Schematic Design Report
Madras High School
Performing Arts Center
& Athletic Complex

A joint effort with the Jefferson County School District

BBT
ARCHITECTS
JANUARY 17, 2013
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Ken Stout
Lyle Rehwinkel
Margaret Sturza
Rick Molitor
Sarah Braman-Smith
Shannan Ahern

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Rob Quaempts

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MLC Engineering LLC:
Lun Chau

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BBT Architects:
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Cost Consultant
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Theater Consultant
PLA Consultants:
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Introduction
The following Schematic Design Report is a culmination of the process and work completed to the end of this first phase of the design process, known as Schematic Design. Schematic Design establishes the general scope, conceptual design, scale and relationships among the components of the project. The primary objective is to arrive at a clearly defined, feasible concept while exploring the most promising alternative design solutions. The architect will prepare a series of rough plans, known as schematics, which show the general arrangement of rooms and of the building on the site. Models and/or illustrations are prepared to help visualize the project as necessary. Preliminary Costs are estimated based on overall project volume and preliminary site design. The project proceeds to the next phase (Design Development) when the Owner approves this Schematic Design.

This report only includes the additions at Madras High School. All other maintenance, and other remodels will be completed at a further date.
History & Process

History

The District
Jefferson County School District 509-J serves the communities of Madras, Warm Springs Reservation, Metolius and Antelope with seven schools, 2,900 students, grades K-12 and 400 staff members. The district is proudly among the most culturally diverse in Oregon with equal populations of Native American, Hispanic, and Caucasian students. Jefferson County School District operates one primary, one intermediate, two elementary, one K-8, one middle school and one high school.

District Administration
The District is administered under Oregon statutes as a unified school system with a five-member Board. The Superintendent is the chief executive officer of the school district and, as part of his duties, is responsible for all non-instructional support services. In the area of support services, the Superintendent is assisted by the Director of Human Resources and Operations.

Project Background
The District is currently in need of asset protection, operational and instructional improvements, which requires a new facilities to provide the highest quality educational environment possible. The intent of this construction program is to provide newly constructed and renovated/improved facilities to meet the most urgent need for instructional space, meet JCSD desire for energy savings and reduce the District’s deferred maintenance backlog.

The School District was authorized to issue general obligation bonds not to exceed $16,000,000 to build a new Performing Arts Center, Replace the Madras High School Athletic Stadium and Track, provide access roads to athletic facilities, improve energy efficiency, increase student safety, provide a new track surface at Jefferson County Middle School.
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<thead>
<tr>
<th>DESCRIPTION</th>
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<tr>
<td>A&amp;E Selection Process</td>
<td>4-Sep-12</td>
<td>17-Sep-12</td>
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<td>Agreements / Start-up</td>
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<td>24-Sep-12</td>
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<td>Pre-Design Phase</td>
<td>1-Nov-12</td>
<td>23-Nov-12</td>
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<td>Schematic Design Phase</td>
<td>28-Nov-12</td>
<td>17-Jan-13</td>
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<td>Design Development Phase</td>
<td>23-Jan-13</td>
<td>20-Mar-13</td>
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<td>Construction Document Phase</td>
<td>21-Mar-13</td>
<td>29-May-13</td>
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<td>Building Permit Reviews &amp; Approvals</td>
<td>29-May-13</td>
<td>29-Jun-13</td>
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<td>Bidding Phase</td>
<td>3-Jun-13</td>
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<td>Construction Phase</td>
<td>7-Jul-13</td>
<td>15-Aug-14</td>
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<td>Project Commissioning</td>
<td>15-Aug-14</td>
<td>12-Sep-14</td>
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<tr>
<td>District Move-in / Setup</td>
<td>25-Aug-14</td>
<td>14-Sep-14</td>
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Process

Prior to the design process beginning an architect and a construction manager was selected. Following these selections, a Design Guidance Team was developed. A Contractor was selected near the midway point of this phase. The role of the Design Guidance Team (DGT) is to provide guidance of the design of the new Performing Arts Center, Athletic Complex, and site amenities/traffic flow improvements. The DGT is to report to the Core Team who provides overall guidance of the project, along with being the primary communicators. The DGT is made up of community members, administrators and staff.

The DGT met at least once a week from October 18th until December 20th. A schematic design work plan was provided at the first meeting which spelled the process (see pages 6-8). The following are some highlights from the process.
**Proposed Workplan**  
for the  
District Wide Projects (incl PAC and Athletics)  
Jefferson County School District

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<th>DATE</th>
<th>TASK</th>
<th>PARTICIPANTS</th>
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</table>
| Week of October 22nd | PROJECT LAUNCH  
  - Introductions  
  - Discuss Roles and Responsibilities  
  - Review Workplan  
  - Discuss Givens  
  - Discuss Communication Plan  
  - Establish Guiding Principles  
  - Forward Thinking Session | Design Team & Architect Team            | 1.5 Hrs.   |
| Week of October 29th | PROGRAM REFINEMENT  
  - Establish Guiding Principles  
  - Forward Thinking Session  
  - Educational Goals  
  - School Tours  
  - Staff Conversations | Design Team & Architect Team            | 2 Hrs. plus tour |
|                       | COMMUNITY FORUM #1  
  - Explain Overall Design Process & Schedule  
  - Listening Session  
  - Establish Guiding Principles  
  - Forward Thinking Session | Design Team, Architect Team & Community | 2 Hrs.     |
| Week of November 5th  | BRAINSTORM SESSION (for PAC and Athletics)  
  - Share and Discuss Sustainability Strategies  
  - Brainstorm Site Options  
  - Brainstorm Floor Plan Options  
  - Prioritize Site Options  
  - Prioritize Floor Plan  
  - Visual Survey | Design Team & Architect Team            | 8 Hrs.     |
|                       | **Begin Schematic Design**                  |                                       |            |
| Week of November 12th | FLOOR PLAN & SITE PLAN REVIEW (for PAC and Athletics)  
  - Refine Floor Plan  
  - Refine Site Plan  
  - Review Concept Design Images | Design Team, CMGC & Architect Team     | 2 Hrs.     |
| Week of November 19th | SITE SCOPE MEETINGS (except PAC and Athletics)  
  - Meet at each site  
  - Discuss & Understand Issues and Needs  
  - Explore Responsible Solutions  
  - Strategize with CMGC  
  - Determine Bid Packages | Design Team, CMGC, Consultants & Architect Team | 2 Hrs. each site |
| thru Week of November 26th |                                              |                                       |            |
## Proposed Workplan for the
District Wide Projects (Incl PAC and Athletics)
Jefferson County School District

