due to moisture damage. In May 2019, groundwater percolated through the recessed slab and destroyed the hardwood basketball court causing the facility to be shut down and the need to reschedule graduation. Unless a significant intervention is made, water infiltration can be expected to continue.
- A membrane roof was installed in 2015 to address leaking. Due to the barrel vault shape of the building, snow slides off the smooth membrane roof and accumulates against the exterior walls and on adjacent sidewalks causing constant safety and maintenance challenges.
- Acoustics in the gym are severely deficient, yet the space functions as the only performance venue on campus and includes a stage on the south side of the court that connects to the commons.
- The building is not capable of supporting all the athletic and performance needs of the District. Students are leaving the District due to inability to provide programming. A new multi-purpose gymnasium would resolve the programming deficiencies.



### Structural Review

- Exterior concrete buttresses are deteriorating. Spalling is visible at multiple locations. This was discussed in the 2012 Master Plan and the deficiency has increased in severity.
- Cracking is present on the parapet of the south wall. Strapping has been added.

### Building Envelope

- The insulation in the envelope does not meet current energy code standards.
- At multiple locations, daylight can be seen at the connection between the exterior wall and bottom of structure.

### Mechanical/ Electrical/ Plumbing Review

- No ventilation system exists and the structure cannot support a roof mounted unit.
- Light levels are below CHSAA standards.
- There are only four receptacles in the gym and the use of cleaning equipment frequently trips the breaker.
- The four-ceiling mounted gas-fired radiant heat tubes are obsolete and were recommended for replacement in the 2012 Master Plan. They are frequently hit and damaged by basketballs.



Spalling Buttresses



Gym Wall Cracking

## AUXILIARY GYMNASIUM

### Architectural Review

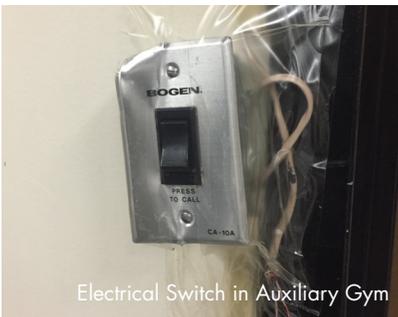
- The building is lacking secure vestibules at exterior entrances.
- The wrestling room is located on the second level. Low ceilings, lack of plumbing, and no ventilation provide a non-supportive environment for the activity.
- The basketball court contains multiple dead spots posing safety risks to students.
- There is no accessible access to the wrestling facility on the upper level.

### Structural Review

- The gym is a prefabricated metal building and does not appear to have structural deficiencies.

# FACILITY EVALUATION & FUTURE USE ANALYSIS

## DOLORS SCHOOL DISTRICT MASTER PLAN



### Building Envelope

- Efflorescence is visible throughout the concrete block on the lower level of the exterior walls, suggesting the connection between the top of block and metal stud wall above is improperly flashed and allowing moisture to enter the wall assembly. Its unknown how long this has been happening and could have caused unseen deterioration or negative effects to indoor air quality based on the persistence of moisture within the wall cavity.
- The aluminum gutters and downspouts are incapable of handling large snow melts. Gutters are destroyed and replaced annually. On the north elevation of the building, ice damming is constant posing a safety risk to students walking on the adjacent concrete path from the bus drop-off.

### Mechanical/ Electrical/ Plumbing Review

- Ventilation is inadequate.
- Receptacles are not properly installed.
- Light levels are below CHSAA standards. The 2012 Master Plan recommended adding a row of lights, but this work has not been completed.

## BAND ROOM

### Architectural Review

- The most pressing needs at the Band Room are access to restrooms and an indoor connection to the Secondary School.
- The building contains no windows.
- The building is located on the north side of campus isolated from all other academic facilities. Students are exposed to the bluff as they travel to class.

### Structural Review

- The building has no known structural deficiencies.

### Building Envelope

- This building has been affected with past flooding events on campus.
- The stucco veneer is generally in good condition.
- The standing seam metal roof is generally in good condition.

### Mechanical/ Electrical/ Plumbing Review

- Lighting is florescent and should be upgraded to LED.
- The HVAC system has no cooling or ventilation.
- The building contains one sink and no other plumbing fixtures. The lack of dedicated restrooms requires students to travel outside—typically to the opposite side of campus—to use restrooms in the Secondary School.
- The building is sprinklered and connected directly to the city main water line. Pressure is inconsistent.
- Exterior gas connection is protected from falling snow from the roof by a small shed roof that could be compromised in a large snow event.



Isolated Band Room

### SCIENCE BUILDING

#### Architectural Review

- The building is the result of a 2012 BEST grant and the newest construction on campus. In general, the building is functioning well as a science facility.
- Due to lack of space on campus, the large science labs double as rehearsal space for the theater department.
- Finish floor is roughly three feet above finish grade and is in compliance with flood plain construction requirements.

#### Structural Review

- Small cracking in drywall at door frames.

#### Building Envelope

- Envelope appears to be in good condition.

### Mechanical/ Electrical/ Plumbing Review

- Lack of cooling is a problem and negatively affects the learning environment.
- RTU's should be rebalanced as positive pressure is so great when in operation it is difficult to keep exterior doors closed. This compromises security of the building.
- Maintenance only runs forced air heating in periods of extreme cold.
- No protection on the external gas connection to the building.



Gas Meter Shed



Drywall Cracking

# FACILITY EVALUATION & FUTURE USE ANALYSIS

## DOLORES SCHOOL DISTRICT MASTER PLAN

### ART/ WOOD SHOPS

#### Architectural Review

- No major architectural deficiencies were observed or presented to the design team.

#### Structural Review

- The building has no known structural deficiencies.

#### Building Envelope

- The low roof slope allows snow to sit for long periods causing leaks at penetrations. Flashing and caulking repairs are regular maintenance items.
- Corrugated metal siding is generally in good condition.
- A new coat of paint should be applied to structural steel to avoid future corrosion.



#### Mechanical/ Electrical/ Plumbing Review

- Ventilation is deficient in Art room. Odors are often present. It is recommended a unit ventilator be installed. Noted in the 2012 Master Plan as well.
- Dust collection system is located in the Electrical Room in violation of code. The system should be relocated outside. Dust from the system puts electrical equipment at risk.
- Boiler system is not appropriately sized for the size of the building. In the morning it takes four hours for system to reach 70 degrees.
- Boiler system is at the end of projected lifespan.
- No known deficiencies with plumbing system.
- The building becomes extremely hot in spring and fall. Cooling should be added.
- The wood shop does not have enough electrical receptacles.
- Fluorescent lighting throughout building should be replaced with LEDs.

## XI. ENERGY, HVAC, O&M ANALYSIS

### **PRESCHOOL**

#### **Code Review**

- The facility was constructed in 1993 and does not comply with the modern International Energy Conservation Code (IECC) which began in 1998.

#### **Energy Efficiency**

- The building does not have high efficiency roof top units.
- Light fixtures were upgraded to fluorescent tubes in 2009. At the time considered a high efficient fixture

#### **Thermal comfort & envelope**

- Envelope is concrete block and does not comply with 2015 IECC requirements of continuous insulation. The roof is membrane system is does not comply with 2015 IECC R-value requirements.
- Areas of compromise within the envelop include the connection between foundation stem wall and concrete block wall.

#### **Systems analysis**

- See section VII Best Facilities Assessment, for systems FCI score and replacement costs.
- Building includes 3 rooftop units are original and 28 years old with a manufacturer lifespan of 15 years. These units are not built to current efficient standards and are at risk of failure due to age and inability to find replacement parts.
- Light fixtures are fluorescent throughout building. Last upgraded in 2009. Do not meet efficiency levels of modern LED fixtures.

### **ELEMENTARY SCHOOL**

#### **Code Review**

- The facility was constructed in 1968 and does not comply with the modern International Energy Conservation Code (IECC) which began in 1998.
- Additions added in 1991 and 1996 do not comply with modern energy codes.
- The last addition to the South complies with 2015 IECC.

## **Energy Efficiency**

- The HVAC system is antiquated and not efficient.
- A high efficiency boiler was installed in 2014.
- Light fixtures were upgraded to fluorescent tubes in 2009. At the time considered a high efficient fixture.

## **Thermal Comfort & Envelope**

- The envelope of the existing building is load bearing masonry and contains little to no insulation.
- The envelope on the additions meets current standards for R value and includes thermally broken double pane windows.

## **Systems Analysis**

- See section VII Best Facilities Assessment, for systems FCI score and replacement costs.
- Swamp coolers on the original building should be replaced immediately.
- Roof top air handlers were installed in the 90's and are nearing the end of their useful lifespan. New parts are not available.
- The electrical system is original and at capacity. Any new systems would require increased electrical service.
- Two high efficient condensing boilers were installed in 2014 and are functioning adequately.
- Water heaters will reach projected functional lifespan in 2022.

## **SECONDARY SCHOOL**

### **Code Review**

- The facility was constructed in 1954 and does not comply with the modern International Energy Conservation Code (IECC) which began in 1998.

### **Energy Efficiency**

- Due to age of the facility and systems, and lack of insulation this building performs very poorly from an efficiency perspective.
- Light fixtures were upgraded to fluorescent tubes in 2009. At the time considered a high efficient fixture. No Occupancy sensors in building.

### **Thermal Comfort & Envelope**

- Adjoining classrooms each share a furnace. The heating functions well. Controls were upgraded in 2009.

### **Systems Analysis**

- See section VII Best Facilities Assessment, for systems FCI score and replacement costs.
- Classroom furnaces will reach projected functional lifespan in 2022.
- Through wall cooling units were added to classrooms in 2016. The exterior wall mounted water supply to units is leaking onto face of brick at multiple locations.
- BAS installed in 2009. Software is outdated.

## **CAMPUS COMMONS AND GYMS**

### **Code Review**

- The Commons, Varsity Gym, and Auxiliary Gym were constructed in 1995, 1954, and 1990 respectively. None of the buildings comply with the modern International Energy Conservation Code (IECC) which began in 1998.

### **Energy Efficiency**

- The Commons contains appropriate insulation for a building of that time.
- All building systems are dated and not efficient.
- E/W orientation of Commons allows for significant solar exposure on the South elevation.
- Light fixtures were upgraded to fluorescent tubes in 2009. At the time considered a high efficient fixture.

### **Thermal Comfort & Envelope**

- Metal stud walls with rigid exterior insulation and roof insulation provide a reasonably efficient envelope at the Commons.
- Windows at the Commons are thermally broken double pane units and are in good condition.
- The Varsity Gym has no wall insulation and daylight can be seen between the roof structure and top of wall at various locations.
- The glulam beams in the Varsity gym connect to exterior buttresses conducting temperature through the concrete exterior wall.
- Auxiliary Gym has minimal insulation. Consistent with the nature of metal buildings of that time.

## **Systems Analysis**

- See section VII Best Facilities Assessment, for systems FCI score and replacement costs.
- The Commons heating and ventilation is provided through a single packaged rooftop unit nearing the end of it's projected functional lifespan. Mineral deposits are present due to corrosion of components.
- Ventilation for Gym is borrowed from the unit that serves the commons.
- Cooling at the Commons is provided through a roof mounted swamp cooler.
- The heating for the Gyms is provided through gas fired infrared heat tubes. The design is outdated and constantly gets damaged. Three tubes in the Varsity Gym were replaced in 2016. One tube is original.

## **BAND ROOM**

### **Code Review**

- The facility was constructed in 1954 and does not comply with the modern International Energy Conservation Code (IECC) which began in 1998.

### **Energy Efficiency**

- No exterior windows in the building helps the overall efficiency.
- Light fixtures were upgraded to fluorescent tubes in 2009. At the time considered a high efficient fixture.

### **Thermal Comfort & Envelope**

- Metal stud walls with rigid exterior insulation and roof insulation provide a reasonably efficient envelope.

### **Systems Analysis**

- See section VII Best Facilities Assessment, for systems FCI score and replacement costs.
- Boiler heat with heat exchanger for heating.
- No mechanical ventilation
- No cooling.

## SCIENCE BUILDING

### Code Review

- The facility was constructed in 2015 and is compliant with the 2015 IECC.

### Energy Efficiency

- LED Fixtures, Continuous insulation, high efficiency systems, thermally broken efficient window units, daylighting in classrooms through solar tubes.

### Thermal Comfort & Envelope

- Continuous exterior rigid insulation on metal stud exterior walls and roof insulation.

### Systems Analysis

- See section VII Best Facilities Assessment, for systems FCI score and replacement costs.
- Condensing boilers control radiant panels in rooms.
- 3 RTU controls conditioned air. When one of the RTU's is running so much pressure doors are difficult to close.
- Ventilation is provided through fans in rooftop units.
- No cooling.

## ART/ WOOD SHOP

### Code Review

- The facility was constructed in 2002 and is compliant with the 2000 IECC.

### Energy Efficiency

- Aluminum double pane thermally broken exterior windows.
- Continuous exterior rigid insulation on metal stud exterior walls and roof insulation.
- Light fixtures were upgraded to fluorescent tubes in 2009. At the time considered a high efficient fixture.

### Thermal Comfort & Envelope

- Interior spaces experience extreme heat in the spring, summer, and fall.
- The envelope is well insulated for a building of its time.

# ENERGY, HVAC, O&M ANALYSIS

## DOLORS SCHOOL DISTRICT MASTER PLAN

### Systems Analysis

- No ventilation.
- No cooling.
- One boiler supplies hot water to unit heaters for classroom heating. This system will hit the end of its projected functional lifespan in 2020.
- Heat exchangers are deficient for volume of space and take over three hours in the morning to warm the indoor air to 70 degrees.

### 2018 UTILITY AND OPERATING COSTS

Total utility costs for the 2018 for all District facilities have been provided in the table below.

UTILITY	COST
Water & Sewage	\$10,554.98
Natural Gas	\$30,760.90
Electricity	\$66,352.66
<b>TOTAL</b>	<b>\$107,668.54</b>

## XII. SQUARE FOOTAGE ANALYSIS

**PRESCHOOL**

Constructed: 1993  
Current Enrollment: 68  
Square Footage: 5,580 gross sf

**ELEMENTARY SCHOOL**

Constructed: 1993. Additions: 1991, 1996, 2015.  
Current Enrollment: 384  
Square Footage: 29,594 gross sf

**SECONDARY SCHOOL**

Constructed: 1954. Addition: 1971  
Current Enrollment: 288  
Square Footage: 18,506 gross sf

**CAMPUS COMMONS AND GYMS**

Constructed: 1995  
Square Footage: 14,215 gross sf

**BAND ROOM**

Constructed: 1995  
Square Footage: 1,870 gross sf

**SCIENCE BUILDING**

Constructed: 2015  
Square Footage: 10,262 gross sf

**ART/ WOOD SHOP**

Constructed: 2002  
Square Footage: 3,748 gross sf

**ADMINISTRATION**

Constructed: 1938  
Square Footage: 2,097 gross sf

# SQUARE FOOTAGE ANALYSIS

DOLORES SCHOOL DISTRICT MASTER PLAN

## ELEMENTARY SCHOOL

\*Red text indicates space does not meet CDE standards

	Building	Square Footage	CDE Req.		Notes
			SF	SF/Pupil	
E100	Corridor	2090			
E101	6th Grade Classroom	715	540	30	
E102	6th Grade Classroom	712	540	30	
E103	6th Grade Classroom	712	540	30	
E104	5th Grade Classroom	715	630	30	
E105	5th Grade Classroom	711	630	30	
E106	5th Grade Classroom	707	630	30	
E107	Nurse	218			
E108	Dean	106			
E109		65			
E110	Restroom	49			
E111	Principal	192	150		
E112	SPED	379	370	37	*Classrooms must be > 675 SF
E113	SPED	324	370	37	*Classrooms must be > 675 SF
E114	Office	161	150		
E115	Counselor	161	150		
E116		71			
E117		85			
E118	Restroom	23			
E119	Art	969		45	
E120	Gymnasium	2307	3000		
E121	Storage	96			
E122	Storage	94			
E123	Boys Restroom	211			
E124	Girls Restroom	328			
E126	Vestibule	87			
E127	Restroom	38			
E130	Restroom	46			
E131	Corridor	645			
E132	Teacher Workroom	482	250		
E133	SPED	525	259	37	*Classrooms must be > 675 SF
E134	Kindergarten	514	697	38	*Classrooms must be > 675 SF
E136	Kindergarten	983	697	38	
E137	Restroom	40	50		

RATIO | HPA

# SQUARE FOOTAGE ANALYSIS

DOLORES SCHOOL DISTRICT MASTER PLAN

E138	Kindergarten	975	697	38	
E139	Restroom	49	50		
E141	Corridor	1922			
E142	1st Grade Classroom	762	459	32	
E143	1st Grade Classroom	754	459	32	
E144	2nd Grade Classroom	750	491	32	
E145	2nd Grade Classroom	755	491	32	
E146	2nd Grade Classroom	745	491	32	
E147	1st Grade Classroom	756	459	32	
E148	3rd Grade Classroom	735	661	32	
E149	Boys TLT	258			
E151	Janitor	35			
E152	Girls TLT	256			
E153	Electrical / Data	121			
E154	Mechanical	154			
A101	Vestibule	371			
A102	Corridor	707			
A103	Storage	155	300	50	
A104	4th Grade Classroom	695	610	30	
A106	3rd Grade Classroom	733	661	32	
A107	3rd Grade Classroom	729	661	32	
A108	4th Grade Classroom	727	610	30	
A109	4th Grade Classroom	734	610	30	
A110	Vestibule	155			

# SQUARE FOOTAGE ANALYSIS

DOLORES SCHOOL DISTRICT MASTER PLAN

## MIDDLE SCHOOL

	Building	Square Footage	CDE Req.		Notes
			SF	SF/Pupil	
E414	Furnace	66			
E415	Office	138	120		
E416	Science Classroom	673	1232	44	*Classrooms must be > 675 SF
E417	ELA Classroom	694	784	28	
E418	Mechanical	10			
E419	Social Studies Classroom	752	784	28	
E420	Mechanical	12			
E423	Health / Reading Classroom	660	784	28	*Classrooms must be > 675 SF
E423a	Mechanical	12			
E425	Math Classroom	687	784	28	Classroom not large enough for quantity of students
E425a	Mechanical	10			
E426	Science Classroom	678	1232	44	Classroom not large enough for quantity of students
E426a	Mechanical	32			
E428	Boys TLT	198			
E429	Janitor	36			
E431	Girls TLT	215			

# SQUARE FOOTAGE ANALYSIS

DOLORES SCHOOL DISTRICT MASTER PLAN

## HIGH SCHOOL

	Building	Square Footage	CDE Req.		Notes
			SF	SF/Pupil	
E400	Corridor	1701			
E401	Reception	457			
E402	Principal	236	150		
E404	Electrical	56			
E405	Corridor	65			
E406	Mechanical	41			
E407	Office	192	150		
E408	Mechanical / Electrical	66			
E410	Staff RR	32			
E411	Teacher Work Room	324	250		
E412	IT Tech Classroom	636	640	32	*Classrooms must be > 675 SF
E413	Corridor	1938			
E432	Commons	4747	4200		
E432a	Mechanical	12			
E432b	Mechanical	19			
E434	Counselor	521	150		
E434a	Social Worker	521	150		
E435	Dean's Office	552	150		
E436	Vestibule	82			
E437	English Classroom	743	560	28	
E438	Mechanical	10			
E439	SS On Line	706			
E440	Mechanical	11			
E442	English Classroom	642	560	28	*Classrooms must be > 675 SF
E443	IEP Boces	339			
E445	Social Studies Classroom	666	560	28	*Classrooms must be > 675 SF
E446	Mechanical	8			
E447	Civics & Economics Classroom	670	560	28	*Classrooms must be > 675 SF
E448	Spanish Classroom	628	560	28	*Classrooms must be > 675 SF
E449	Mechanical	9			
E451	SPED Classroom	545	740	37	*Classrooms must be > 675 SF
E452	Mechanical	26			
E453	TLT	58	50		
E454	Girls TLT	223			
E455	Janitor	33			
E456	Boys TLT	206			

# SQUARE FOOTAGE ANALYSIS

## DOLORES SCHOOL DISTRICT MASTER PLAN

### GYMNASIUMS

	Building	Square Footage	CDE Req.		Notes
			SF	SF/Pupil	
E246	Gymnasium	7473	7300		
E247	Storage	484			
E249	Weight Training	1065			
E251	Corridor	245			
E252	ES - Music Classroom	1093	640	35	
E260	Mechanical	484			
E261	Wrestling Room	2468			
B101	Vestibule	75			
B102	Office	119	120		Offices should be minimum 120 sf
B103	Toilet	64	50		
B104	Custodial / Mechanical	131			
B105	Toilet (HS Boys Lockers)	146			
B106	HS Boys Lockers	460			
B107	MS Boys Lockers	238			
B108	Vestibule	74			
B109	Storage	59			
B111	Shower	54			
B112	Vestibule	40			
B113	Office	82	120		Offices should be minimum 120 sf
B114	Toilet	41			
B115	Toilet	83			
B116	Lavatory	41			
B117	Vestibule	41			
B118	MS Girls Lockers	184			
B119	Shower	50			
B120	HS Girls Lockers	414			
B122	Ramp	66			
B124	Ramp	65			
B125	Girls	92			
B125a	Boys	94			
E229	Gymnasium	8048	7300		

# SQUARE FOOTAGE ANALYSIS

DOLORES SCHOOL DISTRICT MASTER PLAN

## LIBRARY & COMMONS

	Building	Square Footage	CDE Req.		Notes
			SF	SF/Pupil	
E200	Commons	4747	4200		
E201	Computer	651	896	32	
E202	Computer	548	640	32	
E203	Office	134	120		
E204	HS / MS Library	2133			
E205	Office	260	120		
E206	Elementary Library	1523			
E207	Janitor	73			
E208	IT	73			
E209	Computer	561		32	
E211	Vestibule	67			
E212	Vestibule	64			
E213	Kitchen	987			
E214	Office	77	120		
E215	TLT	52	50		
E216	Walk-In	253			
E217	Pantry	186			
E218	Ware Wash	132			
E219	Janitor	48			
E221	Storage	88			
E222	Table Storage	117			
E223	Mechanical	149			
E224	Girls TLT	222			
E225	Boys TLT	211			
E226	Janitor	31			
E227	Vending	311			
E228	Vestibule	517			

# SQUARE FOOTAGE ANALYSIS

DOLORES SCHOOL DISTRICT MASTER PLAN

## BAND BUILDING

	Building	Square Footage	CDE Req.		Notes
			SF	SF/Pupil	
E300	Band / Music Room	1376	700	35	
E301	Mechanical / Electrical / Storage	138		50	*per instructor
E302	Office / Practice	86	120		Offices should be minimum 120 sf
E303	Storage	59		50	*per instructor

## SCIENCE BUILDING

	Building	Square Footage	CDE Req.		Notes
			SF	SF/Pupil	
D100	Vestibule	84			
D102	Corridor	633			
D103	Science Classroom	945	880	44	
D104	Girls	250			
D105	Science Prep	304			
D106	Chem Storage	84	50		*per instructor
D107	Boys	250			
D108	Science Classroom	945	880	44	
D109	Vestibule	94			
D111	Corridor	490			
D112	Math Classroom	828	560	28	
D113	Math Classroom	822	560	28	
D114	Vestibule	99			
D115	Office	79	120		
D116	VoAg Lecture	572	560	28	*Classrooms must be > 675 SF
D117	Tools	264			
D118	Janitor	33			
D119	Mechanical / Electrical	207			
D121	CAD CAM	135			
D122	Shop	3119	1200	60	
D123	COMP	25			

# SQUARE FOOTAGE ANALYSIS

DOLORES SCHOOL DISTRICT MASTER PLAN

## WOOD SHOP

	Building	Square Footage	CDE Req.		Notes
			SF	SF/Pupil	
E500	Vestibule	156			
E501	TLT	58	50		
E502	Tool Storage	202		50	
E503	Wood Shop	1563	1200	60	
E504	Wood Storage	106		50	
E505	Mechanical / Electrical	70			
E506	Storage	134		50	
E507	Computer	94		32	
E508	Office	122	120		
E509	TLT	60	50		
E511	Kiln	52	50		
E512	Storage	143		50	
E513	Art Room	988	900	45	

## XIII. SITE EVALUATION

Over the last 60 years, the campus has expanded piece-by-piece on the same site to meet the changing needs of the District. The campus is at a point where new construction is necessary to support future student population growth and replace failing facilities, yet there is no room to grow without a large intervention to the current site layout. It was also clear through the multiple stakeholder meetings that the community has economic and emotional ties to the current location of the campus in the center of town. Therefore, the vision for the site described in this Master Plan addresses immediate deficiencies while providing a road-map for the thoughtful growth of the campus in it's current location.



