

# Review of Proposed Projects for Joint Appropriations Committee

## Wyoming State Legislature

Including



Central Middle School  
and  
Sheridan High School  
Addition  
Sheridan County  
School District #2

December 4, 2002



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# **TABLE OF CONTENTS**

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	<b>PAGE</b>
<b>1.0 INTRODUCTION AND EXECUTIVE SUMMARY .....</b>	<b>1-1</b>
1.1 Introduction.....	1-1
1.2 Executive Summary.....	1-2
<b>2.0 CENTRAL MIDDLE SCHOOL .....</b>	<b>2-1</b>
2.1 Project Description.....	2-1
2.2 Design Guidelines and Rules Review.....	2-1
2.3 Value Analysis .....	2-3
2.4 Energy Efficiency Review .....	2-11
2.5 Safety and Security Review.....	2-12
<b>3.0 SHERIDAN HIGH SCHOOL ADDITION .....</b>	<b>3-1</b>
3.1 Project Description.....	3-1
3.2 Design Guidelines and Rules Review.....	3-1
3.3 Value Analysis .....	3-2
3.4 Energy Efficiency Review .....	3-8
3.5 Safety and Security Review.....	3-8

## **APPENDICES**

- Appendix A: Design Guidelines Rules Review
- Appendix B: Safety and Security Review

**1.0 INTRODUCTION AND  
EXECUTIVE SUMMARY**

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## **1.0 INTRODUCTION AND EXECUTIVE SUMMARY**

### **1.1 Introduction**

This report presents the results of a four-part review and planning process conducted for the Wyoming State Legislature's Joint Appropriations Committee by MGT of America, Inc. of a capital construction grant application. The application was submitted by the following district for the listed projects:

- A. Sheridan County School District #2
  - 1. Central Middle School
  - 2. Sheridan High School Addition

The review and planning process consisted of four elements, which included an analysis of how the projects aligned with the new Rules for Site Selection and School Construction for Wyoming Public School Buildings and the Wyoming Public Schools Facilities Guidelines, a value engineering analysis, an energy efficiency analysis, and a safety and security review. The reviews were completed using schematic design documents prepared by the district's architect. The review team was made up of design professionals and educational consultants from MGT of America, Inc. and J-U-B Engineers, Inc.

The review team met with the district's representatives, and the district's architectural team, including engineers, for a two-day workshop. The workshop included a presentation of the projects by the architectural team, a review of the findings and observations of the review team, discussions of design options, discussions of the district's responses to the options, and finally a summary of the findings and recommendations the review team would make in its report.

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## **1.2 Executive Summary**

The following paragraphs outline the major observations and recommendations for each project.

### **1.2.1 Central Middle School**

#### **Design Guidelines and Rules Review**

This project is substantially in compliance with the design guidelines. There are minor areas of non-compliance which are not significant or the District has agreed to review.

#### **Value Analysis**

The value analysis resulted on a major change in the building location and configuration. VE proposals were also accepted in mechanical HVAC systems and electrical and site options. The total potential capital cost reductions were determined to be between \$1.8 to \$2.5 million. If the existing gym is rehabilitated as part of the project the cost of the renovation is estimated to be \$950,000 or and additional \$600,000 more than proposed by the District for the gym renovation. More analysis should be done on the project. The VE alternatives selected has resulted in a major change from the project proposed in the schematic design. It will not be known what the actual cost savings might be until additional geotechnical work is completed and additional design modifications and cost estimates can be completed.

#### **Energy Efficiency**

The schematic design has incorporated many of the energy efficiency items that should be incorporated into a school building. The HVAC system is highly efficient incorporating load leveling and economizer cycles to lower heating and cooling loads. CO2 sensing is incorporated into the control systems for the Gym and other large spaces. The lighting systems are proposed as T5 systems in the classrooms. The

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District has agreed to replace the HID fixtures with high bay T5 units. Occupancy sensors will be used throughout the building to reduce energy use.

### **Safety and Security**

The District should develop a strategy and a written plan to ensure it will have sufficient visual surveillance in all areas of the site and the building. The conflicts between auto, bus and pedestrian traffic need to be resolved, and the District should consider fencing the site.

### **1.2.2 Sheridan High School Addition**

#### **Design Guidelines and Rules Review**

This project is substantially in compliance with the design guidelines. There are minor areas of non-compliance which are not significant or the District has agreed to review.

#### **Value Analysis**

By moving the freshman classrooms to the east end of the High School building the total potential cost savings is estimated to be \$365,000. After our meeting with the District's design team and the District officials it was determined that this alternative could not be implemented. Based on the information provided by the District the disadvantages far outweighed the advantages and moving the freshman wing is not recommended.

Based on the VE review it appears that a potential savings of approximately \$50,000 could be realized if the district implemented all of the VE alternatives except moving the freshman classrooms. We have a response from the District Design Team and they do not agree with our cost figures but we feel they are still realistic.

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### **Energy Efficiency**

The proposed project is a remodel and addition. The heating and air handling system proposed is an extension and expansion of the existing system. Several items were considered for energy efficiency and discussed with the District's team. Most of the items were not implemented in order to conform to the existing school and the systems that already exist.

### **Safety and Security**

The District should develop a strategy and a written plan to ensure it will have sufficient visual surveillance in all areas of the site and the building.

**2.0 CENTRAL MIDDLE  
SCHOOL**

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## **2.0 CENTRAL MIDDLE SCHOOL**

### **2.1 Project Description**

The district has proposed building a new 6-8 grade middle school (new Central Middle School) at the existing site of the Sheridan Junior High School (SJHS), and a new 9<sup>th</sup> grade wing at the high school, to replace the existing 6-7 middle school (old Central Middle School) and the 8-9 junior high school (Sheridan Junior High School). The proposal includes the renovation of the existing Vocational Education building at the SJHS site to accommodate the District administration, which is currently housed in the 3<sup>rd</sup> floor of the existing SJHS. The relocation of the 9<sup>th</sup> graders to the high school would free up the Early Building on the SJHS site to accommodate the two alternative schools that currently occupy leased space.

The projects proposed for the high school will be reviewed separately in Chapter 3.0.

In the District's original proposal, the design capacity for the new middle school is 775 students in 116,055 GSF. It is the review team's understanding that the District has modified this proposal in response to recommendations made during the workshop; however we have not had the opportunity to review the District's revised proposal.

### **2.2 Design Guidelines and Rules Review**

Rules and guidelines with which the project design did not align are detailed below with the District's response and the review team's comment or recommendation. To view the results of the complete review, see Appendix A.

#### **Guideline**

*All grade levels should have paved activity areas.*

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***Analysis***

All grade levels do not have paved activity areas. There are no paved activity areas on the campus with the exception of a track.

***District's Response***

The existing site is somewhat restricted and the existing play field and track will be a sufficient activity area.

***Comments/Recommendations***

The review team concurs.

**Guideline**

*Regular classrooms shall have 15 SF added for each computer workstation...*

***Analysis***

The classrooms are sized at 827 SF and the designers have not verified whether they will accommodate computer stations.

***District's Response***

The District is considering a wireless network, which would eliminate the need for the additional space.

***Comments/Recommendations***

The District needs to ensure the classrooms are sized appropriately for the number of students and any computer workstations.

**Guideline**

*Windows shall be provided in Vocational Education classrooms.*

***Analysis***

The woodshop does not have any windows.

***District's Response***

The woodshop is below grade and it would be very difficult to provide a window.

***Comments/Recommendations***

The review team concurs.

**Summary**

This project substantially complies with the design guidelines.

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### ***2.3 Value Analysis***

MGT of America and J-U-B Engineers, Inc. completed the Value Analysis (VA) for the proposed Central Middle School. The VA was completed by the Value Engineering team then presented in a workshop to the District's design team on November 14 and November 15, 2002. The options and alternatives developed by the VE team were discussed and reviewed with the District's design team. A level of consensus was developed and the District's design team accepted many of the options from the VE work.

The VE process identifies opportunities to remove unnecessary costs while maintaining quality, reliability, performance, and other critical factors (determined by the Owner) meeting the customer's expectations. The VE process used is as follows:

1. **Information Phase:** The first phase of the value engineering process is to gather project data and information including project constraints, cost constraints, quality expectations, space requirements, functions, cost estimates, and other pertinent data.
2. **Function Phase:** This phase identifies functions and a cost versus worth model was prepared. Worth was defined as the lowest cost that is required to perform a function. Areas where there was a large difference of cost versus worth were identified for further study and evaluation. This phase was done independent of the design team and District.
3. **Creative Phase:** This phase is to generate alternate ideas for providing the NEEDED functions through creative thinking, brainstorming, and even speculation. This phase was done independent of the District and the District's design team and is not limited by some constraints that the District's design team may encounter.

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4. **Analysis Phase:** After the VE team developed alternatives cost estimates for the alternatives were developed. The alternatives were presented to the District and design team at the meeting. Each item was discussed and analyzed at the meeting with the District and design team.
  5. **Recommendation Phase:** This report is the recommendation phase of the VE study by this team. Where applicable or the information is available we provide the actions proposed by the District.

### ***2.3.1 Information***

The following information was used within this VE study:

Schematic Design package as prepared by Malcone Belton Abel P.C. and GSG Architecture including District information, design narratives, site geotechnical data, schematic design plans, and draft system specifications.

Cost Data. Groathouse Construction provided estimated cost for construction and general conditions in a detail estimate. Cost data for the VE alternative analysis was obtained from Means Cost Works data and other school construction cost data adjusted for the local conditions.

School Guidelines for the State of Wyoming

The schematic design proposal information and drawings were reviewed with the objective of understanding the design direction in terms of materials, systems and construction procedures and functions. From the information the following basic items were determined:

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## **New Building**

Site currently owned by Sheridan County School District #2 and is partially occupied by the Junior High (Grades 8 & 9)

Building Size:	116,250 square feet (including the Gym and Multipurpose Room)
Remodel Vocational Bldg	16,380 square feet

Total Estimated Cost:	\$19,117,000
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Middle School cost:	\$17,061,000
Remodel Voc. Bldg:	\$1,483,000
Existing Gym:	\$352,000
Early Building:	\$20,000

### **2.3.2 Function Phase**

The second phase was to review the information with the VE team, determine function of each system. The VE team consisted of a civil engineer, structural engineer, architect, geotechnical engineer, electrical engineer, mechanical engineer and an energy consultant. The review team commented on the schematic design proposal to determine relative system costs, functions, and alternatives.