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<th>DATE</th>
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<tbody>
<tr>
<td>Week of November 26th</td>
<td>DESIGN REVIEW (for PAC and Athletics)</td>
<td>Design Team, CMGC &amp; Architect Team</td>
<td>2 Hrs.</td>
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<tr>
<td></td>
<td>• Refine Floor Plan</td>
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<td>• Refine Site Plan</td>
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<td>• Refine Concept Design Images</td>
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<td></td>
<td>COMMUNITY FORUM #2</td>
<td>Design Team, Architect Team &amp; Community</td>
<td>2 Hrs.</td>
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<td></td>
<td>• Review Guiding Principles</td>
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<td></td>
<td>• Progress Report</td>
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<td></td>
<td>• Update on Brainstorming Session</td>
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<td>• Q &amp; A</td>
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<td>Week of December 3rd</td>
<td>SYSTEMS WORKSHOP</td>
<td>Staff, Consultants, CMGC, &amp; Architect Team</td>
<td>4 Hrs.</td>
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<td></td>
<td>• Discuss Mechanical Systems</td>
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<td>• Discuss Plumbing Options</td>
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<td>• Discuss Electrical &amp; Data Options</td>
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<td>• Discuss Lighting Options</td>
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<td></td>
<td>• Discuss Responsible Solutions</td>
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<tr>
<td>Week of December 10th</td>
<td>FOCUS GROUPS - Session 1 (for PAC and Athletics)</td>
<td>Design Team, CMGC, Staff, &amp; Architect Team</td>
<td>8 Hrs.</td>
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<td></td>
<td>• Meet with Building Users</td>
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<td>• Discuss Details of each Space</td>
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<td></td>
<td>• Refine Plans</td>
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<tr>
<td>Week of December 24th</td>
<td>FINAL SD DESIGN REVIEW</td>
<td>Design Team, CMGC &amp; Architect Team</td>
<td>2 Hrs.</td>
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<td></td>
<td>• Review Schematic Design Package</td>
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<td></td>
<td>• Measure Against Guiding Principles</td>
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<td>• Measure Against Budget</td>
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<td>• Refine As Needed</td>
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<td>• Develop Cost Estimates</td>
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<td>• Final Review with Costs</td>
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<td></td>
<td>Begin Design Development</td>
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<td>Week of January 7th</td>
<td>DESIGN REVIEW</td>
<td>Design Team, CMGC &amp; Architect Team</td>
<td>2 Hrs.</td>
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<td></td>
<td>• Review Floor Plans</td>
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<td>• Review Site Plans</td>
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<td></td>
<td>• Review Design Details</td>
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<td></td>
<td>• Discuss Materials &amp; Colors</td>
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<td>Week of January 14th</td>
<td>FOCUS GROUPS - Session 2 (for PAC and Athletics)</td>
<td>Design Team, CMGC, Staff, &amp; Architect Team</td>
<td>8 Hrs.</td>
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<tr>
<td></td>
<td>• Meet with Building Users</td>
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<td>• Discuss Details of each Space</td>
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<td>• Refine Plans</td>
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<td>COMMUNITY FORUM #3</td>
<td>Design Team, Architect Team &amp; Community</td>
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<td></td>
<td>• Review Guiding Principles</td>
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<td>• Progress Report</td>
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<td>• Next Steps</td>
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<td>• Q &amp; A</td>
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# Proposed Workplan for the District Wide Projects (incl PAC and Athletics) Jefferson County School District

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<th>PARTICIPANTS</th>
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<tr>
<td>Week of January 21st</td>
<td><strong>DESIGN REVIEW</strong>&lt;br&gt;• Review Floor Plans&lt;br&gt;• Review Site Plans&lt;br&gt;• Review Design Details&lt;br&gt;• Review Materials &amp; Colors</td>
<td>Design Team, CMGC &amp; Architect Team</td>
<td>2 Hrs.</td>
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<td>Week of January 28th</td>
<td><strong>FINAL DD DESIGN REVIEW</strong>&lt;br&gt;• Review Design Development Package&lt;br&gt;• Measure Against Guiding Principles&lt;br&gt;• Measure Against Budget&lt;br&gt;• Refine As Needed&lt;br&gt;• Develop Cost Estimates&lt;br&gt;• Final Review with Costs</td>
<td>Design Team, CMGC &amp; Architect Team</td>
<td>2 Hrs.</td>
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**Begin Construction Documents (February - May 2013)**
The DGT met at least once a week from October 18th until December 20th. A schematic design work plan was provided at the first meeting which spelled the process. The following are some highlights from the process.

The DGT was provided with givens for the project, which was established by the Core Team. Givens are non-negotiable items that were developed prior to the project starting.

**Givens**

- Achieve promises made to voters (complete all projects included in the Bond)
- Below budget and ahead of schedule
- Spend the tax payers money wisely
- Provide Community Input throughout the process
- Low maintenance and long lasting solutions
- Bring economic benefits to Jefferson County (contractors, businesses)
Guiding Principles for the new school were developed by asking and prioritizing the following questions. These guiding principles will be used throughout the process as the main goals of the project’s design. The group was empowered to always keep these in mind at each step along the way.

- As a Student, what is the most important goal for this project?
- As a Staff Member, what is the most important goal for this project?
- As a Parent/Community, what is your most important goal for this project?

The results are as follows:

**Guiding Principles**

- Tax dollars are to be spent wisely to meet expectations of the voters.
- Design for durability and ease of maintenance.
- Facilities are to be designed to provide increased and expanded opportunities.
- Facilities are to include the latest, proven technologies; the design should include infrastructure for facilities to evolve as new technologies become available.
- Facilities are to provide a safe and secure feeling to students, staff and visitors.
- The design process and end results are to include and reaffirm student input and participation.
- Facilities are to be accessible to those with disabilities.
- Facilities are to be accessible to the users and the community as a whole.
- Facilities are to be versatile and able to evolve while also meeting the functional needs of the current curriculum.
- The design of the facilities is to represent student culture (Multi-racial MHS & MHS White Buffaloes)
- Facilities are to feel inviting and welcoming to all users.
Coinciding with these activities was the development of the architectural program. An architectural program is the process of discovering the owner/client's requirements and desires for a project. The following are what is included in the program:

- The types of spaces frequently included in the building type
- The space criteria (number of square feet per person or unit) for those spaces
- Typical relationships of spaces for these functions
- Typical ratios of net assignable square footage (NASF—areas that are assigned to a function) to gross square footage (GSF—total area to the outside walls) for this building type
- Typical site requirements for the project type

A series of focus group meetings with the users of both the Performing Arts Center and the Athletic Complex helped develop this program. The preliminary Schematic Design program is included in this report.

Along with these activities with the DGT, there were a series of activities that reached out beyond the DGT. For instance, the entire student population of both Madras High School and Jefferson County Middle School had the opportunity to provide input in the needs of the project.
Several DGT members and community members traveled to other Central Oregon locations to visit three schools. Those three schools were:

- **La Pine High School**  
  La Pine, Oregon

- **Summit High School**  
  Bend, Oregon

- **Ridgeview High School**  
  Redmond, OR

These tours provided the group with exposure to ideas of recently designed theaters and athletic facilities. Following these tours, there was a formal debrief on each school we visited. The following pages include comments made by the group.
Athletic Facility

- The longer and narrower concession sales area similar to that at Summit HS is preferred over the example at Ridgeview HS because it is faster to turn around for merchandise than having to walk across the room. The back counter/shelving should be higher so that customers can see the merchandise more easily.