### PRIMARY SAFETY AND SECURITY SITE DEFICIENCIES

- No separation between pedestrian, vehicle, and bus traffic at the Elementary School loading zone.
- Bus loading occurs on a dirt lot shared with the town recycling and does not include sidewalk, curb and gutter, or separation islands.
- Students walk long distances across campus without supervision, exposed to the elements and security threats to get to school facilities.
- The campus backs up to a 400' bluff on the north. This is a major security concern for staff and teachers. Existing buildings provide no shelter from potential threats from the bluff.
- The perimeter of the site is porous with multiple unsecured points of entry.
- The layout of buildings creates open corridors and alleys, offering multiple opportunities to hide in place while obscuring clear routes of campus egress.
- The current location of the football field on the north edge of campus leaves it vulnerable to threats from the bluff. It also drastically reduces the flexibility for future building expansion.
- Vehicle Pick-up and drop-off at the Secondary School occurs between parking and traffic lane causing congestion and safety.
- Remote location of the Preschool requires teachers to walk students along city streets each day to get to the Library.
- Roughly 1/3 of the campus sits within the FEMA flood plain boundary.
- The high water-table in the Dolores valley leaves the campus vulnerable to flooding during spring runoff.

- Snow removal is a maintenance and safety challenge. The layout of buildings make it difficult to efficiently clear the campus. Maintenance staff starts snow removal in the middle of the night in order to open campus on-time. The lack of open space on campus requires maintenance to pile snow along circulation paths which impedes on egress routes and creates multiple areas of icing on sidewalks.

### Bus/Vehicle/Pedestrian Traffic Patterns

- There is no organization to the bus and vehicle loading because no infrastructure exists for separation. The lack of dedicated bus lanes and separated parking is a code violation and does not meet CDE requirements. Vehicles are forced to stop in the public right-of-way impacting travel flow around the campus.

### Sports Fields

- The football field and recreation fields are located on the north edge of campus and are vulnerable to external threats. Site grading is inadequate and ponding on the fields is present after weather events.
- The site does not allow room for is a CHSAA compliant track.

### Soft and Hard Playground Surfaces

- The northwest corner of the main campus contains two Elementary playgrounds with cedar chip surfacing. North of the playgrounds is a large grass play field with basketball courts at the far north edge of campus. This play space is generously sized and connects to the Elementary School, but the grass field is isolated from buildings and fully exposed to the bluff.
- The preschool has a small playground with cedar chip surfacing and a small grass field surrounded by residential lots with exposure to the bluff.
- Directly east of the Elementary playground is an outdoor lunch area with a concrete pad and picnic tables. Due to grading and poor site drainage, this pad regularly floods after rain events.
- The southeast corner of the main campus contains a playground with cedar chip surfacing and a concrete half basketball court. The playground is within the campus fence but it's location comprises the secure perimeter of the site. There are minimal site lines to the playground from the adjacent High School and Wood Shop.



Piled Snow on Circulation Paths



No Dedicated Bus Lanes



Ponding on Football Field



Isolated Grass Play Field



Ponding around Lunch Patio

# SITE EVALUATION

## DOLORS SCHOOL DISTRICT MASTER PLAN



### Parking Lots

- There are not enough parking stalls on the campus to support all vehicles. The district must rent two lots that are dirt surface with no defined ADA stalls adjacent to the campus to accommodate the overflow.
- The main parking is head-in along the south edge of the site. This causes challenges for snow removal along the sidewalk and creates a dangerous scenario during pick-up and drop-off as vehicles try to pull out of the head-in stalls while parents queue behind them to pick up students. Ultimately, traffic on the public right-of-way is forced to stop due to vehicular congestion.

### ADA Compliance

- In general, ADA access to buildings is adequate. At multiple locations around the site, concrete flat-work is spalling and heaving creating dangerous conditions for individuals with mobility challenges. Access to the football field is difficult for elderly citizens who have to park on the south edge of campus and walk to the field on the north edge of campus.

### Site Lighting/Security Cameras

- In general, site lighting is provided through halogen wall packs and is inadequate. Security cameras are located at primary building entrances and is inadequate with blind spots across the site.

### Emergency Access

- Access for emergency vehicles is adequate with multiple entry points and FDC locations on the west edge at N. 12th Street and the east edge at N. 14th Street. Through the center of campus, there is a dirt service road that runs along the north side of the football and connects to the central pedestrian walk between the commons/gym building and the Secondary School.

### Acreage of Site

- Main Campus = 10.4 acres.
- Preschool = 0.95 acres.
- District Administration. Offices = 0.44 acres.
- Bus Maintenance Facility = 2.23 acres (estimate)

### Geo-technical Technical Field Study

Trautner Geotech LLC prepared a report for the District in 2013, the Field Study is provided on the following pages with the results of their findings.

### 3.2 *Site Characteristic and Discussion.*

The Dolores High School is located in a flat area within the historic waterway, and flat-bottomed valley of the Dolores River drainage system. We understand that there are areas within the town limits where ancillary drainage channels and possibly the main river channel existed prior to development of portions of the town. These areas were filled in as part of the original land improvement and development of the Town of Dolores. These areas of fill range from limited vertical and horizontal extent to more massive areas where fill was placed. Though the fill is relatively old, areas of loose and undesirable fill are occasionally encountered. Other loose and less-desirable shallow soils are a result of alluvial deposits from the Dolores River.

Generally the proposed additions are located either within landscaped areas and are situated within flat areas adjacent to portions of the existing structures. We anticipate that foundation excavation backfill in addition to the previously placed (“historic”) fill associated with general site improvements will be encountered during the construction of the various additions currently planned. The age of the individual existing structures varies widely across the project site. We anticipate that the existing structures are supported by conventional shallow foundation systems; however the particular structural designs of individual structure foundation systems are likely variable.

### 3.3 *Subsurface Soil and Water Conditions*

We advanced seven (7) continuous flight test borings in the vicinity of the proposed structure. A rough sketch of the outline of the proposed structure and the test boring locations are shown on Figure 1. The logs of the soils encountered in our test borings are presented in Appendix A.

We encountered man-placed fill in Test Borings One, Two and Seven to depths of about one and one-half to three and one-half (3½) feet below the ground surface. As mentioned above, in Section 3.2 of this report we suspect that variable depth and quality existing fill material may be encountered throughout this project.

We encountered cohesive soils, generally sandy clay and sandy silt soils, in our test borings to depths as deep as about seven (7) feet below the ground surface. Although we did not encounter cohesive soil in Test Boring Three, these soils can generally be considered as having an average depth of nominally six (6) to seven (7) feet in our test borings. Our laboratory tests of this soil layer indicate that the material is relatively low density with a high consolidation potential under relatively light loads. We do not know if this layer is previously placed (historic) fill material, or if it was naturally placed soils from fluvial processes associated with the Dolores river, however regardless of the depositional history of this material, it is undesirable for support of foundation components.

We encountered dense gravel and cobble soil in the test borings below the cohesive soils (and from the ground surface in Test Boring Three). These soils have a low swell potential when wetted and may consolidate under high loads.

We encountered free subsurface water in our test borings at depths ranging from five (5) to nine (9) feet below the ground surface at the time of the advancement of our test borings at the project site. We suspect that the subsurface water elevation and soil moisture conditions will be influenced by snow melt and/or precipitation and local irrigation.

The logs of the subsurface soil conditions encountered in our test borings are presented in Appendix A. The logs present our interpretation of the subsurface conditions encountered exposed in the test borings at the time of our field work. Subsurface soil and water conditions are often variable across relatively short distances. It is likely that variable subsurface soil and water conditions will be encountered during construction. Laboratory soil classifications of samples obtained may differ from field classifications.

### 5.0 FOUNDATION RECOMMENDATIONS

There are two general types of foundation system concepts, “shallow” and “deep”, with the designation being based on the depth of support of the system. More common deep foundation system concepts include driven piles, drilled piers and steel helical piers. Shallow foundation system concepts include mats or rafts, and conventional spread footings with stem walls. There are numerous similar foundation design concepts, but the concepts listed above are of the more common types used in western Colorado.

#### *Shallow Foundation System Considerations*

There are numerous types of shallow foundation systems and variants of each type. Generally the most common shallow foundation design concepts which have been used in western Colorado include spread footings, and mat (or raft) foundation systems.

The integrity and long-term performance of each type of system is influenced by the quality of workmanship which is implemented during construction. It is imperative that all excavation and fill placement operations be conducted by qualified personnel using appropriate equipment and techniques to provide suitable support conditions for the foundation system.

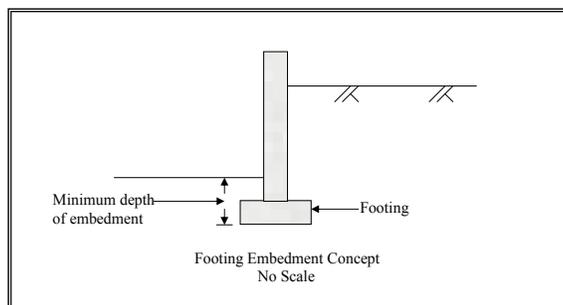
#### *5.1 Spread Footings*

Conventional spread footing and stem wall foundation systems have been used successfully in western Colorado for most residential and many commercial applications. The spread footing foundation system consists of a footing which dissipates, or spreads, the loads imposed from the stem wall (or beam) from the structure above.

The soil samples tested from the anticipated support elevations in our test borings had little reaction due to addition of water at a 100 pound per square foot surcharge load, but the shallow soils have a relatively high consolidation potential under relatively light loads, therefore if shallow foundation systems are considered, we feel that the shallow soils and fill materials are not suitable for support of these structural components.

Footing excavation should be extended to the underlying cobble soils and the elevations of the shallow footings should be established at a convenient elevation to be supported by a granular fill material that is placed on the underlying cobble soils. Due to the potential for subsurface water to be encountered in some of the excavations near the interface of the shallow fill and/or cohesive soil, we feel a viable material option for support of the footings is a clean crushed and screened aggregate material. Generally this material should have 100 percent passing the two (2) inches sieve with not more than about five (5) percent assign the #4 sieve.

All footings should have a minimum depth of embedment of at least one (1) foot. The embedment concept is shown below.



## XIV. TECHNOLOGY

### **NETWORK TOPOLOGY**

- Main campus includes fiber optic lines connecting all of the buildings with cat 5 cables from network closets to classrooms.
- 14 Procurve network switches, 1000 MBS fiber and Procurve switches
- Bandwidth and connectivity is supplied by Cedar Networks in Durango CO.
- Preschool includes (1) T-1 line shared between Internet and phone.
- District Administration offices include (1) T-1 line shared between Internet and phone.
- The main campus includes (3) T-1 lines for data and (1) T-1 line for phone.
- The network includes a firewall, security systems, and backup/recovery systems.

### **SPECIFICATIONS**

- (9) servers running windows server.
- Active directory standards, email services, and Wi-Fi services (secure & guest access)

### **EDUCATIONAL TECHNOLOGY**

- Some classrooms contain smart-boards and interactive white-boards.
- Secondary Students are provided with Chrome-books.
- Two computer labs in the Library.
- Multi-media digital projectors in every classroom.
- Science building contains three full lab classrooms.

### XV. FUTURE USE ANALYSIS

#### **FOOTBALL FIELD**

In 2013, a Master Plan concept was designed for the existing Joe Rowell Park located on the west side of Dolores as you come down the hill and enter the valley. The Master Plan called for an athletic complex shared by an outdoor amphitheater and river walk. This Master Plan report endorses that concept by relocating the existing football field from campus to Joe Rowell Park. It is the logical move to provide the District with room needed to accommodate future growth in the next fifty years while remaining on the same site. This will also create a state-of-the-art contemporary joint use athletic complex that will meet a myriad of community and District needs. The funding for the new athletic facility is not contemplated to be part of the BEST grant.

#### **VARSITY GYMNASIUM**

The demolition of the existing Varsity Gymnasium will result in the construction of a new state-of-the-art multi-purpose Gymnasium on the northeast side of campus. As the existing gym functions as a place for community gathering, so will the new gymnasium, however it will have the added benefit of serving as a place of refuge for the community. The new facility will be the largest gathering space in town and it will be above the flood plain that encompasses a majority of the town.

#### **DISTRICT ADMINISTRATION OFFICES**

Moving the District Administration offices onto a second floor of the new Secondary School will leave the current building vacant. There is significant meaning to the building as it was the previous offices of the U.S. Forest Service and has been placed on the National Register of Historic Places. There is an opportunity to work with the Town of Dolores to reimagine this building as a community space that would keep it in the hands of the public while honoring its past.

#### **PRESCHOOL**

The preferred Master Plan scheme includes a new preschool facility located on the northwest corner of the main campus. The existing preschool would be vacant and there is an opportunity for the District to sell this land to offset the cost of new construction, or re-purpose this facility for alternative District needs.

#### **ELEMENTARY SCHOOL MODULAR CLASSROOM**

The modular classroom facility on the south side of the Elementary School can be retained, relocated, and re-purposed for alternative District needs.

## XVI. STRATEGIC PLAN FOR IMPLEMENTATION

The Dolores School District has gone to the Colorado Department of Education twice before to secure grants that addressed immediate needs, yet did not provide a holistic solution for the long-range future. Through our Design Advisory Group and community meetings, it was made clear to the Design Team that it was time for a vision that described the road-map to success for the next fifty years and beyond.

The Design Team held three stakeholder meetings which included workshops where participants created groups to develop their own Master Plan concepts. The Design Team presented multiple iterations of the Master Plan before finalizing three options, which were then presented at a community meeting. One option was voted on to include as the preferred option for the Master Plan report. The options included:

### **OPTION 1 – KEEP THE FOOTBALL FIELD**

- Football field remains on campus and is regraded and resurfaced with artificial turf.
- Add an 8-lane artificial surface track around football field and a concessions building on the south edge.
- Demolish the existing gymnasiums and build a new 2-story Secondary School in their place.
- Demolish the Commons/ Library and build a new Commons building in its place.
- Demolish the Secondary School and build a new multi-gym facility in its place.
- Add a bus loop and new entry on the south side of the Elementary School.
- Existing Elementary play fields are eliminated with the addition of the track. Outdoor space for them is provided in a sheltered courtyard in the center of campus
- An addition is added to the east wing of the Elementary School to plan for the district's future growth and connect the Elementary to the Commons. This also secures the South perimeter of the site.
- The courtyard on the plinth and to the east of the Secondary School provides sheltered outdoor space for the upper classmen. The courtyards allow for new storm water infrastructure and large permeable surfaces to resolve the current site drainage issues.

# STRATEGIC PLAN FOR IMPLEMENTATION

## DOLORS SCHOOL DISTRICT MASTER PLAN

- Construct a three foot tall “plinth” of fill dirt around the east side of campus to raise new construction out of the FEMA flood plain. This will also support the District’s goal of creating a secure perimeter by providing a retaining wall around the perimeter of the plinth and creating three controlled access points to campus through steps and ramping.
- A new parking lot is added on the east side of campus, and a new District Administration office is proposed on an adjacent lot across N. 14th Street
- The existing Preschool remains with two additions on either side, creating a secure courtyard in the center for a sheltered play area. This also provides the opportunity for a separate bus loop, away from other vehicle drop-off, alleviating the congestion and enhancing the student’s safety getting to school and leaving school.

Impact on educational delivery will be primarily isolated to athletic programming during construction. The new Secondary School will be constructed first allowing students to move in without disrupting the school year. Then the existing Secondary School will be demolished, and the new Gymnasiums building will be constructed.

There should be a reduction in operating costs through increased efficiency in campus maintenance and the replacement of antiquated poorly performing buildings with contemporary highly efficient buildings. The operating costs of continually having to replace finishes and remedy defects due to flooding will be eliminated. The opportunity to integrate passive/sustainable design strategies will have a positive impact on the annual cost of utilities.

The impact on adjacent streets and properties will be concentrated to the east side of campus along N. 14th Street. Some construction impact will be felt on the west side of campus along N. 12th Street when the Elementary addition and bus loop are built.

While the presence of construction will be significant in the small town of Dolores, the long-term impacts will be extraordinarily beneficial for the community including:

- A secure and beautiful campus in the heart of the town.
- A new Secondary School. Students will no longer have to choose other districts to find the academic programming that fits their needs.
- New joint-use athletic facilities.

# STRATEGIC PLAN FOR IMPLEMENTATION

## DOLORES SCHOOL DISTRICT MASTER PLAN



### OPTION 1 KEEP THE FOOTBALL FIELD

# STRATEGIC PLAN FOR IMPLEMENTATION

## DOLORES SCHOOL DISTRICT MASTER PLAN

### OPTION 2 – PRESERVATION

- Football field is moved to a remote location.
- Demolish the existing main gymnasium and re-grade for a secure Elementary School play area.
- Demolish the Commons and build a new Commons building to the East of the library to serve as a main point of entry on the south edge of campus.
- Demolish the Secondary School and relocate to secure the southeastern corner of campus.
- Add a bus loop along Central Ave. near the new central secure campus entry point at the new Commons.
- Existing Elementary play fields are removed and outdoor space is provided in a sheltered courtyard sheltered by buildings along the campus perimeter.
- An addition is added on the north side of the east wing of the Elementary School to house the Title-1 and BOCES programs currently located in a temporary modular building. The addition would also include two general classrooms and teacher work space to allow for future growth.
- Construct a 3' tall "plinth" of fill dirt around the east side of campus to raise new construction out of the FEMA flood plain. This will also support the District's goal of creating a secure perimeter by providing a retaining wall around the perimeter of the plinth and creating three new controlled access points to campus through steps and ramping.
- The courtyard on the plinth allows for new storm water infrastructure and creates large permeable surfaces to resolve the current storm water ponding and make campus snow removal more efficient.
- A new parking lot is added on the east side of campus, and a new District Administration office is proposed on an adjacent lot across N. 14th Street
- The existing Preschool remains with two additions on either side, creating a secure courtyard in the center for a sheltered play area. This also separates bus and vehicular drop-off alleviating the congestion and enhancing student safety as they move from the parking lot to the building.

To reduce academic disruption Phase one of construction would begin with the demolition of the main gym and construction of the new main gym and northern Elementary School Addition in the Fall. Phase two would begin in the Summer with the demolition of the Secondary School Building and construction of the Commons, the connection between the Elementary School and Library, and the West Elementary School Addition. Phase Three would begin again in the Fall with the Construction of the new Secondary School. Portable classrooms will likely be needed to ensure education programming continues. The new gym and the new commons space could also be used for temporary classroom space. During construction the campus will maintain a secure perimeter with the initial construction on the norther side and then the demo and replacement of the southern edge.

There should be a reduction in operating costs through increased efficiency in campus maintenance and the replacement of antiquated poorly performing buildings with contemporary highly efficient buildings. The operating costs of continually having to replace finishes and remedy defects due to flooding will be eliminated. The opportunity to integrate passive/sustainable design strategies will have a positive impact on the annual cost of utilities.