The process started with the program review, site layout and building configuration, and finished up looking at the building systems.

### **2.3.3 Creative Phase**

The VE team suggested alternatives for the above systems and other systems during the review. Based on the review of the building configuration, site constraints and other issues the selected alternatives centered on moving the proposed building to a location adjacent to the existing Gym. This alternative would require the demolition of the vocational building that was scheduled to remain and be remodeled into a new District

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Central Office. After review of the alternatives it was determined that the demolition and construction of a new Central Office would not increase the cost beyond what was budgeted to remodel the vocational building.

Some of the major advantages to moving the building include being able to utilize the existing gym reducing the need to add additional gym space to the proposed middle school, eliminating the need to reconstruct the football and track complex, eliminating the extensive excavation on the hillside which would also require retaining walls and retaining wall foundations and moving the building out of an area where fill had been placed for the football and track complex.

#### ***2.3.4 Analysis Phase***

The following table shows the alternatives and options developed including suggestions made, the advantages, disadvantages, and reasons for the suggestions if applicable. As shown by moving the building the total potential cost savings is \$2.6 million which includes the not replacing the track/football field, reduced site work, reduced floor space by using the existing gym, improved circulation, and reduced costs for the mechanical system in the existing gym and proposed building. After review with the District design team and District personnel and School Board the reduction of space could not be high as proposed in the VE proposed alternative due to program needs and other community constraints.

Item Number	Description	Advantages	Disadvantages	Potential Capital Savings	Accepted	Notes
M-1	Omit Mechanical Cooling for the entire school and provide unitary cooling for offices and other essential rooms.	Reduces the cost of the cooling system to provide cooling just for the essential rooms.	Does not allow year round cooling and does not provide for cooling in the classrooms and other educational spaces	\$300,000	NO	District runs and will be expanding year-round educational opportunities and needs the cooling.
M-2	Keep Mechanical cooling and design for warmest day during the school year	Reduces the size and cost of the mechanical cooling system	Does not provide adequate cooling for summer use.	\$75,000	NO	District runs and will be expanding year-round educational opportunities and needs the cooling.
M-3	Keep Mechanical cooling and use packaged/DX rooftop units.	Eliminates the remote chiller, pumps and piping resulting in reduced costs	Potentially higher maintenance costs.	\$150,000	Yes	District will consider the use of these units.
M-4	Eliminate crawl space eliminating the need for ventilation and fire sprinkling.	Reduced cost and maintenance of fire sprinkler and ventilation system.	Requires use of slab on grade that may have differential settling.	\$100,000	To Be Determined by District	District will complete additional geotechnical and structural work to determine if slab on grade can be used.
M-5	Split air handling units 3 and 4 into two equal size units.	Increased performance by reducing runs and size of ducts, reduced noise	Will require crossing of rated corridors	\$20,000	To Be Determined by District	District will review this and use two smaller units instead of one big unit and one small unit.
M-6	Use variable frequency drives for supply fans in gym and multipurpose rooms	Allows to reduce air flow when the demand control ventilation system and heating/cooling loads allows and reduced energy consumption	Increased capital cost	(\$7,000)	Yes	Payback on the VFD is 5 to 7 years based on energy savings
M-7	Use variable frequency drives for secondary heating water system	Reduced energy use and better control of heating water system	Increased capital cost	(\$7,500)	Yes	Payback on the VFD is 5 to 7 years based on energy savings

Item Number	Description	Advantages	Disadvantages	Potential Capital Savings	Accepted	Notes
M-8	Relocating new middle school will allow to share a new boiler eliminating the need for a separate boiler	Eliminates a separate boiler and reduces costs or operations and maintenance	Reduced separate control of heating.	\$100,000	Yes	District has decided to move building and use a single boiler system for the new school and existing gym.
C-1	Move new middle school to be adjacent to the existing gym currently serving the Junior High	Does not require reconstruction of the track and football complex, reduces site earthwork, simplifies the ingress and egress for the site.	Requires the demolition and relocation of the vocational building being remodeled into the new district office	\$675,000	Yes	District has decided to move building.
S-1	Move new middle school to be adjacent to the existing gym currently serving the Junior High utilizing what appears to be better soils allowing the use of slab-on-grade like the existing buildings currently on the site.	Soils appear to be better at the site adjacent to the existing school which would allow the use of slab on grade instead of structural floor.	Will require additional soils investigation and may require over excavation.	\$450,000	To Be Determined by District	District will complete additional geotechnical and structural work to determine if slab on grade can be used.

Item Number	Description	Advantages	Disadvantages	Potential Capital Savings	Accepted	Notes
S-2	Move new middle school to be adjacent to the existing gym currently serving the Junior High utilizing what appears to be better soils allowing the use of spread footings like the existing buildings currently on the site.	Soils appear to be better at the site adjacent to the existing school which would allow the use of spread footings instead of drilled piers.	Will require additional soils investigation and may require over excavation increased potential of differential settling and public perception of bad soils in the area.	\$130,000	To Be Determined by District	District will complete additional geotechnical and structural work to determine if spread footings can be used.
A-1	Move the new middle school utilizing the existing gym allowing the reduction of space for a new gym and locker rooms resulting in reduction of 9,885 square feet.	Reduced floor space required to deliver the programs at the new school.	Requires the demolition and relocation of the vocational building being remodeled into the new district office	\$1,250,000	Partially	The District agreed to move the building using the existing gym and with other agreed adjustments had a net reduction of building area of approximately 7,000 square feet resulting is an estimated capital cost savings of \$882,000.
A-2	Demolish the vocational building and reconstruct new district office on a different site or in a different location on the site.	Better utilization of the site by allowing the track to remain in its location, other reasons above and better space utilization in a new building	Public perception of a new building and may require renting space for a period of time as the new office is being built.	\$0	Yes	District has elected to contract the new District office at a new site and may save temporary space rental

Item Number	Description	Advantages	Disadvantages	Potential Capital Savings	Accepted	Notes
A-3	Eliminate sloped roofs on sixth grade classroom wing.	Reduced structural costs and eliminates 'pocket' in center of roof structure.	Reduced aesthetics.	\$30,000	Yes	Building is being redesigned at a new site.
A-4	Rehabilitate the existing gym under this project as it is on the immediate needs list of next year including structural, mechanical and electrical needs.	Increased project cost to make structural changes and replace the HVAC system, electrical, mechanical and site work.	Results in a remodeled building instead of a new building and requires some temporary issues for PE classes when the building is being remodeled.	(\$650,000)	Yes	This is an increase in budget but will take the building off the immediate needs list for 2003 and would result in a net savings as the work can be accomplished at the same time as the rest of the work.
A-5	Reduce the story height in the building from 16 feet to 14.5 to 15 feet and increase the story height on the third story.	Reduced wall construction.	Reduced area for HVAC and mechanical systems and reduces height below existing building (old school).	\$40,000	To Be Determined by District	Redesign of building may require new story heights.

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The results of the VE recommendations are not fully analyzed at this time because the proposed VE changes dramatically changes the building configuration. It is anticipated that the total floor space will be reduced 4,000 square feet to 9,000 square feet. Some of the VE team has seen the proposed floor plan and configuration at the new location but it is a concept plan that will require some additional design and input to fully develop the changes that could be realized in floor space and building configuration. The resulting changes also allowed an increase in classroom space for each of the general classrooms. It is anticipated that the District can and should realize an estimated \$1.8 million to \$2.5 million dollar capital cost reductions due to the proposed and accepted VE changes.

Dave LePlant reported at the VE review that the existing gym will be on the immediate needs list for 2003. It is recommended that the gym be remodeled and rehabilitated as part of this project. We have estimated an additional cost of \$600,000 over the current programmed cost of \$351,000 (total \$950,000) would be required for this project resulting in a total potential cost savings of \$1.2 million to \$1.9 million identified in the VE process.

The VE alternatives selected has resulted in a major change from the project proposed in the schematic design. It will not be known what the actual cost savings might be until additional geotechnical work is completed and additional design modifications and cost estimates can be completed.

#### ***2.4 Energy Efficiency Review***

The proposed building was reviewed for energy efficiency. The schematic design incorporated many of the latest energy efficiency items including:

1. High efficiency boiler and cooling system
2. T-5 lighting in classrooms

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3. Low flush toilets, urinals and limited flow wash basins
  4. Adequate insulation.
  5. CO<sub>2</sub> Sensors for Ventilation Control in Gyms and Multipurpose Rooms

In addition, the District has agreed to install occupancy sensors on lighting systems and consider the use of high bay or sport light T5 fixtures in the Gym, Commons and multipurpose room.

## **2.5 Safety and Security**

The following items are issues, which the project design did not resolve completely. The district's response is included with any comments or recommendations by the review team.

### **Issue**

*Are the school grounds fenced? Are all play areas fenced?*

#### ***Analysis***

The campus is only partially fenced.

#### ***District's Response***

The site has never been completely fenced. While there was a security incident at the middle school site, the District is not sure a fence would have prevented it.

#### ***Comments/Recommendations***

The District should consider fencing the site.

### **Issue**

*Does the layout of the buildings and landscape elements ensure open sight lines?*

#### ***Analysis***

The site has multiple existing buildings that prevent open sight lines.

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***District's Response***

This is a constraint of the existing site. Remote areas will be covered by surveillance cameras.

***Comments/Recommendations***

The review team concurs.

**Issue**

*Is visual surveillance of the parking lots possible from the main office?*

***Analysis***

One parking area is visible from some of the offices but not from the reception area.

***District's Response***

The District will use surveillance cameras to achieve visual surveillance.

***Comments/Recommendations***

The review team concurs.