- *Atlas Track & Field* should be specified for the track installation.

- Windows should be included at the back wall of the stadium crow’s nest to allow viewing of other fields.

- There were mixed opinions regarding whether or not the press box area should be accessed via a hallway or directly from the exterior walkway. The hallway at Summit HS did not allow access to both sides of the upper area without going through the press box hallway, while the exterior walkway at Ridgeview HS allowed for access to the entire upper level without entering the press box area.

- The idea of constructing a slightly smaller seating area with adjacent raised concrete platforms for seating or standing room was suggested. There is some concern that the stadium should not be too small for large events, like graduation.

- The group liked the idea of a 4-foot high fence to separate fans from the fields.

- The group did not think that a 10-foot high fence, like at Summit HS, was necessary. They felt that a 5 or 6-foot high fence was adequate for security at games and events. The group agreed that the fields should be accessible to the community on weekends and non-event times and that field/track over-usage could be controlled with proper signage and supervision.
• The group would like to include storage space below the stadium seating if allowed by code and the local fire department.

• The group prefers to have a CMU/concrete stadium over an aluminum stadium as seen at Summit and Ridgeview HS. There is additional cost associated with a site built stadium. BBT should review this with the first construction cost estimate.

• The locker/team rooms should include boys and girls spaces only, or home and visitor spaces only. There should also be a space for teams to view game footage within the Athletic Complex.

• The athletic complex needs to include official’s area with lockers, showers, restrooms and a place to sit before and after games and during halftime. Separate facilities for men and women should be included.

• There should be a space for hang drying of football pads and helmets included in the design for the Athletic Complex. This space will be needed for the storage of football pads during the off-season and could allow for the use of smaller lockers within the locker rooms.
Performing Arts Center

- The group liked the way that the stage was accessed from the seating area with ramps and the stage extensions.

- The group liked the way the seating was arranged at Ridgeview HS with the two tiers and the aisles within the seating area. They did not like the seating arrangement at Summit HS with the long rows of seats and no central aisles.

- The group liked the quality features seen during the tours, but felt that there needed to be balance between getting what they need and what they want. They do not want to include and spend money on equipment that the facility users are not able to operate, such as a state of the art sound or lighting system that cannot be operated by students and staff.

- There needs to be some level of fly loft included in the design. BBT suggested that the theater consultant come to the next meeting to discuss the pros and cons of a full fly versus a half fly loft.

- There was concern raised over the fact that Madras HS did not have many students in the programs that would be using the PAC facility and that funding was being reduced in the future for those programs. The group is concerned that they could be constructing a nice PAC facility that could sit unused due to lack of funding for programs like band, choir, drama, etc.

- The PAC needs to include a motorized projection screen and a projector located in the control booth. The projector should not be mounted to the catwalks like at Summit HS.
• The Green Room / Black Box space needs to be multi-functional and should have direct access to the stage without having to go through other spaces.

• The group liked the way the dressing, makeup and restrooms were laid out at both Summit and Ridgeview HS, with separate dressing and restroom areas and a shared makeup area. The group felt that the cubbies and costume closets at Ridgeview HS worked well.

• The group agreed that there should be a scene shop adequate in size to construct and store sets. There should be large roll-up doors to allow movement of sets between the stage and scene shop.

• The PAC should have an inviting lobby space adequate in size for crowd gathering. The lobby could link to an exterior plaza or courtyard similar to Ridgeview HS for use during warm weather. This would allow for the construction of a slightly smaller lobby.
Thus far, one Community Information Session has been conducted. Community members heard about the overall design process and had an opportunity to share their thoughts on the project. Additional Community Information Sessions will be held during Design Development phase.

With all the valuable input given from the Design Guidance Team, staff, students, community members and others, several site plan options, floor plan options, and options for the overall design approach were shared with the DGT and discussed. These were revised and continue to be reviewed. The final direction for the design is reflected in this report.
Site Narrative

Madras High School is located at the northeast corner of the intersection of Buff Street and 10th Street. The site abuts Madras Primary School on the north edge, and Buff Intermediate School is located to the south on the opposite side of Buff Street. Madras High School occupies a portion of an approximately 43-acre site that it shares with Madras Primary School and the Jefferson County School District Maintenance & Transportation Department facilities. The site is relatively flat and slopes uphill at the southwest corner near the intersection of Buff and 10th Streets. The site is bisected on the northeast side by the Willow Creek floodway and floodplain. Construction is not permitted in the floodway and is allowed within the floodplain; provided the finish floor elevation is set a minimum of one (1) foot above the FEMA established flood elevation height.

BBT began the site design process by investigating the three locations proposed by the School District for the new Performing Arts Center (PAC). The three locations proposed included 1) the ‘Grassy Knoll’ at the southwest corner of the site, 2) the area south of the tennis courts in between the band and choir rooms and the 10th Street setback, and 3) on the east side of the school, between the school and the west side of the football stadium. BBT was informed by District Staff that ODOT and the City of Madras Public Works Department were planning improvements and revisions to the City’s storm water management system at the southwest corner of the site, which makes the ‘Grassy Knoll’ site non-viable for the construction of a Performing Arts Center. BBT presented a site plan showing a building with the approximate square footage required for a 600 seat Performing Arts Center in the space between the band and choir rooms and 10th Street, and it quickly became evident that there was not enough site area for the new building in that location. That left the only, truly viable location for the new Performing Arts Center as the space between the existing high school and the football stadium. There were, however, some site constraints associated with this location, such as the existing bus drive and an existing utility easement.

After a number of design options showing the new Performing Arts Center located between the existing bus loop and the existing utility easement were presented and revised, the group discussed options to relocate the easement or the existing football field. It was determined that the cost to relocate the existing football field would roughly be the same cost as relocating the easement and that the relocation of the football field would open up many more opportunities for the design of a more cohesive Performing Arts Center and Athletic Complex, which could include a central, shared outdoor plaza, more on-site parking and also give the facilities a much better street and community presence.

The ODOT and City of Madras street and storm water management improvements, discussed earlier, include the construction of retention swales located on School District property and also minor improvements to the intersections of Buff & 10th and Buff & McTaggart Streets.
The District has requested to participate in the design of these improvements so that their concerns with student safety and the proposed locations for the storm water retention swales can be addressed. The District has requested that the retention swales be relocated so they do not take up so much of the District’s property at the corner of Buff and 10th Streets. The District has also requested that 10th Street be rerouted slightly to improve public safety at the intersection with Buff Street. The reroute would push the intersection of 10th and Buff to the east and create a standard ‘T’ intersection. The District has also requested that the proposed improvement to the intersection of Buff and McTaggart be modified to create a similar ‘T’ intersection. ODOT and the City of Madras Public Works Department have been presented with these proposed changes and are in discussion with the District regarding funding and construction schedule.