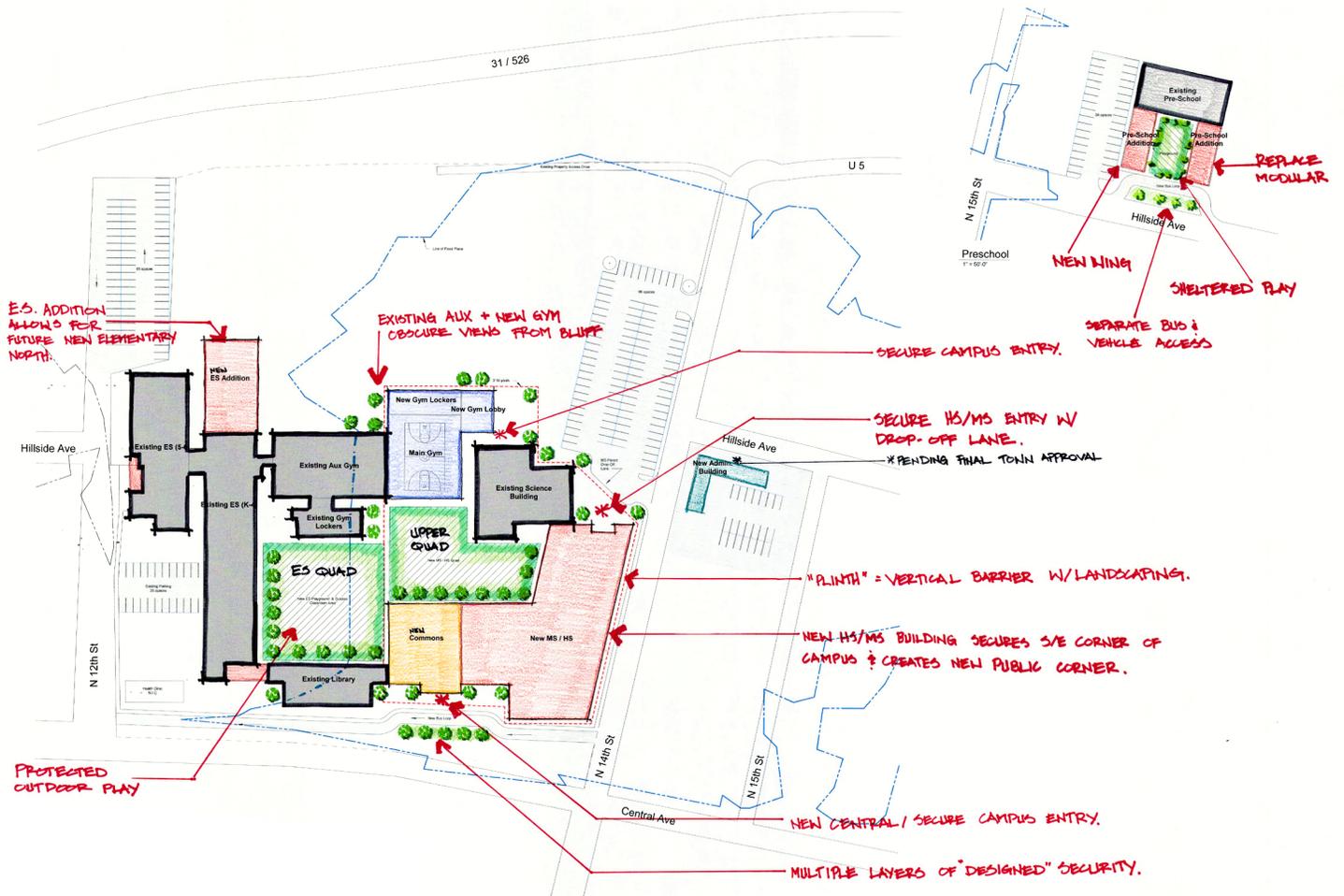
The impact on adjacent streets and properties will be concentrated to the east side of campus along N. 14th Street. Some construction impact will be felt on the west side of campus along N. 12th Street when the Elementary addition is built.

While the presence of construction will be significant in the small town of Dolores, the long-term impacts will be extraordinarily beneficial for the community including:

- A secure and beautiful campus in the heart of the town.
- A new Secondary School. Students will no longer have to choose other districts to find the academic programming that fits their needs.
- New joint-use athletic facilities.

# STRATEGIC PLAN FOR IMPLEMENTATION

DOLORES SCHOOL DISTRICT MASTER PLAN



## OPTION 2 PRESERVATION

## **OPTION 3 – THE GATEWAY**

*(Option selected by community during July 16, 2019 meeting)*

- Football field is moved to a remote location.
- Demolish the existing Varsity and Auxiliary Gymnasiums and build a secure Elementary School play area in it's place.
- New Library and Commons, and new Gymnasiums are relocated to the northern edge of campus to enhance the goal of a secure perimeter and obscure site lines from the bluff.
- Demolish the existing Commons and Library facility and build a new Secondary School in it's place to secure the southern edge and provide a new public face of the campus.
- Add a bus loop along Central Ave near the new central secure campus entry point.
- Existing Elementary play fields are removed and outdoor space for them is provided in the sheltered courtyard in the center of campus.
- An addition is added on the north side of the east wing of the Elementary School to house the Title-1 and BOCES programs currently located in a temporary modular building. The addition would also include two general classrooms and teacher work space to allow for future growth.
- Construct a three foot tall "plinth" of fill dirt around the east side of campus to raise new construction out of the FEMA flood plain. This will also support the District's goal of creating a secure perimeter by providing a retaining wall around the perimeter of the plinth and creating three new controlled access points to campus through steps and ramping.
- A new parking lot is added on the east side of campus, and a new District Administration office is proposed on an adjacent lot across N. 14th Street.
- The existing Preschool remains with two additions on either side, creating a secure courtyard in the center for a sheltered play area. This also separates bus and vehicular drop-off alleviating the congestion and enhancing student safety as they move from the parking lot to the building.

To ensure minimal classroom disruption Phase One of construction would begin with the demolition of the main gym and construction of the new Main Gym, the Library, the Commons, and Northern Elementary School Addition in the fall. Phase Two would begin in the summer with the Construction of the new Secondary School.

# STRATEGIC PLAN FOR IMPLEMENTATION

## DOLORS SCHOOL DISTRICT MASTER PLAN

Portable classrooms will likely be needed to ensure education programming continues. The new gym and the new commons space could also be used for temporary classroom space.

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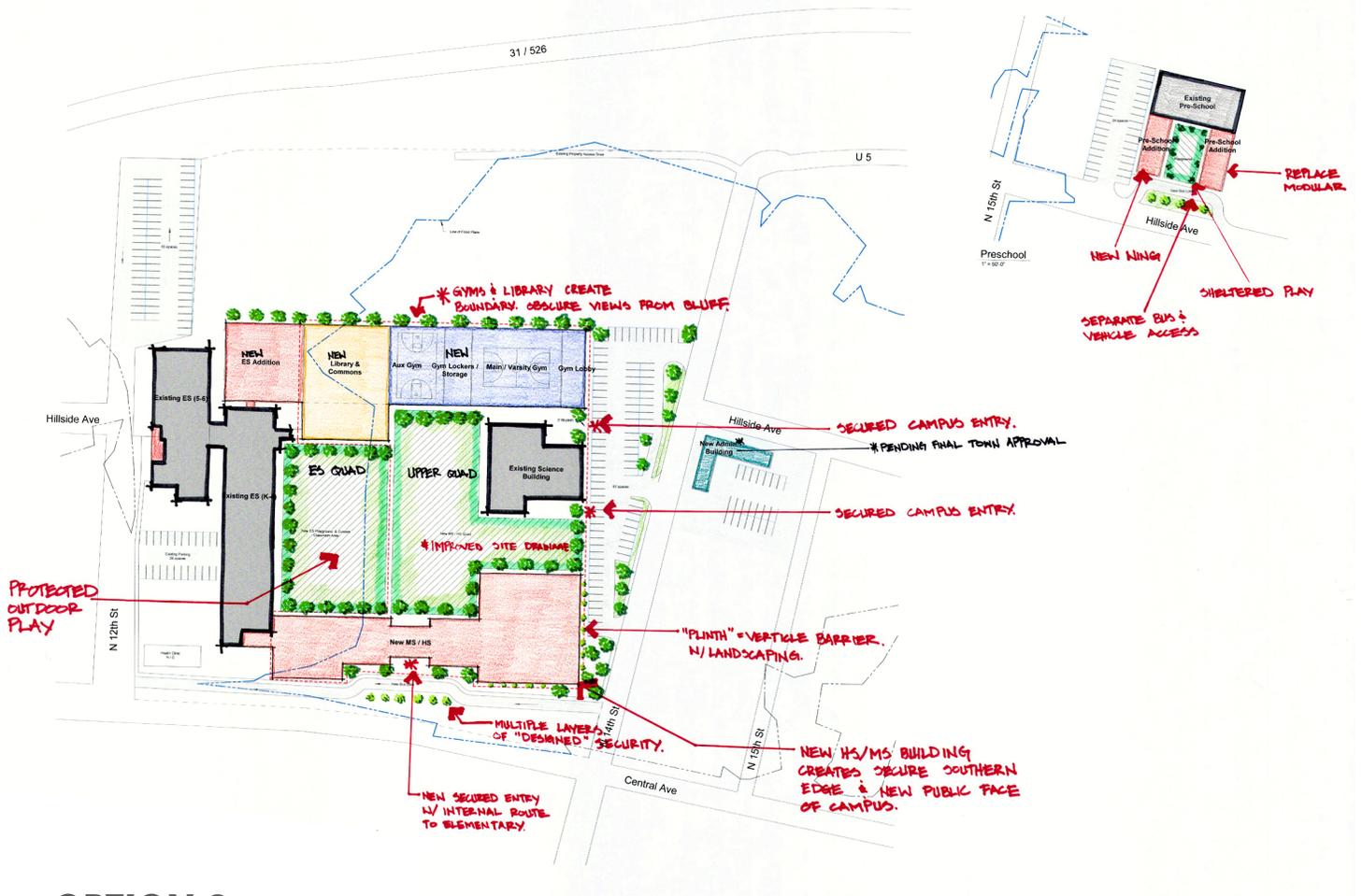
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# STRATEGIC PLAN FOR IMPLEMENTATION

DOLORES SCHOOL DISTRICT MASTER PLAN



## OPTION 3 THE GATEWAY

# STRATEGIC PLAN FOR IMPLEMENTATION

## DOLORES SCHOOL DISTRICT MASTER PLAN

To the right is Master Plan Preferred Option voted on by the Community, based off of the “Gateway” presented on July 16. It was decided to modify this option to keep the existing Library and Commons, and Auxiliary Gyms, but keep the two linear new buildings, to secure the north and the south edges of campus.

# STRATEGIC PLAN FOR IMPLEMENTATION

DOLORES SCHOOL DISTRICT MASTER PLAN

BLUFF: ~ 400' above campus

31 / 526



## FINAL CONCEPT DOLORES SCHOOL DISTRICT MASTER PLAN

# STRATEGIC PLAN FOR IMPLEMENTATION

DOLORES SCHOOL DISTRICT MASTER PLAN



## FINAL CONCEPT

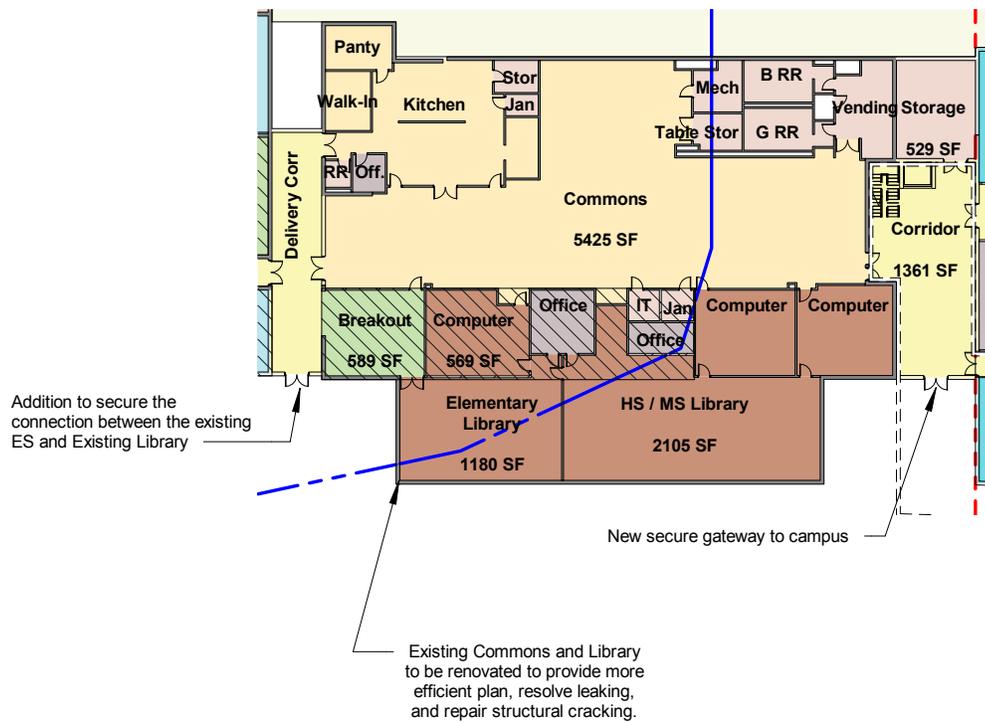
# NEW DOLORES HIGH SCHOOL BUILDING

RATIO | HPA

**90**

# STRATEGIC PLAN FOR IMPLEMENTATION

DOLORES SCHOOL DISTRICT MASTER PLAN



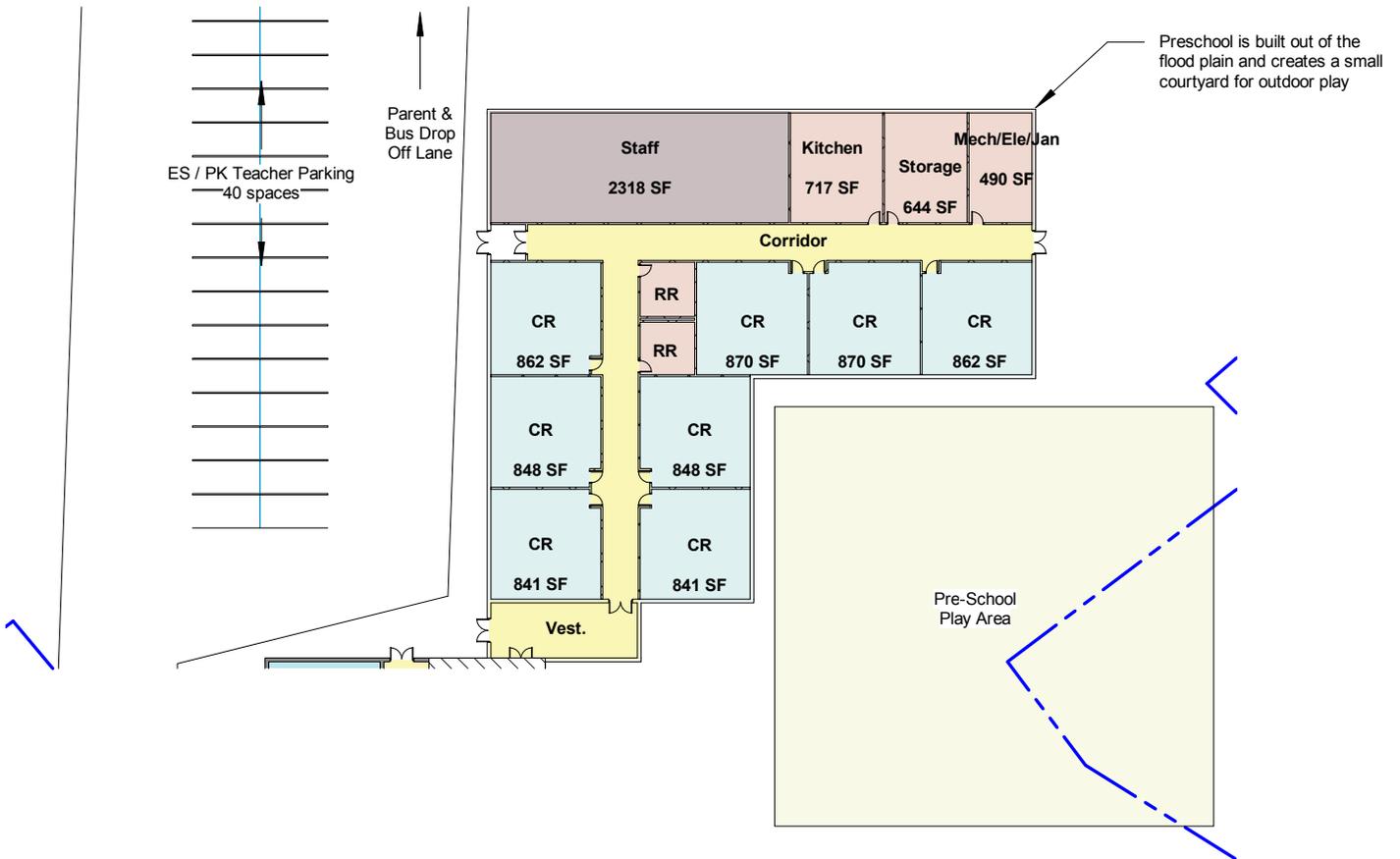
## FINAL CONCEPT

# DOLORES COMMONS AND LIBRARY RENOVATIONS



# STRATEGIC PLAN FOR IMPLEMENTATION

DOLORES SCHOOL DISTRICT MASTER PLAN

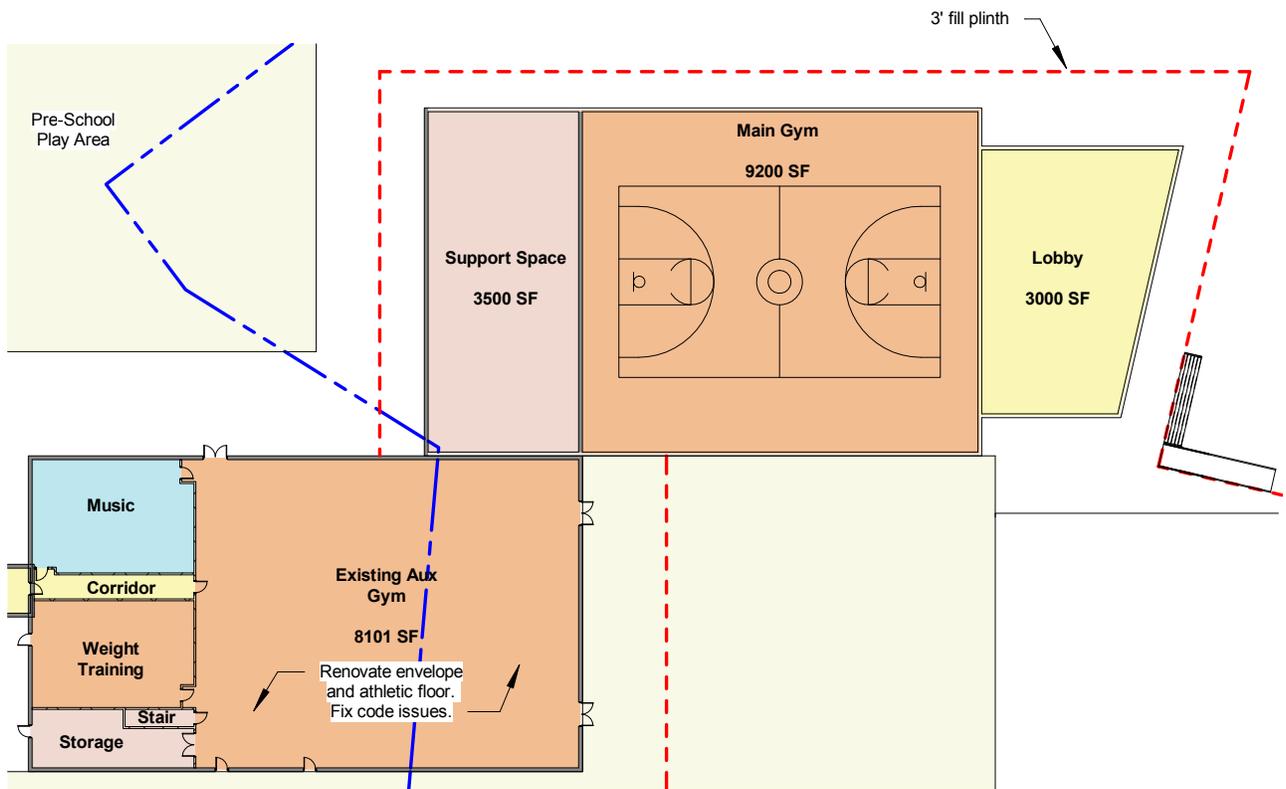


**FINAL CONCEPT**

## NEW DOLORES PRESCHOOL BUILDING

# STRATEGIC PLAN FOR IMPLEMENTATION

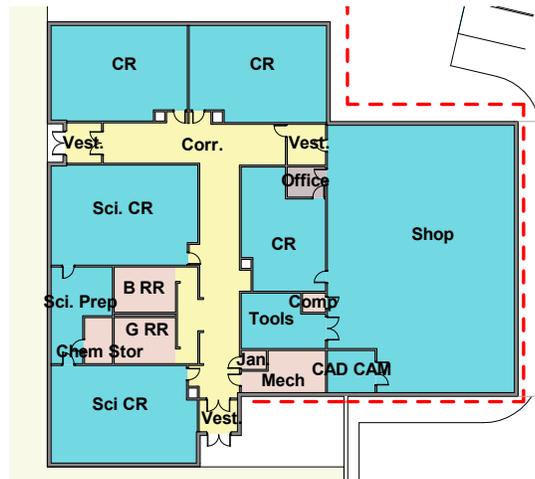
DOLORES SCHOOL DISTRICT MASTER PLAN



## FINAL CONCEPT

# DOLORES AUXILIARY GYM RENOVATION & NEW MAIN GYM

RATIO | HPA



## FINAL CONCEPT

## EXISTING DOLORES SCIENCE BUILDING

### **HIGH PERFORMANCE OBJECTIVES**

High performance objectives/components should be evaluated and included as part of the master planning process, including a LEED or CO-CHPS scorecard (if applicable) and narrative of high performance opportunities that can be achieved.

