

SHOW LOW CITY COUNCIL
REGULAR MEETING - TUESDAY, JANUARY 6, 2026

PURSUANT to A.R.S. Section 38-431.02, notice is hereby given to the Show Low City Council and to the general public that a **Regular Meeting** of the Show Low City Council will be held on Tuesday, January 6, 2026, at 7:00 PM in the City Council Chambers, 181 North 9th Street, Show Low, Navajo County, Arizona. The agenda for this meeting is as follows:

1. Call to Order.
2. Roll Call.
3. Invocation.
4. Pledge of Allegiance.

5. **CALL TO THE PUBLIC:**

Any citizen desiring to speak on a matter that is within the jurisdiction of the City Council may do so at this time. Comments shall be limited to three minutes per person and shall be addressed to the City Council as a whole, and not to any individual member. Issues raised shall be limited to those within the jurisdiction of the City Council. Pursuant to the Arizona Open Meeting Law, the City Council cannot discuss or act on items presented at this time. At the conclusion of the call to the public, individual City Council members may (1) respond to criticism made by those who have spoken, (2) ask staff to review a matter, and (3) ask that a matter be put on a future agenda.

6. **SPECIAL EVENTS:**

- A. Presentation of Annual Comprehensive Financial Report for Fiscal Year 2025

7. **CONSENT CALENDAR:**

- A. Consideration of Resolution No. R2026-01 Designating Authorized Agents to Provide Financial Information Regarding Arizona Department of Emergency and Military Affairs Grants (Mischa Steinbrecher)
- B. Consideration of Acceptance of Well 4 Emergency Repairs, City of Show Low Project No. W-1821 J011 (Rick Austin)
- C. Consideration of Acceptance of Well 13 Repairs, City of Show Low Project No. W-1821 JO19 (Rick Austin)
- D. Consideration of Minutes of Show Low City Council meetings:
 1. Regular Meeting of December 9, 2025

8. **NEW BUSINESS:**

- A. Consideration of Acceptance of Updated Programming for the Show Low Sports and Events Center and Programming Stage Cost Estimate, City of

Show Low Project No. FM-4625 (Shane Hemesath)

- B. Discussion and Consideration of Improvements of Huning House located at 100 North 11th Street (Shane Hemesath)

9. **SUMMARY OF CURRENT EVENTS:**

- A. Council Members
B. Mayor
C. City Manager

10. **SCHEDULE OF MEETINGS:**

Scheduling of meetings, which may be brought up at this time.

11. **ADJOURNMENT:**

SCHEDULED MEETINGS/EVENTS:

DATE	TIME	EVENT NAME
01/06/2026	7:00 PM	CITY COUNCIL - REGULAR MEETING
01/20/2026	6:30 PM	CITY COUNCIL - BUDGET STUDY SESSION
01/20/2026	7:00 PM	CITY COUNCIL - REGULAR MEETING
01/22/2026	6:00 PM	TOWN HALL BUDGET MEETING
01/27/2026	7:00 PM	P&Z COMMISSION - REGULAR MEETING

NOTICE TO PARENTS AND LEGAL GUARDIANS: Parents and legal guardians have the right to consent before the City of Show Low makes a video or voice recording of a minor child, pursuant to A.R.S. § 1-602(A)(9). The Show Low City Council regular meetings are recorded and may be viewed on the City of Show Low's website. If you permit your child to attend/participate in a televised City Council meeting, a recording will be made. You may exercise your right not to consent by not allowing your child to attend/participate in the meeting.

Pursuant to the Americans with Disabilities Act (ADA), the City Council endeavors to ensure the accessibility of its meetings to all persons with disabilities. If you need accommodation for a meeting, please call the City Clerk's office at (928) 532-4061 at least 48 hours prior to the meeting for accommodation.

Council Chambers will open at least fifteen minutes prior to the meeting to allow public access to the room. Council Chambers has a maximum occupancy of 139 people.

Rachael Hall, City Clerk

I, Rachael Hall, do hereby certify that the foregoing notice was posted on Friday, January 2, 2026.

**City of Show Low
STAFF SUMMARY REPORT**

AGENDA TITLE: Consideration of Resolution No. R2026-01 Designating Authorized Agents to Provide Financial Information Regarding Arizona Department of Emergency and Military Affairs Grants (Mischa Steinbrecher)

RECOMMENDATION

I **MOVE** to adopt Resolution No. R2026-01 Appointing the Finance Manager as the Applicant Agent for Public Assistance for the purpose of obtaining disaster and public assistance during the COVID-19 public health emergency and authorizing the same to submit the request for public assistance, and the Deputy City Manager as alternative representative.

BACKGROUND

The Department of Emergency Military Affairs requires a current Applicant Agent form on file before granting access to the Grants Portal for reimbursement requests due to any public assistance during a public health emergency and/or state of emergency. The current Applicant Agent on file (Cari Bilbie) is no longer employed with the City of Show Low. This requires a new application and resolution to change the Applicant Agent.

Once received, staff will be able to update the Grants Portal and begin the process of requesting any eligible expenses due to COVID-19.

Staff recommends adopting Resolution No. R2026-01 appointing Mischa Steinbrecher, Finance Manager, as the Applicant Agent for Public Assistance for the purpose of obtaining disaster and public assistance during the COVID-19 public health emergency and authorizing the same to submit the request for public assistance for the City of Show Low, and Justin Johnson, Deputy City Manager, as alternate.

ATTACHMENTS

1. Resolution No. R2026-01

FISCAL IMPACT

N/A

CITY OF SHOW LOW RESOLUTION NO. R2026-01

A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SHOW LOW, ARIZONA, DESIGNATING AUTHORIZED AGENTS TO PROVIDE FINANCIAL INFORMATION REGARDING ARIZONA DEPARTMENT OF EMERGENCY AND MILITARY AFFAIRS GRANTS

RECITALS:

WHEREAS, The City has the DR3342 (COVID 19) grant with the Arizona Department of Emergency and Military Affairs; and

WHEREAS, said grant needs to be finalized and closed out; and

WHEREAS Arizona Department of Emergency and Military Affairs requires the designation of Authorized Agents for the grant; and

WHEREAS, the Authorized Agents for the City needs to be updated; and

WHEREAS, the City, desires to designate the City's Deputy City Manager And Finance Manager as Authorized Agents and authorize the same to execute and submit the required documents to finalize and close out said grant.

ENACTMENTS:

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and Council of the City of Show Low, Arizona, as follows:

SECTION 1

The City Council hereby (i) designates Justin Johnson, Deputy City Manager and Mischa Steinbrecher, Finance Manager Accounting Manager as Authorized Agents of the City and (ii) authorizes the Authorized Agents to execute and submit for, and on behalf of the City, the required documents to finalize and close out the DR3342 (COVID 19) grant with the Arizona Department of Emergency and Military Affairs.

PASSED AND ADOPTED this 6th day of January 2026, by the Mayor and Council of the City of Show Low, Arizona.

John Leech, Jr., Mayor

ATTEST:

Rachael Hall, City Clerk

APPROVED AS TO FORM:

Anna M. Atencio, City Attorney

**City of Show Low
STAFF SUMMARY REPORT**

AGENDA TITLE: Consideration of Acceptance of Well 4 Emergency Repairs, City of Show Low Project No. W-1821 J011 (Rick Austin)

RECOMMENDATION

I **MOVE** to accept Well 4 Emergency Repairs, City of Show Low Project No. W-1821 JO11, release final payment and initiate the two-year warranty period.

BACKGROUND

On January 19, 2021, the City Council approved a Job Order Contract (JOC) of three well services companies to provide labor, furnish, and install materials relating to repairing and maintaining water wells and repairing existing water facilities at various locations. The three companies are Willis Drilling and Pump, Beeman Drilling, and Weber Water Resources. On an emergency basis staff selected Willis Drilling based on the company's ability to respond, and this company was the last to work on the well and was familiar with this facility.