Opportunities for Future Additions
Due to the fact that there is a floodway and flood plain running through the site, the opportunities for future additions are somewhat limited. Space to the east of the existing high school, in the area of the practice field, has been preserved for a possible classroom addition. Space has also been preserved for additions at the northwest corner of the school near the band / choir rooms, in one of the locations discussed as a possible site for the Performing Arts Center.

Parking
The existing parking area at the front of the school will largely remain unchanged. The student parking area located to the east of the school building will be slightly modified to accommodate the construction of the new Performing Arts Center. This parking area will also be expanded to the east to meet the parking requirements of the enlarged stadium, Performing Arts Center and to add much needed parking for the soccer fields. The parking counts will increase from an existing total of 268 spaces to a new total of 309 spaces. BBT, along with District representatives, have met with the City of Madras Planning & Public Works departments to discuss the parking requirements. Final requirements will be documented once determined.

On-Site Storm Water Treatment
Storm water is required to be retained on site by local codes. The site design will include various forms of catchment and retainage systems to meet these requirements, such as catch basins, drywells and bioswales depending on subsurface conditions.

Traffic Patterns
The on-site traffic patterns will be changed slightly with the completion of the new construction and proposed changes to Buff Street and 10th Street. The front parking area will only be accessible from 10th Street during morning and afternoon bus times, due to the closure of the Buff Street access and rerouting of the bus drive to align with the entry drive to the Buff Intermediate School parking lot and bus pick-up area.
The parking lot expansion on the south side of the site allows for a Performing Arts Center and Athletic Complex facility entrance that is separated from the main school parking access, and can also function as student parking. The Performing Arts Center / Athletic Complex facility parking has two entry points, which direct drivers to a segregated drop-off area at the plaza outside of the entries to both the Performing Arts Center and Athletic Complex.

Entry Plaza
The proposed design has established an entry plaza that serves both the Performing Arts Center and the Athletic Complex. The entry plaza is to be located on the southeast side of the Performing Arts Center and the Stadium, providing a common space with access to the Performing Arts Center entry and to the Stadium entry gate and ticket booth. The plaza is designed to be large enough to accommodate patrons of the Performing Arts Center as well as fans for athletic events in the enlarged stadium.

Athletic Components
The Athletic Complex will include new facilities as well as revisions and improvements to some of the existing elements. The existing baseball field is planned to be rotated 180 degrees, which will place the backstop back to back with the softball backstop, and create a core to a more concentrated sports plaza with access to the proposed concessions building and restrooms. This will require the relocation of the existing backstop, fencing and scoreboard.

The construction of a centrally located concessions and restroom building in the sports plaza will provide facilities for fans of baseball, softball and football events. The new sports plaza creates a link to the new football stadium and the plaza between the stadium and the Performing Arts Center. The plaza between the stadium and the Performing Arts Center will serve as a gathering place for fans during games and also as a place for fans to cheer on the home team as they exit the new locker room facilities and enter into the proposed tunnel under the seating, which provides access to the field. The sports plaza will also be equipped with electrical and water services for food vendors and Booster Club sales. The football field has been rotated approximately 45-degrees and moved to the east to take advantage of the non-buildable floodway space and to create more buildable areas within the flood plain. The new locker rooms, official’s facilities and coach’s areas will be constructed as part of the new Performing Arts Center and located across the plaza from the stadium. The new stadium will seat 2,000 fans and include public announcement, coach’s and media boxes. Stadium amenities that have been discussed include a tunnel below the seating for the home team to use as their entrance to the field, seating with backs for Boosters and Donors, and covered seating for all or a portion of the stadium. The back of the stadium should be solid to create a wind break for sheltering fans.
Building Narrative
The design of the Performing Arts Center (PAC) and the Athletic Complex (AC) must fall within the budget established by the Bond Measure, while also meeting the needs of the school district and community. BBT’s goal is to design facilities that instill pride in Jefferson County students, staff and the community at large, while encouraging countless opportunities that may not have been possible prior to the concept of these two new facilities.

PAC Narrative
Approaching Madras High School along Buff Street, the PAC will become a symbolic structure noticeable by students, staff, community and visitors. To aid in this visual experience, the building will be rotated approximately 45 degrees, which is a similar alignment to the existing front of the school, but moved farther to the south. This will give the building slight prominence over the High School on the same site. The height of the building will be 50 feet, adding visual recognition. Though slightly larger, the PAC will visually be tied to the High School through use of complimentary building materials.

A dramatic feature will announce the entrance of the facility, and will be integrated with an auto drop off lane. The lobby, which has to act as a distribution zone, will allow attendees to flow into the performance house and find the ticket booth, concession stand and restroom facilities, as well as utilize vertical circulation. Moreover, the lobby will accommodate displays by the MHS Art Department and host gatherings of various sorts, including pre-event, post-event and intermission activities, as well as uses not directly tied to performances. The design flows to an exterior terrace, adding the possibility of future activities along with an upper level space to accommodate vertical viewing areas both in the lobby below and the exterior entrance, plaza and lobby terrace.

Stairs and an elevator will allow access to the upper lobby and upper seating. A 600-seat house with a central cross-aisle as well as two side aisles on quarter points, will allow for the distribution of accessible seating and is the result of the main floor seating / aisles being on a low, sloping plane. The upper seating, which occurs on a steeper slope, will maintain an intimate feel by bringing the audience closer to the stage.

A pit-let is designed to meet the needs of the MHS orchestra, and negates the need of a downward slope from stage level. Stage extensions will help bring performances out towards the audience, and allow for accessibility to and from the stage which will sit three and a half feet above the house floor.

The visual ceiling of the house will be made up of a combination of lightweight, but reflective clouds. They will be integrated with catwalks where the bulk of production lighting will occur. Side lighting for production will be located in service balconies accessible from service halls off the sides of the stage and upper lobby.
The control booth will be in the standard location above the highest level of seating, in the rear wall of the house. The audio mixing will occur in the central location just above the central cross-aisle, but can also occur in the control booth.

The proscenium opening will be 44 feet wide by 21 feet high. In conjunction with a 50-foot high fly loft, this will allow for full scenery to be flown up out of sight. Directly behind the proscenium will be the ideal position for the projection screen, which may be motorized, or rigid and flown into the fly loft.

The sprung-floor stage will be 90 feet by 38 feet, and spacious enough for rear stage circulation, a rigging work area and side stage access screened by the proscenium walls. The stage will also be large enough to accept a full band performance or large production. Piano storage will also be just off the stage on the same sprung floor for ease of movement.

Backstage will house the supporting spaces, such as the scene storage, costume storage and scene shop. The scene shop will have overhead doors on both the exterior and directly onto the stage for the ease of moving large equipment or scenery.