#### **Sustainable Features**

The ultimate goal for the project will be achieving an energy-efficient facility that minimizes maintenance costs and maximizes the performance of the students. The following goals should be addressed as a road-map to high performing facilities:

- Maximize energy and water conservation
- Energy efficient building envelope
- Appropriate day lighting in all learning environments
- High level of acoustic performance in learning environments
- Improved indoor air quality
- Use local and lowest “embodied energy” materials
- Eliminate toxic and hazardous substances
- Use materials and products with recycled content
- Provide recycling and composting programs for the school

#### **Daylight**

Of all the elements that make up a high performance school, none has greater impact on quality of learning than daylight. Daylight can be introduced into school buildings in many ways — including windows, skylights and light shelves. Sometimes, entire outside walls can disappear through the use of overhead doors and movable panels so that daylight can penetrate deep into interior spaces.

#### **Durability**

Educational facilities should be constructed with the longevity in mind. That means not only using durable materials but also designing the facility with as much built-in flexibility as possible.

When considering the materials to be used, the most durable, such as masonry, also become the most sustainable. The issues of resource control - what to build, where to build, and budget, are basic to sustainability in design. The use of materials that are timeless in nature as well as durable will lead to a structure that retains its usefulness for an extended period of time.

### **Sustainability Program Certification**

Should project funding be secured through a State of Colorado BEST grant, the project will be required to adhere to LEED for schools or the Collaborative for High Performing Schools certification, based on Senate Bill 07-051. The total size of the new construction will be over 5,000 square feet in area, and state funds will account for more than 25% of the project's budget. The proposed scope and budget contain specific allowances for achieving a certification. These strategies will exceed 5% of the project budget, so the requirement is subject to review. The sustainability program the District elects to include should be developed with the District at the schematic phase of the design process.

Some items to consider include:

- Focusing on water efficiency will earn the project bonus points due to the regional considerations of LEED for Schools.
- Low-flow faucets and plumbing fixtures will contribute to an above-average use reduction.
- Local, recycled and renewable materials are possible for the school, as is construction waste management.
- Specification of proper interior finishes to support indoor air quality.
- Construction Indoor Air Quality Management Plan – During Construction
- Thermal Comfort
- Mold Prevention
- Highly efficient HVAC systems

## XVII. CONCLUSION

Participation by parents, students, teachers, community stakeholders, and administrative staff is crucial to ensuring that the design philosophy and initiatives reflect the needs, concerns, and priorities of the community. Involving the community in the planning process takes time and effort, but we have found it results in a facility that is optimal for serving current and future residents. Nearly every school project undertaken by our firm demonstrates our ability to make communities feel heard and gain direction through our outreach efforts.

As a firm, we are committed to a design process that establishes a relationship with the community. Our public engagement process is designed to gather input from diverse groups to understand the specific needs of the community the school will serve. This type of participation greatly informs our designs and is something that we feel results in a strong sense of civic pride. The following information provides an overview of our methods to gather feedback and how we translate the data collected into usable information to apply towards your 21st Century Learning Environment design.

### **PHOTO-TYPING**

User-focused school design requires us to get to know students and users on a deeper level than just demographics and statistics. The “photo-typing” exercise is one way that we gather information about what participants care about and what the school’s vision is. Attendees are asked to bring photos to the meeting representing ideas such as how they use the school, how they interact with their community, and the things that inspire them about their school culture. These photos are then shared and discussed in the group setting. The stories that emerge highlight rich areas of opportunity and allow our design team to more fully understand the values, attitudes, and driving forces in a community, resulting in a school facility that represents the people it serves.

### **PROTOTYPING**

Prototyping is a process of experimentation to explore ideas before any ground is broken. Similar to photo-typing, we work with smaller groups to make ideas visible and tangible. Working quickly to put together a simple three-dimensional model allows people to not worry about the details or getting it right the first time, but instead focus on the endless possibilities of their ideas. As people work to transform and communicate ideas in their head to a form that can be understood by others, it becomes obvious what ideas users are excited about. These concepts can then be used by the design team in the next stage of the process.

As with many rural districts in Colorado the Dolores School District campus is the literal and symbolic heart of the community and it is the desire of this community to keep the campus where it exists today. It is clear that without a major intervention the campus will continue to experience the same safety concerns and challenges from weather events that are currently absorbing district resources and deteriorating from the quality of the educational experience.

To begin to understand the campus needs, Max McCloskey, with RATIO | HPA, met with the Facilities Maintenance Director, Alfonso Goad, on May 2nd, 2019 to identify the system's deficiencies around the campus. These observations are outlined through the BEST Facilities Assessment, Complete Inventory of Facilities, and Facility Evaluation Sections of this Master Plan with Meeting Minutes included in the Appendix.

RATIO | HPA returned to campus on May 10th, 2019 with Max McCloskey and Alisa Penkala to host the first Design Advisory Group (DAG) Meeting. Members of the School Board, Students, Faculty, Staff, Administration, Parents, and Alumni of Dolores School along with other various community members were invited to participate in the DAG. Participants were asked to bring four photos that represented each of the following:

1. A photo that represents the Community / what makes Dolores Schools special to them
2. Their Vision for the campus
3. That best depicts Dolores School District culture
4. That represents their view of a perfect school

This quickly helped RATIO | HPA to identify the community values and overall goals of the School District. The DAG voiced their concerns for the safety of the students and staff, and the deterioration of the facilities. This feedback coupled with the information from the maintenance staff provided RATIO | HPA with a broad understanding of the campus needs. The Agenda, Sign-In Sheets, and Meeting Minutes for this DAG can be found in the Appendix of this Master Plan.

The DAG split into two groups and met for a second time with Max and Alisa for a Programming Workshop. The first group consisted of the Principals, Interim Superintendent, and Maintenance Director. Max and Alisa presented a Matrix indicating additional campus deficiencies based on CDE guidelines. The meeting concluded with a presentation and discussion of the following two options presented to the group:

# CONCLUSION

## DOLORES SCHOOL DISTRICT MASTER PLAN



### Scheme 1:

“The Quad” Scheme’s goal was to have a secure bus loop away from other congested drop-off and pick up points, maintain as much of campus as possible, and create a secure interior quad courtyard for students. The Elementary School would remain and be connected to the existing Library and Commons Building with a new District Administration Office. A new Performing Arts Center is built to the east of the Library and Commons securing the southeast edge of the site. The Wood Shop, Science Building, and Band Room remain while. The existing Secondary School is demolished and a new Secondary School is constructed directly to the north of the Band Room. A security plaza connects the new Secondary School to the new bus drop-off and the new Varsity Gymnasium.



### Scheme 2:

“Dryland” Scheme’s goal was to move new construction out of the flood plain and centralize the bus drop-off and pick up location to alleviate congestion and remove kids from the outside of campus while keeping the football field on campus. The Elementary School remains in place with an addition located on the north side of the west wing. Attached to the Elementary School addition is a new Secondary School Building that creates a small courtyard for secure outdoor play. The existing football field is re-surfaced with artificial turf, and a CHSAA compliant 8-lane track is added around the perimeter of the field.

After the first DAG critiqued RATIO | HPA’s preliminary design schemes, the second half of the DAG, consisting of teachers, school board members, parents, and chamber members learned about the two schemes and provided feedback. The DAG then broke into three teams to develop their own Mast Plan concept.



### DAG Scheme A:

This scheme keeps the football field on campus, along with the Elementary School, Band Room Building, Science Building, and Wood Shop Building. A new cafeteria would replace the existing Auxiliary Gym. On the southern edge, a new Library and Performing Arts Center are connected to a new Varsity Gym. A new bus loop is centered on the Varsity Gym, becoming the main entry point on campus. The eastern half of campus is locked down by the Auxiliary Gym, and Secondary School.

### DAG Scheme B:

This scheme also keeps the football field and track on campus. The existing Elementary School receives an addition on the north side of the West Wing and an addition to the south on the East Wing for District Administration, which connects the Elementary School to the existing Library and Commons. A new two-story Secondary School is located to the north of the Commons adjacent to the existing Science Building. The existing Auxiliary is converted to a Varsity Gymnasium and new Auxiliary Gymnasium is connected to the east. A new Performing Arts Center is located in the Center of Campus.

The Agenda, Sign-In Sheets, and Meeting Minutes for this DAG can be found in the Appendix of this Master Plan.



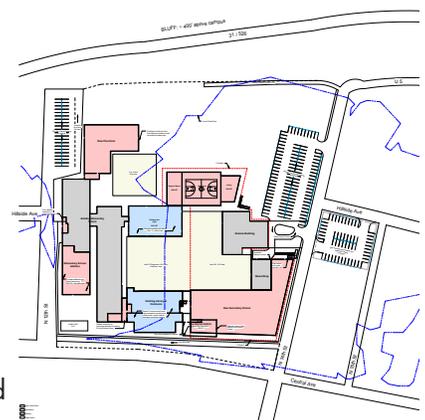
### Community Meeting:

On July 16, 2019 RATIO | HPA hosted a community meeting in which they presented three schemes derived from the DAG meetings. These options are outlined in Strategic Plan for Implementation. Ultimately the group decided the preferred option to be "Gateway". In this scheme the Secondary School, Library, Commons, and both Gymnasiums are demolished. A new Secondary School anchors the south edge of campus. A new bus loop lane drops off right in front of the new Secondary School. A secure courtyard is created with the new construction on the north side of campus of an Elementary School Addition, Library, Commons, and new Gymnasiums.



### Final Scheme:

The Gateway option was shared with Julia Fitzpatrick and Meg Donaldson with the CDE. Some modifications were developed and approved by the District Superintendent, Lis Richard, in an effort to couple the needs of the District with the competitive funding nature of the BEST grant system. The concept includes keeping the Elementary School, Library, Commons, Auxiliary Gym, Science Building, and Wood Shop. Relocating the Preschool to the main campus and connecting it directly to the northern edge of the Elementary School. A new Varsity Gym would be constructed to the north of the Existing Auxiliary Gym with new locker rooms and support spaces and a lobby. A new large parking lot near N 14th St and Hillside Ave will be located at the northeast corner. A new Secondary School will anchor the southeast corner of campus. A partial second level will be constructed to house the District Offices and the first floor will be constructed to have the potential to add a full second floor for future growth. A dedicated bus lane will be implemented on Central Ave improving site safety through the separation of vehicle and bus circulation.



# APPENDIX A - STAKEHOLDER MEETING MINUTES

DOLORES SCHOOL DISTRICT MASTER PLAN

## APPENDIX A - STAKEHOLDER MEETING MINUTES



RATIO



### FACILITIES MEETING AGENDA

Date: May 2<sup>nd</sup>, 2019 9:00AM – 4:30PM

Project: Dolores School District Master Plan – Project Kick-off Meeting, Dolores School District Administrative offices.

#### Agenda:

1. 9:30AM – 11:00AM Meeting with facilities/ maintenance Staff
  - a. Understand campus systems deficiencies as outlined in the 2012 CDE facilities report. What additional items have emerged since?
  
2. 11:00AM – 12:30PM Campus Tour
  - a. Document deficiencies
  
- 12:30 – 1:30 Lunch
  
3. 1:30 – 4:30 Project Kick-Off meeting/ DAG workshop
  - a. Dolores School District team introductions
  - b. Humphries Poli Architects introduction presentation
  - c. Review Master Plan scope as outlined in the Request for Proposals
  - d. Discuss campus deficiencies as outlined in the 2012 CDE facilities report.
  - e. Establish/ confirm project goals and community values
  - f. Discuss needs for next workshop:
    - i. Programming documents
    - ii. Facilities operational cost data
    - iii. Preliminary coordination with CDE Regional Program Manager (HPA to initiate)

#### Design Advisory Group (DAG):

The DAG group should be selected prior to the kick-off meeting and should consist of 12-15 members of the following stakeholder groups:

1. School Board
2. Students
3. Faculty & administration leaders
4. Parents
5. Alumni and/ or community members

# APPENDIX A - STAKEHOLDER MEETING MINUTES

DOLORES SCHOOL DISTRICT MASTER PLAN

## FACILITIES TEAM MEETING SUMMARY

**Meeting Minutes**

**Dolores RE-4a Master Plan – Facilities Team Meeting**

**Date** 02 MAY 2019

**Project** Dolores School District Master Plan

**Project No.** 39018

**Re:** Facilities Team Meeting

**Location** District Offices

**Participants**

Name (Initials) Max McCloskey (MM) Alfonso Goad (AG) Jose Barrera (JB) Roseta Vandever Nick Martinez Gee Scott Luke Godwin Roberto Vaca	Company Name (Initials) RATIO   HPA (HPA) Dolores School District (DSD) Dolores School District (DSD)
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These meeting minutes represent our record of the issues discussed and/or action items identified during the meeting. If the minutes contained herein are not consistent with your recollection of the meeting, please contact this office within 3 business days of receipt. The following summarizes the minutes of the meeting: Legend (Resp – Responsibility, IP – In Progress, C - Closed, Info. - Information) ES – Elementary School, MS – Middle School, HS – High School, PS – Preschool, CC – Campus Commons, L – Library, MG – Main Gym, AG – Auxiliary Gym,

Item	Description	Due
<b>1. PRE-SCHOOL</b>		
1.0	- Original Building 1993	
1.1	MECHANICAL: - There are (3) mechanical units from the original construction in 1993 and have not been replaced. Their parts have been an issue. The building has both heating and cooling. - No additional issues, parts and filters have been maintained and changed regularly.	
1.2	PLUMBING: - The restroom counts are deficient for the number of students the school is serving. - Due to the amount of water the kitchen uses, there is a desire for on-demand just for the kitchen. - The water heater was replaced in 2014. - The building is sprinklered; it is a dry system. The parts are hard to find, and they would like to move to a wet system.	
1.3	ADDITIONAL NEEDS: - There is not a designated custodial closet. - There is not a sufficient amount of storage. - Currently have a modular to house the infant program which has a new structure but is not sprinklered. These classrooms should be included in the Pre-School building.	
1.4	ENVELOPE: - The EPDM Membrane Roof is as old as the building and has not been replaced and needs to be replaced. - Natural drainage path from the mountain runs directly behind the Pre-School Building. A retaining wall currently keeps the water from coming into the building. - During the winter months there is ice build-up on the back sidewalk of the Pre-School Building. - The dirt parking lot is not sufficient for the school's needs. New gravel is placed down every year and is consequently removed every year with the necessity to plow for snow removal. There is not an adequate amount of spaces and not a safe way to	

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Affiliates: RATIO States, LLC | RATIO States – NC, PLLC | RATIO Architects of Ohio, LLC | smdp, LLC

# APPENDIX A - STAKEHOLDER MEETING MINUTES

## DOLORES SCHOOL DISTRICT MASTER PLAN

Dolores School District

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May 2, 2019

	<p>navigate during pick up and drop off. With a new security fence, this parking lot will be in the way. A lot is available for purchase adjacent to the pre-school, which could serve as a new parking lot and place for snow removal storage.</p> <ul style="list-style-type: none"> <li>- A separate bus drop-off is desired, away from the parking to alleviate congestion.</li> <li>- The current playground is antiquated. The district is working on getting grant money for a new play area include new fencing to replace the inadequate fencing that currently exists.</li> <li>- There is a waiting list of 45 students, with additional classrooms, the Pre-School could serve these students. The school was remodeled in 2014 to provide (1) additional classroom.</li> </ul>	
<b>2. ELEMENTARY SCHOOL</b>		
2.1	<ul style="list-style-type: none"> <li>- Original building 1968</li> <li>- Additions: 1991, 1996</li> </ul>	
2.2	<p>LIGHTING:</p> <ul style="list-style-type: none"> <li>- Currently there are florescent lights that were installed in 2009. Most ballasts now need to be replaced. There is a desire to change to LED.</li> <li>- The previous MP noted that this is the oldest service on campus. Although the current system is working fine, the teacher's lounge is overburdened with equipment.</li> <li>- Current system is CAT-5 with Fiber.</li> </ul> <p>Mark Baxter runs the District's IT.</p>	
2.3	<p>MECHANICAL:</p> <ul style="list-style-type: none"> <li>- The building has heating (furnace and controls) that is original to the building's construction. There are unit ventilators in each classroom. The Trane units are forced air on the north side in the 3-5 wing. This building also includes boilers.</li> <li>- The building has cooling with evaporative coolers throughout the roof, only in the K-3 wing, which is original to the building's construction. The new addition does not have cooling. The areas without cooling are a big complaint from the teachers.</li> <li>- The original building is ventilated through the operable windows while the addition has unit ventilators that bring the outside air in.</li> <li>- The boilers were replaced in 2014 with (2) Lock and Var Knight highly efficient condensing boilers</li> <li>- The air handling units are likely done in the 1990's and cannot find the parts anymore.</li> </ul>	
2.4	<p>PLUMBING:</p> <ul style="list-style-type: none"> <li>- (3) faucets have been updated since the original construction</li> <li>- Hot water heater has not been replaced since the 2011 MP report and it is not able to keep up with the demand from the restrooms. Due to the demand and the distance from the restrooms, the water is lukewarm in the K-3 hallway.</li> <li>- Sprinklers were added in the 2014 renovation / grant.</li> <li>- 1-2 times per year there is a backup in the breezeway between the gym and ES. It is assumed there is not enough fall. Nothing has been done to remedy this.</li> <li>- The restrooms need to be remodeled and additional fixtures need to be added. The demand for the restrooms during lunch hour creates a line in the hallway.</li> </ul>	
2.5	<p>ENVELOPE:</p> <ul style="list-style-type: none"> <li>- The original building is brick and the addition is stucco. There is some stucco damage due to water. The entire north side of the building is damaged from snow during the winter months and water draining from the roof onto the face of the envelope.</li> <li>- The roof is metal seam and membrane with the addition having only a membrane. The additional roof is in acceptable condition while the roof on the original building</li> </ul>	

# APPENDIX A - STAKEHOLDER MEETING MINUTES

	has had some ice damming damage causing leaks in various locations including the ES Gym and the new building and needs to be replaced.	
2.6	<p>ADDITIONAL:</p> <ul style="list-style-type: none"> <li>- Consider the health apart of the ES</li> <li>- This was built with no landscaping - an item on to do list for maintenance.</li> </ul>	
<b>3. MIDDLE SCHOOL</b>		
3.1.	<ul style="list-style-type: none"> <li>- Original Building 1971</li> <li>- Finishes Remodel 2010 (tongue and groove ceiling and laminate tile only)</li> </ul>	
3.2.	<p>LIGHTING:</p> <ul style="list-style-type: none"> <li>- Fluorescent lighting throughout</li> <li>- Same issues as ES, the ballasts are going out and would like to switch over to LED</li> <li>- Wall Pack LED to be added this summer</li> <li>- There is quite a bit of overloading, breakers are frequently tripped, and outlets are not enough to serve the classrooms. The surface strop mounted outlets are located inefficiently for today's classroom uses. Each student has a chrome book or tablet and charging carts in each classroom.</li> </ul>	
3.3.	<p>MECHANICAL:</p> <ul style="list-style-type: none"> <li>- Classrooms are served by furnaces</li> <li>- Previous 2011 MP noted the furnaces would need to be replaced within 10 years, but they have not yet been replaced.</li> <li>- Trane units with on-going minor maintenance.</li> <li>- Controls only have 4-degree variance, causing constant complaints from teachers about the temperature.</li> <li>- Overall building automation system is outdated</li> <li>- Hardware needs to be updated.</li> </ul>	
3.4.	<p>COOLING:</p> <ul style="list-style-type: none"> <li>- Cooling is provided through wall mounted (hotel) units in classrooms (3 years ago)</li> </ul>	
3.5.	<p>PLUMBING:</p> <ul style="list-style-type: none"> <li>- The fixtures are original to the building, although there are not any current issues, maintenance anticipates their failure and they need to be replaced</li> <li>- The hot water heater has not been replaced since the last MP report</li> <li>- The building is sprinklered</li> </ul>	
3.6.	<p>ENVELOPE:</p> <ul style="list-style-type: none"> <li>- The East wall of MS commons / counselor has water seeping at roof and floor.</li> <li>- Exposed stem wall is deteriorating.</li> <li>- The Breezeway with the shed roof at entry directly south of the commons has ice dams and poor drainage from roof</li> <li>- MS N wing roofs been replaced with EPDM (2014)</li> <li>- Roof above commons, south of firewall needs to be replaced. (currently membrane - likely original)</li> <li>- Brick damage with efflorescence</li> <li>- Snow sits on roof for long periods of time due to low slope</li> <li>- Fire wall separating HS may not meet code</li> </ul>	
3.7.	<p>OTHER:</p> <ul style="list-style-type: none"> <li>- During this year's thaw, water leaked into the floor ducts</li> </ul>	