During the first week of July, Well 4 had a complete failure. During the summer period of high water demand, an emergency contract was issued to pull the well for repair, as it is typically one of our largest water producers. Well 4 is a vertical turbine well. The original estimate of \$109,177.20 initiated pulling the well for repairs on an emergency basis. Staff, not knowing what the issues were until the well was removed, accepted an estimate that covered known problems that occur in a typical well-rebuilt. This work included rebuilding the motor, replacing a head shaft assembly, replacing the Variable Frequency Drive (VFD), replacing a cast iron eight-inch bowl assembly, labor and time to put a temporary pump in the well to clear the water in the casing for inspection. During this process, Willis Drilling discovered that 525 feet of oil shaft and 100 bearings were found to be out of specification and needed to be replaced resulting in an increase of \$12,593.24 for a total of \$121,770.44. However, once the well was removed and the casing was inspected, there were several large holes found requiring additional work to repair the holes by a specialized water well process called swaging in which a liner is placed over the holes and is forced into place to seal the casing. It was determined that the estimate for the swaging of Well 4 was \$81,641.52, bringing the repairs of the well to \$203,411.96. Willis pumped out the sand from the well casing and scheduled the swaging repairs. Specialty repairs like swaging require some lead time and the repairs were completed in October. The original repair work was allowed to resume, and well 4 repairs are now completed.

On December 04, 2025, all the repairs were completed, and the final cost was \$203,411.96. Staff recommends accepting Well 4 Emergency Repairs, City of Show Low Project No. W-1821 JO11 releasing the final payment of \$12,593.24 and initiating the two-year warranty period.

ATTACHMENTS

None

FISCAL IMPACT

Final cost: \$203,411.96

Funding source (account no.): Water Maintenance (43-760-490-4120-0000)

MTG DATE: 1/6/2026
ITEM: 7.C

**City of Show Low
STAFF SUMMARY REPORT**

AGENDA TITLE: Consideration of Acceptance of Well 13 Repairs, City of Show Low Project No. W-1821 JO19 (Rick Austin)

RECOMMENDATION

I **MOVE** to accept Well 13 Repairs, City of Show Low Project No. W-1821 JO19 and initiate the two-year warranty period.

BACKGROUND

On January 19, 2021, the City Council approved a Job Order Contract (JOC) of three well services companies to provide labor, furnish, and install materials relating to repairing and maintaining water wells existing water facilities at various locations. The three companies are Willis Drilling and Pump, Beeman Drilling, and Weber Water Resources. As repairs arise, the work is competitively bid among the three JOC Contractors on the City's JOC roster.

On November 18, 2025, bids were opened by staff for the repairs of Well 13. The bids included replacing a new Grundfos motor and pump, installing a one-quarter inch steel tubing air line for testing static water levels, a well transducer, and the labor to pull and replace the well to an operating condition. Of the three JOC well companies, Weber Water Resources and Willis Drilling submitted bids. Weber Water Group was low bidder with an amount of \$65,216.55.

On December 18, 2025, Weber Water Resources completed the repairs. Staff recommends accepting Well 13 Repairs, City of Show Low Project No. W-1821 JO19, releasing payment of \$65,216.55 and initiating the two-year warranty period.

ATTACHMENTS

None

FISCAL IMPACT

Final cost: \$65,216.55

Funding source (account no.): Water Maintenance (43-760-490-4120-0000)

MINUTES OF THE REGULAR MEETING OF THE SHOW LOW CITY COUNCIL HELD ON TUESDAY, DECEMBER 9, 2025, AT 7:00 PM IN THE CITY COUNCIL CHAMBERS, 181 NORTH 9TH STREET, SHOW LOW, NAVAJO COUNTY, ARIZONA

1. Call to Order.

Mayor Leech called the meeting to order at 7:00 p.m.

2. Roll Call.

COUNCIL MEMBERS PRESENT: Mayor Leech, Vice Mayor Kakavas, Councilman Adams, Councilman Hatch, Councilman Judd, and Councilman Whipple.

COUNCIL MEMBERS ABSENT: Councilman Clark.

STAFF MEMBERS PRESENT: F. Morgan Brown, City Manager; Anna Atencio, City Attorney; Justin Johnson, Deputy City Manager; Brad Provost, Outgoing Police Chief; Greg Westover, New Police Chief; Shane Hemesath, Public Works Director; Mike Mariscal, Community Services Director; Jacob Allen, Airport Manager; Chris Tewalt, Information Technology Manager; Rick Austin, Public Works Operations Manager; Grace Payne, Communications Manager; and Rachael Hall, City Clerk.

GUESTS: Angel Kerr, Riala Leech, Cathy Reed, Phil Uhall, Tim and Stephanie Westover, Denise Stow, Dan Barnes, Jim Girard, Randy Chevalier, Jim and Raelene Stanton, Dustin Westover, Lynne Hansen, Raymond and Kathleen Brown, Jessica Turley, Clair Thomas, Dave Murray, John and Betty Jarrett, and others.

3. Invocation.

Councilman Whipple gave the invocation.

4. Pledge of Allegiance.

Councilman Judd led the Council and audience in the pledge of allegiance.

5. **CALL TO THE PUBLIC:**

Any citizen desiring to speak on a matter that is within the jurisdiction of the City Council may do so at this time. Comments shall be limited to three minutes per person and shall be addressed to the City Council as a whole, and not to any individual member. Issues raised shall be limited to those within the jurisdiction of the City Council. Pursuant to the Arizona Open Meeting Law, the City Council cannot discuss or act on items presented at this time. At the conclusion of the call to the public, individual City Council members may (1) respond to criticism made by those who have spoken, (2) ask staff to review a matter, and (3) ask that a matter be put on a future agenda.

Timber Mesa Fire and Medical District Chief Randy Chevalier thanked the City

Council and staff for their support during the tragic events of losing personnel at Timber Mesa Fire and Medical District.

6. **SPECIAL EVENTS:**

A. Special Musical Number by Show Low High School Students

Show Low High School Choir Students performed Christmas Carols for the City Council and audience.

B. Recognition of Show Low Junior High School Softball Team White Mountain Regional Champions

The City Council recognized the Show Low Junior High School Softball Team who recently won the White Mountain Regional Tournament.

C. Recognition of Citizens' Academy Graduates

Ms. Payne recognized the Citizens' Academy Graduates.

D. Promotion Presentation of New Police Chief

Mr. Brown presented Greg Westover as the new City of Show Low Police Chief.

E. Presentation of Annual Report by Show Low Historical Society

Clair Thomas, Show Low Historical Society Museum Executive Director, said the 2025 season numbers were up with a visitor count of over 4,469. The Museum had 15 volunteers who donated 1,121 hours. The Museum also accepted 408 donations and had an active membership of 68. She said the Museum hosted many school classes, church groups and others.

Ms. Thomas thanked the City staff for their help and partnership this past year with many projects. She said the Museum would be closed starting December 20, 2025, and would reopen on March 4, 2026.

Several Council members thanked Ms. Thomas and her staff for the great job they did and the history and knowledge they shared with everyone.

F. Presentation Regarding Show Low Turn of a Card Community Center and Meals on Wheels Program

Dave Murray, White Mountain Meals on Wheels Board Secretary, shared statistics and reviewed Meals on Wheels (MOW) program during the past year. He said in Fiscal Year 2026 (FY2026), MOW delivered 28,101 meals, compared to 27,739 in FY2025 and 27,581 in FY2024. He said in FY2026, MOW did 6,298 congregate meals and 12,096 Headstart Meals.

Mr. Murray said there were 14,001 visitors at the Community Center from July 2025 to June 2026. He shared a few activities the Community Center held such as congregate lunches, Thanksgiving Dinner, monthly classes, etc. Mr. Murray shared sources of income for the Community Center and Meals on Wheels and their expenses.

Mr. Murray said their projected fund development included a Fourth of July event, an annual golf tournament, 50/50 raffles, requests for increased funding from Head Start and NACOG, sponsorship programs, community presence, and planned activities.

Mr. Girard thanked the City of Show Low and the City Council for the continued support of the Meals on Wheels program and the use of the Turn of the Card Community Center.

Mayor Leech and Councilman Judd said they appreciated the work that the Community Center and MOW did for the community.