Flanking the stage will be a multi-purpose room that acts as a “green room” or classroom, and can be accessed by the community. The band equipment storage room will be accessible from the exterior and is adjacent to the multi-purpose room. Also, the dressing rooms and make-up space will be directly accessible to both the stage and the multi-purpose room.

**Athletic Complex Narrative**

The Athletic Complex will be made up of several components including locker rooms, coach’s rooms, and all the elements described in the site narrative. There will be a major savings in cost by combining the components of the team spaces with the PAC rather than constructing two separate buildings.

The AC lobby will be located at the center of the new home team stands so athletes and teams may be greeted on the central plaza as they leave the locker rooms and enter the tunnel that passes under the stands and feeds out onto the football field. This lobby will also allow public access to the PAC multi-purpose room.

Accessible from the lobby on the north side, will be a trainer’s room which will be available to both the Athletic Department and the PAC. Similarly, a central custodial room for the PAC and the AC is situated off the lobby.

Off the north side of the lobby will also be the location of the home team / boy’s locker room, which contains seventy (70) lockers. The locker room showers and toilet facilities are located at the north end. The linear layout will facilitate film reviews by the coaches and team members. The home team coach’s office, toilet and shower room will be located at the south end of the locker room.
Off the south end of the AC lobby, there will be a mirror image of north facilities to be used for the visiting team / girl’s locker room.

At the north end of the AC wing will be additional rest room facilities for game day use. Attaching them to the main building will increase cost savings, versus building them under the stands, or as a separate building.

The officials for athletic events will use the PAC dressing rooms when needed. If an athletic event happens to occur at the same time as a PAC event, officials can use facilities within the main school building. This was a decision made by the Design Guidance Team.

Under the home team stand will be a structure that houses various AC-related needs including athletic equipment storage. Some of the equipment storage is to be heated and have filtered ventilation. The structure will be low cost, yet fire protected by code.

Above the home stands, accessible by two sets of stairs and a wheelchair lift, will be the press box with a full length rear walkway. This structure will have a central public address room flanked by media rooms on both sides. On the ends of this structure will be the rooms for both sets of coaching staff. The coach’s rooms will have glass looking through the adjacent media room and out the end wall, providing a clear 180 degree view of the field. Naturally, the entire press box structure is glazed for full views of the field.
## PRELIMINARY ARCHITECTURAL PROGRAM

### MHS - Performing Arts Complex and Athletic Complex

**Thursday, November 01, 2012**

**Revised November 6, 2012**

<table>
<thead>
<tr>
<th>AREA</th>
<th>NUMBER OF SPACES</th>
<th>SQUARE FEET PER SPACE</th>
<th>TOTAL SQ. FT.</th>
<th>LOCATED NEAR</th>
<th>NOTES</th>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>80</td>
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<tr>
<td>Theater House (600 seats)</td>
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<td>7,750</td>
<td>7,750</td>
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<td>Includes space above for catwalks, light rigging, etc. - Existing MHS stage is approximately 1,435 SF - Tower Theater has a total of 468 seats</td>
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<td>Stage/Wings</td>
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<td>Includes Fly Loft space above for rigging, etc.</td>
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<td>Prop Storage</td>
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<td>Scene Shop</td>
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<td>Makeup Rooms</td>
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<td>Girl’s Dressing Room</td>
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<tr>
<td>Boy’s Dressing Room</td>
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<tr>
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<tr>
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<tr>
<td>Control Booth</td>
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</tr>
<tr>
<td>Office</td>
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<tr>
<td>Orchestra Pit</td>
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<tr>
<td>Black Box Theater</td>
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<td></td>
<td>Flexible space - could be used for multiple purposes (Drama classroom, Band practice room, Team room, etc.)</td>
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<tr>
<td>Black Box Control Booth</td>
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<tr>
<td>Restrooms</td>
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**SUBTOTAL: Performing Arts** 18,545
## ATHLETIC FACILITY

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<tr>
<td>Concessions</td>
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<td>Officials Room</td>
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<tr>
<td>Home Locker Room</td>
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<tr>
<td>Home Team Room</td>
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<tr>
<td>Visitor's Locker Room</td>
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<tr>
<td>Restrooms</td>
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<td>Family Restroom</td>
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<td>Ticket Booth</td>
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<td>Storage Rooms</td>
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<tr>
<td>Weight Room</td>
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<tr>
<td>Training Room</td>
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**SUBTOTAL: Athletic Facility**

8,135

## SHARED BUILDING SERVICES

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<tr>
<td>IT - HubRoom</td>
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<td>120</td>
</tr>
<tr>
<td>Electrical/Telephone Room</td>
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<tr>
<td>Boiler Room</td>
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<tr>
<td>Air Handler Rooms</td>
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**SUBTOTAL: Shared Building Services**

1,465

**SUBTOTAL: All Areas**

29,145

Circulation @ 30% (circulation and walls) 8,744

**TOTAL**

37,899
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<thead>
<tr>
<th>SITE PROGRAM</th>
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<tbody>
<tr>
<td>Track</td>
<td>1</td>
<td></td>
<td>8 Lanes minimum - 9 Lanes are needed for Steeple Chase events</td>
</tr>
<tr>
<td>Resurface Tennis Courts</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Road adjacent to football field</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parking</td>
<td></td>
<td>How many spaces? Determine if this is a City requirement or a School decision</td>
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</tr>
<tr>
<td>Repair Existing Parking Lots</td>
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<td></td>
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</tr>
<tr>
<td>Practice Field</td>
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<td>Sport?</td>
</tr>
<tr>
<td>Road adjacent to BE and SB</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Soccer Scoreboard</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Soccer Bleachers</td>
<td></td>
<td>Seats?</td>
<td></td>
</tr>
</tbody>
</table>
Consultant Narratives

Civil Engineer - WHPacific
Landscape Architect - Vallier Design
Structural Engineer - Walker Structural Engineering
Mechanical & Plumbing - MFIA, Inc.
Electrical Engineer - MFIA, Inc.
Theater Consultant - PLA Designs
Civil Narrative - WHPacific

The project consists of Madras High School renovations to the athletic facilities and the addition of a Performing Arts Center. The proposed improvements to the athletic facilities include the reconstruction of the high school track and football field, including new bleacher seating, press box and a free standing concession stand. The Performing Arts Center is proposed to be constructed between the existing track and field location and the existing school. The parking lot will be completely reconfigured to work with the new Performing Arts Center and Athletic Complex.

The varsity baseball field is proposed to be rotated 180 degrees from its current orientation. This allows home plate, dugouts and seating to be configured in a central location, aligned with the varsity softball field. A new access road from the bus yard property to the east of the high school is proposed for maintenance access to the fields.

Other proposed alterations to the site include some pavement repair to the west parking lot, closing of the western Buff entrance, a new bus-only access across from the Buff Intermediate School entrance, and moving the greenhouses against the south side of the high school building.

The scope of the project was reviewed in the field with the School District, BBT Architects, Skanska and WHPacific. The following is a schematic design narrative of the proposed Civil Plans.