# APPENDIX A - STAKEHOLDER MEETING MINUTES

## DOLORES SCHOOL DISTRICT MASTER PLAN

Dolores School District

Page 4

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	<ul style="list-style-type: none"> <li>- Janitorial storage is inefficient. Chemicals are at the bus garage; paper is in a shed. Custodians running all over town. Must walk all over campus for specific supplies. A central supply facility to service all buildings would be ideal. They have been pushed out of spaces.</li> </ul>	
<b>4. HIGH SCHOOL</b>		
4.1	<p>Original building: 1954            Addition: 1971            Finishes remodel: 2010</p>	
4.2	<p><b>ELECTRICAL:</b></p> <ul style="list-style-type: none"> <li>- Fluorescent lighting throughout</li> <li>- Same issues as ES, the ballasts are going out and would like to switch over to LED</li> <li>- Wall Pack LED to be added this summer</li> <li>- Same as MS Service issues</li> </ul>	
4.3	<p><b>MECHANICAL:</b></p> <ul style="list-style-type: none"> <li>- Classrooms served by furnaces - previous master plan indicated replacement in 10 years, but they have not been replaced.</li> <li>- (Trane) Forced air in classrooms with transfer grills to hallway.</li> <li>- Roof exhaust fans (some are non-operational, likely need motors replaced.) and through wall fresh air to classroom furnaces.</li> <li>- Controls have same issues as MS.</li> </ul>	
4.4	<p><b>COOLING:</b></p> <ul style="list-style-type: none"> <li>- Wall mounted (hotel) units at classrooms three years ago similar to the MS. Admin.</li> <li>- The offices have rooftop heating / cooling unit.</li> </ul>	
4.5	<p><b>PLUMBING:</b></p> <ul style="list-style-type: none"> <li>- None of the fixtures have been replaced.</li> <li>- The hot water heater was replaced in 2017; the hot water is warm, not hot.</li> <li>- The building is sprinklered</li> <li>- There is water damming</li> </ul>	
4.6	<p><b>ENVELOPE:</b></p> <ul style="list-style-type: none"> <li>- See comments in MS</li> </ul>	
<b>5. GYM / COMMONS / LIBRARY</b>		
5.1.	<p>Library Built as addition to gym: 1995            Original Gym building: 1954            Second gym addition: 1990            Commons addition: 1995            Locker rooms: 1976 (remodeled 2014?)            Additions: 1991, 1996 (vestibule on east side of original gym)</p>	
5.2.	<p><b>LIGHTING / ELECTRICAL:</b></p> <ul style="list-style-type: none"> <li>- Gyms to get LED lighting this summer</li> <li>- Wall Packs to be LED this summer</li> <li>- Current gym lighting is inadequate</li> <li>- Ballasts need to be replaced</li> <li>- Would like to have LED lighting throughout</li> <li>- The gym lacks adequate amounts of outlets; there are only (4) in gym proper</li> <li>- When polishing the floor with 2 pieces of equipment breaker is tripped.</li> <li>- South wall of commons - outlets don't work.</li> <li>- East wall of library - some outlets don't work.</li> <li>- Computer labs in commons don't have enough outlets for workstation computers. Currently plugging surge protector into strip outlets. Not enough outlets for the number of students per class. District would like to modernize the computer labs - currently all outlets are on perimeter of room - kids sit at computers facing walls and it becomes hard for the teacher to instruct their students since the students are not looking at her or the teaching wall. (There are two labs.)</li> </ul>	

# APPENDIX A - STAKEHOLDER MEETING MINUTES

5.3.	<p><b>MECHANICAL:</b></p> <ul style="list-style-type: none"> <li>- The Commons is served by the rooftop unit for ventilating and the unit is shared by the library and Gym. It is served by gas fired tube heaters that are ceiling mounted in the space. The previous master plan recommended these units to be replaced, but it has not been replaced yet - these tubes are constantly getting damaged.</li> <li>- There is corrosion in the lines due to mineral deposits in the components in the system for commons eating space and library. The Heating unit is on top of kitchen along with the swamp cooler</li> <li>- Heating tubes for gym replaced three years ago - one is still original.</li> </ul>	
5.4.	<p><b>COOLING:</b></p> <ul style="list-style-type: none"> <li>- There is a swamp cooler on the kitchen roof, but there is not a reservoir, therefore the supply water runs through the pads and onto the roof.</li> <li>- The cooler does not service the volume appropriately.</li> <li>- The previous MP suggested replacement for the gym and locker rooms, but it was not replaced.</li> <li>- There is not a ventilations system for the gym, the pressure from the commons pressurizes the gym.</li> </ul>	
5.5.	<p><b>ADDITIONAL:</b></p> <ul style="list-style-type: none"> <li>- The curtains for the stage are deteriorating and the manufacturer is out of business.</li> <li>- Locker rooms: The previous BEST grant remodel did not replace AHU, which needs constant maintenance, it has exceeded its expected lifespan. It's the original unit (resnar)</li> <li>- The Buttresses are deteriorating</li> </ul>	
5.6.	<p><b>PLUMBING:</b></p> <ul style="list-style-type: none"> <li>- Locker rooms are connected to same waste line as ES. During sporting events backup frequently occurs. This line was previously replaced with 2014 BEST. Issues began after warranty expired.</li> </ul>	
5.7.	<p><b>ENVELOPE:</b></p> <ul style="list-style-type: none"> <li>- The building is settling and there are structural cracks throughout commons floor and wall.</li> <li>- Library has significant structural cracking. Visual increase is cracking since 2012.</li> <li>- Library/ commons roof needs replaced.</li> <li>- The gutters are replaced every year. Snow falls from the roof and onto the front sidewalk (south facing). Maintenance has suggested heated sidewalks.</li> </ul>	
5.8.	<p><b>ADDITIONAL:</b></p> <ul style="list-style-type: none"> <li>- Storage for lunch tables is needed</li> <li>- Additional space for eating is needed since the commons is the hub for the public and the main eating area for the students. MAIN COMMON SPACE USED ON CAMPUS.</li> </ul>	
<b>6. BAND ROOM</b>		
6.1	Original building: 1995	
6.2	<p><b>ELECTRICAL:</b></p> <ul style="list-style-type: none"> <li>- Fluorescent lighting updated in 2009</li> </ul>	
6.3	<p><b>MECHANICAL:</b></p> <ul style="list-style-type: none"> <li>- Boiler heat with heat exchanger for heating.</li> <li>- No mechanical ventilation</li> <li>- No cooling.</li> </ul>	
6.4	<p><b>PLUMBING:</b></p> <ul style="list-style-type: none"> <li>- One sink with Hot Water</li> <li>- No Restrooms</li> <li>- The building is sprinklered and the system is run off of the city main and has affected the town's use of water</li> </ul>	
6.5	<p><b>ENVELOPE:</b></p> <ul style="list-style-type: none"> <li>- Stucco - no leaks.</li> <li>- Gas meter needs shed on.</li> <li>- Roof is standing seam metal with a pitch without gutters.</li> </ul>	
6.6	<p><b>ADDITIONAL:</b></p> <ul style="list-style-type: none"> <li>- Security concern with detachment from the rest of campus and visibility and vulnerability from the bluff</li> </ul>	
<b>7. WOOD SHOP</b>		

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## DOLORES SCHOOL DISTRICT MASTER PLAN

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7.1	Original building: 2002	
7.2	<p><b>ELECTRICAL:</b></p> <ul style="list-style-type: none"> <li>- The proximity to dust collector is a problem.</li> <li>- Fluorescent lighting updated in 2009</li> <li>- Service still seems to be adequate for the building</li> <li>- Additional outlets in the woodshop area are needed.</li> </ul>	
7.3	<p><b>MECHANICAL:</b></p> <ul style="list-style-type: none"> <li>- The Boiler providing Hot Water to the unit heaters in rooms was suggested to be replaced in 7-10 years from the Pervious master plan in 2011</li> <li>- The current system is adequate, often, parts are breaking but Facilities is still able to find the necessary parts and pieces.</li> <li>- There is not cooling in this building, although it should be added because the building gets incredibly hot especially during the hot months (May and August).</li> <li>- The previous Master plan had suggested adding a small ventilation unit and exhaust fans in classrooms.</li> <li>- The Dust collector located inside is code violation</li> <li>- The heat exchangers are struggling because it's such a large volume and the boiler is too small for the output needed. When the unit is in night mode it shuts down. When teachers arrive 7:30 am it takes four hours to get back up to 70 degrees</li> </ul>	
7.4	<p><b>PLUMBING:</b></p> <ul style="list-style-type: none"> <li>- No issues identified from previous master plan</li> <li>- The sinks have traps and there are drainage issues. Traps are cleaned at least 3 times a year.</li> </ul>	
7.5	<p><b>ENVELOPE:</b></p> <ul style="list-style-type: none"> <li>- There are leaks around the ventilation system due to flashing inefficiencies. Every couple of years there is a need to re-flash and re-caulk; this is caused by a low slope of roof and buildup of snow, primarily on east side of roof</li> <li>- The roof is a metal roof</li> <li>- There is corrugated metal factory painted siding that is in acceptable condition.</li> </ul>	
7.6	<p><b>ADDITIONAL:</b></p> <ul style="list-style-type: none"> <li>- Additional STORAGE for art is needed.</li> <li>- Egress being blocked.</li> <li>- When kiln is not being used its storage.</li> </ul>	
<b>8. SCIENCE BUILDING</b>		
8.1	2014 BEST Grant funded building	
8.2	<p><b>MECHANICAL:</b></p> <ul style="list-style-type: none"> <li>- Condensing boilers control radiant panels in rooms.</li> <li>- 3 RTU controls conditioned air. When one of the RTU's is running so much pressure doors are difficult to close.</li> <li>- There is not cooling in this building and it is a major issue with the teachers</li> <li>- HVAC is a large issue with this building. Primarily heating is through the boiler, and only when outdoor temps are below zero is when RTU's are used.</li> <li>- Outdoor air is provided through fans in RTUs.</li> </ul>	
8.3	<p><b>PLUMBING:</b></p> <ul style="list-style-type: none"> <li>- The electronic sensors get vandalized by students and the school must frequently buy an entire new fixture.</li> </ul>	
8.4	<p><b>ENVELOPE:</b></p> <ul style="list-style-type: none"> <li>- Roof and envelope are in good condition. There is some snow build up, but the roof's drains are better than the other buildings.</li> </ul>	
<b>9. CAMPUS</b>		
9.1	<p><b>DRAINAGE:</b></p> <ul style="list-style-type: none"> <li>- Worst area includes the north edge of campus with Ice damming.</li> <li>- There is nowhere to put snow, and no storm drainage.</li> <li>- With the 2014 remodel, the retaining ponds at east courtyard is not working efficiently during water events. With a snowstorm the city infrastructure backs up and the 8" storm drain cannot handle storm runoff. The east side of campus runoff water backs up into courtyard retaining ponds which pushes water all the way back to the MS/ band room.</li> </ul>	

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	<ul style="list-style-type: none"> <li>- The west side of campus area drains work well a product of the 2014 construction.</li> <li>- With the 2019 Gym flooding since the playing surface is 4-5 below finish grade, the entire gym floor was warped. 9 years ago, the gym floor was redone with a membrane.</li> </ul>	
9.2	<p><b>SECURITY:</b></p> <ul style="list-style-type: none"> <li>- Emergency lights have not been updated and the school district is always replacing the batteries.</li> <li>- There is a stand-alone fire alarm system.</li> <li>- There are over 100 doors on campus, and it is difficult to keep every door secure. Campus needs to be walked 2-3 times a day to ensure doors are closed. The only buildings that got access control in last BEST Grant were the Science and new ES addition with electronic strikes. The District installed their own electronic access control with cameras and fobs.</li> <li>- The Science Building has full access controlled; however the south main entrance is pinned up for student circulation.</li> <li>- The weak point in perimeter is the south walk between library and HS &amp; north between gym &amp; MS.</li> </ul>	
9.3	<p><b>LIGHTING:</b></p> <ul style="list-style-type: none"> <li>- Currently all exterior security lighting is consistent of wall packs with some additional lighting at the breezeway between the gym and ES, the HS courtyard, and the north edge of campus</li> </ul>	
9.4	<p><b>PARKING:</b></p> <ul style="list-style-type: none"> <li>- Teachers use the front (south parking area) and across street and is completely full.</li> <li>- Teachers also park at the southwest corner of campus for ES teachers and it is currently a sufficient size. The lot across 12th is additional parking for both parents and teachers.</li> <li>- HS student parking is at the southeast corner across the street and is sufficient for their current needs. Their largest parking issue is on the west side of campus. The pickup and drop off area gets very congested; cars park along both sides of 1 way street.</li> <li>- Bus drop off and pick is on the northwest corner of the site. There is a lot of pedestrian and vehicle congestion at this location.</li> <li>- Parking at HS (south) has conflicts with pull in parking and parents dropping off HS students simultaneously; Parked cars can't pull out.</li> <li>- The Preschool is a not efficient and there is not enough parking. The parking lot is a dirt lot without any striping, causing conflicts with bus drop off and creates safety concerns for students getting dropped off by bus and from cars. There are also concerns about cars hitting the building because there is not a barrier.</li> </ul>	
<b>10. OTHER NOTES AND CONCERNS</b>		
10.1	<ul style="list-style-type: none"> <li>- There is lots of separation between buildings with so many paths and routes to maintain. The staff arrives at 3 am (2 staff) and will work until 10:30am to clear pedestrian paths, to the school. The parking has not been addressed by this point in the morning. Parking has been outsourced to private snow removal company. Total staff = 7.</li> </ul>	
10.2	<ul style="list-style-type: none"> <li>- Snow removal is an issue with the constant question of where does snow on all the paths go? It could be piled in street, unless there's more than 8", then it either goes in plantings or out to the football field.</li> </ul>	
10.3	<ul style="list-style-type: none"> <li>- Rock landscaping requires a ton of labor to remove weeds. The school does not use poison. An alternative option could be native seed or flatwork.</li> </ul>	

End of Meeting Minutes

**By:** Alisa Penkala, Designer  
Max McCloskey, Project Architect

**Cc:** Attendees, Project Team, file

# APPENDIX A - STAKEHOLDER MEETING MINUTES

DOLORES SCHOOL DISTRICT MASTER PLAN



RATIO



## DAG - 1 MEETING AGENDA

Date: May 10, 2019

Project: Dolores School District Master Plan – Design Advisory Group (DAG) Meeting-1

Location: Dolores School District Administration Offices, 100 N. 6th Street

### Design Advisory Group (DAG):

The DAG group should be selected prior to the kick-off meeting and should consist of 12-15 members of the following stakeholder groups:

1. School Board
2. Students
3. Faculty & administration leaders
4. Parents
5. Alumni and/ or community members

### DAG Meeting#1 (Mind-Breaking & Photo-Typing) Homework!

Just as *Groundbreaking* is the beginning of construction, *Mind-breaking* is the beginning of the conceptual phase of the project. Each participant in the mind-breaking meeting is asked to **bring 4 photographs** that define the items listed below. This will assist HPA in understanding the community values and overall goals each Stakeholder has for this master planning process.

1. A photo that represents the Community / what makes Dolores Schools special to them
2. Their Vision for the campus
3. That best depicts Dolores School District culture
4. That represents their view of a perfect school

### (1:00 – 4:00) DAG Meeting #1 Mind Breaking Agenda

1. (30 minutes) Project Kick-Off Introductions and project scope
  - a. Dolores School District team introductions/ Humphries Poli Architects introduction presentation
  - b. Confirm Master Plan scope as outlined in the Request for Proposals
2. (40 minutes) Campus deficiencies
  - a. Participants will write on post-it notes and place them on areas of a campus plan to identify deficiencies.
3. (60 minutes) Photo-typing exercise
  - a. AG participants will be asked to share their four images followed by a group discussion to define the Master Plan goals.
  - b. Establish/ confirm project goals and community values
4. (30 minutes) Discuss needs and plan for next workshop to be held on 5/24:
  - a. Programming documents – HPA to follow up with DSD
  - b. Facilities operational cost data – HPA to follow up DSD
  - c. Preliminary coordination with CDE Regional Program Manager – HPA to initiate
  - d. DAG Meeting #2: Campus Master Planning design Charette.

# APPENDIX A - STAKEHOLDER MEETING MINUTES

DOLORES SCHOOL DISTRICT MASTER PLAN

## Sign in

**Date** 10 May 2019  
**Project** Dolores School District Master Plan  
**Project No.** 39018  
**Re:** Mind Breaking  
**Location:** Dolores School

NAME	DEPARTMENT/ TITLE	EMAIL
Alfonso Good	Maint	agood@dolores.k12.co.us
Valiema Rosenkranz	Preschool	vrosenkrantz@dolores.k12.co.us
KEVIN Vaughn	ELEMENTARY	kvaughn@dolores.k12.co.us
Kelly Howerton	Elementar	khowerton@dolores.k12.co.us
Doreen Jones	Admin/ Finance Dir	djones@dolores.k12.co.us
Michael Nielson	History Secondary/ Teacher	mnielson@dolores.k12.co.us
Santiago Lopez	community member	santi.37@hotmail.com
Phil Kasper	DSD	pkasper@dolores.k12.co.us
Ryan Maloney	Parent	racerbaby@rocketmail.com
Patsy Sainz	community	pa_zhi@sbc.com

## PROJECT GOALS

1. TRANSPARENCY
2. COMMUNITY INVOLVEMENT
3. PROXIMITY (NEW BUILDINGS)
4. SAFETY
  - Secure campus entry points
  - Secure campus perimeter with delayed entry
  - No more than 3 access points
5. INCLUSION - DESIGN FOR ALL STUDENTS.



# APPENDIX A - STAKEHOLDER MEETING MINUTES

DOLORES SCHOOL DISTRICT MASTER PLAN



RATIO



## DAG - 1 MEETING SUMMARY

### Meeting Minutes

#### Dolores RE-4a Master Plan – DAG Meeting no. 01

**Date** 10 MAY 2019  
**Project** Dolores School District RE-4a Master Plan  
**Project No.** 39018  
**Re:** DAG #1: MIND BREAKING & PHOTOTYPING  
**Location** District Offices

Participants	Name (Initials)	Company Name (Initials)
	Max McCloskey (MM)	RATIO   HPA (HPA)
	Alisa Penkala (AP)	RATIO   HPA (HPA)
	Alfonso Goad (AG)	Dolores School District (DSD)
	Phil Kasper (PK)	Dolores School District (DSD)
	Valiena Rosenkrance (VR)	Dolores School District (DSD)
	Kevin Vaughn (KV)	Dolores School District (DSD)
	Kelly Howerton (KH)	Dolores School District (DSD)
	Doreen Jones (DJ)	Dolores School District (DSD)
	Michael Nielson (MN)	Dolores School District (DSD)
	Santiago Lopez (SL)	Community Member
	Ryan Maloney (RM)	Parent
	Patsy Sainz (PS)	Community Member

These meeting minutes represent our record of the issues discussed and/or action items identified during the meeting. If the minutes contained herein are not consistent with your recollection of the meeting, please contact this office within 3 business days of receipt. The following summarizes the minutes of the meeting: Legend (Resp – Responsibility, IP – In Progress, C - Closed, Info. - Information)  
 ES – Elementary School, MS – Middle School, HS – High School, PS – Preschool, CC – Campus Commons, L – Library, MG – Main Gym, AG – Auxiliary Gym,

Item	Description	Due
<b>1. INTRODUCTIONS</b>		
1.1	DAG members went around the room and introduced themselves.	
1.2	MM gave background presentation about Humphries Poli Architects.	
1.3	MM reviewed Master Plan process and project scope	
<b>2. DEFICIENCIES WORKSHOP</b>		
2.0	AP and MM pinned up aerial images of the campus on the wall and asked DAG members to write known deficiencies on post it notes then locate them on the corresponding areas of the aerial images of the campus.	
2.1	DAG a group discussion as AP read comments provided.	
<b>3. CAMPUS</b>		

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1655 Grant Street Denver, Colorado 80203 303.607.0040  
 Indianapolis, IN Champaign, IL Raleigh, NC Chicago, IL Denver, CO  
 Affiliates: RATIO States, LLC | RATIO States – NC, PLLC | RATIO Architects of Ohio, LLC | smdp, LLC

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DOLORES SCHOOL DISTRICT MASTER PLAN

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<b>Item</b>	<b>Description</b>	<b>Due</b>
3.0	Campus: currently admin. offices are housed in four separate locations across campus. Consolidate to one central location and relocate superintendent offices to main campus.	
3.1	Campus: install heated sidewalks on North side of campus. Currently sidewalks experience extensive icing. This is a safety risk.	
3.2	Campus: most buildings are experiencing some level of decay/ deterioration. EX: main gym walls – daylight can be seen where structure penetrates exterior walls.	
3.3	Campus: a space for the arts is needed. A campus auditorium. This would also be a resource for the community as the only place to meet with large groups in town is the Dolores Community Center which is not large enough and expensive to rent. The gym is used for school gatherings now. The acoustics are deficient, and the scheduling creates challenges between departments competing for use of the space.	
3.4	Campus: Access control is inconsistent across buildings. MS hallway has no access control for students. Students in the band room that need to use the bathroom have to go all the way around to the HS entry, or a teacher has to interrupt instruction to allow students into the MS. This negatively affects the learning environment and creates a safety hazard due to students being stuck outside exposed to threats and weather.	
3.5	DAG member comment: Campus: "to put band-aids on something that old makes no sense" " need to be upfront with the community and honest with the needs."	
3.6	PK: Campus: Whether we remodel, demolish and relocate, build new - whatever, it will cost local citizens the same amount due to the need to max out the match. This will affect short term or long-term thinking. The price will not change.	
3.7	KV: Campus: Going back to the pot over and over again for little things affects the community view of future funding. Example fire suppression upgrades.	
3.8	Football Field: a new field house with bleachers, storage, and concessions would be beneficial.	
3.9	SL: Suggested the concept of utilizing the existing football field for the construction of new buildings to get them out of the flood plain and building a new athletic campus in Joe Rowell Park.	
3.10	Campus: Recycling should be moved off campus or at least away from bus loop.	
3.11	Campus: difficult for elderly and disabled individuals to get from parking area to football field to watch games.	
<b>4. MIDDLE SCHOOL</b>		
4.0	MS: Classrooms do not meet needs of student learning. Classrooms are too small. Project based learning requires additional space. No space to store projects. No place to display projects. Materials ordering are on-demand so they	

# APPENDIX A - STAKEHOLDER MEETING MINUTES

## DOLORES SCHOOL DISTRICT MASTER PLAN

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<i>Item</i>	<i>Description</i>	<i>Due</i>
	don't have to be stored. The classrooms are old and obsolete. Every system and piece of furniture is obsolete.	
<b>5. HIGH SCHOOL</b>		
5.0	Need secure check point at entrance.	
5.1.	Hallways need to be wider to support flexible learning spaces.	
5.2.	MORE STORAGE!	
5.3.	All Classrooms components/ systems are outdated, and classrooms are too small for project-based learning.	
<b>6. LIBRARY/ COMMONS</b>		
6.1	CC & L: circulation/ student flow is deficient. If kids arrive to commons late, they are locked out of building. This is a safety hazard due to students being stuck outside exposed to threats and weather.	
6.2	CC: the building is settling exposing significant cracking in the slab and walls. Window mullions are shifting allowing moisture in between glazing panels.	
<b>7. PRESCHOOL</b>		
7.0	VR: Isolated from rest of campus. Good and bad. Sometimes being isolated removes the PS from other issues occurring on main campus.	
7.1.	Needs a secure perimeter.	
7.2.	There is a significant waiting list for enrollment. The building needs to grow. VR sketched a preferred addition location on the aerial image that ties the buildings together and removes a modular classroom currently being utilized.	
7.3.	Parking is dangerous during pick up and drop off and the parking lot is dirt.	
7.4.	Drainage on the north side of the building creates a safety hazard and potential flooding scenario. Runoff from the bluff to the north comes down to the edge of the building. The only infrastructure keeping runoff from contact with the building envelope is a concrete retaining wall. In the winter extensive ice damming exists on the north side of the building.	
7.5.	Students use the main campus library multiple times a week and have to cross town streets with no sidewalk or pedestrian protection.	
<b>8. GYMS</b>		
8.0	AG: floor needs to be replaced and vestibule needs to be added. Students use this building as a "hallway" to cross the campus which consistently tracks mud across the hardwood floor.	
8.1	MG & AG: athletic scheduling is challenging due to limited gym space. Students cannot practice (arts or athletics) because other events fully book gym space which is creating decreased student involvement in athletics and the arts.	
<b>9. ELEMENTARY SCHOOL</b>		
9.1.	ES: more classroom/ storage space needed throughout.	
9.2.	ES: Sinks requested to be included in each classroom.	
9.3.	ES: Hallways are too narrow. Traffic jams occur in between classes and travel distances between classes are too long.	
9.4.	ES: acoustics need to be improved. Not conducive for teaching.	
9.5.	ES: need to improve parking at main entrance. Separate bus drop-off and parent/ teacher parking.	