7. **CONSENT CALENDAR:**

- A. Consideration of Approval of Proposed Fiscal Year 2027 Budget Calendar (Justin Johnson)
- B. Consideration of Acceptance of Playground Equipment for City Park New Pavilion (Rick Austin)
- C. Consideration of Resolution No. R2025-47 Granting Utility Easement to Arizona Public Service (Shane Hemesath)
- D. Consideration of Application for Federal Aviation Administration Grant Funding for Windcone Relocation Project at Show Low Regional Airport (Jacob Allen)
- E. Consideration of Noncommercial Ground Lease with Mohawk Partners LLC and Termination of Ground Lease with Danlars Aircraft Sales LLC at Show Low Regional Airport (Jacob Allen)
- F. Consideration of Resolution No. R2025-46 Rescinding Resolution No. R2019-22 and Authorizing an Intergovernmental Agreement with Navajo County for Court Collections and Criminal Justice Services (Anna Atencio)
- G. Consideration of Award of Well 13 Repairs, City of Show Low Project No. W-1821 JO19 (Rick Austin)
- H. Consideration of Award of Well 6D Upgrade, City of Show Low Project No. W-1821 JO18 (Rick Austin)
- I. Consideration of Award of Well 3A Upgrade, City of Show Low Project No. W-

1821 JO17 (Rick Austin)

J. Consideration of Minutes of Show Low City Council meetings:

1. Regular Meeting of November 4, 2025

COUNCILMAN ADAMS MOVED TO APPROVE THE CONSENT CALENDAR AS PRESENTED; SECONDED BY COUNCILMAN JUDD; PASSED 6 TO 0 WITH MAYOR LEECH, VICE MAYOR KAKAVAS, COUNCILMAN ADAMS, COUNCILMAN HATCH, COUNCILMAN JUDD, AND COUNCILMAN WHIPPLE VOTING IN FAVOR.

8. **NEW BUSINESS:**

A. **PUBLIC HEARING** and Consideration of Ordinance No. 2025-07, Amending Chapter 5.05, Section 5.05.070, "Dog at Large-Exceptions" and Adopting Resolution No. R2025-44 Declaring as Public Record that Documents Titled "*Chapter 5.05, Section 5.05.070, Restraint-Dog at Large of the Show Low City Code.*" (Anna Atencio)

Ms. Atencio said at the City Council Retreat held on October 1, 2025, staff presented information and issues related to dogs at large and dog restraint and the current Dog at Large Ordinance. Dogs running at large could pose risks to people, other animals, and property, including the potential for injury and the spread of disease. Improperly restrained or controlled dogs were also potential hazards to residents, visitors, and their pets from nuisance behavior or harm caused by dogs not properly restrained or controlled.

Ms. Atencio said currently, the City's Ordinance required that dogs off the owner's premises be on a leash. However, the leash length was not specified. Generally, retractable leashes ranged from 10 to 26 feet, with an average of 16 feet. The average width of the path at the City Park was 10 feet, with sidewalks and walking paths narrower. The longer leashes and an owner's ability to physically control their dog created issues with unwanted contact between people and other animals. Many Arizona municipalities had adopted the six-foot leash length.

Ms. Atencio said the proposed amendment included reasonable regulations designed to protect the public peace and safety along with the rights of responsible dog owners to maintain and enjoy their pets. The Ordinance specified a six-foot leash length and that all dogs needed to be under the physical control of the owner, sufficient to prevent unwanted contact with passersby. The six-foot leash requirement was consistent with current City Code 11.35.040(U)(2)(a), which already requires a maximum six-foot leash in municipal parks.

Ms. Atencio said staff recommended adopting Ordinance No. 2025-07 and Resolution No. R2025-44.

Mayor Leech opened the matter for a public hearing. There being no input, Mayor Leech closed the public hearing.

BY UNANIMOUS CONSENT, MS. HALL READ ORDINANCE NO. 2025-07 BY TITLE ONLY, AS ALL COUNCIL MEMBERS HAVE A COPY.

VICE MAYOR KAKAVAS MOVED TO ADOPT ORDINANCE NO. 2025-07, AMENDING CHAPTER 5.05, SECTION 5.05.070 "DOG AT LARGE-EXCEPTIONS" OF THE SHOW CITY CODE AND ADOPTING RESOLUTION NO. R2025-44 DECLARING AS A PUBLIC RECORD THAT DOCUMENT TITLED "*CHAPTER 5.05, SECTION 5.05.070, RESTRAINT-DOG AT LARGE OF THE SHOW LOW CITY CODE*"; SECONDED BY COUNCILMAN ADAMS; PASSED 6 TO 0 WITH MAYOR LEECH, VICE MAYOR KAKAVAS, COUNCILMAN ADAMS, COUNCILMAN HATCH, COUNCILMAN JUDD, AND COUNCILMAN WHIPPLE VOTING IN FAVOR.

- B. **PUBLIC HEARING** and Consideration of Ordinance No. 2025-08, Adding Chapter 7.35, Outdoor Camping and Adopting Resolution No. R2025-45 Declaring as Public Record that Documents titled "Revisions to Title 7, adding Chapter 7.35 Outdoor Camping, of the Show Low City Code" (Anna Atencio)

Mayor Leech pulled this item from the agenda and said staff would present this item at a future meeting.

- C. Consideration to Approve Agreement with AMK Solutions, LLC to Replace Access Control System (Chris Tewalt)

Mr. Tewalt said the City of Show Low currently utilized an outdated access control system that required replacement. The proposed new system would significantly enhance the City's security infrastructure by restricting access to sensitive areas and maintaining a detailed log of the date, time, and employee identity for each access event.

Mr. Tewalt said the project was publicly bid according to statutory requirements and only one bid was received. After thorough research, staff recommended the Brivo access control system, which was well-suited to meet the City's needs both now and in the future.

Mr. Tewalt said staff recommended approving an agreement with AMK Solutions, LLC for an amount not to exceed \$156,428.75 for the replacement of the access control systems throughout the City of Show Low. The City would use a Standard Form Contract for this agreement.

COUNCILMAN ADAMS MOVED TO APPROVE AN AGREEMENT WITH AMK SOLUTIONS, LLC FOR AN AMOUNT NOT TO EXCEED \$156,428.75 FOR THE REPLACEMENT OF ACCESS CONTROL SYSTEMS THROUGHOUT THE CITY OF SHOW LOW; SECONDED BY COUNCILMAN

WHIPPLE; PASSED 6 TO 0 WITH MAYOR LEECH, VICE MAYOR KAKAVAS, COUNCILMAN ADAMS, COUNCILMAN HATCH, COUNCILMAN JUDD, AND COUNCILMAN WHIPPLE VOTING IN FAVOR.

- D. Consideration of Award of Construction Contract for Headworks Automatic Screen Rake and Wash Press, City of Show Low Project No. 7552206 and Authorization of Associated Budget Transfers (Shane Hemesath)

Mr. Hemesath said the City's 2026 Capital Improvement Plan budget included \$250,000 for the installation of an automatic screen rake and wash press at the headworks building at the City's Wastewater Plant. Current operations include manual raking of a bar screen. The new screen rake would remove larger debris before they enter the wastewater plant and dispose of them in a nearby dumpster at all times during the day. The scope of the project was to provide and install the Automatic Screen Rake with wash press including all required electrical, plumbing, and infrastructure to provide a turn-key, operational unit at the headworks location.

Mr. Hemesath said the City engineering staff designed the project with a construction estimate of \$400,000. The project was publicly bid according to statutory requirements with the following results:

<u>Contractor</u>	<u>Total Bid</u>
Mountain Top Development LLC	\$525,000.00
Fann Environmental LLC	\$547,612.00

Mr. Hemesath said staff recommended awarding the construction contract for the Headworks Automatic Screen Rake and Wash Press, City of Show Low Project No. 7552206 to Mountain Top Development, LLC in an amount not to exceed \$525,000.00 and authorizing associated budget transfers. The City would use a Standard Form Contract for this construction contract.

Mayor Leech asked where the budget transfer would be coming from to fund this project. Mr. Hemesath said there were funds in the Waste Water Improvements account that would be used for this project.