**Issue**

*Has auto and bus traffic been separated?*

***Analysis***

There are potential conflicts between auto, bus and pedestrian traffic.

***District's Response***

The District will have a traffic study done by a traffic consultant.

***Comments/Recommendations***

The review team concurs.

**Issue**

*Are covered areas provided for waiting students?*

***Analysis***

There are no covered areas in the bus pick-up area.

***District's Response***

The District has never provided covered areas and does not see this as an issue.

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**Comments/Recommendations**

The review team concurs.

**Issue**

*Does each room have at least one window or a second door that can be used for emergency rescue?*

**Analysis**

The weight room and the special education room on the first floor do not have second exits or windows.

**District's Response**

Due to the configuration of the design, it would be difficult to provide windows or second exits in these rooms.

**Comments/Recommendations**

The review team concurs.

**Issue**

*Are locker rooms visible from inside gym teacher's office?*

**Analysis**

The offices are not adjacent to the locker rooms.

**District's Response**

This would be difficult since there are women gym teachers that have male students and vice versa. The gym teachers are positioned in the hall right outside the locker rooms during class change over to supervise the locker rooms.

**Comments/Recommendations**

The District should explore ways to provide direct visual supervision

**Issue**

*Is the building designed to minimize the number staff necessary to supervise all interior hallways and common spaces?*

**Analysis**

The layout of the corridors and the fact that the building is three floors will require numerous staff to supervise the hallways and common areas.

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***District's Response***

The District will supplement staffing with surveillance cameras.

***Comments/Recommendations***

The review team concurs.

**Issue**

*Are exterior wall finishes graffiti repellant or capable of repeated cleaning?*

***Analysis***

The exterior walls will be brick.

***District's Response***

The District has not experienced a problem with graffiti.

***Comments/Recommendations***

The review team concurs.

**Summary**

The District should develop a strategy and a written plan to ensure it will have sufficient visual surveillance in all areas of the site and the building. The conflicts between auto, bus and pedestrian traffic need to be resolved, and the District should consider fencing the site.

**3.0 SHERIDAN HIGH SCHOOL  
ADDITION**

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## **3.0 SHERIDAN HIGH SCHOOL ADDITION**

### **3.1 Project Description**

The District is proposing to build a classroom wing at the high school to house the 9<sup>th</sup> graders who will be moved from the existing SJHS site. A new Vocational Agricultural facility will be added to the high school building to replace the one that will be lost when the existing SJHS is demolished.

The classroom wing will contain 14,720 GSF and will house 275 students. The Vocational Agriculture facility will contain 8,270 GSF and will be attached to the existing high school building.

### **3.2 Design Guidelines and Rules Review**

Rules and guidelines with which the project design did not align are detailed below with the District's response and the review team's comment or recommendation. To view the results of the complete review, see Appendix A.

#### **Guideline**

*Regular classrooms shall have 15 SF added for each computer workstation.*

#### ***Analysis***

The classrooms are sized at 800 SF and the designers have not verified whether they will accommodate computer stations.

#### ***District's Response***

The District is considering a wireless network, which would eliminate the need for the additional space.

#### ***Comments/Recommendations***

The District needs to ensure the classrooms are sized appropriately for the number of students and any computer workstations.

#### **Guideline**

*Windows shall be provided in Vocational Education classrooms.*

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### ***Analysis***

The vocational agriculture shop does not have any windows.

### ***District's Response***

The shop was not provided with windows because the shop environment is dirty and smoky, which damages the windows and causes them to become a maintenance issue. The District will consider adding some windows.

### ***Comments/Recommendations***

The review team concurs.

## **Summary**

This project substantially complies with the design guidelines.

### ***3.3 Value Analysis***

The Value Analysis process for the proposed Sheridan High School additions was similar to the process used for the Middle School project. The VE team was the same and we presented the findings of the VE process to the District's design team on November 14, 2002 at a workshop in Sheridan.

#### ***3.3.1 Information***

The following information was used within this VE study:

Schematic Design package as prepared by TSP Two, Inc. including District information, design narratives, site geotechnical data, schematic design plans, and draft system specifications.

Cost Data. A cost estimate titled Delpro Corporation provided estimated cost for construction and general conditions in a detail estimate. Cost data for the VE alternative analysis was obtained from Means Cost

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Works data and other school construction cost data adjusted for the local conditions.

School Guideline for the State of Wyoming

The schematic design proposal information and drawings were reviewed with the objective of understanding the design direction in terms of materials, systems and construction procedures and functions. From the information the following basic items were determined:

**Remodel and addition to Existing Sheridan High School Building**

Site currently owned by Sheridan County School District #2 and is occupied by the Sheridan High School (Grades 10 through 12)

Freshman Addition Size: 14,720 square feet

Agriculture Vocational Bldg 8,270 square feet

Total Estimated Cost: \$3,729,000

**3.3.2 Function Phase.**

The second phase was to review the information with a VE team, determine function of each system. The review team consisted of a civil engineer, structural engineer, architect, geotechnical engineer, electrical engineer, mechanical engineer and an energy consultant. The review team commented on the schematic design proposal to determine relative system costs, functions, and alternatives.

The process started with the program review, site layout and building configuration, and finished up looking at the building systems.

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### ***3.3.3 Creative Phase***

The VE team suggested alternatives for the above systems and other systems during the review. The project is an addition and remodel to an existing school. The need to meet the existing site and architectural requirements in the existing building limits the alternatives that can or should be explored.

It appeared that the original design of the High School provided for a space where a classroom addition could be placed on the east end of the existing classroom wing. The proposed freshman wing was not proposed in this area but as a standalone wing attached to the commons area on the northeast side of the building. The agriculture vocational building was proposed at the north end of the existing classroom wing.

The VE process assumed no constraints and explored options for locating the freshman classrooms based on the function of “providing additional classroom space” and looked at other options. By moving the additional classrooms to the east end and constructing a two story addition, the cost of relocating utilities could be saved and the cost of building construction could be reduced with less roof and wall space required in a two story addition.

The agricultural vocational shop and classroom could be a stand-alone building on the site under this option. This would be an improvement over the current situation where students have to be transported to the Junior High site for these programs.

The VE team also reviewed the proposed building and layout and explored options and alternative as part of the VE review.

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### ***3.3.4 Analysis Phase***

The following are the suggestions made and the advantages, disadvantages, and reasons for the suggestions if applicable. As shown by moving the freshman classrooms to the east end of the building the total potential cost savings is \$365,000 which includes the estimated costs of not relocating the existing utilities, reduced building costs in foundation, roof and walls, and reduced site work.

After our meeting with the District's design team and the District officials it was determined that this alternative could not be implemented. Several issues made the program evolve the way it did. The community and educators felt very strongly that the freshman, if moved to the High School had to be as separate as possible. The best way to achieve this requirement is the separate wing of classrooms for freshman as proposed. This configuration would allow the freshman to remain in their own group through much of the day with interface with the upper classes only for electives and Physical Education.

Based on this information the disadvantages far outweighed the advantages and reduced costs and the alternative for moving the freshman wing is not recommended. The following table shows the suggested program but it is not recommended.

Item Number	Description	Advantages	Disadvantages	Potential Capital Savings	Accepted	Notes
M-1	Use fan coil units at entrances and eliminate the VAV boxes in hallways.	Reduced cost for VAV boxes in hallways and uses heat from adjoining rooms to heat and cool hallway.	Reduced Heating and cooling control.	\$6,000	NO	District believes the savings will not be substantial enough to warrant the lack of cooling control in the hallways
M-2	Eliminate plenum vents in Science rooms	Stops the return of air from Science rooms to rest of wing.	Adds cost as there needs to be a direct vent to the outside.	(\$1,500)	Yes	District will use louvers on plenum vent to operate with power ventilator.
M-3	Use trench drain(s) in vocational shop instead of multiple single floor drains	Reduces under floor piping and reduces the various slopes in the floor with potential wet spots.	Materials more costly.	\$4,000	NO	District disagrees with the cost factors and savings.
C-1	Move new freshman wing to end of existing classroom wing and construct new vocational rooms in other place on site.	Eliminates the need to move all of the utilities, reduces wall system and roof area.	Mixes the Freshman classes in with the other H.S. Classes may require an unattached vocational building and will require moving classrooms.	\$365,000	NO	The district reviewed this option and the community was very firm on the need to have the freshman separated from most of the high school for core classes.
S-1	Eliminate piers and grade beams and use spread footings similar to the rest of the building construction	Reduced costs for construction and reduced time for construction.	Soil conditions may not be uniform with the rest of the building causing differential settling.	\$37,000	To Be Determined by District	District will complete additional geotechnical and structural work to determine if slab on grade can be used.

Item Number	Description	Advantages	Disadvantages	Potential Capital Savings	Accepted	Notes
S-2	Eliminate tapered insulation and use structural members for slope and reduce the number of roof drains.	Reduced roof penetrations, reduced cost for insulation.	Additional labor for setup of bearing points on roof structure.	\$13,500	Yes	District response shows no cost saving however, VE team still believes the savings will occur and the reduced roof penetrations for drainage will add to the service of the roof.
A-1	Use single roof elevation for entire Vocational building addition	Reduced structural costs and simplify roof drainage and structure.	Will add building volume.	\$10,000	No	District disagrees with the cost factors and savings also does not allow for good attachment to existing building.
A-2	Add windows for natural light into Shop room 112.	Provides natural light	Increased capital cost	(\$1,800)	Yes	
A-3	Add observation window from Ag Office to Classroom Room	Adds security and observation for the classroom.	Increased capital cost	(\$1,000)	Yes	
A-4	Lower height above grade of exterior canopy system	Provides better shelter for people using canopy		No Change	Yes	
E-1	Add occupancy sensors to lighting controls in all new classrooms	Reduces energy consumption by turning lights off if space is not being used.	Additional cost	(\$3,500)	Yes	District has decided to use occupancy sensors.
E-2	Replace HID fixtures and lamps with T5 fluorescent low bay fixtures.	Reduced operations cost and ability to control light level and instant off and on.		(\$5,000)	Yes and No	District will replace HID with T8 High Bay fixtures resulting in no capital cost increase but higher energy costs.
E-3	Replace T8 lay in fixtures in classroom with T5 indirect lighting fixture	Reduced energy costs and reduced lamp replacement over T8 fixtures, better lighting in classrooms.	Will require stock of two different lights increased capital costs	(\$7,000)	No	District will continue to use T8 light fixtures as that are what is in the rest of the school.