# APPENDIX A - STAKEHOLDER MEETING MINUTES

DOLORES SCHOOL DISTRICT MASTER PLAN

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<b>Item</b>	<b>Description</b>	<b>Due</b>
<b>10. SAFETY/ SECURITY</b>		
10.0	Being in the valley gives perfect sightlines for shooters. All buildings need to be joined. Too many exterior doors.	
<b>11. PHOTOTYPING WORKSHOP</b>		
11.0	DAG was asked to pin-up images representing the following categories: <ul style="list-style-type: none"> <li>- What makes Dolores special?</li> <li>- What is the Culture of Dolores School District?</li> <li>- The perfect school</li> <li>- Vision for the Campus</li> </ul> * images will be provided in appendix of Master Plan report.	
<b>WHAT MAKES DOLORES SPECIAL</b>		
11.0	The river	
11.1.	The people. Moving forward, this mater plan can be an opportunity to bring people together.	
11.2.	SL: Moving forward, this mater plan can be an opportunity to bring people together. Getting people involved. Discussed the success of the bear backer membership – fundraising model when he was booster club treasurer.	
11.3.	SL: Need to get community members to buy in to the master plan. In the past there has been divisions between different interest groups.	
11.4.	KV: we are coming out of a divisive political time in the community. This process needs to be transparent. Traditionally the community always shows up for the kids.	
11.5.	DAG member provided an Image of the town water tower as a symbol for the community.	
11.6.	DAG member: the school is “a conglomerate of the community. A place we all come together for the kids.”	
11.7.	DAG member: “the diversity of our community. It’s cultural perspective, and all its students faculty and families.	
<b>WHAT IS THE CULTURE OF DOLORES SCHOOL DISTRICT</b>		
	* See images in Master Plan appendix	
11.8.	DAG again discussed the previous willingness of the community to support the kids. Provided an example of a mill levy tax increase to improve the Preschool infant/ toddler building.	
11.9.	The district is “family based”.	
11.10.	The district incorporates outdoor activities.	
<b>THE PERFECT SCHOOL</b>		
11.11.	PK: presented the timeless elements of education: communication, relationships, and respect. “we get to wrapped up in the contemporary needs of schools and forget that communication is the core of what we do.	
11.12.	PK: spaces in schools that accommodate these timeless elements.	
11.13.	Close proximity of departments that physically support communication.	
11.14.	Due to size of school district we have to integrate age groups and use this to our advantage, not try to separate them. Young students observing the behavior of older students to instill values of respect and decorum.	

# APPENDIX A - STAKEHOLDER MEETING MINUTES

## DOLORS SCHOOL DISTRICT MASTER PLAN

Dolores School District  
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<b>Item</b>	<b>Description</b>	<b>Due</b>
11.15.	Do not push students with special needs to the edges of buildings. We are better as a group if we put special needs students in the heart of our buildings. All students should interact with special needs students.	
11.16.	“one size fits all” classrooms do not serve the control needed for students with special needs.	
11.17.	Emergency access to support students with special needs is critical.	
11.18.	KV: shared images of school floor plans that accommodate centrally located flexible learning environments.	
11.19.	A school that is contemporary, and open with spaces that are multi-functional and collaborative.	
11.20.	An auditorium and a track.	
	<b>VISION FOR THE CAMPUS</b>	
11.21.	KV: shared image of the campus being redone. X’s over buildings that should demolished. Historic gym should be preserved	
11.22.	Additional image depicted a remodel of the ES, a new HS connect to the ES.	
11.23.	21 century school and more S.T.E.M.	
11.24.	Modern amenities	
11.25.	A campus that accounts for future needs	
11.26.	A unified school district: <ul style="list-style-type: none"> <li>○ Open buildings.</li> <li>○ Less little buildings.</li> <li>○ Easier to maintain.</li> <li>○ Safer.</li> <li>○ Attracts students &amp; faculty.</li> </ul>	
<b>12 PROJECT GOALS</b>		
12.0	DAG group discussed project goals based on the content of the conversation throughout the day. Goals were suggested as a draft at this point to include the following primary items: <ul style="list-style-type: none"> <li>● TRANSPARENCY</li> <li>● COMMUNITY INVOLVEMENT</li> <li>● SAFETY                             <ul style="list-style-type: none"> <li>- “designed safety” integrating security needs into a beautiful design.</li> <li>- Campus perimeter and access.</li> <li>- Electronic security.</li> </ul> </li> <li>● INCLUSION. A master plan for all stakeholders.</li> </ul>	

End of Meeting Minutes

**By:** Max McCloskey, Project Architect

**Cc:** Attendees, Project Team, file

# APPENDIX A - STAKEHOLDER MEETING MINUTES

DOLORES SCHOOL DISTRICT MASTER PLAN



RATIO



## DAG - 2 MEETING AGENDA

Date: May 24, 2019

Project: Dolores School District Master Plan – Design Advisory Group (DAG) Meeting-2  
Location: Dolores School District Administration Offices, 100 N. 6th Street

### (1:00 – 4:00) DAG Meeting #2 Programming workshop

1. (90 minutes) Space programming with Principals:
  - a. HPA to present a matrix of current square footage deficiencies for each school based on Colorado Department of Education guidelines.
  - b. Principals to review floor plans and identify spaces not known to HPA.
  - c. Space planning workshop: using a campus site plan and scaled blocks of program space, the group will develop conceptual master plan schemes that identify site circulation/ security, building demolition, building renovation, and new construction.
  - d. Group to have closing conversation on which items within the design to move forward with.
  
2. (90 minutes) Space planning workshop with DAG:
  - a. Space planning workshop: using a campus site plan and scaled blocks of program space, the group will develop conceptual master plan schemes that identify site circulation/ security, building demolition, building renovation, and new construction.
  - b. Design discussion. Each group will present their Master Plan concept and the DAG will come together to discuss the elements of each design and which items to move forward with.



# APPENDIX A - STAKEHOLDER MEETING MINUTES

## DOLORS SCHOOL DISTRICT MASTER PLAN

### Sign in

**Date** 22 May 2019  
**Project** Dolores School District Master Plan **DAG**  
**Project No.** 39018  
**Re:** Programming Workshop  
**Location:** Dolores School

NAME	DEPARTMENT/ TITLE	EMAIL
SUSAN LISAK	DOLORS CHAMBER	info@doloreschamber.com
KEVIN VAUGHN	ELEMENTARY ART	kvaughn@dolores.k12.co.us
John McHenry	8 <sup>th</sup> Teacher	jmchenry@dolores.k12.co.us
Lenetta Shull	School Board	lshull@dolores.k12.co.us
Santiago Lopez	Community Member	santi37@hotmail.com
Kyan Maloney	parent	racerbaby@rocketmail.com
Amber Rantz	parent	rantzamt@yahoo.com

### Sign in

**Date** 22 May 2019 **(1-2:30).**  
**Project** Dolores School District Master Plan  
**Project No.** 39018  
**Re:** Programming Workshop  
**Location:** Dolores School

NAME	DEPARTMENT/ TITLE	EMAIL
Alfonso Good	Maint	algood@dolores.k12.co.us
Valiena Rosenkranz	Preschool	vrosenkranz@dolores.k12.co.us
Doreen Jones	Finance	djones@dolores.k12.co.us
Kelly Howerton	Elem Principal	khowerton@dolores.k12.co.us
Phil Kasper	Supt.	pkasper@dolores.k12.co.us
Jen Huffman	Sec. Principal	jhuffman@dolores.k12.co.us

# APPENDIX A - STAKEHOLDER MEETING MINUTES

DOLORES SCHOOL DISTRICT MASTER PLAN

## DAG - 2 MEETING SUMMARY



### Meeting Minutes

#### Dolores RE-4a Master Plan – DAG Meeting no. 02

**Date** 24 MAY 2019  
**Project** Dolores School District Master Plan  
**Project No.** 39018  
**Re:** DAG #2: Programming and Space Planning Workshop  
**Location** District Offices

Participants	Name (Initials)	Company Name (Initials)
	Max McCloskey (MM)	RATIO   HPA (HPA)
	Alisa Penkala (AP)	RATIO   HPA (HPA)
	Alfonso Goad (AG)	Dolores School District (DSD)
	Phil Kasper (PK)	Dolores School District (DSD)
Principal Focus Group:	Valiena Rosenkrance (VR)	Dolores School District (DSD)
	Doreen Jones (DJ)	Dolores School District (DSD)
	Kelly Howerton (KH)	Dolores School District (DSD)
	Jen Huffman (JH)	Dolores School District (DSD)

DAG:	Susan Lisak (SL)	Dolores Chamber
	Kevin Vaughn (KV)	Dolores School District (DSD)
	John McHenry (JM)	Dolores School District (DSD)
	Lenetta Shull (LS)	Dolores School District (DSD)
	Santiago Lopez (SL)	Community Member
	Kyan Maloney (KM)	Parent
	Amber Rantz (AR)	Parent

These meeting minutes represent our record of the issues discussed and/or action items identified during the meeting. If the minutes contained herein are not consistent with your recollection of the meeting, please contact this office within 3 business days of receipt. The following summarizes the minutes of the meeting: Legend (Resp – Responsibility, IP – In Progress, C - Closed, Info. - Information)  
 ES – Elementary School, MS – Middle School, HS – High School, PS – Preschool, CC – Campus Commons, L – Library, MG – Main Gym, AG – Auxiliary Gym,

Item	Description	Due
<b>1. INTRODUCTIONS</b>		
1.1	HPA Presented the Program document describing and displaying the areas on the campus the Colorado Department of Education (CDE) defines as insufficient space.	
1.2	Each Principal was given a plan of their building and defined the spaces in the building that were unclear and identified the ones in which they saw were problematic as a learning environment.	
<b>2. MIDDLE SCHOOL</b>		

RATIOdesign.com 1655 Grant Street Denver, Colorado 80203 303.607.0040  
 HPArch.com Indianapolis, IN Champaign, IL Raleigh, NC Chicago, IL Denver, CO  
 Affiliates: RATIO States, LLC | RATIO States – NC, PLLC | RATIO Architects of Ohio, LLC | smdp, LLC

# APPENDIX A - STAKEHOLDER MEETING MINUTES

## DOLORES SCHOOL DISTRICT MASTER PLAN

Dolores School District

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May 24, 2019

<b>Item</b>	<b>Description</b>	<b>Due</b>
4.1	Classrooms are currently designed with cupboards but are not designed for today's current class needs. They need a variety of sizes. Lighting within the classrooms (windows) is not ideal. The classrooms are long and narrow, but not open and not easily flexible. Would be desired for an open concept model, where classrooms flow together, so students within various classrooms could utilize multiple classrooms (operable walls)	
4.2	Average class size is 22-24 with the largest class size being 28	
4.3	Teachers feel compartmentalized and it would be ideal to create collaborative spaces for learning, while combining "pods" of classrooms (by subject) with breakout spaces for the classes to spill out and work together	
4.4	There isn't a conference room	
4.5	Space is needed for the students to gather while waiting near reception / secretary	
4.6	The current office doesn't have eyes on the entry	
4.7	The existing classrooms are small and do not have any storage.	
4.8	A significant amount of additional storage space is needed throughout building to support project-based learning curriculum	
<b>3. HIGH SCHOOL</b>		
5.1.	Smaller class sizes	
5.2.	Projects are worked on in the hallway – don't have enough space to work in classrooms	
5.3.	HS & MS should utilize same classrooms, with PODS, the HS Students feel as if they need to set a good example for the MS students. The school district supports integration of age groups, and there is not a desire or ability to separate older students from younger	
<b>4. ELEMENTARY SCHOOL</b>		
4.1	Larger classrooms for SPED; the current movement in them is congested and only conducive for stationary work at desks. The current SPED classrooms were not intended for this use. A partition was installed at one point to create two underperforming rooms	
4.2	Hallways are long, and narrow, which is not ideal for many classes moving to different rooms simultaneously	
4.3	Noise is easily transferred from one classroom to the next or from the hallway to the classroom, causing not only disruptions to the learning environment, but can cause issues with confidentiality between private conversations.	
4.4	There is not currently a designated conference or planning room	
4.5	Currently there is not an ideal area for parents to be checked in at the main office, causing a security concern with students moving down the same hallways from classroom to classroom, causing more congestion in the narrow hallway	

# APPENDIX A - STAKEHOLDER MEETING MINUTES

Dolores School District  
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<i>Item</i>	<i>Description</i>	<i>Due</i>
4.6	There are approximately 40 employees in the ES, and they all eat within roughly 90 mins of each other, the breakroom only hosts a small table for employees to eat at, additionally the room is even more cramped with the other equipment within it.	
4.7	Additional space is needed for the K-2 Title, the 3-6 Title, and BOCES Speech, which are currently being held in the modular building south of the small gym of the ES. The modular classroom should be removed and the program in this building should be included in the addition/ or renovation of the ES	
4.8	Not all classrooms have sinks in the ES, which becomes an issue for Science experiments and cleanup.	
<b>5. WOODSHOP</b>		
7.1.	The classes currently utilize the covered area outside the east side of the building to work on larger project, no matter the weather.	
7.2.	During the bad winters, the water sheds poorly off the building.	
<b>6. SCIENCE BUILDING</b>		
8.1	SPED has not used the dedicated classroom in this building, but the school would like the availability to have a moveable partition in this room.	
<b>7. LIBRARY AND COMMONS</b>		
7.1	The Commons area acts as a “hallway”, connecting the different areas of campus, which makes the function of this space difficult. It causes a pinch point in circulation with classes in the lunch line, classes traveling through the building, classes heading to the adjacent library or computer labs. The congestion in movement causes not only difficulty in circulation of the space, but also results in the students having very minimal time to eat their lunch.	
7.2	This space is not adequate enough for everything that is truly “common” on campus	
7.3	Add a maker space for all grades to utilize with 3D Printer and CNC	
7.4	The kitchen placement in this space is not ideal, in addition to the “hallway” / pinch point (noted above in 7.1), there are also difficulty getting deliveries to the kitchen, causing a safety concern for the students who are passing through.	
<b>8. OTHER</b>		
8.1	The theater students currently utilize a science classroom to practice their performances and stage their props for the performances. The students are very talented and have created great productions, but the space they have to prepare is limiting, and their current performance venue, the existing Main Gymnasium, has poor acoustical quality. A new dedicated auditorium would be ideal for the success of the school districts theater program and would also serve as a better place to host their graduation and large events in Dolores.	
8.2	Would be ideal to house all the school program in one building.	
<b>9. MASTER PLAN DESIGN OPTIONS - PRINCIPALS</b>		
9.1	HPA Presented their two preliminary design options for the Master Plan to the Principals	
<b>10. “THE QUAD”</b>		
10.1	HPA Presents the “QUAD”: <ul style="list-style-type: none"> <li>• Dark purple buildings = existing to remain. Magenta buildings = new</li> <li>• Bus loop along the North edge of campus to create border and separate bus/ vehicles.</li> <li>• Demolition of the existing MS and HS buildings creates open quad in the center of campus. Playground can move into heart of campus for</li> </ul>	

# APPENDIX A - STAKEHOLDER MEETING MINUTES

## DOLORES SCHOOL DISTRICT MASTER PLAN

Dolores School District

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<b>Item</b>	<b>Description</b>	<b>Due</b>
	<p>security and site maintenance/ snow removal/ drainage becomes much easier.</p> <ul style="list-style-type: none"> <li>• New MS/ HS building on the northeast corner of the Quad w/ entrance aligned to a secure bus arrival court.</li> <li>• A new Performing Arts Center is located on South side (public face) of campus when the HS goes away. We've heard consistently that there is an extreme need for a dedicated performance venue.</li> <li>• A new district administration office is added on the southwest corner of the campus to create an edge and consolidate admin onto the main campus.</li> <li>• A new varsity/ competition gym frames the west side of the bus arrival plaza. The historic gym remains. Becomes an auxiliary facility.</li> <li>• We're not suggesting any changes to the existing ES other than an addition that would connect to the new competition gym and create interior circulation from the bus loop.</li> </ul>	
10.2	<p>The Principals reactions and feedback on the QUAD design option:</p> <ul style="list-style-type: none"> <li>• The restricted access to the interior of the campus is ideal</li> <li>• The facility storage should be relocated (PK)</li> </ul>	
<b>11. "DRYLAND"</b>		
11.1	<p>HPA Presents "DRYLAND"</p> <ul style="list-style-type: none"> <li>• Main goal with this concept was to locate new buildings outside the flood plain boundary and keep the football field on site. The flood plain boundary is denoted with an orange dashed line on the sketch.</li> <li>• The bus drop loop is internal to the campus to create the separation from cars, but Phil did not like the security issues associated with an internal bus loop.</li> <li>• ES teachers did not like the new HS/MS buildings taking up the existing playground. These buildings are out of the flood plain and create a secure outdoor courtyard that aligns to their existing ES playground.</li> <li>• Similar to concept #1 this demolishes the existing HS/ MS plus both existing gyms.</li> <li>• New multi-gym building, and Performance Center are located on south east corner of campus.</li> </ul>	
11.2	<p>The Principals reactions and feedback on the DRYLAND design option:</p> <ul style="list-style-type: none"> <li>• The secure perimeter is not as strong</li> <li>• HS parking near the ES drop-off and pick-up is not as ideal for safety</li> <li>• The central bus loop drop-off is not a strong point for security and not desired</li> </ul>	

# APPENDIX A - STAKEHOLDER MEETING MINUTES

<b>12. MASTER PLAN DESIGN OPTIONS - DAG</b>		
12.1	HPA Presented their two preliminary design options for the Master Plan to the DAG	
12.2	See 10.1	
12.3	See 11.1	
<b>13. DAG GROUP REACTS TO DESIGN OPTIONS</b>		
13.1	<p>“THE QUAD”</p> <ul style="list-style-type: none"> <li>This option was preferred because of the perimeter created by pinching the buildings together</li> <li>By moving the bus loop to the front of campus, making it a one-way street, the campus flips around and there is potential for the athletic fields to be added back on site.</li> <li>If the bus loop was moved to the Northwest corner of the site, the football field could be kept, but the secure plaza would be lost</li> <li>If the bus loop was relocated to the northern edge of campus, the relationship between the drop off and campus increases significantly</li> </ul>	
13.2	<p>“DRYLAND”</p> <ul style="list-style-type: none"> <li>Playground space is removed, but football field is kept on campus</li> </ul>	
13.3	<p>“MOVE THE CAMPUS”</p> <ul style="list-style-type: none"> <li>There are 80 acres above the valley that is available and would be significantly cheaper than buying 40 acres in the valley</li> <li>Although the school has worked very well for the community for a long time, these buildings are not made for the 21<sup>st</sup> century learning the school district and teachers are striving for</li> <li>The current site could be a very viable option for a long time if the school only needed 14 acres of land</li> <li>The campus could be Master Planned in such a way that buildings would be relocated to the new site as they become inadequate for the school, allowing, easing the cost of the new school over time. PK believes this would be a great way to utilize BEST Grant money and not waste the money they have been awarded in the past 5 years.</li> </ul>	
13.4	<p>“MOVE THE ATHLETIC FIELD”</p> <ul style="list-style-type: none"> <li>This will only work if all the athletics are moved</li> <li>But this is also a safety and convenience issue by moving everything away from campus, students will need to be bused and parents will need to drive across town to pick up their students</li> <li>Maintenance would also be an issue, for the fields and the amenities (locker rooms, etc)</li> <li>Although it wouldn't be ideal to move the students, the facilities could be way nicer than what they currently have, and to adequate space in the valley would cost way more (JM)</li> <li>If the fields were moved, it would be unlikely that the BEST Grant would help support the financial need to build the fields and supporting amenities</li> </ul>	
<b>14. MASTER PLAN WORKSHOP</b>		
14.1	The DAG broke into (2) teams to develop their own master plan schemes using a campus site plan and scaled blocks of program space that identify site circulation/ security, existing building demolition, existing building renovation, and new construction.	
14.2	<p>Group “A” concluded the following:</p> <ul style="list-style-type: none"> <li>Keep the existing ES building</li> <li>Keep the football field on site</li> <li>Keep the existing Science Building</li> </ul>	