VICE MAYOR KAKAVAS MOVED TO AWARD THE CONSTRUCTION CONTRACT FOR THE HEADWORKS AUTOMATIC SCREEN RAKE AND WASH PRESS, CITY OF SHOW LOW PROJECT NO. 7552206 TO MOUNTAIN TOP DEVELOPMENT, LLC IN AN AMOUNT NOT TO EXCEED \$525,000.00 AND AUTHORIZE ASSOCIATED BUDGET TRANSFERS; SECONDED BY COUNCILMAN ADAMS; PASSED 6 TO 0 WITH MAYOR LEECH, VICE MAYOR KAKAVAS, COUNCILMAN ADAMS, COUNCILMAN HATCH, COUNCILMAN JUDD, AND COUNCILMAN WHIPPLE VOTING IN FAVOR.

- E. Consideration of Approval of Five-Year Capital Improvement Plan for Fiscal Years 2027 to 2031 (Shane Hemesath)

Mr. Hemesath said the City of Show Low was required by City Code to have an approved five-year Capital Improvement Plan (CIP). The CIP was a planning tool to look five years ahead to plan and prioritize the City's needs. The program was administered by an advisory committee that consists of City staff and representatives from the City Council. Prior to the advisory committee meeting, a public notice was issued seeking recommendations for capital project requests. Every requestor that provided contact information receives a written response from staff.

Mr. Hemesath said the first year of the CIP (2027) included any projects that were not funded in the fiscal year 2026 budget. The 2027 projects were the committee's top priorities. However, it was understood that not all the projects could be funded. The budget process would be the final determinant of which projects receive funding. Only projects over \$50,000.00 were included in the CIP. Smaller projects would be accounted for in each department's operations budget. Each project listed in the CIP had a detailed "Capital Outlay Project Sheet," which identified the project, its cost, potential funding sources, and a timetable. Detailed cost estimates and maps were also included with the worksheets when appropriate.

Mr. Hemesath said staff held a meeting with the advisory committee on November 13, 2025, at which time the CIP was recommended for approval by the committee. Staff recommended that the City Council approve the five-year Capital Improvement Plan for fiscal years 2027 to 2031.

COUNCILMAN ADAMS MOVED TO APPROVE THE FIVE-YEAR CAPITAL IMPROVEMENT PLAN FOR FISCAL YEARS 2027 TO 2031 FOR THE CITY OF SHOW LOW; SECONDED BY VICE MAYOR KAKAVAS; PASSED 6 TO 0 WITH MAYOR LEECH, VICE MAYOR KAKAVAS, COUNCILMAN ADAMS, COUNCILMAN HATCH, COUNCILMAN JUDD, AND COUNCILMAN WHIPPLE VOTING IN FAVOR.

- F. Consideration of Acceptance of the Programming for the Show Low Sports and Events Center and Consideration of Entering into the Schematic Design Phase of the Design Build Contract, City of Show Low Project No. FM-4625 (Shane Hemesath)

Mr. Hemesath said at its regular meeting on July 15, 2025, the City Council awarded the pre-construction contract to Haydon Companies LLC for the Show Low Sports and Event Center. The scope of the work for this contract was the first phase of the design build contract for the facility. The pre-construction design was divided into four phases of development to achieve the final project design. The four phases were the Programming/Conceptual Design phase, Schematic Design Phase, Design Development phase, and the Construction Document Phase.

Mr. Hemesath said over the past few months, the design team had been

working to identify the possible programming elements of the facility. A public comment open house was held on September 16, 2025 followed by a City Council meeting to discuss possible additional items that may be included in the final building programming. Cost to add the additional possible items was also presented and discussed. Based on that direction, the design team had finalized the initial programming for the facility and were present to give an overview of the final programming document.

Chris Ford, Principal Architect, 4Line Studio LLC, provided an update regarding the final programming phase and said the team was seeking feedback from the City Council to advance to the 30% schematic design phase. He said over the past two months, the team produced a final programming document which included room data sheets identifying all proposed spaces and their contents, narratives and design intent for building systems (mechanical, structural, electrical), and an updated conceptual design package, including floor plans, site plans, and renderings.

Mr. Ford said Haydon Construction was currently pricing the programming document and the team planned to review the initial budget internally before the holiday and present the programming budget to the City Council at an upcoming meeting in early January.

Mr. Ford reviewed the facility and said the proposed facility was located on an approximate 12.5-acre site north of the Woolford Road expansion. The site was situated between Penrod and Highway 260, on the western edge of the Show Low Bluff commercial development. He said the building was strategically placed in the southeast corner of the site to maximize frontage and screen service areas from residential neighbors. The site was bounded by Woolford Road to the south and an unnamed "Road X" to the east. The Lewis Street extension was shown for reference to the north but was not part of the current project scope. The southeast placement provided frontage to Woolford Road and the planned commercial development, while minimizing service disruption to neighborhoods to the west. The main vehicular entrance was off Road X, with secondary access points off Road X to the north and Woolford Road to the south. The main building entrance was on the east side, facing the commercial development. A large drop-off area on the north side of the meeting rooms was designed to be an exterior extension of community spaces and enhance safety for school bus drop-offs. A secured patio on the northwest corner provided a securable outdoor space for ticketed or private events like concerts and weddings, and could also accommodate food trucks. The back-of-house area, including the loading dock, was on the western edge and had been carefully designed with architecture, walls, and landscaping to be completely screened from the western neighbors.

Mr. Ford said the site plan included on-site parking and designated an area for future off-site overflow parking. The primary parking lot was located on the northern end of the 12.5-acre site. The project would be deficient in parking spaces within the site boundaries and additional off-site overflow parking was

identified to the east of the site. The specific layout of this overflow parking was still to be determined. The main building entrance was located on the northeast corner to provide a welcoming and clear pathway from this future overflow parking area during large events.

Mr. Ford said the first-floor plan features a large lobby, divisible court space, and dedicated community recreation access. A large, covered entry plaza was located at the northeast corner, leading into a primary vestibule and lobby. The lobby/pre-function space would include a welcome/reception desk and a focal fireplace to create a community-focused "heart" for the building. The primary entrance to the court space was off the lobby, with a secondary entrance to the west. A planned divider would allow the facility to be cordoned off during "community rec mode," restricting access to only the lobby, gyms, upstairs walking track, and one set of restrooms. The facility's north and west sides house meeting rooms, a commercial kitchen, and concessions. The meeting room area was on the north side and could open up to the north plaza space. This area would include a 500-seat banquet hall for events like weddings and conferences. Most bathrooms and storage spaces were located on the north side of the courts. The rear (west side) of the building contained a large commercial kitchen and building support spaces. Concession stands were split: one was attached to the commercial kitchen, and a satellite concession was located near the meeting rooms to separate service during large events. The gym space could be configured for six basketball courts, twelve volleyball courts, or a championship court with retractable seating. Main equipment storage was located on the west side of the gym, with additional storage scattered on the east and southern ends.

Mr. Ford said the second floor was dominated by a three-lane walking track with user amenities. A three-lane walking track would encircle the perimeter of the gym space. Four staircases and an elevator would be located in the northeast corner near the main entrance to provide access. Two "bump-out" areas were included off the track to provide space for stretching or resting without obstructing the track.

Mr. Ford said the current plan and square footage have been vetted by the City's Sports Facilities Company (SFC) advisor, the internal design/engineering team, and the construction team. The building's exterior design used natural materials and varied massing to blend with the regional context. The design aimed to relate the building to its context, the region, and the city. Materials were inspired by the natural environment, including: creatively textured and colored metal panels, necessary for the large structural spans of the gym, Concrete Masonry Units (CMU) for ground-level elements that people will be close to, and large-format stone for the fireplace element. The gym and its associated storage would have a single monopitch sloped roof. The meeting rooms were at a lower volume to minimize the building's overall impact. The gym section was treated with metal panels, while the lower, ground-level meeting rooms use block and stone materials. He said the design was still in the conceptual phase, with significant refinement and fine-

tuning expected over the next six months before schematic design begins.

Mr. Ford said the renderings showed a four-sided building designed for visual interest and functionality from all approaches. The northeast view, the approach from the overflow parking showed a large, covered entry plaza. The metal panels on the gym were sculpted to mimic natural rock faces. An evening view would highlight the vestibule and raised drop-off plaza. The southeast view from the roundabout at Woolford Road and Road X, the design focused on opening the southeast and southwest corners with extensive glass to feel welcoming. The track level has views in all directions. The southwest view from Woolford Road, the building was designed to fit within the landscape. Mechanical units for the gym were hidden by the building's structure itself, not placed on the ground. He said overall, the building was designed as a "four-sided" structure, with visual interest and functionality on all sides due to its site placement and access points. The southwest corner was glazed to be inviting to traffic approaching from Highway 260.