---

Based on the VE review it appears that a potential savings of approximately \$50,000 could be realized if the district implemented all of the VE alternatives except moving the freshman classrooms. We have a response from the District Design Team and they do not agree with our cost figures but we feel they are still realistic.

### **3.4 Energy Efficiency Review**

The proposed project is a remodel and addition. The heating and air handling system proposed is an extension and expansion of the existing system. Several items were considered for energy efficiency and discussed with the District's team. Those items are included in the table above under mechanical and electrical items. Most of the items were not implemented in order to conform to the existing school and the systems that already exist.

### **3.5 Safety and Security**

The following items are issues, which the project design did not resolve completely. The district's response is included with any comments or recommendations by the review team.

#### **Issue**

*Are the school grounds fenced? Are all play areas fenced?*

#### ***Analysis***

The campus is only partially fenced.

#### ***District's Response***

The site has never been completely fenced. While there was a security incident at the middle school site, the District is not sure a fence would have prevented it.

#### ***Comments/Recommendations***

The District should consider fencing the site.

---

**Issue**

*Does the layout of the buildings and landscape elements ensure open sight lines?*

***Analysis***

The site has multiple existing buildings that prevent open sight lines.

***District's Response***

This is a constraint of the existing site. Remote areas will be covered by surveillance cameras.

***Comments/Recommendations***

The review team concurs.

**Issue**

*Are raised sidewalks used to separate pedestrians in parking areas?*

***Analysis***

There are no sidewalks in the parking area which is being added.

***District's Response***

This is a small parking area and does not warrant this expense.

***Comments/Recommendations***

The review team concurs.

**Issue**

*Have doors been eliminated from group toilet rooms to allow for acoustic surveillance?*

***Analysis***

The group bathrooms have doors.

***District's Response***

The District will consider adding electric hold-opens to the doors so they can remain open and not violate the 1-hour rating of the corridor.

***Comments/Recommendations***

The review team concurs.

**Issue**

*Are restrooms designed to be closer to interior spaces and away from exterior doors?*

---

***Analysis***

The student restrooms are adjacent to an exterior door.

***District's Response***

All exterior doors are locked from the outside.

***Comments/Recommendations***

The review team concurs.

**Issue**

*Are exterior wall finishes graffiti repellant or capable of repeated cleaning?*

***Analysis***

The exterior walls will be brick.

***District's Response***

The District has not experienced a problem with graffiti.

***Comments/Recommendations***

The review team concurs.

**Issue**

*Are out-buildings, sheds and portable classrooms arranged to allow clear lines of sight for surveillance?*

***Analysis***

The existing boiler plant building blocks the line of sight.

***District's Response***

This is an existing building that would be expensive to move

***Comments/Recommendations***

The review team concurs.

**Summary**

The District should develop a strategy and a written plan to ensure it will have sufficient visual surveillance in all areas of the site and the building.

## ***APPENDICES***

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***APPENDIX A-1***

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**Sheridan Middle School**

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**District: Sheridan County #2  
Project: Central Middle School**

**I. Site Requirements**

**A. Size**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Elementary School: 4 acres with an additional acre for each 100 students.			<b>X</b>	
2. Middle School: 10 acres up to 300 students, 15 acres up to 500 students, 20 acres above 500 students.			<b>X</b>	
3. Senior High School: 20 acres up to 400 students, 25 acres up to 800 students, 30 acres above 800 students.			<b>X</b>	

**B. Existing Sites**

Requirement	Yes	No	N/A	Recommendation/Comment
1. No additional space shall be added to an existing site when it is less than 50% of the recommended site size.	<b>X</b>			Existing site is 17.5 acres

**C. Guidelines**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Sites with stadiums may require 10 additional acres.			<b>X</b>	
2. Pre-kindergarten and kindergarten students should have separate play area.			<b>X</b>	
3. All grade levels should have paved activity areas.		<b>X</b>		
4. Parking should be provided for all staff, itinerant specialists, and an additional 10-20% for visitors.	<b>X</b>			
5. Student parking for high schools should accommodate a minimum of one-fourth of the students	<b>X</b>			60 high school students at alternative school

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**II. School Size**

**A. Size**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Elementary Schools: 90 to 120 GSF per student			<b>X</b>	
2. Middle School: 120 to 150 GSF per student	<b>X</b>			
3. Senior High School: 150 to 180 GSF per student			<b>X</b>	
4. Schools less than 350 students: graduated adjustment			<b>X</b>	

**B. Enrollment**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Projected enrollment of a new school may not exceed the enrollment of prior year by more than 10%.	<b>X</b>			Enrollment set at 775 based on enrollment projections.

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**III. Class Size**

**A. General Classrooms**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Not more than 1050 GSF and not less than 35 GSF per student.	<b>X</b>			
2. No classroom shall be less than 560 GSF.	<b>X</b>			
3. Resource rooms may range from 100 to 560 GSF.			<b>X</b>	

**B. Auditoriums**

Requirement	Yes	No	N/A	Recommendation/Comment
1. For schools less than 600 students, a multi-purpose room may serve as an auditorium.			<b>X</b>	
2. When an auditorium is provided, it should seat one-third of the ADM.			<b>X</b>	

**C. Guidelines for Regular Classrooms**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Maximum regular classroom size is 1050 GSF.	<b>X</b>			
2. Add 15 SF for each computer workstation.	<b>?</b>			District not sure – will review design

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**C. Guidelines for Regular Classrooms**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Ceiling Heights: - 805 SF or less, 9'-4" - 851 SF or more 10'-0" - Modular or mobile 8'-0" to 9'-0"	<b>X</b>			
2. All classrooms shall have windows - K-5: equal to or greater than 8% of floor area - 6-12: equal to or greater than 6-8% of floor area - 9-12: No more than 20% of teaching stations shall be windowless	<b>X</b>			
3. All classrooms shall have window for emergency rescue, or exterior door, or secondary access through adjoining classroom or directly to exit corridor	<b>X</b>			

**D. Guidelines for Science Classrooms**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Size:				
<u>Grade</u> <u>Room</u> <u>Guideline (MGSF)</u>				
6-8        Science                                      1,250	<b>X</b>			
6-8        Combination Math/Science              1,050	<b>X</b>			
9-12        Biology, Chemistry, Physics,    250 GSF per 2 labs Storage /Prep Rooms				
9-12        Physical Science                              1,250				
Biology    1,250				
Physics    1,250				
Earth Science                                    1,250				
Chemistry                                        1,500				
Multi-Purpose Science                        1,500				

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**D. Guidelines for Science Classrooms**

Requirement	Yes	No	N/A	Recommendation/Comment
2. Project and science rooms should have windows	<b>X</b>			
3. Ceiling height: 10'-0"	<b>X</b>			
4. Eye protection/showers shall be provided per OSHA requirements	<b>X</b>			

**E. Guidelines for Exceptional Children**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Classroom size varies with program	<b>X</b>			
2. Resource room: 560 MGSF	<b>X</b>			
3. Ceiling height same as regular classroom	<b>X</b>			

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**F. Music**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Size:				
<u>Grade</u> <u>Room</u> <u>Guideline (MGSF)</u>				
K-6        General Music                    1,050				
6-8        General Music                    1,050			<b>X</b>	
6-12       Vocal                    10-18 SF per student		<b>X</b>		Uses 45 SF
6-12       Instrumental                    25-35 SF per student		<b>X</b>		Uses 46 SF
Instrument Storage                    600				
Instrument Lockers                    300				
Music Library                    200				
Instrument Repair                    150				
Office (each)                    150	<b>X</b>			
Uniform Storage                    Varies				
Practice Room                    60	<b>X</b>			
Ensemble Practice Room                    200				
2. Ceiling Height				
<u>Room Size</u> <u>Guideline</u>				
900 SF and less                    9'-4"	<b>X</b>			
901-999 SF                    10'-0"				
1,000-1,199 SF                    12'-0"				
1,200-1,800 SF                    14'-0" - 18'-0"				
Over 1,800 SF                    16'-0" - 18'-0"				

**G. Art Education**

Requirement	Yes	No	N/A	
1. Size:				
<u>Grade</u> <u>Room</u> <u>Guideline (MGSF)</u>				
K-8        Art classroom                    1,400	<b>X</b>			
9-12       Art classroom                    1,500				
K-12       Kiln/clay storage                    60				
K-12       Art material storage                    150				

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**G. Art Education**

Requirement	Yes	No	N/A	
2. Ceiling height: 10'-0"	<b>X</b>			
3. Art classrooms should have windows	<b>X</b>			

**H Theater Arts - Auditoriums**

Requirement	Yes	No	N/A	
1. Size: <u>Grade</u> <u>Guideline (Seating Capacity)</u> K-8            Not recommended 9-12           1/3 of ADM	<b>X</b>			

**I. Vocational Education**

Requirement	Yes	No	N/A	
1. Size: Varies	<b>X</b>			
2. Ceiling height: see regular classrooms and light-duty labs up to 1,200 SF 1,200 - 2,000 SF      12'-0" 2,000 SF and above   14'-0"	<b>X</b>			
3. Windows should be provided per regular classrooms.		<b>X</b>		Woodshop is below grade.