# APPENDIX A - STAKEHOLDER MEETING MINUTES

## DOLORES SCHOOL DISTRICT MASTER PLAN

Dolores School District

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- Keep the Band Room, but repurpose as a shed
- Central Ave would be a one-way street going East
- A new cafeteria would be added (in the location of the existing Auxiliary Gym currently)
- The Administration would occupy the existing Library space, the Commons would be added, and a new Library and new Performing Arts building would be added to the north of the existing Library building.
- A new Gymnasium / HS / MS building would be built to the east of the existing Library
- Administration would enter south of the existing Science Building (north of the new proposed addition)
- A new woodshop would be added south of the football field
- Parking would be added to the east of the existing Science building



# APPENDIX A - STAKEHOLDER MEETING MINUTES

Dolores School District  
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14.3	<p>Group "B" concluded the following:</p> <ul style="list-style-type: none"><li>• Keep the existing ES building, and build an addition to the north and create a bus loop drop off to the west of the ES</li><li>• Utilize the existing Auxiliary Gym as a Main Gym with a north addition for additional lockers, storage, and seating.</li><li>• Add a new Auxiliary Gym to the east of the existing Auxiliary Gym</li><li>• Keep the Library and Commons Building and add a connection between the Library and Common and the ES for the District Administration</li><li>• Replace the existing Main Gym with a (2) Story MS / HS</li><li>• The Preschool moves into the existing Science Building with parking to the east</li><li>• The Woodshop remains with a Performing Arts addition to the west with parking to the south</li><li>• Keep the football, gardens, and playground on the north half of the site, while adding a track around the football field</li></ul>  <p>The diagram is a hand-drawn site plan on a large sheet of paper. It shows the layout of a school campus. At the top, there is a rectangular area labeled 'NEW FOOTBALL FIELD' with a blue note attached. Below this is a 'Track' area. The main campus buildings are outlined in purple and labeled: 'Elementary Addition' (top left), 'Main Gym' (top center), 'Auxiliary Gym' (top right), 'Preschool' (middle right), 'Science / Math' (middle center), 'Performing Arts' (middle right), 'Wood Shop' (far right), 'Library + Commons' (bottom center), and 'District Admin' (bottom left). There are also two 'parking' areas marked in the bottom right. A person's hand and a green marker are visible on the left side of the plan.</p>	
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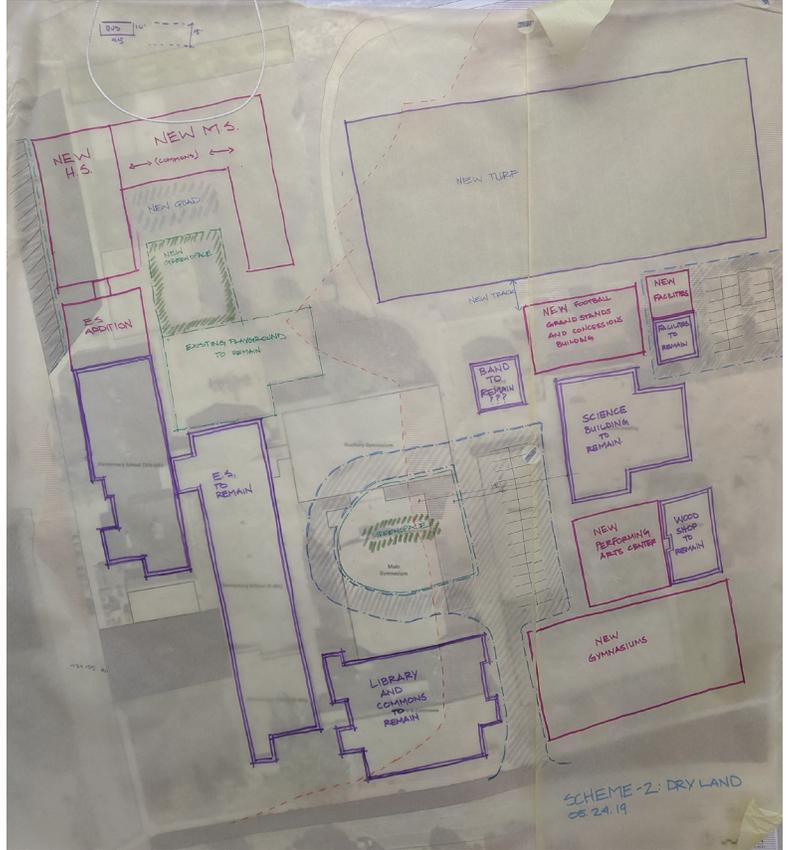
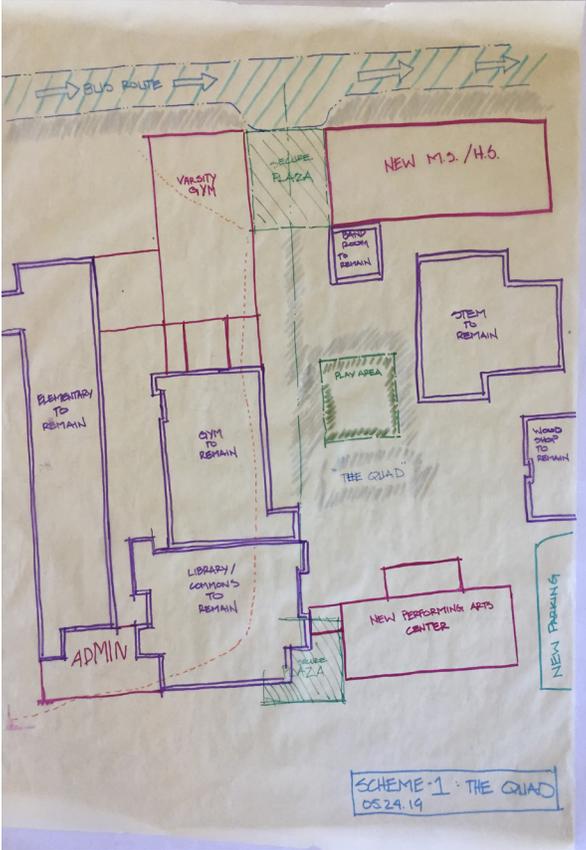
End of Meeting Minutes

**By:** Alisa Penkala, Designer  
Max McCloskey, Project Architect

**Cc:** Attendees, Project Team, file

# APPENDIX A - STAKEHOLDER MEETING MINUTES

## DOLORES SCHOOL DISTRICT MASTER PLAN



# APPENDIX A - STAKEHOLDER MEETING MINUTES

DOLORES SCHOOL DISTRICT MASTER PLAN

## COMMUNITY MEETING

June 16, 2019

RATIO | HPA hosted a meeting at the Dolores Community Center to share three final Master Plan schemes that represented the different ideas that came out of the DAG workshops. The goal of the meeting was to leave with a single scheme voted on by the community to develop as the Strategic Plan for Implementation. Of the schemes presented: Preservation, The Gateway, and Football Field (shown in section XVI. Strategic Plan for Implementation) – The Gateway received the vast majority of community votes.



# APPENDIX B - HISTORICAL SIGNIFICANCE

DOLORES SCHOOL DISTRICT MASTER PLAN

## APPENDIX B - HISTORICAL SIGNIFICANCE

**From:** Mark MacHale  
**Sent:** Friday, September 03, 2010 12:19 PM  
**To:** Lortie, Kristin  
**Cc:** Diane Koenig  
**Subject:** RE: Dolores RE-4 - MS-HS

Thanks. We will be sure to include the findings in our plan.

---

**From:** Lortie, Kristin [[mailto:Lortie\\_K@cde.state.co.us](mailto:Lortie_K@cde.state.co.us)]  
**Sent:** Friday, September 03, 2010 12:13 PM  
**To:** Mark MacHale  
**Cc:** Diane Koenig  
**Subject:** FW: Dolores RE-4 - MS-HS

Mark,

Please find below the determination from the historical society regarding the 1954 MS-HS. This should be included and documented in the master plan for the district.

Kristin

---

**From:** Corson, Dan [<mailto:Dan.Corson@chs.state.co.us>]  
**Sent:** Friday, September 03, 2010 12:08 PM  
**To:** Lortie, Kristin  
**Subject:** RE: Dolores RE-4 - MS-HS

Kristin:

We do not believe that this building has historical significance.

Thanks.

Dan W. Corson  
Intergovernmental Services Director  
Office of Archaeology and Historic Preservation  
History Colorado [Colorado Historical Society]  
Civic Center Plaza  
1560 Broadway, Suite 400  
Denver, Colorado 80202  
(303) 866-2673  
[www.coloradohistory-oahp.org](http://www.coloradohistory-oahp.org)

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**From:** Lortie, Kristin [[mailto:Lortie\\_K@cde.state.co.us](mailto:Lortie_K@cde.state.co.us)]  
**Sent:** Friday, September 03, 2010 12:02 PM  
**To:** Corson, Dan  
**Subject:** Dolores RE-4 - MS-HS

Dan,

The Dolores RE-4 School District is undergoing a master planning study, and I am writing to request a determination of historical significance for this building. Please find attached photos of the Dolores MSHS (1954).

Thank you,

**Kristin Lortie**  
Senior Consultant  
Public School Capital Construction Assistance (BEST)  
Colorado Department of Education  
303-866-6184 Phone  
303-866-6186 Fax  
<http://www.cde.state.co.us/cdefinance/CapConstMain.htm>

# APPENDIX C - COST ESTIMATE

DOLORES SCHOOL DISTRICT MASTER PLAN

## APPENDIX C - COST ESTIMATE



Dolores Public Schools Cost Estimate											Add Alternate 1		
Calculations Sheet											August 20th, 2019 Single Story w/ 2 Story Provision		
Division	Live Estimates										Div Totals	New MS & HS ALT 1	
	Sitework	Parking Lots	New MS & HS	New Pre School	New V.Gym	ES Addition	ES Renovation	Commons & Lib Reno	Aux Gym Reno	Other			
1 General Conditions (See Below)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2 Selective Demolition	\$0	\$0	\$14,150	\$0	\$0	\$61,500	\$151,100	\$126,055	\$37,375	\$0	\$0	\$390,180	\$14,150
3 Concrete	\$0	\$0	\$639,000	\$198,000	\$287,745	\$174,600	\$0	\$106,000	\$0	\$0	\$0	\$1,405,345	\$735,000
4 Masonry	\$30,000	\$0	\$200,890	\$123,500	\$564,040	\$113,850	\$0	\$0	\$0	\$0	\$0	\$1,032,280	\$200,890
5 Metals	\$15,892	\$0	\$1,068,515	\$355,590	\$519,055	\$320,245	\$92,140	\$44,926	\$1,500	\$0	\$0	\$2,417,864	\$1,229,640
6 Wood and Plastics	\$0	\$0	\$321,806	\$157,395	\$111,423	\$139,377	\$24,750	\$203,742	\$0	\$0	\$0	\$958,493	\$321,806
7 Thermals & Moisture Protection	\$59,734	\$8,189	\$887,522	\$373,740	\$448,994	\$344,021	\$69,948	\$98,155	\$29,186	\$0	\$0	\$2,319,488	\$887,522
8 Doors and Windows	\$0	\$0	\$536,751	\$221,010	\$232,059	\$215,220	\$0	\$125,409	\$55,000	\$0	\$0	\$1,385,448	\$536,751
9 Finishes	\$0	\$0	\$1,344,045	\$447,232	\$524,045	\$401,373	\$374,340	\$555,798	\$221,375	\$0	\$0	\$3,868,408	\$1,344,045
10 Specialties	\$12,808	\$4,500	\$173,878	\$98,925	\$52,058	\$98,647	\$0	\$47,893	\$7,000	\$0	\$0	\$495,710	\$173,878
11 Equipment	\$0	\$0	\$7,207	\$12,400	\$168,187	\$4,400	\$0	\$185,900	\$124,174	\$0	\$0	\$502,268	\$7,207
12 Furnishings	\$18,000	\$0	\$31,979	\$11,151	\$1,800	\$10,046	\$0	\$14,297	\$0	\$0	\$0	\$87,273	\$31,979
14 Conveying Equipment	\$0	\$0	\$120,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$120,000	\$120,000
21 Fire Suppression	\$0	\$0	\$142,000	\$44,000	\$75,831	\$38,800	\$0	\$69,718	\$0	\$0	\$0	\$370,349	\$142,000
22 Plumbing	\$35,235	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$35,235	\$0
23 Mechanical	\$0	\$0	\$1,467,570	\$454,740	\$649,038	\$400,998	\$1,323,810	\$672,879	\$195,500	\$0	\$0	\$5,164,535	\$1,467,570
26 Electrical	\$230,724	\$72,828	\$1,547,090	\$479,380	\$359,687	\$422,726	\$389,640	\$640,626	\$340,170	\$0	\$0	\$4,482,871	\$1,547,090
27 Communications	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28 Electronic Safety and Security	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31-33 Site Construction & Site Demolition	\$3,657,394	\$726,431	\$501,360	\$188,217	\$283,314	\$166,505	\$0	\$0	\$0	\$0	\$0	\$5,523,221	\$574,960
Contingency	\$202,989	\$40,597	\$450,188	\$158,264	\$213,864	\$145,615	\$121,286	\$144,570	\$50,564	\$0	\$0	\$1,527,938	\$466,724
CCIP & Builders Risk Insurance	\$74,215	\$14,843	\$164,593	\$57,863	\$78,191	\$53,238	\$44,344	\$52,856	\$18,487	\$0	\$0	\$558,630	\$170,639
Pre-Construction Services										90,100.00		\$90,100	
Fixed General Conditions										1,882,923.00		\$1,882,923	
Fixed General Contractor Fee										1,211,642.53		\$1,211,643	
<b>Estimate Totals:</b>	<b>\$4,336,992</b>	<b>\$867,388</b>	<b>\$9,618,544</b>	<b>\$3,381,407</b>	<b>\$4,569,331</b>	<b>\$3,111,161</b>	<b>\$2,591,358</b>	<b>\$3,088,823</b>	<b>\$1,080,331</b>	<b>3,184,665.53</b>		<b>\$35,830,000</b>	<b>\$9,971,851</b>

\$353,307.07	Cost of Work
\$12,366	Fee
\$365,673	ALT 1 Total

### FINAL MASTER PLAN SCHEME

#### Main Campus

Construction estimate	\$35,830,000.00
Soft Costs	\$4,657,900.00
<ul style="list-style-type: none"> <li>Design consultants</li> <li>Furniture, fixtures, equipment. AV. Telecomm.</li> <li>Owner's Representative</li> <li>Site survey and Geotechnical report</li> <li>Material testing and Environmental report</li> </ul>	
<b>Subtotal</b>	<b>\$40,487,900.00</b>

#### Relocation Of Football Field

Construction cost	\$4,000,000.00
<ul style="list-style-type: none"> <li>New artificial turf field</li> <li>New synthetic track</li> <li>Concessions/ locker rooms</li> <li>Grandstands</li> <li>Field lighting</li> </ul>	
Soft Costs	\$520,000.00
<b>Subtotal</b>	<b>\$4,520,000.00</b>

### COMPREHENSIVE MASTER PLAN TOTAL

**\$45,007,900.00**

RATIO | HPA

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# APPENDIX D - ENGINEERING REPORTS

DOLORES SCHOOL DISTRICT MASTER PLAN

## APPENDIX D - ENGINEERING REPORTS



Memo

Project: Dolores School District Master Plan  
Date: 08 August 2019  
To: Max McCloskey of Humphries Poli Architects  
Re: Conceptual Design of Civil Features for BEST Application  
From: Thomas W. Engel, P.E.

The discussion herein describes the site needs for the expansion of the Dolores School Site at a concept level regarding stormwater, grading, hardscape, and utilities. Please see attached *Conceptual Civil Improvements Exhibit* for orientation.

Existing drainage conditions for this area consist of stormwater runoff draining in a sheet flow manner across the football field area and eventually into a Town of Dolores maintained grate inlet and storm drain system beginning at the 12<sup>th</sup> Street and Hillside Avenue intersection. Along that route, significant water from the hillside to the north and building roof runoff contribute to the regular saturation of this low-lying area, rendering the play areas and sports field unusable during snowmelt season and frequent storm events. Some drainage is conveyed to the North 14<sup>th</sup> Street and Central Avenue intersection.

Proposed drainage will need to be upgraded to prevent standing water from disrupting school function. A majority of stormwater in the developed condition will be conveyed with pipes and surface swales to temporary ponding areas (P1, P2, & P3), required by state regulations and CHPS/ LEED mandates. These ponds will filter and attenuate the captured runoff from proposed roof and parking lot areas and release the mitigated water into the surrounding Town storm conveyance systems.

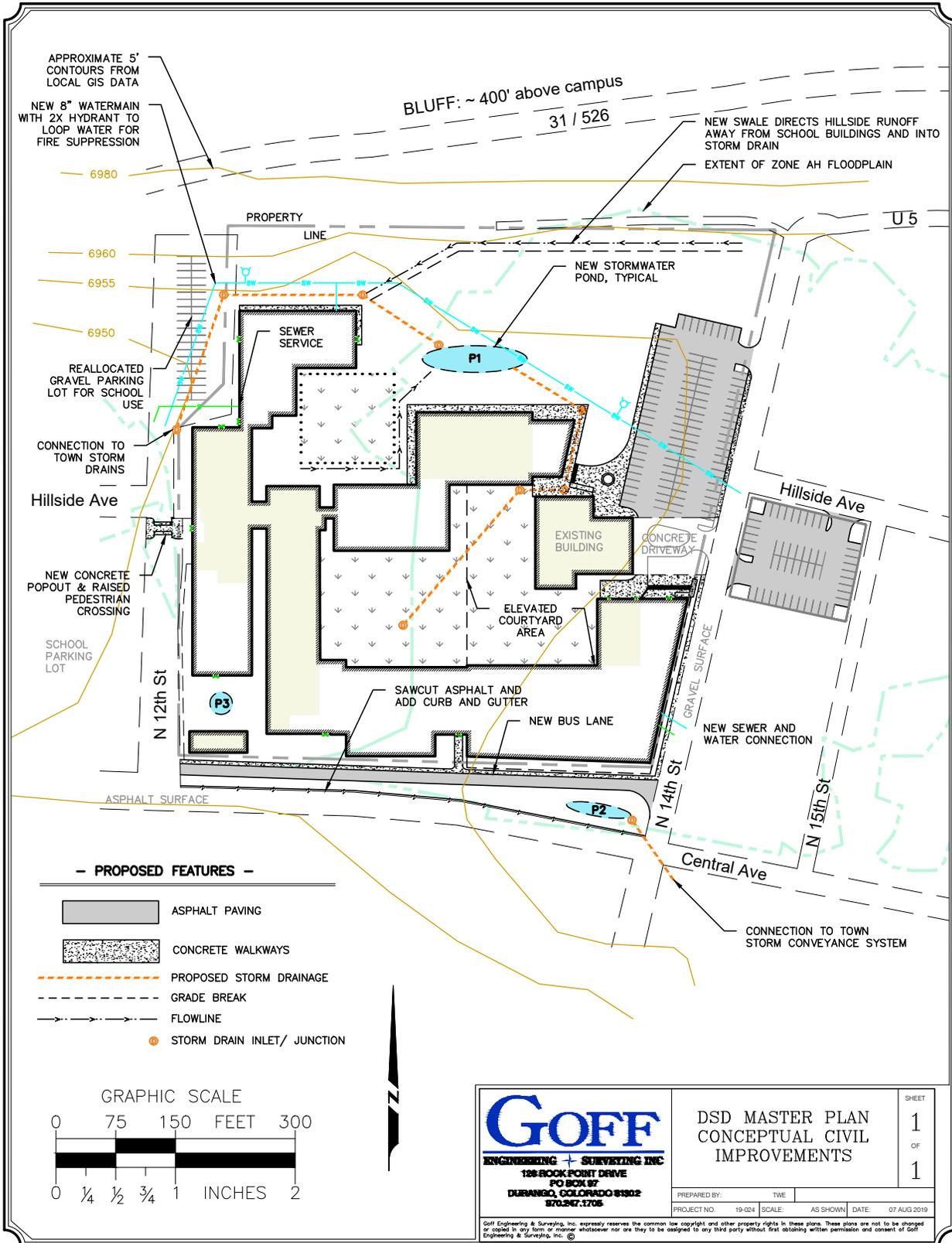
The intent of the new grading scheme is to bring the finished floor of the new buildings above the elevation of the published FEMA AH floodplain, similar to the elevation of the 2013 Science Building. Zone AH is described as shallow sheetflow during the 100-year storm, devoid of the erosive velocities closer to the Dolores River. The adjacent earthen courtyard areas will also be elevated to the new FFE, adding functionality to the new campus. The grade raise (plinth) of the new buildings contributes to security of the revised campus layout, as described in the architectural narrative.