Mr. Ford shared the aerial renderings and said they provided a comprehensive overview of the site layout and key architectural features. The northeast aerial view clarified the front entry plaza and the raised drop-off area, which would use paving and grade changes to maximize safety. The meeting rooms could expand into the plaza space. The southeast view of the Woolford/Road X roundabout showed how landscaping would be used to make the building appear to rise from the site, with significant glazing on the corner. The southwest corner was also opened with glazing to welcome visitors. A visible opening in the roof indicated the location where mechanical units would be housed to minimize site disturbance. The northwest side showed the secured patio area was visible, with a cut in the roof to allow for natural light. He said it would be secured by operable gates and walls. Cross-sections illustrated building height, and interior design would focus on warm, natural materials. Sectional drawings show the monoslope of the gym roof, designed to minimize height, as well as the relationship between the courts, walking track, and banquet hall. The interior design concept focused on using wood and other warm materials. The design approach was to expose the building's structure as much as possible on the interior. Inspiration images were shared to convey the intended theme and materials for the interior spaces.

Several Council members expressed positive feedback regarding the design and expressed excitement to move forward and appreciation for the team's hard work and professional presentation.

Vice Mayor Kakavas asked if there was outside access to the meeting rooms. Mr. Ford said yes, there would be outside access to the meetings rooms. He said that was required for emergency egress and the doors would likely be locked most of the time but could be opened for events to create an indoor-outdoor flow to the north plaza.

Mr. Hemesath said staff recommended approving the Programming /

Conceptual Design for the Show Low Sports and Events Center and direct the design team to begin Schematic Design Phase of the Pre-Construction contract, City of Show Low Project No. FM-4625.

Councilman Adams asked for clarification regarding the next phase of the project. Mr. Ford explained that after the programming was accepted by the City Council, then the team would begin working on Phase 2, which would be completing the schematic design phase.

Councilman Adams asked when the project would go out to bid. Mr. Ford said the site package would go out to bid next year in June or July with a start time in the fall and the building package would follow a few months behind with a start time of October 2026.

COUNCILMAN JUDD MOVED TO APPROVE THE PROGRAMMING/CONCEPTUAL DESIGN FOR THE SHOW LOW SPORTS AND EVENT CENTER AND DIRECT THE DESIGN TEAM TO BEGIN SCHEMATIC DESIGN PHASE OF THE PRE-CONSTRUCTION CONTRACT, CITY OF SHOW LOW PROJECT NO. FM-4625; SECONDED BY COUNCILMAN WHIPPLE; PASSED 6 TO 0 WITH MAYOR LEECH, VICE MAYOR KAKAVAS, COUNCILMAN ADAMS, COUNCILMAN HATCH, COUNCILMAN JUDD, AND COUNCILMAN WHIPPLE VOTING IN FAVOR.

9. **SUMMARY OF CURRENT EVENTS:**

A. Council Members

Several Councilmembers thanked staff for all the Christmas decorations in the City.

B. Mayor

Mayor Leech thanked staff for the Christmas decorations around the City.

C. City Manager

Mr. Brown said there would be several family events for the holiday season. He said the Show Low Family Aquatic Center was hosting a Holly Jolly Christmas Pool Party on December 12, and the Flashlight Candy Cane Hunt would be held on the Senior Field at City Park on December 18, for kids ages 12 and under. He said the Christmas Tree Trail was going on right now through December 27 at the Show Low Meadow. He said the finale event for the year was the Deuce of Clubs Drop on New Year's Eve, December 31, in front of the public library. The festivities begin at 11:00 p.m., followed by the dropping of the giant card and fireworks at midnight.

Mr. Brown said the Community Fast officially ended, but donations were still being accepted through December at City Hall and local banks.

Mr. Brown said after the holidays, citizens could recycle Christmas trees from December 26, through Sunday, January 11, by dropping it off, with all decorations and lights removed, in the designated area at the Frontier Park parking lot north of the Deuce of Clubs on 9th Place. The trees would be taken to Novo Power in Snowflake for use as biomass fuel.

Mr. Brown said this was the last regular Council meeting for 2025 and wished everyone a Merry Christmas.

10. **SCHEDULE OF MEETINGS:**

Scheduling of meetings, which may be brought up at this time.

Mr. Brown said the next meeting would be held January 6, 2026.

VICE MAYOR KAKAVAS MOVED TO RECESS INTO EXECUTIVE SESSION; SECONDED BY COUNCILMAN HATCH, PASSED 6 TO 0 WITH MAYOR LEECH, VICE MAYOR KAKAVAS, COUNCILMAN ADAMS, COUNCILMAN HATCH, COUNCILMAN JUDD, AND COUNCILMAN WHIPPLE VOTING IN FAVOR.

The Show Low City Council recessed into Executive Session at 9:00 p.m.

11. **EXECUTIVE SESSION:**

- A. Confidentiality Statement.
- B. Discussion or consultation for legal advice with the attorney or attorneys of the public body or with designated representatives of the public body in order to consider its position and instruct its representatives regarding contracts that are the subject of negotiation pursuant to A.R.S. Sections 38-431.03(A)(3) and 38-431.03(A)(4).

(1) Memorandum of Understanding with White Mountain Advisory Group

12. **POST EXECUTIVE SESSION:**

The Show Low City Council reconvened to Open Session at 9:16 p.m.

- A. Consideration of any item on the Executive Session portion of this agenda which the Council may wish to take action upon in Open Session.

(1) Memorandum of Understanding with White Mountain Advisory Group

VICE MAYOR KAKAVAS MOVED TO SEND A LETTER OF TERMINATION OF MEMORANDUM OF UNDERSTANDING WITH WHITE MOUNTAIN ADVISORY GROUP; SECONDED BY COUNCILMAN ADAMS; PASSED 6

TO 0 WITH MAYOR LEECH, VICE MAYOR KAKAVAS, COUNCILMAN ADAMS, COUNCILMAN HATCH, COUNCILMAN JUDD, AND COUNCILMAN WHIPPLE VOTING IN FAVOR.

- B. Consideration of Approval of the Minutes of the Executive Session of the Show Low City Council held on November 4, 2025.

COUNCILMAN JUDD MOVED TO APPROVE THE EXECUTIVE SESSION MINUTES HELD ON NOVEMBER 4, 2025; SECONDED BY COUNCILMAN WHIPPLE; PASSED 6 TO 0 WITH MAYOR LEECH, VICE MAYOR KAKAVAS, COUNCILMAN ADAMS, COUNCILMAN HATCH, COUNCILMAN JUDD, AND COUNCILMAN WHIPPLE VOTING IN FAVOR.

13. **ADJOURNMENT:**

There being no further business to be brought before the Council, **MAYOR LEECH ADJOURNED THE REGULAR MEETING OF THE SHOW LOW CITY COUNCIL OF DECEMBER 9, 2025, AT 9:17 P.M.**

ATTEST:

APPROVED:

Rachael Hall, City Clerk

John Leech, Jr., Mayor

CERTIFICATION

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the Regular Meeting of the City Council of Show Low held on December 9, 2025. I further certify that the meeting was duly called and held and that a quorum was present.

Dated this _____ day of _____, 20____.

(SEAL)

Rachael Hall, City Clerk

**City of Show Low
STAFF SUMMARY REPORT**

AGENDA TITLE: Consideration of Acceptance of Updated Programming for the Show Low Sports and Events Center and Programming Stage Cost Estimate, City of Show Low Project No. FM-4625 (Shane Hemesath)

RECOMMENDATION

I **MOVE** to approve the updated Programming/Conceptual Design for the Show Low Sports and Events Center and the programming stage cost estimate, City of Show Low Project No. FM-4625

BACKGROUND

At its regular meeting on July 15, 2025, the City Council awarded the pre-construction contract to Haydon Companies LLC for the Show Low Sports and Event Center. The scope of the work for this contract is the first phase of the design build contract for the facility. Over the past few months, the design team has been working to identify the possible programming elements of the facility. A public comment open-house was held on September 16th followed by a City Council meeting to discuss possible additional items that may be included in the final building programming. Based on that direction, the design team has finalized the initial programming for the facility. The Haydon, Architekton and 4-Line Studio team are here to present a review of the final programming document, including a review of the program phase cost estimate for the facilities and items included.