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**J. Media Centers**

Requirement	Yes	No	N/A																											
<b>1. Size:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Grade</u></th> <th style="text-align: left;"><u>Room</u></th> <th style="text-align: left;"><u>Guideline (MGSF)</u></th> </tr> </thead> <tbody> <tr> <td>K-12</td> <td>Main Room</td> <td>4-6 GSF per ADM 1,250 GSF min.</td> </tr> <tr> <td>K-5</td> <td>Support Spaces (see below)</td> <td>1,200</td> </tr> <tr> <td>6-8</td> <td>Support Spaces (see below)</td> <td>1,800</td> </tr> <tr> <td>9-12</td> <td>Support Spaces (see below)</td> <td>2,000</td> </tr> <tr> <td>K-5</td> <td>Video Production Room</td> <td>300</td> </tr> <tr> <td>6-12</td> <td>Video Studio</td> <td>400</td> </tr> <tr> <td></td> <td>Control/Editing</td> <td>260</td> </tr> <tr> <td></td> <td>Equipment Storage</td> <td>80</td> </tr> </tbody> </table>	<u>Grade</u>	<u>Room</u>	<u>Guideline (MGSF)</u>	K-12	Main Room	4-6 GSF per ADM 1,250 GSF min.	K-5	Support Spaces (see below)	1,200	6-8	Support Spaces (see below)	1,800	9-12	Support Spaces (see below)	2,000	K-5	Video Production Room	300	6-12	Video Studio	400		Control/Editing	260		Equipment Storage	80	<b>X</b> <b>X</b>		
<u>Grade</u>	<u>Room</u>	<u>Guideline (MGSF)</u>																												
K-12	Main Room	4-6 GSF per ADM 1,250 GSF min.																												
K-5	Support Spaces (see below)	1,200																												
6-8	Support Spaces (see below)	1,800																												
9-12	Support Spaces (see below)	2,000																												
K-5	Video Production Room	300																												
6-12	Video Studio	400																												
	Control/Editing	260																												
	Equipment Storage	80																												
2. Capacity shall be 40 students or 10% of ADM, whichever is greater.																														
<b>3. Support Spaces:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Support Space</u></th> <th style="text-align: left;"><u>Guideline (MGSF)</u></th> </tr> </thead> <tbody> <tr> <td>Media office/admin.</td> <td>Up to 200 + 50/add'l staff</td> </tr> <tr> <td>Workroom</td> <td>600</td> </tr> <tr> <td>Production</td> <td>600</td> </tr> <tr> <td>Darkroom</td> <td>150</td> </tr> <tr> <td>Professional Area</td> <td>150</td> </tr> <tr> <td>Conference/Small Group</td> <td>150</td> </tr> <tr> <td>Equip. Stor./Distribution/Maintenance</td> <td>175</td> </tr> <tr> <td>Periodical Storage</td> <td>250</td> </tr> </tbody> </table>	<u>Support Space</u>	<u>Guideline (MGSF)</u>	Media office/admin.	Up to 200 + 50/add'l staff	Workroom	600	Production	600	Darkroom	150	Professional Area	150	Conference/Small Group	150	Equip. Stor./Distribution/Maintenance	175	Periodical Storage	250	<b>X</b> <b>X</b>     <b>X</b>											
<u>Support Space</u>	<u>Guideline (MGSF)</u>																													
Media office/admin.	Up to 200 + 50/add'l staff																													
Workroom	600																													
Production	600																													
Darkroom	150																													
Professional Area	150																													
Conference/Small Group	150																													
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Periodical Storage	250																													
<b>4. Ceiling Height:</b> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Main Room</td> <td>Min. 12'-0"</td> </tr> <tr> <td>Support Areas:</td> <td>9'-0"</td> </tr> </tbody> </table>	Main Room	Min. 12'-0"	Support Areas:	9'-0"	<b>X</b> <b>X</b>																									
Main Room	Min. 12'-0"																													
Support Areas:	9'-0"																													
5. Windows are recommended in main room.	<b>X</b>																													

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**K. Physical Education**

Requirement			Yes	No	N/A	
<b>1. Size:</b>						
<u>Grade</u>	<u>Spaces</u>	<u>Guideline (MGSF)</u>				
K-6	Multipurpose/Indoor P.E. (Play Area)	3,600 min. plus 4 SF per student over 600 students				Includes weight room, aux. PE room, multi-purpose room.
6-9	Gymnasium Play Area	varies 42x74 practice court min. 50x84 competition court	X			
9-12	Seating Gymnasium	400-500 SF per 100 seats One competition court with two practice cross-courts.	X			
	Play Area	GSF varies depending on seating 50x84 court 6' on sides 8' on ends				
	Seating	400-500 SF per 100 seats				
9-12	Wrestling	3,000				
9-12	Weight Room	2000-3,000				
<b>2. Ceiling Heights:</b>						
<u>Grades</u>	<u>Rooms</u>	<u>Guideline</u>				
K-6	Multipurpose	15' (18' recommended)	X			
6-9	Gymnasiums	20'-22' min.	X			
9-12	Gymnasiums	20'-25' min. (25' recommended)				
	Support area under 850 SF	9'-4"				
	Dressing, showers	10'-0"				
	Teaching areas	12'-0"				
<b>3. Showers are recommended</b>			<b>X</b>			

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**L. Home Economics**

Requirement	Yes	No	N/A	
1. Size varies	<b>X</b>			
2. Ceiling height per regular classrooms	<b>X</b>			
3. Windows are recommended.		<b>X</b>		Room is below grade.

**M. School Building Administration**

Requirement	Yes	No	N/A	
1. Size:				
<u>Rooms</u>				<u>Guidelines (MGsf)</u>
Principal		<b>X</b>		210 SF
Assistant Principal (each)		<b>X</b>		194 SF
Reception Area	<b>X</b>			342 SF
Secretary		<b>X</b>		272 SF
Other student services				200
Workroom/Storage	<b>X</b>			200 varies 270 SF
Conference Room		<b>X</b>		200 247 SF
Record Storage			<b>X</b>	100
General Storage	<b>X</b>			100 varies 381 SF

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**N. Student Support Areas**

Requirement			Yes	No	N/A	
1. Size:						
<u>Grades</u>	<u>Rooms</u>	<u>Guidelines (MGSF)</u>				
K-5	Guidance	450				
6-12	Guidance	300		X		385 SF
9-12	Reception/Career Center	Varies				
K-12	Counselor Office	150	X			3 @ 124 SF
K-5	Other student services	150				
6-12	Other student services	200		X		3 Itinerant offices @ 103 = 309 SF
K-8	Health Room	200	X			
9-12	Health Room	200				
K-12	Health Room Toilet	50	X			

**O. Staff Support Areas**

Requirement			Yes	No	N/A	
1. Size:						
<u>Grades</u>	<u>Rooms</u>	<u>Guidelines (MGSF)</u>				
K-12	Group Teacher Office/Planning	100 per teacher			X	
K-12	Special Assistant and Itinerant teacher office/work space	100 per teacher		X		3 @ 103 = 309 SF
K-12	Workroom	Varies	X			
K-12	Lounge	Varies	X			
2. Faculty toilets should be located near classrooms			X			



**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**Q. Cafeterias**

Requirement	Yes	No	N/A	
<b>1. Size:</b> <u>Grades</u> <u>Guidelines (SGSF per student)</u> K-6                                      12-14 5-8                                      12-14 7-9                                      14 9-12                                      14	<b>X</b>			
<b>2. Ceiling Height</b> Minimum below 3000 SF      12'-0" Minimum 3000 SF or above    14'-0"	<b>X</b>			
<b>3. Serving area varies</b>	<b>X</b>			
<b>4. Kitchen</b> <u>Lunches Served</u> <u>Guidelines (SGSF)</u> 100                                      856 250                                      1,261 500                                      1,518 750                                      1,938 1,000                                      2,208 1,250                                      2,566 1,500                                      2,880		<b>X</b>		2270 SF – Some satellite service

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**R. Building Support Areas**

Requirement	Yes	No	N/A	
1. Size of all areas vary	<b>X</b>			

**S. Technology**

Requirement	Yes	No	N/A	
1. Size:				
<u>Spaces</u>				
Regular/science classroom		?		District will review.
K-5 computer lab				
6-8 computer lab	<b>X</b>			
9-12 computer lab				
Distance learning room				
Wiring closets				
Main Head-End room				

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**IV. Life-Cycle Cost Analysis**

Requirement	Yes	No	N/A	Recommendation/Comment
A. All new construction more than 18,000 GSF shall have a life-cycle cost analysis				District will complete.

**V. Electrical and Lighting**

**A. Illumination**

Requirement	Yes	No	N/A	Recommendation/Comment
1. See appendix for recommended lighting levels	<b>X</b>			
2. Energy efficient lighting is critical	<b>X</b>			

**B. Fire Alarm**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Fire Alarm System per fire code	<b>X</b>			

**C. Communications**

Requirement	Yes	No	N/A	Recommendation/Comment
1. All classrooms should be equipped with two-way communication	<b>X</b>			
2. All classrooms should be wired for telephone	<b>X</b>			

***APPENDIX A-2***

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**Freshman Addition to  
Sheridan High School**

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**District: Sheridan County #2  
Project: Sheridan High School**

**I. Site Requirements**

**A. Size**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Elementary School: 4 acres with an additional acre for each 100 students.			<b>X</b>	
2. Middle School: 10 acres up to 300 students, 15 acres up to 500 students, 20 acres above 500 students.			<b>X</b>	
3. Senior High School: 20 acres up to 400 students, 25 acres up to 800 students, 30 acres above 800 students.			<b>X</b>	

**B. Existing Sites**

Requirement	Yes	No	N/A	Recommendation/Comment
1. No additional space shall be added to an existing site when it is less than 50% of the recommended site size.				Not indicated

**C. Guidelines**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Sites with stadiums may require 10 additional acres.			<b>X</b>	
2. Pre-kindergarten and kindergarten students should have separate play area.			<b>X</b>	
3. All grade levels should have paved activity areas.	<b>X</b>			
4. Parking should be provided for all staff, itinerant specialists, and an additional 10-20% for visitors.	<b>X</b>			
5. Student parking for high schools should accommodate a minimum of one-fourth of the students	<b>X</b>			

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**II. School Size**

**A. Size**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Elementary Schools: 90 to 120 GSF per student			<b>X</b>	
2. Middle School: 120 to 150 GSF per student			<b>X</b>	
3. Senior High School: 150 to 180 GSF per student			<b>X</b>	
4. Schools less than 350 students: graduated adjustment			<b>X</b>	

**B. Enrollment**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Projected enrollment of a new school may not exceed the enrollment of prior year by more than 10%.	<b>X</b>			Enrollment of 275 based on enrollment projections.