**Access**

The southeast parking lot will access Buff Street at multiple locations. The most westerly access is potentially being moved to the east to align with the westerly Buff School entrance. This will be a bus only entrance and gated during school hours. The other entrances along Buff will be for parking lot access. The School District and the City of Madras are discussing possible street and access modifications along the western portion of the site.

Sight distance for driveways along Buff appears to be adequate barring any vision issues at driveways. Driveways will be constructed to current City standards for width, location and visibility.

**Utilities**

*Sanitary Sewer:*

An 8” sanitary sewer main exists within the site in a 20-foot-wide easement. Additional sewer mains are located in 10th and Buff Streets. Connections for the Performing Arts Center and the concession stand are proposed to the onsite sewer line.
Water:
The high school is currently served by the City of Madras water system through a 6” main in 10th street. The athletic facilities and the bus yard are served by Deschutes Valley Water District through an existing 6” water main in Buff Street.

Service for the Performing Arts Center and the athletic facility improvements will most likely connect to the Deschutes Valley Water District water main. A water line, with a double check at the property line, is anticipated to be extended on the site for the fire service and a separate domestic water service.

A fire flow analysis will be needed to verify the system can provide adequate fire flow for the improvements.

Storm Water:
The site designs will address storm water collection and an on-site disposal system. Infiltration testing by the Geotechnical Engineer, is recommended to provide infiltration rates for use with the site disposal designs. Drainage facilities may include infiltration swales, extended dry detention ponds, permeable surfaces, underground storage galleries, and drywells. The use of drywells may be limited to disposal of roof drainage, if allowed due to the shallow water table.

A portion for this site is located within the flood zone for Willow Creek bordering the eastern side of the property. There may be concerns with infiltration facilities and high water tables on the site. A minimum five feet of vertical separation is required between the bottom of an infiltration facility and the water table.

There are existing stormwater facilities on the site, most of them are drill holes within catchbasins. These are not allowed per current DEQ rules and will need to be abandoned per DEQ rules. The abandonment will be part of this project if facilities are deemed non-compliant.

Franchise Utilities:
The site is within the Pacific Power service district. It is anticipated that power service will connect to the existing service for the high school but there may be the need for additional vaults and service for the Performing Arts Center and the athletic facility improvements. A work order should be opened with Pacific Power when design starts in order to get an estimate for improvements.

There are communications vaults and connections on the south end of the high school property on Buff Street. It is assumed all communications connections for phone and fiber will be made from the services on Buff Street.

Natural gas service is not available. The site design will consider space for the placement of propane tanks.
Site and Grading Plans

The site plan is being developed to accommodate parking for approximately 100 vehicles near the main school entrance. For safety and congestion reasons, visitors and parent drop-off / pick-up areas will be separated from the bus routes for loading and unloading. The bus loading area is planned to be near the cafeteria and commons area of the building.

Additional parking is planned near the sports fields. The use of the site is intended to extend beyond normal school hours, allowing some community use of the facilities. The site design will also consider access routes for service trucks (kitchen supplies, propane, recycling, trash) and for adequate fire or emergency access around the perimeter of the building.

The existing ground slopes of the site vary from approximately 2.5% to 8%. While these slopes are not too excessive, the construction of the building and play fields with large footprints across these slopes will require considerable earthwork efforts. Approximately 15 feet of existing ground elevation difference is noted across the building footprint. Likewise, the track / football field configurations have about 13 feet of existing ground elevation change.

The site grading plan will attempt to balance the cut and fill closely, to avoid the import or removal of material from the site. This will require excavations into the hillside for a portion of the building pad, and construction of embankments for the other portion. The geotechnical report should provide recommendations for the construction of embankments to support structures.

Terracing of the cut and fill banks is recommended to help establish vegetation and reduce erosion. The terracing of cut banks adjacent to play fields can provide a seating area for spectators.

The site improvements are expected to include fencing around the perimeter of the site, or portions of the site. Cattle guards may also be used across the driveways to deter the free range livestock.
Landscape Narrative - Vallier Design

Landscape Architectural improvements for Madras High School will include construction of a new all-weather track and grass football / soccer field, installation of track and field event spaces to the north of the track and field, renovation and repairs to the practice field baseball area, street frontage and parking lot landscaping, and plaza spaces and landscape improvements around the new Performing Arts Center, Athletic Complex and new stadium bleacher structure.

The frontage along SE Buff Street will be planted with low water shrubs and street trees, possibly interspersed with drainage basins where required. The parking lot will also be planted with shrubs and shade trees and may require drainage basins in some locations.

A majority of the site landscape will be used for athletic and physical education uses consequently the site landscape will be primarily turf grass with trees and shrub beds in key locations. The palette of site materials for the plaza and gathering spaces will be influenced by the building exterior and interior finishes in order to visually tie the site and the structure together. The paving materials will be earth-toned colored concrete in varied patterns. Site furnishings will be a combination of purchased benches, trash receptacles and possibly tables. Planting beds will consist of low maintenance, drought tolerant plant material made up of trees and shrubs in geometric patterns that highlight the layout of the building and stadium area. The geometrically arranged trees and plants will punctuate key areas of the site to highlight the building and its key spaces. The foundation of the building along the front plaza will be planted to anchor the building and accent the main entry point. The entry to the stadium area will also be accented with plant material and will have adjacent seating and gathering areas, as will the plaza space around the concessions and storage building. All landscape areas will be irrigated using state of the art controllers and heads, and will be designed to avoid overspray and runoff.

The stadium will be located off of the plaza spaces and will be oriented on a diagonal, as will be the Performing Arts Center building. The stadium, track and field will be built in accordance with all design and governing body standards including the Oregon School Activities Association (OSAA), The National Federation of State High School Associations (NFHS), the USA Track and Field (USATF) and the International Association of Athletics Federation (IAAF). The OSAA is a non-profit, board-governed organization comprised of public and private schools that coordinates interscholastic sports and activities for Oregon high schools. The NFHS leads the development of education-based interscholastic sports and activities for the nation, and set directions by establishing consistent standards and rules for design of facilities and competition. USATF is the national governing body for track and field, road running, and cross country running in the United States. The IAAF is the world governing body for track and field. The track and field will be built to OSAA, NFHS, USATF and IAAF standards and will have an eight-lane, all-weather track that encloses a grass football / soccer field.
The bleachers structure will be installed on the southwest side of the track for home spectators, with visitor’s seating on the northeast side of the field. There is a possibility of a ninth lane in order to facilitate larger track and field events. The track surfacing will be made up of either a paved-in-place polyurethane base mat coated with a two-part polyurethane sealer and single component top spray to make the surface impermeable, or the upgraded flood and chip sandwich system which consists of the same paved-in-place polyurethane base mat but is topped with a two-component seal coat finished with a flow-applied layer of polyurethane and embedded colored rubber chips.