Staff recommends approving the updated Programming/Conceptual Design for the Show Low Sports and Events Center, including the program phase cost estimate, City of Show Low Project No. FM-4625.

ATTACHMENTS

1. 2025-1118 Show Low EC Programming Document
2. Aerial Map
3. Show Low Sports and Event Center - Program Stage Estimate 12182025

FISCAL IMPACT

N/A



PROGRAM

SHOW LOW SPORTS AND EVENT CENTER



ARCHITEKTON



11.18.25

VISION
4-7 **01**

PROGRAM
8-67 **02**

CONCEPT
68-XX **03**

APPENDIX
STRUCTURAL NARRATIVE
MPEF NARRATIVE
AV/IT/SECURITY NARRATIVE
ACOUSTICAL NARRATIVE
THEATRE PROJECTS NARRATIVE
FOOD SERVICE PLAN
ARCHITECTURAL SITE PLAN
CIVIL EXHIBIT
LANDSCAPE EXHIBIT

VISION



01

Establish Facility As Multi-Purpose Community Hub

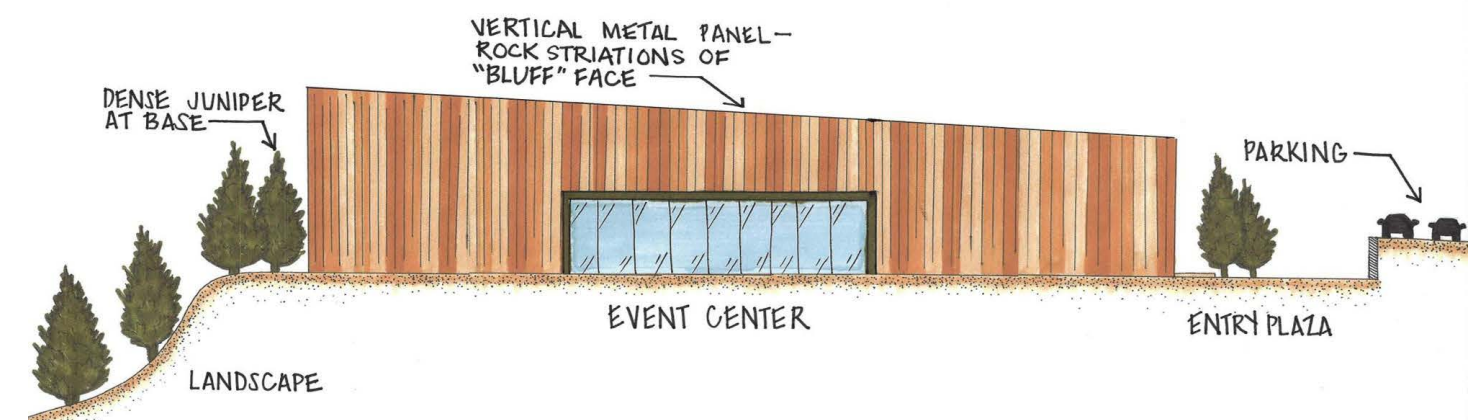
Provide Year Round Use Of Facility For Sports Tournaments, Concerts, Graduations, Trade Shows, Weddings, Clinics, and Community Fitness

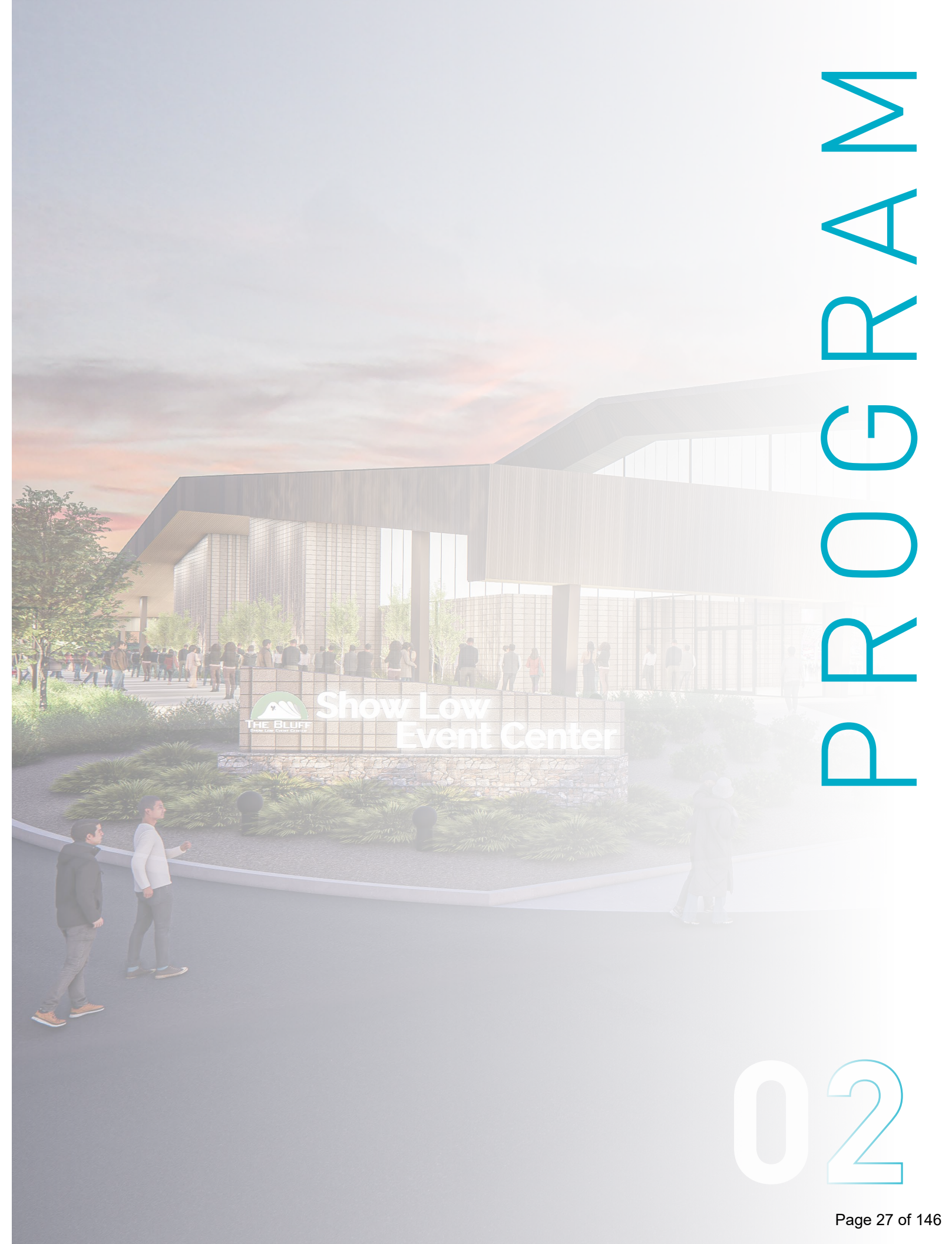
Become Economic Driver For Hotels, Businesses, and Community Pride

Become A Self-Sustaining Operation

The Show Low Sports and Event Center will be designed to foster economic development and community pride for the entire City of Show Low. The new facility will feature multi-purpose courts designed to accommodate year round events within the community. From high school basketball tournaments to graduations, there will be no event that the facility is not prepared to host. The success of this facility will depend on the thoughtful balance of economic and community priorities to provide a multi-purpose hub that currently doesn't exist in the region.

The design of the facility will borrow from the surrounding context bringing both local colors and textures to the facade. Taking cues from the surrounding geology and a nod to the card-based founding of the city, the new event center has been nicknamed "The Bluff" due to its use of multi-colored metal panels designed to evoke the striking texture of a vertical cliff face or bluff rising out of a dense thicket of natural pinyon-juniper vegetation. The use of punched windows along the exterior borrows from the clearings between the trees created by the towering ponderosa pines of the neighboring forests. This relationship to the natural environment will ensure the new Show Low Sports and Event Center properly balances the functional needs of the program while still being rooted in place amongst the elements that define the City of Show Low's character.