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**III. Class Size**

**A. General Classrooms**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Not more than 1050 GSF and not less than 35 GSF per student.	<b>X</b>			
2. No classroom shall be less than 560 GSF.	<b>X</b>			
3. Resource rooms may range from 100 to 560 GSF.			<b>X</b>	

**B. Auditoriums**

Requirement	Yes	No	N/A	Recommendation/Comment
1. For schools less than 600 students, a multi-purpose room may serve as an auditorium.			<b>X</b>	
2. When an auditorium is provided, it should seat one-third of the ADM.			<b>X</b>	

**C. Guidelines for Regular Classrooms**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Maximum regular classroom size is 1050 GSF.	<b>X</b>			
2. Add 15 SF for each computer workstation.	<b>?</b>			District will review.

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**C. Guidelines for Regular Classrooms**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Ceiling Heights: - 805 SF or less, 9'-4" - 851 SF or more 10'-0" - Modular or mobile 8'-0" to 9'-0"	<b>X</b>			
2. All classrooms shall have windows - K-5: equal to or greater than 8% of floor area - 6-12: equal to or greater than 6-8% of floor area - 9-12: No more than 20% of teaching stations shall be windowless	<b>X</b>			
3. All classrooms shall have window for emergency rescue, or exterior door, or secondary access through adjoining classroom or directly to exit corridor	<b>X</b>			

**D. Guidelines for Science Classrooms**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Size:				
<u>Grade</u> <u>Room</u> <u>Guideline (MGSF)</u>				
6-8              Science                                      1,250				
6-8              Combination Math/Science              1,050				
9-12              Biology, Chemistry, Physics,      250 GSF per 2 labs Storage /Prep Rooms	<b>x</b>			
9-12              Physical Science                              1,250	<b>X</b>			
Biology    1,250				
Physics    1,250				
Earth Science                                      1,250				
Chemistry    1,500				
Multi-Purpose Science                              1,500				

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**D. Guidelines for Science Classrooms**

Requirement	Yes	No	N/A	Recommendation/Comment
2. Project and science rooms should have windows	<b>X</b>			
3. Ceiling height: 10'-0"	<b>X</b>			
4. Eye protection/showers shall be provided per OSHA requirements	<b>X</b>			

**E. Guidelines for Exceptional Children**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Classroom size varies with program			<b>X</b>	
2. Resource room: 560 MGSF			<b>X</b>	
3. Ceiling height same as regular classroom			<b>X</b>	

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**F. Music**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Size:				
<u>Grade</u> <u>Room</u> <u>Guideline (MGSF)</u>				
K-6          General Music                      1,050			X	
6-8          General Music                      1,050			X	
6-12        Vocal                      10-18 SF per student			X	
6-12        Instrumental                      25-35 SF per student			X	
Instrument Storage                      600			X	
Instrument Lockers                      300			X	
Music Library                      200			X	
Instrument Repair                      150			X	
Office (each)                      150			X	
Uniform Storage                      Varies			X	
Practice Room                      60			X	
Ensemble Practice Room                      200				
2. Ceiling Height				
<u>Room Size</u> <u>Guideline</u>				
900 SF and less                      9'-4"			X	
901-999 SF                      10'-0"			X	
1,000-1,199 SF                      12'-0"			X	
1,200-1,800 SF                      14'-0" - 18'-0"			X	
Over 1,800 SF                      16'-0" - 18'-0"			X	

**G. Art Education**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Size:				
<u>Grade</u> <u>Room</u> <u>Guideline (MGSF)</u>				
K-8          Art classroom                      1,400			X	
9-12        Art classroom                      1,500			X	
K-12        Kiln/clay storage                      60			X	
K-12        Art material storage                      150			X	

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**G. Art Education**

Requirement	Yes	No	N/A	
2. Ceiling height: 10'-0"			<b>X</b>	
3. Art classrooms should have windows			<b>X</b>	

**H Theater Arts - Auditoriums**

Requirement	Yes	No	N/A	
1. Size: <u>Grade</u> <u>Guideline (Seating Capacity)</u> K-8          Not recommended 9-12         1/3 of ADM			<b>X</b>	

**I. Vocational Education**

Requirement	Yes	No	N/A	
1. Size: Varies	<b>X</b>			
2. Ceiling height: see regular classrooms and light-duty labs up to 1,200 SF 1,200 - 2,000 SF      12'-0" 2,000 SF and above   14'-0"	<b>X</b>			
3. Windows should be provided per regular classrooms.		<b>X</b>		District will review putting windows in the shop.

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**J. Media Centers**

Requirement	Yes	No	N/A																											
<b>1. Size:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Grade</u></th> <th style="text-align: left;"><u>Room</u></th> <th style="text-align: left;"><u>Guideline (MGSF)</u></th> </tr> </thead> <tbody> <tr> <td>K-12</td> <td>Main Room</td> <td>4-6 GSF per ADM 1,250 GSF min.</td> </tr> <tr> <td>K-5</td> <td>Support Spaces (see below)</td> <td>1,200</td> </tr> <tr> <td>6-8</td> <td>Support Spaces (see below)</td> <td>1,800</td> </tr> <tr> <td>9-12</td> <td>Support Spaces (see below)</td> <td>2,000</td> </tr> <tr> <td>K-5</td> <td>Video Production Room</td> <td>300</td> </tr> <tr> <td>6-12</td> <td>Video Studio</td> <td>400</td> </tr> <tr> <td></td> <td>Control/Editing</td> <td>260</td> </tr> <tr> <td></td> <td>Equipment Storage</td> <td>80</td> </tr> </tbody> </table>	<u>Grade</u>	<u>Room</u>	<u>Guideline (MGSF)</u>	K-12	Main Room	4-6 GSF per ADM 1,250 GSF min.	K-5	Support Spaces (see below)	1,200	6-8	Support Spaces (see below)	1,800	9-12	Support Spaces (see below)	2,000	K-5	Video Production Room	300	6-12	Video Studio	400		Control/Editing	260		Equipment Storage	80			<b>X</b>
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2. Capacity shall be 40 students or 10% of ADM, whichever is greater.			<b>X</b>																											
<b>3. Support Spaces:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Support Space</u></th> <th style="text-align: left;"><u>Guideline (MGSF)</u></th> </tr> </thead> <tbody> <tr> <td>Media office/admin.</td> <td>Up to 200 + 50/add'l staff</td> </tr> <tr> <td>Workroom</td> <td>600</td> </tr> <tr> <td>Production</td> <td>600</td> </tr> <tr> <td>Darkroom</td> <td>150</td> </tr> <tr> <td>Professional Area</td> <td>150</td> </tr> <tr> <td>Conference/Small Group</td> <td>150</td> </tr> <tr> <td>Equip. Stor./Distribution/Maintenance</td> <td>175</td> </tr> <tr> <td>Periodical Storage</td> <td>250</td> </tr> </tbody> </table>	<u>Support Space</u>	<u>Guideline (MGSF)</u>	Media office/admin.	Up to 200 + 50/add'l staff	Workroom	600	Production	600	Darkroom	150	Professional Area	150	Conference/Small Group	150	Equip. Stor./Distribution/Maintenance	175	Periodical Storage	250			<b>X</b>									
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Main Room	Min. 12'-0"																													
Support Areas:	9'-0"																													
5. Windows are recommended in main room.			<b>X</b>																											

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**K. Physical Education**

Requirement	Yes	No	N/A																					
<p>1. Size:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Grade</u></th> <th style="text-align: left;"><u>Spaces</u></th> <th style="text-align: left;"><u>Guideline (MGSF)</u></th> </tr> </thead> <tbody> <tr> <td>K-6</td> <td>Multipurpose/Indoor P.E. (Play Area)</td> <td>3,600 min. plus 4 SF per student over 600students</td> </tr> <tr> <td>6-9</td> <td>Gymnasium Play Area</td> <td>varies 42x74 practice court min. 50x84 competition court</td> </tr> <tr> <td>9-12</td> <td>Seating Gymnasium</td> <td>400-500 SF per 100 seats One competition court with two practice cross-courts. GSF varies depending on seating</td> </tr> <tr> <td></td> <td>Play Area</td> <td>50x84 court 6' on sides 8' on ends</td> </tr> <tr> <td>9-12</td> <td>Seating Wrestling</td> <td>400-500 SF per 100 seats 3,000</td> </tr> <tr> <td>9-12</td> <td>Weight Room</td> <td>2000-3,000</td> </tr> </tbody> </table>	<u>Grade</u>	<u>Spaces</u>	<u>Guideline (MGSF)</u>	K-6	Multipurpose/Indoor P.E. (Play Area)	3,600 min. plus 4 SF per student over 600students	6-9	Gymnasium Play Area	varies 42x74 practice court min. 50x84 competition court	9-12	Seating Gymnasium	400-500 SF per 100 seats One competition court with two practice cross-courts. GSF varies depending on seating		Play Area	50x84 court 6' on sides 8' on ends	9-12	Seating Wrestling	400-500 SF per 100 seats 3,000	9-12	Weight Room	2000-3,000			<b>X</b>
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<u>Grades</u>	<u>Rooms</u>	<u>Guideline</u>																						
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	Support area under 850 SF	9'-4"																						
	Dressing, showers	10'-0"																						
	Teaching areas	12'-0"																						
3. Showers are recommended			<b>X</b>																					

**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**L. Home Economics**

Requirement	Yes	No	N/A
1. Size varies			<b>X</b>
2. Ceiling height per regular classrooms			<b>X</b>
3. Windows are recommended.			<b>X</b>

**M. School Building Administration**

Requirement	Yes	No	N/A
1. Size:			<b>X</b>
<u>Rooms</u> <u>Guidelines (MGSF)</u>			
Principal                      200			
Assistant Principal (each)      150			
Reception Area                      400			
Secretary                      150			
Other student services              200			
Workroom/Storage              200 varies			
Conference Room                      200			
Record Storage                      100			
General Storage                      100 varies			