Due to the concept plan tying into existing buildings and Town streets, there will need to be some accessible ramps and stairs on campus to tie each feature together with hardscaping. It is intended to preserve the large concrete driveway at the Sciences Building, potentially making it dual use as a delivery area and loading zone during pickup & dropoff times. A new bus loading area will be established in front of the school (Central Ave) utilizing as much of the existing concrete and asphalt as feasible. The current parking stripes on Central will be moved to a reallocated gravel lot and a new asphalt lot in the north periphery of campus. Additional concrete pathways will likely be added in the commons areas that are not shown conceptually. A raised pedestrian crosswalk with "pop-outs" tied into the curb & gutter system on North 12<sup>th</sup> Street will be added. This feature will prevent parked cars from obstructing the view of students exiting the elementary school who are crossing into the parking lot pickup area. The raised concrete surfacing will make crossing children more noticeable to passing vehicles.

New 6" waterlines will be stubbed into each new building for fire suppression and culinary use. New tee connections or taps to the Town main will likely be needed, in addition to a looped watermain loop extension around the north side of campus. Two additional hydrants are forecasted, along with two sewerline connections to Town infrastructure. Upgrades and connections to gas, water, and other dry utilities are also expected, but are not described in the civil narrative.

# APPENDIX D - ENGINEERING REPORTS

## DOLORES SCHOOL DISTRICT MASTER PLAN



## APPENDIX D - ENGINEERING REPORTS

DOLORES SCHOOL DISTRICT MASTER PLAN



### ***Bighorn Consulting Engineers, Inc.***

569 South Westgate Drive, Suite 1, Grand Junction, CO 81505  
Phone 970-241-8709 Fax: 970-241-9514

Dolores Schools Mechanical and Electrical Assessment  
October 12, 2010

Performed by:  
Bighorn Consulting Engineers  
Grand Junction, CO

M. Blaine Buck and Richard Callaway

Blaine Buck and Richard Callaway visited the Dolores Schools buildings on Wednesday September 29, 2010. The purpose of the visit was to assess the state of the mechanical and electrical systems in the buildings.

#### **Preschool Building:**

The preschool building was built in 1991. It is approximately 5,500 square feet and contains classrooms, offices, toilet rooms and a small serving space.

#### **Mechanical:**

The building is served with a series of 3 packaged rooftop units that provide heating and cooling to the spaces. These packaged rooftop units date to the original construction of the building and are approaching 20 years old. The published life of these kind of units is 12 to 15 years. The units are past their useful life and should be considered for replacement as soon as possible to avoid an emergency situation in the winter if one breaks down and can't be repaired. The replacement would involve a total of 12 tons in packaged units. The units need to be rebalanced when installed. The exhaust fans in the space should be replaced at the time the other equipment is replaced.

#### **Plumbing:**

The plumbing in the school is in fairly good shape. The water heater should be replaced when it gives out, but this is a readily available item at hardware stores and should not be considered an emergency item. Fixtures should be monitored with regard to repair and maintenance. Problem fixtures should be replaced when the mechanical system is complete. The fixture replacement would be approximately 8 to 10 fixtures and should be replaced with low water flow fixtures.

#### **Electrical:**

Electrically the preschool building is in fairly decent shape. There has been upgrades to the lighting and the electrical system is not antiquated or in disrepair. There is of course a need for more electrical receptacles (plug-ins) at locations where equipment has been placed. This would eliminate some cords that pose a tripping hazard. Exterior lighting could be upgraded to more energy efficient lighting if monies were available

### **Elementary School:**

The elementary school is a combination of a 1966 building and a 1995 building. These buildings are a total of approximately 22,500 square feet and consists of a gym, classrooms, offices, toilet rooms and corridors.

### **Mechanical:**

The mechanical system in the older space has been replaced with heating only furnaces and controls. These units seem to be working very well for the school district and should be operational for another 10 years. The district should have a replacement plan as furnaces will start to fail in a school application in about 10 years from installation. The outside air requirement in the school is met through operable windows. The mechanical system in the newer portion of the building is a series of unit ventilators providing outside air and heat to the rooms. The cooling portion of the building is a series of evaporative coolers on the roof. The evaporative cooling provides air to the plenum in the building and provides some cooling late in the year and early in the year (May and August). Controls have been added to the system in the recent past and seem to be working well for the school district. The boiler system in the new portion of the building should be considered for replacement. The boilers are reaching the end of their useful life. This boiler system should be replaced with a high efficiency system and be re-piped to provide two system pumps and two boiler pumps. The redundancy in the pumps and boilers will allow the maintenance department a chance to get things fixed if something goes wrong. Currently when a boiler is down and/or a pump is down, the whole system is down and it becomes an emergency in the winter. All mechanical systems should be re-balanced to provide the best comfort possible for the heating only system installed. The owners group also mentioned that the ventilation needs to be addressed in the art room. This room would need to add an exhaust fan that would operate from a switch in the room.

### **Plumbing:**

The plumbing in the building seems to be in fairly good shape. The water heater and the fixtures should be monitored for high maintenance items and should be replaced at such a time when the maintenance is out of the ordinary. A plan should be developed to replace a certain amount of fixtures per year to make sure not all the fixtures have to be replaced at once. The owners group suggested the elementary school needs sinks in every classroom. This would require adding waste lines, water lines, water heaters, etc to the existing system. The old portion of the elementary school should have fire sprinklers added to the facility.

### **Electrical:**

The elementary school appeared to have the oldest electrical service. The electrical service has been added onto several times and it is of a vintage that if replacement parts were needed they would not be readily available. If at all possible the best scenario would be to replace the service with a newer service that would be installed with spare capacity. This would be necessary if there was a mechanical upgrade.

There is of course a need for more electrical receptacles (plug-ins) at locations where equipment has been placed. This would eliminate some cords that pose a tripping hazard.

This school as with others was built pre-computer, therefore the infrastructure for data cabling and wifi access has been added. The problem that surfaces with adding data cabling to an existing building is that access to already enclosed areas is limited, therefore cabling is installed wherever it can be fitted in. This type of installation is more prone to electro-magnetic interference. This can happen when data cabling has to cross in close proximity a large current carrying conduit or is laid along a string of fluorescent lights or any electro-magnetic generating piece of equipment. The transmission of data is broken into packets of information and electro-magnetic interference disrupts this packet flow and this leads to slower internet connections and lost information.

## APPENDIX D - ENGINEERING REPORTS

### DOLORES SCHOOL DISTRICT MASTER PLAN

#### **High School/Middle School:**

These buildings are a combination of multipurpose, gyms, classrooms, cafeteria, toilet rooms and locker rooms. These buildings also include the Music/Band building. The square footage of the buildings are approximately 52,000 square feet. Multiple additions and renovations have been done to these buildings and they are all of different ages.

#### **Mechanical:**

Most of the mechanical in these buildings have been re-done over the last decade. This may have been done as part of a mechanical remodel or an addition to the buildings. The classroom areas are served with a series of furnaces providing heating to the spaces. The Commons/Library space is served with a large heating and ventilating unit mounted on the roof and the gyms are served with small gas fired infrared tube heaters mounted in the space. Controls have been done on these buildings in the last couple of years and seem to be working well for the district. The furnace equipment should be planned for replacement approximately 10 years out as these system have a life of approximately 10-12 years. The gymnasiums and locker areas need to have ventilation and the heating system replaced. The heating system is a series of infrared tube heaters that constantly get damaged. The ventilation is inadequate in the gyms and locker rooms as well. The suggestion is to provide heating and ventilating units on the roof. The oldest gym would not be able to support a unit on the roof, but a unit on the adjacent locker area would be adequate. The distribution in the gym spaces could be spiral duct or duct sox material hung from the structure.

The Foreign Language classroom has mechanical noise that needs to be remediated. This would require a new mechanical space and new mechanical unit for this classroom. All the mechanical systems need to be re-balanced for maximum comfort available with the heating only system installed. It was suggested by the owners group that air conditioning be installed in the classrooms. This is a very expensive undertaking, but could be done if desired. It would require a complete mechanical replacement of systems and an electrical service upgrade to the building. The office areas are in need of dedicated heating and ventilating equipment.

#### **Plumbing:**

The plumbing in the building seems to be in fairly good shape. The water heater and the fixtures should be monitored for high maintenance items and should be replaced at such a time when the maintenance is out of the ordinary. A plan should be developed to replace a certain amount of fixtures per year to make sure not all the fixtures have to be replaced at once. The locker room areas should have showers and fixtures replaced as soon as is reasonable for budget purposes. The old portions of the high school and middle school should have fire sprinklers added to the building. The kitchen area needs some upgrades including fire protection under the hoods and a sewer smell problem fixed. The owners group suggested that some snowmelt be provided at strategic areas around the site for safety reasons. This could be accomplished with a new boiler system and new sidewalks.

#### **Electrical:**

The existing electrical system appears adequate at this time if any mechanical upgrades were considered an evaluation of the usage would be in order to determine if the existing system needed upgraded.

There has been some lighting upgrades, but in the oldest gym the light levels appeared to be low for this type of usage. The lighting over the bleachers is antiquated and not energy efficient. On the exterior of the older gym conduits were unsupported and hanging loose and because of that joints had separated and wiring was exposed. The newer gym had a lighting upgrade, but an additional row of lights would bring the light levels up to recommended levels for this usage.

There is of course a need for more electrical receptacles (plug-ins) at locations where equipment has been placed. This would eliminate some cords that pose a tripping hazard.

This school as with others was built pre-computer, therefore the infrastructure for data cabling and wifi access has been added. The problem that surfaces with adding data cabling to an existing building is that access to already enclosed areas is limited, therefore cabling is installed wherever it can be fitted in. This type of installation is more prone to electro-magnetic interference. This can happen when data cabling has to cross in close proximity a large current carrying conduit or is laid along a string of fluorescent lights or any electro-magnetic generating piece of equipment. The transmission of data is broken into packets of information and electro-magnetic interference disrupts this packet flow and this leads to slower internet connections and lost information.

### **Wood Shop/Art Building:**

The wood shop and art building was built in 2002. This building is approximately 4,000 square feet with a partial mezzanine. The building is comprised of the art space, woodshop space, toilet rooms and offices.

#### **Mechanical:**

The heating for the space is provided by a small boiler with hot water piped to the unit heaters in the space. All the equipment is in good shape as it should be for being 7 to 8 years old. Equipment will start needing replacement in 7 to 10 years. It should be considered to add more ventilation to the classroom spaces. On our visit, the air was stale and smells of the art room and woodshop were heavy in the spaces. A small ventilation unit with some small exhaust fans would be all that is needed to improve the air quality in the space. The dust collector system should also be looked at to be placed outside. It appears this is a code issue being mounted inside. It is also installed in a room with sensitive equipment in it. This dust could cause premature damage to these systems.

#### **Plumbing:**

The plumbing in the space is consistent with the age of the building and is in good shape. Nothing should be done to the plumbing system.

#### **Electrical:**

The dust collection system is located in the electrical room. The electrical equipment in the room is not rated for dust environments. The biggest concern is fine dust entering into circuit breakers and collecting. Over time this could impact the breakers ability to function in a proper manner. There are case studies available on just this occurrence.

There is of course a need for more electrical receptacles (plug-ins) at locations where equipment has been placed. This would eliminate some cords that pose a tripping hazard.

### **Vocational Building:**

The Vocational Building is approximately 5,000 square feet and includes vehicle bays, science classrooms and offices.

#### **Mechanical:**

The mechanical in the space is a series of gas fired make up air units and unit heaters. One make up air unit has been replaced in the past year and is in excellent working condition. The remainder of the mechanical system is in poor condition and in need of replacement. This includes the welding exhaust, general exhaust, heating, etc. The replacement system should be heating and ventilating units to provide code required outside air and heating. The ventilation in most spaces is poor. It was noted by the owners group that fumes are at times brought into the building from adjacent properties.

## APPENDIX D - ENGINEERING REPORTS

### DOLORES SCHOOL DISTRICT MASTER PLAN

#### **Plumbing:**

The plumbing in the building is in poor condition and should be replaced. Some of the main piping could be saved for re use. The roof drainage should be replaced. The gas lines could be re used if the layout of the new system is similar to the old. There does not seem to be gas shut offs in the classrooms with gas provided for science. Fire sprinklers should be added to this building.

#### **Electrical:**

The vocational building is in need of a complete lighting upgrade. All lighting fixtures in the shop area need upgraded.

This area with the most equipment and the highest electrical usage is the only area that has single phase power. This alone accounts for higher electrical bills and inefficient operation of present equipment. Three phase power is available at approximately 200 feet. If the school district continues operation of this area the savings in energy cost would pay for the upgrade in a short period of time.

There is of course a need for more electrical receptacles (plug-ins) at locations where equipment has been placed. This would eliminate some cords that pose a tripping hazard.

Some receptacles are not grounded and this is a potential risk.

#### **Maintenance Sheds:**

The maintenance sheds are simple buildings. They operate well mechanically and there is no plumbing in the space. The unit heaters in the space should be considered for replacement.

#### **Administration Complex:**

The administration complex consists of an administration office, bus shed, and old maintenance building. The square footage on these buildings is unknown.

#### **Mechanical/Plumbing:**

The administration building is served by a gas fired furnace that should be replaced. The plumbing in the space should also be replaced with water conserving fixtures. The bus shed does not have any associated mechanical and plumbing. The old maintenance building has a series of gas fired unit heaters in the space that serve the space well for heating. There is no ventilation in the space and if it is used as a maintenance shop in the future, ventilation should be added to bring the building up to code.

#### **Electrical:**

Start over electrically if any large maintenance projects are considered in the shop area.

Drop down reels for bus heaters would be an ideal way to supply power to buses and would do away with all the electrical cords running across the ground now needed for this function.



**McGlamery Structural Group, Inc.**  
CONSULTING STRUCTURAL ENGINEERS

October 14, 2010

Structural Assessment Based on Visual Inspection (1)

Property Inspected: Dolores, CO School District  
Three (3) Campuses  
Dolores, CO

Prepared for: Eidos Architects, PC

Prepared by: Richard B Klein, PE

A site visit was made on September 29, 2010 to perform a visual inspection of all buildings on the three (3) separate campuses of the Dolores, Colorado school district. The three campuses are the main school complex, consisting of the elementary, middle and high school; the preschool building, on a separate property; and the administrative campus.

**A. Pre-school Building / Campus**

The building is a one-story structure with no basement. A full set of construction documents, dated 1992, was provided and the existing construction appears to be consistent with the drawings. (Photo 1)

The foundation, based on the drawings provided, appears to be a shallow foundation consisting of a ribbed, raft slab with perimeter and interior bearing wall footings. The roof structure is wood trusses. Overall, the building appears to be performing well, with no noticeable structural problems.

**B. Administrative Campus**

**1. Administrative Office Building (Photo 2)**

The office building is a modular, double wide building. Based on discussions with school district personnel, the building is 20-30 years old. In the center, rear of the building the floor is sagging and there are signs of moisture deterioration.

On the exterior, rear, there is a wood deck with significant deflection. It appears that there may be foundation issues, as settlement of the perimeter wall and floor is evident. (Photo 3)

While it is possible that the structure could be jacked back to level and the foundation reinforced, it is our preliminary recommendation that this structure be abandoned and replaced. Even with repair, the existing modular construction is at the end of its useful life.

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## DOLORES SCHOOL DISTRICT MASTER PLAN

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### 2. Bus Storage Shed (Photo 4)

This building is an open wall, pre-engineered metal building. There were no drawings or engineering data provided for this structure.

The existing rigid frames and roof structure appear to be sound and performing well, however, there may be lateral design issues with the building as it currently exists. Normally, these types of building rely on the rigid frames to resist lateral (wind or seismic) loads in the transverse direction. In the longitudinal direction, there would either be shear walls or "X" bracing along the perimeter. None of these lateral force resisting elements exist, and therefore, there is little or no lateral strength in that direction. (Photo 5)

Without any walls, the amount of wind load to which the structure is subjected to is minimal, however, it does exist and further engineering investigation and probable reinforcement is needed.

### 3. Garage (x2) (Photo 6)

These buildings are conventionally framed wood construction, with stud bearing walls and wood roof trusses. There is no ceiling in either building.

The gable end walls are framed to plate height, with a gable end truss above. In the absence of a ceiling, there is no lateral bracing for this "hinge" in the wall. Lateral "X" bracing should be added to stabilize these end walls. Further analysis and design is warranted.

There are no hold downs provided at the ends of the roof trusses. Based on limited inspection, the trusses are toe-nailed to the top plate (Photo 7). Hold down straps or clips should be provided to resist uplift forces.

### 4. Warehouse Building (Photo 8)

This structure has the outward appearance of a pre-engineered metal building, however, it is likely that it was site fabricated and constructed without benefit of valid construction drawings. The main structural frames have been fabricated from steel pipe (Photo 9), and based on a visual inspection and our experience these main frames and trusses may not have adequate capacity to resist required snow loadings.

The secondary roof framing members are cold formed channels acting in their minor (weak) axis and are most likely deficient, structurally. These channels are also visible in Photos 9 & 10. The exterior walls are framed with 2 x 4 wood studs, spaced at 24 inches. There are no apparent shear walls, as the metal siding has little to no diaphragm capacity. There is no evidence of any longitudinal "X" bracing.

While the existing structure could certainly be reinforced, it may be cost prohibitive. At the present time, we believe the main structural frames, the roof framing, and the wall framing are deficient. It may be better to demolish

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this structure and proceed with a replacement that is properly designed and constructed. In the interim, it is our professional judgment that this structure should not be occupied during periods when there is more than six (6) inches of snow accumulation on the roof.

In addition to the snow restriction outlined above, the existing overhead hoist should not be used at all. (Photo 35)

## C. Main Campus

### 1. Temporary Portables (x2) (Photo 11)

The two (2) portable classrooms appear to be in good condition with no apparent signs of distress or deterioration.

### 2. Elementary School Gym & Art Room

This building was originally constructed from drawings prepared in 1966. Based on these drawings, the structure is supported on driven timber piles, with masonry bearing walls and an open web trus-joist roof. Overall, this building appears to be performing well with no noted structural deficiencies.

### 3. Elementary School Classrooms – West (Photo 12)

The west wing of the elementary school is outlined in the same drawing package as the gym and art room outlined above in #2. The construction is the same – driven timber piles, load bearing masonry with interior steel beams, and wood trus-joist roof. Overall the building appears to be performing well, with no noted deficiencies.

### 4. Elementary School Classrooms – East (Photo 12)

This classroom addition, constructed in 1995, consists of shallow spread footings with steel joist roof structure. Construction documents are available. Overall this building appears to be in good condition with no noted problems.

### 5. New Gym & Weight Room (Photos 12, 13)

This building, constructed in 1990, is a pre-engineered metal building and appears to be performing well, with no noted issues.

### 6. Original Gym (Photos 14 & 15)

The original gym, shown in drawings dated 1954 (which are largely unreadable) consists of glued-laminated wood arches and structural decking. Overall the building appears sound, however, the bases of the arches extend to the ground, outside the building envelope. Several of these wood bases exhibit advance rot and must be repaired. (Photos 16 & 17). One of the arches on the east side is concealed within the new foyer area (Photo 18),

# APPENDIX D - ENGINEERING REPORTS

## DOLORES SCHOOL DISTRICT MASTER PLAN

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constructed as part of the 1995 additions. This arch should be inspected to determine if any deterioration exists, and if so, repairs should be considered.

### 7. Locker Rooms (Photo 19)

The locker room area appears to have been added to the original gym in 1976. There is a hard ceiling so the structure was not visible, however, there were no noted issues.

### 8. Commons / Library Addition (Photo 20)

Constructed in 1995, this addition is steel framed on shallow foundations and appears to be performing well.

### 9. High School Classrooms (Photo 21)

There are no drawings available for the high school classrooms. The roof is wood framed, and there is no data on the foundation. Several areas of water intrusion exist, resulting in damaged roof decking (Photo 22 ), and in one case, water appears to have caused damage to the existing brick veneer (Photo 23).

### 10. Middle School Classrooms

There are no drawings for the middle school. There are some areas of water damage to the roof decking, similar to that outlined for the high school building above. Additionally, there are double cantilever corners that are currently being reinforced by means of steel columns being bolted to the outside of the building (Photo 24). Diagonal kickers from the new column to the roof beam were on site, but not yet installed. These columns were bolted to the existing brick veneer (Photo 25), which is a detail we would not normally utilize, however, there were no design documents available for this repair, so it was not possible to evaluate. The load is minimal, and it appears to be addressing only a deflection issue.

### 11. Music / Band

This building was constructed as part of the 1995 additions and appears to be in good condition with no noted problems.

### 12. Vocational Building (Photo 30)

No drawings are available for the vocational building. Based on visual examination, it appears to be load bearing masonry with wood framed roof. The rear wall of the north-west three classrooms has some significant structural issues that have been present since the building was constructed. There appear to be no structural tie between the top of wall and the roof structure (Photo 33) and the rear wall is leaning out (Photo 34). The corners of the building were reinforced with through bolts and steel plate at the time of construction (Photo 31 & 32) and the two interior walls should have been

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attached. There is significant movement, resulting in a condition that must be repaired. (Photo 33 )

#### 13. Wood Shop / Art Room (Photos 26 & 27)

This building was constructed in 2002, with drawings available. The building appears to be in good condition with no noted structural problems.

#### 14. Maintenance Sheds (Photo 28 & 29)

The two maintenance sheds are wood framed, similar to the two (2) garages described on the administrative campus above. There are ceilings in most areas, and therefore the structure is not visible. Further examination should be conducted to determine if hold down clips or straps are needed.

This report does not express nor imply any warranty of the structure, but only addresses the condition of the portion which was readily accessible and observable at the time of inspection.

(1) Visual Inspection defined - an inspection performed by a structural engineer of an existing facility, using only the engineer's primary senses. The inspection may be brief in scope. It has the limitation that only conditions that are readily visible and accessible can be evaluated. In many facilities, the structure is covered by finished materials, earth, or other items and cannot be observed directly, and must, therefore, be excluded from the inspection. Such an inspection is based on the philosophy that a qualified structural engineer can frequently find conditions, damage, or structural concerns in a brief period of time for minimal cost, without conducting extensive testing, field measuring existing framing, or performing calculations.