PROGRAM

02

HAYDON + ARCHITEKTON + 4LINE STUDIO

Show Low Sports and Event Center

PROGRAM					
Space	Name	Size	Net Area	Quantity	Total Area
Sport and Event	Event Center	170'x318'	54,060sf	1	54,060sf
	Sport Courts				
	Event Venue				
	Indoor Track	10' Wide	10,280sf	1	10,280sf
subtotal					64,340sf
Community	Meeting Rooms	72'x50'	3,600sf	3	10,800sf
	Meeting Room Storage	10'x40'	400sf	3	1,200sf
subtotal					12,000sf
Event Support	Lobby	40'x50'	2,000sf	1	2,000sf
	Ticket Office	10'x10'	100sf	1	100sf
	Training / Warmup Room	15'x16'	240sf	1	240sf
	Referee Room	30'x32'	600sf	1	600sf
	Event Storage	35'x185'	6,500sf	1	6,500sf
	Concessions	10'x20'	200sf	2	400sf
	Kitchen	50'x60'	3000	1	3,000sf
	Vending	5'x10'	50sf	2	100sf
subtotal					12,940sf
Admin Support	Manager Office	10'x15'	150sf	3	450sf
	Open Office	25'x45'	1,125sf	1	1,125sf
subtotal					1,575sf
Building Support	Womens Restrooms	30'x40'	1,200sf	3	3,600sf
	Mens Restrooms	30'x30'	900sf	2	1,800sf
	Family Restroom	10'x10'	100sf	3	300sf
	Janitor	10'x10'	100sf	3	300sf
	Stairs	10'x20'	200sf	4	800sf
	Elevator	10'x10'	100sf	1	100sf
	Storage Room	10'x10'	100sf	4	400sf
	Electrical Room	10'x20'	200sf	2	400sf
	MDF / IDF Room	10'x20'	200sf	1	200sf
	Mechanical Room	10'x20'	200sf	2	400sf
	Fire Riser Room	15'x20'	300sf	1	300sf
subtotal					8,600sf
Building Total (NSF)					99,455sf
Grossing Factor (15%)					14,918sf
Building Total (GSF)					114,373sf
Exterior	Parking Spaces (Onsite)			780	
	Parking Spaces (Offsite)			345	

SITE ZONING ORDINANCE

Site Size

- 13.82 Acres
- This site is positioned off Woolford Road and located as far from residential areas as possible, minimizing neighborhood impacts. Its size supports the full program with room for growth, while maintaining convenient access for event traffic.

Building Design / Screening

- Max Height 45'-0" w/o Conditional Use Permit
- 6'-0" Fence
- Refuse Enclosure Fully screened from public view (min. 5'-0")
- Constructed of sight-obscuring materials with sloped concrete floor
- Solid or baffled gates, equal height, self-latching

Building Set-backs

- Min Front Yard- None
- Min Rear Yard +/- 45'-0
- Min Street Side 10'-0" Min
- Side Yard, Res. 15'-0"
- Min Rear Yard is Dependent on Building Height

Landscaping Requirements

- 10'-0" Front & Street side
- Minimum of three feet maintained along the developed length of the property. All open areas not used for parking must be landscaped with trees, shrubs, ground cover, pedestrian walkways, and plazas, with at least 30% of the landscape area dedicated to ground cover.
- 5% of Required Parking Area Over 20,000 sf to be Landscaped

Noise Ordinance

- Max 62 dBA Residential + 65 dBA Commercial (10pm - 7am) Max 70 dBA Residential + 72 dBA Commercial (7am - 10pm)
- Entry noise levels are regulated to limit impacts on adjacent residential uses, with specific thresholds set for daytime and nighttime hours.

Lighting Design

- Unshielded outdoor illumination prohibited - Exception: incandescent fixtures under 150 watts
- Lighting must not shine onto or reflect onto adjoining properties
- Outdoor lighting is regulated to prevent glare or spillover, ensuring neighboring properties are not adversely impacted by site illumination.

Parking Requirements

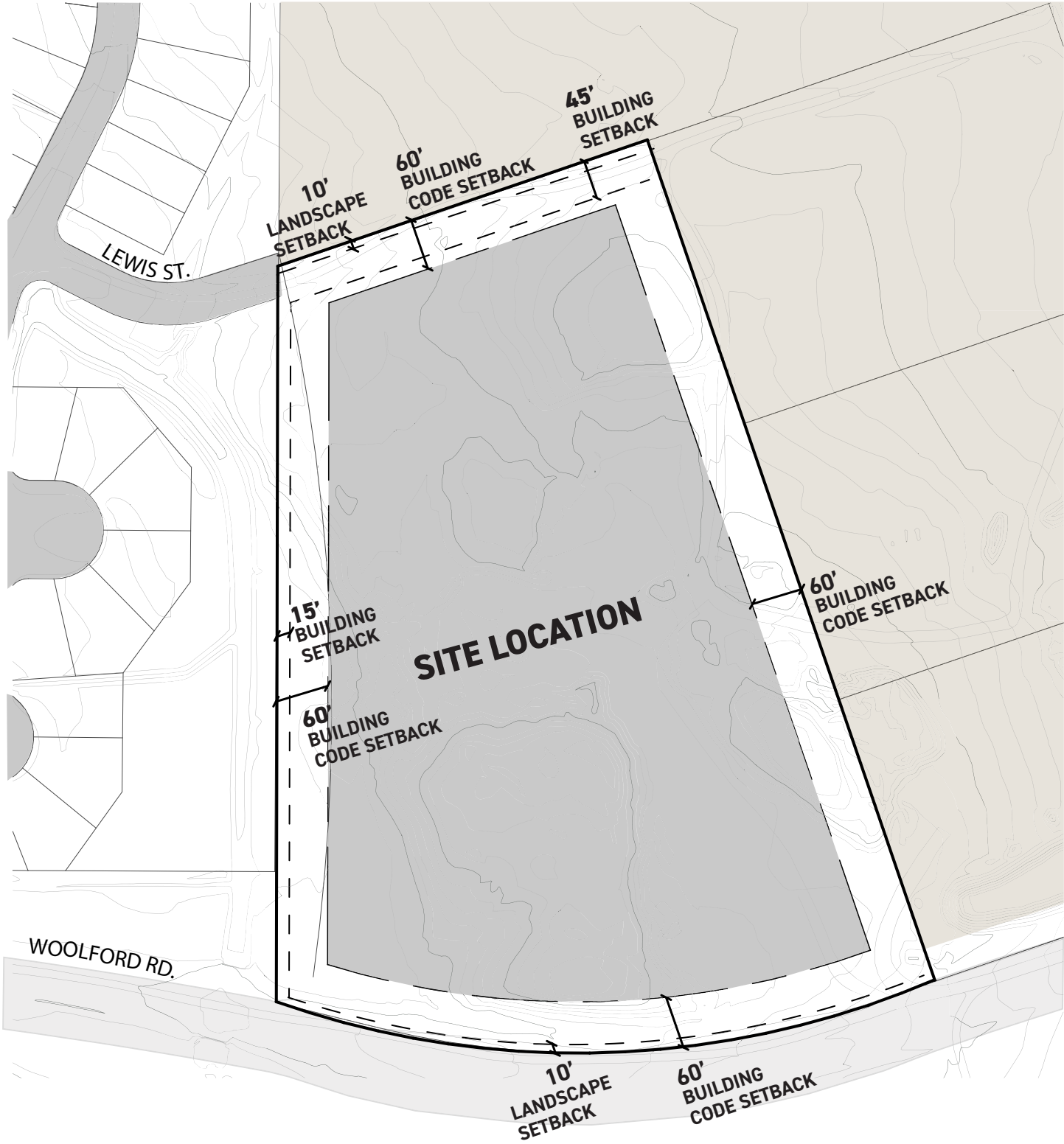
- 1 Spot for every 4 Seats
- 4,500 Seats / 4 = 1,125 Spots
- Parking Stalls Min 9'-0" x 18'-6"
- 22 Required Accessible Parking Spaces