Throwing events including shot put, discus, javelin and possibly hammer throw will be located in the natural grass area to the northeast of the track for safety, and to eliminate conflicts with the running and jumping events. Some associated paved areas will be added to the area to accommodate spectators and athlete staging.
Structural Narrative - Walker Structural Engineering

Performing Arts Center
8”/12” CMU or Insulated Concrete Formed (ICF) exterior walls supported on continuous footings with wall thickness depending on overall height. Roof framing will consist of steel open webbed joists and joist girders to allow catwalk and lighting systems to be suspended from the structure. The second floor will be steel framed with concrete over metal deck supported on steel columns. The large curtain wall / storefront area on the South, Southeast and Southwest ends of the structure at the lobby and stairs will contain steel HSS columns and WF/HSS horizontals to resist windward loads. A concrete slab on grade which will be sloped at the “House” area for seating, will support the first floor loading.

Locker Room Area
8”/12” CMU or ICF exterior walls supported on continuous footings with steel or wood open-webbed joists for the roof structure. Interior walls will consist of 8” CMU walls for shear walls at the girls and boys locker rooms as well as the coach’s areas.

Electrical / Mechanical / Boiler Rooms
2x framed exterior walls (to save cost) supported on continuous footings with premanufactured wood trusses or TJI roof joist system. If this area is wood-framed, a seismic joint will be required between the exterior walls of the PAC and these areas with the roof system being supported independently of the CMU/ICF PAC exterior wall.
Mechanical Narrative - MFI, Inc.

The auditorium will be served by a rooftop air handler located on the flat roof over the multi-purpose room. The unit will be a variable volume unit with a dx cooling coil and hot water reheat coils in VAV boxes providing the zoning. Two small condensing boilers will provide the heat for the VAV boxes.

A low return air will be provided for the auditorium to draw the cold air off the floor of the auditorium seating. Supply air will come into the auditorium from above.

A separate rooftop air handler without cooling over the flat roof over the restrooms will supply the locker rooms. We anticipate a packaged unit with heat recovery serving these spaces. The heat will come from the boilers. Additional zoning will be provided with the heating water.

The separate units will allow the use of one portion of the facility without having to turn everything on.

With the use of rooftop units, a couple of things are important for noise control. The wall between the auditorium and the rooftop units should be a heavy mass wall with good sound absorption characteristic. Concrete or CMU walls work fine. Similarly, the roof beneath the rooftop units should have concrete slab to absorb the noise.
Plumbing Narrative - MfIA, Inc.

**Hot Water**
Water heaters will be provided in the mechanical room. These water heaters will be gas fired and have an operating efficiency of 93% or higher. Water will be stored at 140°F but will be reduced to 120°F before being supplied to any fixtures. A hi/low mixing valve station will be used to reduce the hot water temperature.

Each hot water system will have a recirc loop. This allows faucets to have hot water within a few seconds of being turned on.

**Fixtures**
Floor-mounted water closets will be sensor-operated with 1.3 gallons per flush valves. Urinals will be provided with low consumption 0.5 GPF flush valves. All electronic flush valves will be provided with permanent power connections.

Hose bibbs will also be provided approximately every 100 feet around the building exterior. All hose bibbs will be key operated.

**Materials**
- **Waste/vent:** ABS/PVC
- **Water:** 1” and Larger: Copper
  
  ¾” and smaller: PEX piping
- **Propane:** Schedule 40 black steel
- **Ductwork:** Galvanized sheetmetal insulated per code
Fire Protection Narrative - MFIA, Inc.

Fire Risers
One fire riser will be required at this school.

Sprinklers
The building will be sprinkled in its entirety. Areas outside the building envelope that require fire protection will utilize a dry loop to prevent frozen pipes.
Electrical Narrative - MFIA, Inc.

Site Utilities

Power Utility
Power to the building electrical service will originate from a pad-mounted utility transformer. Access to the transformer location will need to be provided via a paved surface rated for heavy-vehicles. The service voltage will be 120/208-volt, three-phase.

Power Distribution

Electrical Infrastructure
There will be one main electrical service for the project. The main service metering switchgear will be a NEMA 3R enclosure, and will be mounted on the exterior of the building near the pad-mounted transformer location. The incoming service voltage will be 120/208-volt, three-phase. 208-volt branch panelboards will also be located in the back of house, and will be near main electrical load locations in order to minimize the length of individual branch circuit homeruns.

Emergency System
An emergency generator will be provided for the project, and will serve Life-Safety and Optional Standby loads. The generator will utilize an on-site propane tank or diesel tank as a fuel source. Emergency egress lighting will be powered via a Life-Safety branch automatic transfer switch. An additional automatic transfer switch will be provided for the Optional Standby loads. LED exit signage will be provided to indicate the paths of egress out of the building, and select lighting fixtures will be connected to Life-Safety branch circuits to provide the code required egress lighting footcandle levels.
Lighting

Parking Lot Lighting
Site lighting will be provided via LED fixtures mounted on 20'-0” poles. Fixture heads will be full-cutoff in order to meet Dark Sky requirements. The site lighting system serving open parking areas will be provided with occupancy sensors at each pole location to meet the power reduction requirements of the Oregon Energy Code. All site lighting will be connected at 208-volt.

Exterior Building Mounted Lighting
The building exterior lighting will consist of wall-mounted LED architectural wall packs to provide general area lighting, and LED down lighting to highlight the canopy and overhang areas. All fixtures will be full-cutoff to meet Dark Sky requirements.

Interior Lighting
Corridor areas will be provided with recessed direct/indirect fluorescent 2’ x 4’ fixtures with T8 lamping and electronic ballasts. Office areas will be provided with recessed direct and indirect fluorescent 2’ x 4’ fixtures with T8 lamping and electronic ballasts. Mechanical and electrical spaces, storage areas, and locker and shower rooms will be provided with surface mounted fixtures with acrylic wraparound lenses. Interior LED lighting will be used in some specialty areas throughout the project. All interior lighting will be connected at 120-volt.

Lighting Controls: Other than Auditorium
Multi-level switching schemes will be used as a standard, with dimming control kept to a minimum as dictated by space usage. Local occupancy sensors will be provided for offices, work rooms, storage rooms, restrooms and conference rooms.

Lighting Controls: Auditorium
PLA Designs will be doing the theatrical lighting. They will be responsible for the stage house, and black box lighting. They will advise for the rest of the facility and MFIA will provide connections to panels and loads as requested by PLA.
Theater Narrative - PLA Designs

Form & Function
Based on information provided before and during two interview sessions with the Focus Group and Design Guidance Team representatives of the Jefferson County School District, a particular form of assembly space has been identified to meet the diverse performance criteria and limited program area budget. The form and design of the Performing Arts Center (PAC) will endeavor to meet the needs of the programs listed below, to the extent that funding and square foot program allowances will permit.