**State of Wyoming**  
**Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**Q. Cafeterias**

Requirement	Yes	No	N/A	
<b>1. Size:</b> <u>Grades</u> <u>Guidelines (SGSF per student)</u> K-6                                      12-14 5-8                                      12-14 7-9                                      14 9-12                                      14			<b>X</b>	
<b>2. Ceiling Height</b> Minimum below 3000 SF      12'-0" Minimum 3000 SF or above   14'-0"			<b>X</b>	
<b>3. Serving area varies</b>			<b>X</b>	
<b>4. Kitchen</b> <u>Lunches Served</u> <u>Guidelines (SGSF)</u> 100                                      856 250                                      1,261 500                                      1,518 750                                      1,938 1,000                                      2,208 1,250                                      2,566 1,500                                      2,880			<b>X</b>	

**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**R. Building Support Areas**

Requirement	Yes	No	N/A	
1. Size of all areas vary	<b>X</b>			

**S. Technology**

Requirement	Yes	No	N/A																									
1. Size:																												
<u>Spaces</u>																												
Regular/science classroom																												
K-5 computer lab																												
6-8 computer lab																												
9-12 computer lab																												
Distance learning room																												
Wiring closets																												
Main Head-End room																												
<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"></td> <td style="width: 20%; text-align: center;"><u>Guidelines (SGSF)</u></td> <td style="width: 55%;"></td> </tr> <tr> <td></td> <td style="text-align: center;">Add 15 SF per PC</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">1,050</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">1,050-1,400</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">1,050-1,400</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">1,050</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">15-120</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">450-800</td> <td></td> </tr> </table>		<u>Guidelines (SGSF)</u>			Add 15 SF per PC			1,050			1,050-1,400			1,050-1,400			1,050			15-120			450-800		<b>?</b>			District will review.
	<u>Guidelines (SGSF)</u>																											
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**State of Wyoming  
Review of Capital Construction Grant Applications**

**RULES AND DESIGN GUIDELINES**

**IV. Life-Cycle Cost Analysis**

Requirement	Yes	No	N/A	Recommendation/Comment
A. All new construction more than 18,000 GSF shall have a life-cycle cost analysis				District will complete.

**V. Electrical and Lighting**

**A. Illumination**

Requirement	Yes	No	N/A	Recommendation/Comment
1. See appendix for recommended lighting levels	<b>X</b>			
2. Energy efficient lighting is critical	<b>X</b>			

**B. Fire Alarm**

Requirement	Yes	No	N/A	Recommendation/Comment
1. Fire Alarm System per fire code	<b>X</b>			

**C. Communications**

Requirement	Yes	No	N/A	Recommendation/Comment
1. All classrooms should be equipped with two-way communication	<b>X</b>			
2. All classrooms should be wired for telephone	<b>X</b>			

***APPENDIX B-1***

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**Sheridan Middle School**

## SAFETY AND SECURITY REVIEW

**District: Sheridan County #2**

**Project: Central Middle School**

### ***I. Policies and Procedures***

#### **A. District Policies**

Question	Yes	No	N/A	Recommendation/Comment
1. Does the district have written policies requiring each school to have an emergency plan?	<b>X</b>			
2. Does the district have written policies related to building security?	<b>X</b>			
3. Does the district require each school to have security procedures specific to its buildings?	<b>X</b>			
4. Does the district have policies that require a security review for construction and/or renovation projects?	<b>X</b>			

#### **B. School Policies and Procedures**

Question	Yes	No	N/A	Recommendation/Comment
1. If this project is remodeling an existing school, is there an emergency plan for the existing school?			<b>X</b>	
2. If this project is remodeling an existing school, are there written security procedures specific to the school?			<b>X</b>	

## II. Site Security

### A. Fencing

Question	Yes	No	N/A	Recommendation/Comment
1. Are the school grounds fenced? Are all play areas fenced?		<b>X</b>		Partially fenced
2. Is the fence high enough so that intruders cannot easily climb over it?			<b>X</b>	
3. Are gates secured by locks?			<b>X</b>	
4. Are all areas of the school building and grounds accessible to cruising police vehicles and emergency vehicles?	<b>X</b>			

### B. Playground

Question	Yes	No	N/A	Recommendation/Comment
1. Is visual surveillance of playground areas and equipment possible from a single point?	<b>X</b>			
2. Does the playground equipment have tamper-proof fasteners?			<b>X</b>	
3. Are there separate play areas for pre-kindergarten and kindergarten children?			<b>X</b>	
4. Do the protective surfaces around the playground equipment extend to at least 6'?			<b>X</b>	
5. Are structures more than 30 inches high spaced at least 9' apart?			<b>X</b>	
6. Do the project specifications reference the "Handbook for Public Playground Safety"?			<b>X</b>	

## **II. Site Security**

### **C. Surveillance**

Question	Yes	No	N/A	Recommendation/Comment
1. Does the layout of buildings and landscape elements ensure open sight lines?		<b>X</b>		
2. Are remote or high risk areas covered by surveillance cameras?	<b>X</b>			
3. Are the athletics fields organized to allow a single point of surveillance?	<b>X</b>			

### **D. Landscaping**

Question	Yes	No	N/A	Recommendation/Comment
1. Are trees planted away from the building to prevent access to the roof and upper floors?	<b>X</b>			Only landscaping will be grass.
2. Does the location and height of landscaping allow for surveillance?	<b>X</b>			
3. Are trees planted far enough back from intersections to allow good line of sight for traffic, especially taller buses?	<b>X</b>			

### III. Traffic

#### A. Parking

Question	Yes	No	N/A	Recommendation/Comment
1. Is visual surveillance of parking lots possible from the main office?		<b>X</b>		Some offices but not reception
2. Are parking lots designed to minimize long straight runs that would encourage speeding?	<b>X</b>			
3. Are speed bumps used to slow traffic?	<b>?</b>			Will consider.
4. Are raised sidewalks used to separate pedestrians in parking areas?	<b>X</b>			
5. Are student parking areas separate from other parking areas?			<b>X</b>	

#### B. Circulation

Question	Yes	No	N/A	Recommendation/Comment
1. Are the number of entrances and exits to the school minimized?	<b>X</b>			
2. Has traffic flow been directed to eliminate congestion and confusion?	<b>X</b>			
3. Are there designated visitor parking areas?	<b>X</b>			
4. Has auto and bus traffic been separated?		<b>X</b>		
5. Have hazardous entrances off main thoroughfares been eliminated?	<b>X</b>			

### **III. Traffic**

#### **C. Bus Loading Area**

Question	Yes	No	N/A	Recommendation/Comment
1. Have bus loading areas been designed to restrict other vehicles?	<b>X</b>			
2. Are buses parked in single rows?	<b>X</b>			
3. Can buses turn or park without backing up?	<b>X</b>			
4. Are covered areas provided for waiting students?		<b>X</b>		

#### **D. Parent Drop-off and Pick-up Area**

Question	Yes	No	N/A	Recommendation/Comment
1. Is the parent drop-off and pick-up area clearly defined?		<b>X</b>		
2. Is it located so that students do not have to negotiate vehicular traffic?		<b>X</b>		

**IV. Building**

**A. Interior**

Question	Yes	No	N/A	Recommendation/Comment
1. Does each room have at least one window that can be used for emergency rescue?		<b>X</b>		Weight room, Spec. Ed. On 1 <sup>st</sup> floor
2. Can unused areas be closed off during after-school activities?	<b>X</b>			
3. Is the entrance lobby visible from the main office?	<b>X</b>			
4. Are major corridors at least 10' wide for elementary and middle schools and 12' wide for high schools?	<b>X</b>			
5. Are doors that open into corridors recessed or otherwise protected?	<b>X</b>			Except 2 <sup>nd</sup> floor table storage
7. Are light switches for toilet rooms and corridors protected?	<b>X</b>			
8. Are mirrors in toilet rooms and dance classrooms shatterproof?	<b>X</b>			
9. Do basketball courts have a minimum 6' safety border?	<b>X</b>			

**IV. Building**

**A. Interior**

11. Are locker rooms visible from inside gym teacher's offices?		X		
12. Are kilns located in separate rooms (not storage rooms) with adequate exhaust and ventilation?	X			
13. Do hallway doors have vision panels?	X			
14. Do enclosed stairways have electronic surveillance?	X			
15. Are elevators designed for limited access and electronic surveillance?	X			
16. Does the health or nursing room contain lockable storage?	X			
17. Are the ceilings in toilet rooms and locker rooms of a hard surface to eliminate the possibility of hiding places?	X			
18. Are interior media (library) stacks a maximum of 4' high and well spaced to facilitate visual surveillance?	X			
19. Does the layout of the cafeteria promote efficient traffic flow?	X			
20. Have doors been eliminated from group toilet rooms to allow acoustic surveillance?	x			

**IV. Building**

**A. Interior**

21. Are toilet partitions and equipment, such as hand dryers, heavy duty and securely attached?	<b>X</b>			
22. Is the building designed to minimize the number of staff necessary to visually supervise all interior hallway/corridor and common spaces?		<b>X</b>		
23. Are restrooms designed to be closer to interior spaces and away from exterior doors?		<b>X</b>		

**B. Exterior**

Question	Yes	No	N/A	Recommendation/Comment
1. Are the exterior wall finishes graffiti repellent or capable of repeated cleaning?		<b>X</b>		
2. Are exterior covered walkways, walls, and berms designed to prevent access to roofs or upper level areas, and to promote adequate illumination and visual surveillance	<b>X</b>			
3. Is there only one clearly marked entrance for visitors?	<b>X</b>			
4. Are enclosed exterior courtyards designed to permit supervision by one individual?			<b>X</b>	

### **V. Security Systems**

Question	Yes	No	N/A	Recommendation/Comment
1. Is there a central alarm system in the school which is remotely monitored?	<b>X</b>			
2. Are high risk areas (main office, computer room, cafeteria, gymnasium, shops and labs) protected by a security alarm system?	<b>X</b>			
3. Is there a two-way communication system between: - Classrooms and office? - Portable classrooms and office? - Large group areas and the office?	<b>X</b>			

**VI. Lighting**

Question	Yes	No	N/A	Recommendation/Comment
1. Is the perimeter of the school protected by adequate lighting?	<b>X</b>			
2. Is there sufficient lighting to provide marginal coverage in case a light does not work?	<b>X</b>			
3. Are photoelectric cells located out of reach of spotlights?	<b>X</b>			
4. Are accessible lenses protected by some unbreakable material?	<b>X</b>			
5. Is additional lighting provided at entrances and other points of intrusion?	<b>X</b>			
6. Are the switches and controls properly located and protected?	<b>X</b>			
7. Is access to electrical panels restricted?	<b>X</b>			

### **VII. Signage**

Question	Yes	No	N/A	Recommendation/Comment
1. Are there signs posted that declare grounds to be drug-free and gun-free zones?	<b>X</b>			
2. Are there signs posted regarding the penalties for trespassing?	<b>X</b>			
3. Are there welcome signs that politely ask all visitors to check in at the office?	<b>X</b>			
4. Is there signage inside the building that provide directions to the office and other core spaces of the school?	<b>X</b>			

### **VIII. Temporary and Out-Buildings**

#### **A. Security**

Question	Yes	No	N/A	Recommendation/Comment
1. Are out-buildings, sheds, and portable classrooms arranged to allow clear lines of sight for surveillance?		<b>X</b>		
2. Do portable classrooms have skirts to enclose the crawlspace?			<b>X</b>	

***APPENDIX B-2***

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**Freshman Addition to  
Sheridan High School**

## SAFETY AND SECURITY REVIEW

**District: Sheridan County #2**

**Project: Sheridan High School Addition**

### ***I. Policies and Procedures***

#### **A. District Policies**

Question	Yes	No	N/A	Recommendation/Comment
1. Does the district have written policies requiring each school to have an emergency plan?	<b>X</b>			
2. Does the district have written policies related to building security?	<b>X</b>			
3. Does the district require each school to have security procedures specific to its buildings?	<b>X</b>			
4. Does the district have policies that require a security review for construction and/or renovation projects?	<b>X</b>			

#### **B. School Policies and Procedures**

Question	Yes	No	N/A	Recommendation/Comment
1. If this project is remodeling an existing school, is there an emergency plan for the existing school?	<b>X</b>			
2. If this project is remodeling an existing school, are there written security procedures specific to the school?	<b>X</b>			

## II. Site Security

### A. Fencing

Question	Yes	No	N/A	Recommendation/Comment
1. Are the school grounds fenced? Are all play areas fenced?		<b>X</b>		Partially fenced.
2. Is the fence high enough so that intruders cannot easily climb over it?			<b>X</b>	
3. Are gates secured by locks?			<b>X</b>	
4. Are all areas of the school building and grounds accessible to cruising police vehicles and emergency vehicles?	<b>X</b>			

### B. Playground

Question	Yes	No	N/A	Recommendation/Comment
1. Is visual surveillance of playground areas and equipment possible from a single point?		<b>X</b>		District uses surveillance cameras.
2. Does the playground equipment have tamper-proof fasteners?			<b>X</b>	
3. Are there separate play areas for pre-kindergarten and kindergarten children?			<b>X</b>	
4. Do the protective surfaces around the playground equipment extend to at least 6'?			<b>X</b>	
5. Are structures more than 30 inches high spaced at least 9' apart?			<b>X</b>	
6. Do the project specifications reference the "Handbook for Public Playground Safety"?			<b>X</b>	

## II. Site Security

### C. Surveillance

Question	Yes	No	N/A	Recommendation/Comment
1. Does the layout of buildings and landscape elements ensure open sight lines?		<b>X</b>		
2. Are remote or high risk areas covered by surveillance cameras?	<b>X</b>			
3. Are the athletics fields organized to allow a single point of surveillance?			<b>X</b>	

### D. Landscaping

Question	Yes	No	N/A	Recommendation/Comment
1. Are trees planted away from the building to prevent access to the roof and upper floors?			<b>X</b>	
2. Does the location and height of landscaping prevent surveillance?	<b>X</b>			
3. Are trees planted far enough back from intersections to allow good line of sight for traffic, especially taller buses?			<b>X</b>	

### III. Traffic

#### A. Parking

Question	Yes	No	N/A	Recommendation/Comment
1. Is visual surveillance of parking lots possible from the main office?			X	
2. Are parking lots designed to minimize long straight runs that would encourage speeding?			X	
3. Are speed bumps used to slow traffic?			X	
4. Are raised sidewalks used to separate pedestrians in parking areas?			X	
5. Are student parking areas separate from other parking areas?	X			

#### B. Circulation

Question	Yes	No	N/A	Recommendation/Comment
1. Are the number of entrances and exits to the school minimized?			X	
2. Has traffic flow been directed to eliminate congestion and confusion?			X	
3. Are there designated visitor parking areas?			X	
4. Has auto and bus traffic been separated?			X	
5. Have hazardous entrances off main thoroughfares been eliminated?			X	

**III. Traffic**

**C. Bus Loading Area**

Question	Yes	No	N/A	Recommendation/Comment
1. Have bus loading areas been designed to restrict other vehicles?			<b>X</b>	
2. Are buses parked in single rows?			<b>X</b>	
3. Can buses turn or park without backing up?			<b>X</b>	
4. Are covered areas provided for waiting students?			<b>X</b>	

**D. Parent Drop-off and Pick-up Area**

Question	Yes	No	N/A	Recommendation/Comment
1. Is the parent drop-off and pick-up area clearly defined?			<b>X</b>	
2. Is it located so that students do not have to negotiate vehicular traffic?			<b>X</b>	

**IV. Building**

**A. Interior**

Question	Yes	No	N/A	Recommendation/Comment
1. Does each room have at least one window or a second door that can be used for emergency rescue?	X			
2. Can unused areas be closed off during after-school activities?			X	
3. Is the entrance lobby visible from the main office?			X	
4. Are major corridors at least 10' wide for elementary and middle schools and 12' wide for high schools?	X			
5. Are doors that open into corridors recessed or otherwise protected?	X			
7. Are light switches for toilet rooms and corridors protected?	X			
8. Are mirrors in toilet rooms and dance classrooms shatterproof?			X	
9. Do basketball courts have a minimum 6' safety border?			X	

#### **IV. Building**

##### **A. Interior**

11. Are locker rooms visible from inside gym teacher's offices?			<b>X</b>	
12. Are kilns located in separate rooms (not storage rooms) with adequate exhaust and ventilation?			<b>X</b>	
13. Do hallway doors have vision panels?	<b>X</b>			
14. Do enclosed stairways have electronic surveillance?			<b>X</b>	
15. Are elevators designed for limited access and electronic surveillance?			<b>X</b>	
16. Does the health or nursing room contain lockable storage?			<b>X</b>	
17. Are the ceilings in toilet rooms and locker rooms of a hard surface to eliminate the possibility of hiding places?	<b>X</b>			
18. Are interior media (library) stacks a maximum of 4' high and well spaced to facilitate visual surveillance?			<b>X</b>	
19. Does the layout of the cafeteria promote efficient traffic flow?			<b>X</b>	
20. Have doors been eliminated from group toilet rooms to allow acoustic surveillance?		<b>X</b>		

**IV. Building**

**A. Interior**

21. Are toilet partitions and equipment, such as hand dryers, heavy duty and securely attached?	<b>X</b>			
22. Is the building designed to minimize the number of staff necessary to provide open sight lines to all interior hallway/corridor and common spaces?	<b>X</b>			
23. Are restrooms designed to be closer to interior spaces and away from exterior doors?		<b>X</b>		

**B. Exterior**

Question	Yes	No	N/A	Recommendation/Comment
1. Are the exterior wall finishes graffiti repellent or capable of repeated cleaning?		<b>X</b>		
2. Are exterior covered walkways, walls, and berms designed to prevent access to roofs or upper level areas, and to promote adequate illumination and visual surveillance	<b>X</b>			
3. Is there only one clearly marked entrance for visitors?	<b>X</b>			
4. Are enclosed exterior courtyards designed to permit supervision by one individual?	<b>X</b>			

### **V. Security Systems**

Question	Yes	No	N/A	Recommendation/Comment
1. Is there a central alarm system in the school which is remotely monitored?	<b>X</b>			
2. Are high risk areas (main office, computer room, cafeteria, gymnasium, shops and labs) protected by a security alarm system?			<b>X</b>	
3. Is there a two-way communication system between: - Classrooms and office? - Portable classrooms and office? - Large group areas and the office?	<b>X</b>			

**VI. Lighting**

Question	Yes	No	N/A	Recommendation/Comment
1. Is the perimeter of the school protected by adequate lighting?	<b>X</b>			
2. Is there sufficient lighting to provide marginal coverage in case a light does not work?	<b>X</b>			
3. Are photoelectric cells located out of reach of spotlights?	<b>X</b>			
4. Are accessible lenses protected by some unbreakable material?	<b>X</b>			
5. Is additional lighting provided at entrances and other points of intrusion?	<b>X</b>			
6. Are the switches and controls properly located and protected?	<b>X</b>			
7. Is access to electrical panels restricted?	<b>X</b>			

**VII. Signage**

Question	Yes	No	N/A	Recommendation/Comment
1. Are there signs posted that declare grounds to be drug-free and gun-free zones?	X			
2. Are there signs posted regarding the penalties for trespassing?	X			
3. Are there welcome signs that politely ask all visitors to check in at the office?	X			
4. Is there signage inside the building that provide directions to the office and other core spaces of the school?	X			

**VIII. Temporary and Out-Buildings****A. Security**

Question	Yes	No	N/A	Recommendation/Comment
1. Are out-buildings, sheds, and portable classrooms arranged to allow clear lines of sight for surveillance?		X		
2. Do portable classrooms have skirts to enclose the crawlspace?			X	