Drama
Drama performances have not been highly developed due to lack of facilities and staff. Construction of a PAC will ameliorate a large portion of the historic challenges, and therefore, the PAC should be built to reasonably accommodate growth of a drama program at the school. The District does not know at this time if and when a class in technical theater stagecraft will be included. The facility needs to respect traditional and alternative forms of dramatic performance. Community users will need support for drama performances. For community users at this time, dance and movement activities must have representation in the design.

Instrumental Music
With multiple bands currently present at MHS, the facility will need to incorporate the design aspects of music performance that are outside the confines of dramatic performance. This is true not only for the physical layout of the stage and house, but for the circulation, rehearsal and storage aspects as well. Since the existing band classroom is at another part of the existing building, this project will not include direct adjacencies as a consideration in design.

Choral Music
Each of the multiple vocal groups have their own unique repertoire and patron following. Consequently, the design aspects of the auditorium, stage, rehearsal and storage elements of the building must reflect these dynamic educational and performance programs.

Non-Performance Events
The auditorium will need to accommodate special activities from time to time, when the existing commons and/or gymnasium are either in use or are not the appropriate venues for the activity. Therefore, the technical systems within the auditorium and stage shall have a user-friendly layer of access and operation for the non-technical user.

Community
Community use of the new auditorium space is expected to be significant. Therefore, storage, load-in and backstage support areas must be designed accordingly, and basic elements of technical systems must be very flexible and easy to use without special knowledge and training.
Design Overview

Assembly Space

- 600 seat facility (fixed + wheelchairs), with Orchestra Level seating and Rear Tiered seating. Entrance is by two vomitory entrances. Two side exits and two upper rear exit are also provided.

- A primary cross aisle separates the two seating areas. The cross aisle connects the two primary exits.

- Seating layout and relationship to the stage is a modified thrust / proscenium format. This is intended to satisfy the traditional shape that is friendly to music while supporting a basic level of immersive theater (“thrust”) for intimate relationship between actors and audience. Seating rake at the rear of house is sharply stepped to enhance the perception of intimacy.

- Direct ambulatory and non-ambulatory access from the auditorium to the stage is incorporated into the design.

- Catwalks for lighting systems are accessible from the control booth and connected to onstage galleries.

- Side box boom lighting positions are accessible from galleries and catwalks.

- Adjustable height stage extension decks over the house floor level Orchestra area will allow reasonable flexibility with minimum building footprint.

Main Stage

- Not less than 32’ deep x 90’ wide, with a proscenium opening of up to 44’ (max) wide x 21’ (max) high.

- A permanent stage apron extending 5’ beyond the arch line and an 8’-0” long (at centerline) stage deck extension (above orchestra area).

- Side stage areas with connections to the auditorium and main stage.

- Sprung stage floor, with sleepers, neoprene pads, plywood subfloor, tempered hardboard top and expansion joint covers.

- Counterweight rigging with limited motorization.

- Onstage galleries for rigging and lighting and set access.

- At least one crossover catwalk at underside of stage loft roof.
Backstage Support Services
Shall include makeup, dressing, storage, shared green room, stage set prep and backstage circulation corridors.

Lighting Systems
- General lighting in the main auditorium shall be a combination of dimmable quartz or LED downlights, switched and dimmed fluorescent and potentially high-efficiency and long-life controllable LED's. General lighting shall be controlled by a central dimmer and relay system which will be part of an overall lighting control network in the auditorium-theater venue.

- For maintenance purposes, the design will attempt to locate the maximum practical amount of house and worklight fixtures where they may be serviced from catwalks or other stable platforms. In the event that halogen-lamped lighting must be located in an open, high-ceiling area, a lowering system will be incorporated to bring the lighting fixtures down to a level where they may be serviced without the need for tall ladders, scaffold or personnel lift.

- Work lighting shall be provided at all catwalks and galleries and technical access corridors. Work lighting shall be provided in two modes: white general lighting and blue safety lighting (low near floor level).

- Stage lighting shall consist of conventional instruments with standard and intelligent accessories. Modern variable parameter intelligent color changers and automated lighting shall be contemplated and listed a part of the design solution for stage lighting, even if initial construction funding does not permit inclusion at this time.

- A modern, solid-state dimming and control system consisting of a wall-mounted cabinet with modular dimmers/relays shall be provided for house and work lighting control. Stage lighting shall be controlled by means of distributed digital dimmer bars and packs at the locations where the stage lighting fixtures are hung. A digital data network (Ethernet-based) shall be distributed throughout the venue, using conventional IEEE standards and equipment, although the network shall not be connected to the general building network(s). The network shall distribute ACN-RDM/DMX.

- Worklights shall be controlled by means of digitally driven solid-state relays which are part of the master lighting control network.

- A stage lighting console shall be included which shall allow for control of conventional dimmers as well as control of intelligent lighting accessories and automated instruments.
• Convenience push-button stations shall be located at selected doorways to allow activation of basic room lighting. A master control station shall be located in the control booth and at a stage manager’s panel onstage to allow a higher level of basic lighting control. Work lighting shall have local access stations at key points along catwalks and galleries and backstage doors, and shall have mimic control at the master lighting station in the control booth and stage manager’s panel.

• Basic minimum occupancy lighting shall be activated by occupancy detectors such that a code-minimum complement of lighting shall always be on when the theater is occupied for any reason, and shall not shut off until 15 minutes after the occupancy detectors no longer are activated.

Stage Rigging and Drapes
• Stage shall have a manual counterweight system using weighted arbors on steel t-tracks. Selected rigging sets, such as onstage electrics and orchestra concert shells may be motor-driven due to weight and safety concerns.

• Rigging system shall include sets for electrics, masking borders, masking side legs, general purpose scenery, scrim, cyclorama, grand drape, upstage drape, paintable drop, concert shell, side masking tabs and side lighting sets.

• Drapes shall be professional grade fabrics with professional fabrication requirements.

• Tracks shall be professional grade, smooth, quiet and durable.

Orchestra Shell
Acoustic reflector panel, known as orchestra shell, shall be rigged to deploy for use, raise up into storage or lower for adjustment. This single unit shall be heavy duty, and shall be sized and located to provide acoustic projection and onstage ensemble for music performers. Shell shall have integral lighting.

Stage Extension Decks at Orchestra Area
• Heavy-duty stage deck panels shall be fitted into the opening for the Orchestra pit. Decks shall be sturdy and rigid, yet be easily removed.

• Decks shall be dual-height, interlocked and adjustable.
Fixed Upholstered Seating (Mezzanine / Balcony Level)

- Durable and attractive seating units, permanently attached to the floor, shall be included in the design. Aisles and spacing between rows shall meet or exceed code requirements for egress.

- Seating units shall have gravity lift upholstered seats, solid armrests and abuse resistant upholstered seat backs. Color selection of materials and finishes shall be completed by the architect.

- Selected seating units shall be removable on dual-seat skids to allow for placement of wheelchairs. Selected seating units shall have transfer arms for partially ambulatory persons.

- Selected seating units at aisle ends shall have integral safety lighting for aisles.
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