Monument Signage

- 3 Signs allowed per street frontage, maximum of 4 per lot
- Total Sign of area of 1 1/2 square feet per lineal foot of building frontage
- 6'-0" maximum height

Fire Code

- Min 26'-0" Drive Aisle
- Turning Radii 35'-0" Interior, 61'-0" Exterior; Fire Official May Adjust
- 60'-0" Setback To Property Line Required for Unlimited Area Per IBC 507.4



SPORT COURTS

Capacity & Layout

- 54,060 SF
- 170' x 318'
- 40' Ceiling
- 4,500 Occupants
- A-3 Assembly
- Multi-Sport Court (80'x105') to support 6 Basketball, 12 Volleyball, and 18 Pickleball, Mat Sports, Cheer/Dance
- Championship Court to be a single 50'x84' championship court layout with 13' perimeter for a 8,300 sf area with retractable seating
- Entry to include double door access with large 12' x 12' overhead door for equipment to loading zone

Furniture, Fixtures & Equipment

- Retractable Bleachers
- Portable Bleachers
- Scoring Table
- Chairs
- Ceiling Hung Basketball Hoops
- Portable Basketball Hoops
- In-ground Volleyball Sleeves
- Divider Curtains
- Furniture to support multiple sport event setups designed for flexibility
- EVENT STORAGE ROOM to accommodate basketball, volleyball and pickleball equipment

Materials & Finishes

- Maple Wood Floor
- Molded Cove Base
- Painted Wall Finish
- Specialty Ceiling
- Materials to be durable with ability for high-impact resistance and allow for heavy loading on floor
- Acoustic wall and ceiling panels

Acoustics & Privacy

- 50 STC
- 35 NC
- 1 NRC Ceiling
- Acoustic absorption panels on walls and ceilings

Security & Access Control

- Entry Lockset
- Panic Hardware
- Card Reader
- Security Camera
- Entry to allow for high traffic volume with ability to control access
- Security cameras throughout to provide full visual to entry points and overall event space

AV & Telecom

- House Audio / PA System
- Digital Scoreboards
- Wi-Fi Access Points
- Streaming Cameras
- 70A distributed audio system for sports tournaments, wireless microphones, capability of background sound, National Anthem, and data to digital scoreboards. Possible upgrade to 90A system for potential championship game needs. Adjacency to AV Room.

Structural & Loading

- 150 psf Assembly
- Long Span Structure

Mechanical & Plumbing

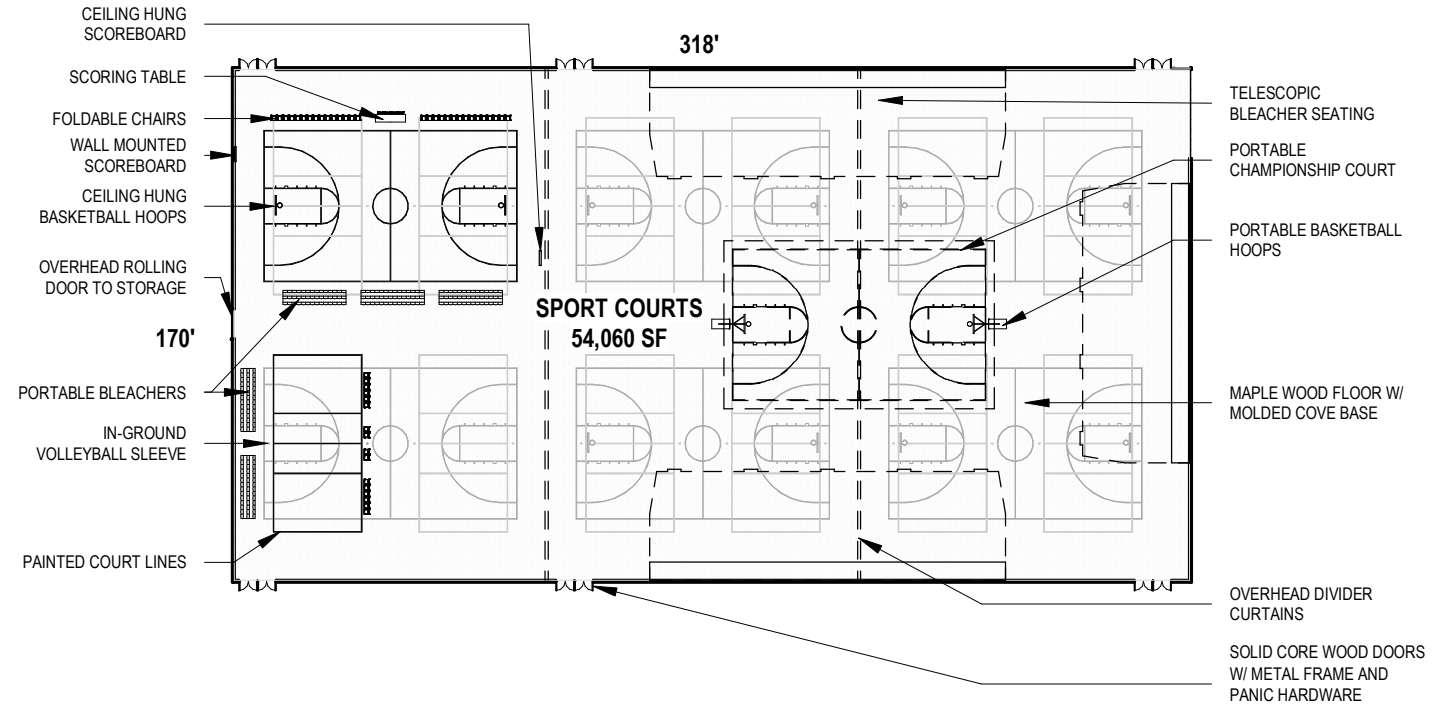
- 78° Max Temperature
- Humidity Control (Higher End Only MFMA Standards Cannot Be Met)
- Dedicated mechanical units for event space with no ducts/drops over courts
- Drinking Fountain and Bottle Filler (Adjacent Wall But Not On Court)

Electrical & Lighting

- 50 [fc]
- 4,000 Kelvin
- Dimmable / Lighting Controls
- House Lighting Only
- 120V TR duplex receptacles, floor boxes at scorer tables, 20A scoreboard, 120V basketball hoops, 120V gym divider curtains
- Overhead lighting and controls to be impact resistant and above structure (cages, etc...)

Fire Protection

- Light Hazard Fire Protection



EVENT VENUE

Capacity & Layout

- 54,060 SF
- 170' x 318'
- 40' Ceiling
- 4,500 Occupants
- A-3 Assembly
- Event space for concerts, graduations, trade shows, summits, car shows
- Single 40'x60' stage layout for a 2,400 sf area with retractable seating
- Entry to include double door access with large 12' x 12' overhead door for equipment to loading zone

Furniture, Fixtures & Equipment

- Stage
- Chairs
- Retractable Bleachers
- Furniture to support floor seating for concert venue setup
- EVENT STORAGE ROOM to accommodate stage and stackable chairs
- No catwalk or specialty rigging is assumed, all future large events will rely on 100% portable stage/rigging

Materials & Finishes

- Maple Wood Floor
- Molded Cove Base
- Painted Wall Finish
- Specialty Ceiling
- Wood flooring to include floor protection for events
- Acoustic wall and ceiling panels

Acoustics & Privacy

- 50 STC
- 35 NC
- 1 NRC Ceiling
- Acoustic absorption panels on walls and ceiling

Security & Access Control

- Entry Lockset
- Panic Hardware
- Card Reader
- Security Camera
- Entry to allow for high traffic volume with ability to control access
- Security cameras throughout to provide full visual to entry points and overall event space

AV & Telecom

- House Audio / PA System
- Wi-Fi Access Points
- 70A distributed audio system for announcements, wireless microphones, capability of background sound, National Anthem, and data to event stage (event audio to be brought in by event producer). Possible upgrade to 90A system for potential championship game needs. Adjacency to AV Room.

Structural & Loading

- 150 psf Assembly
- Long Span Structure

Mechanical & Plumbing

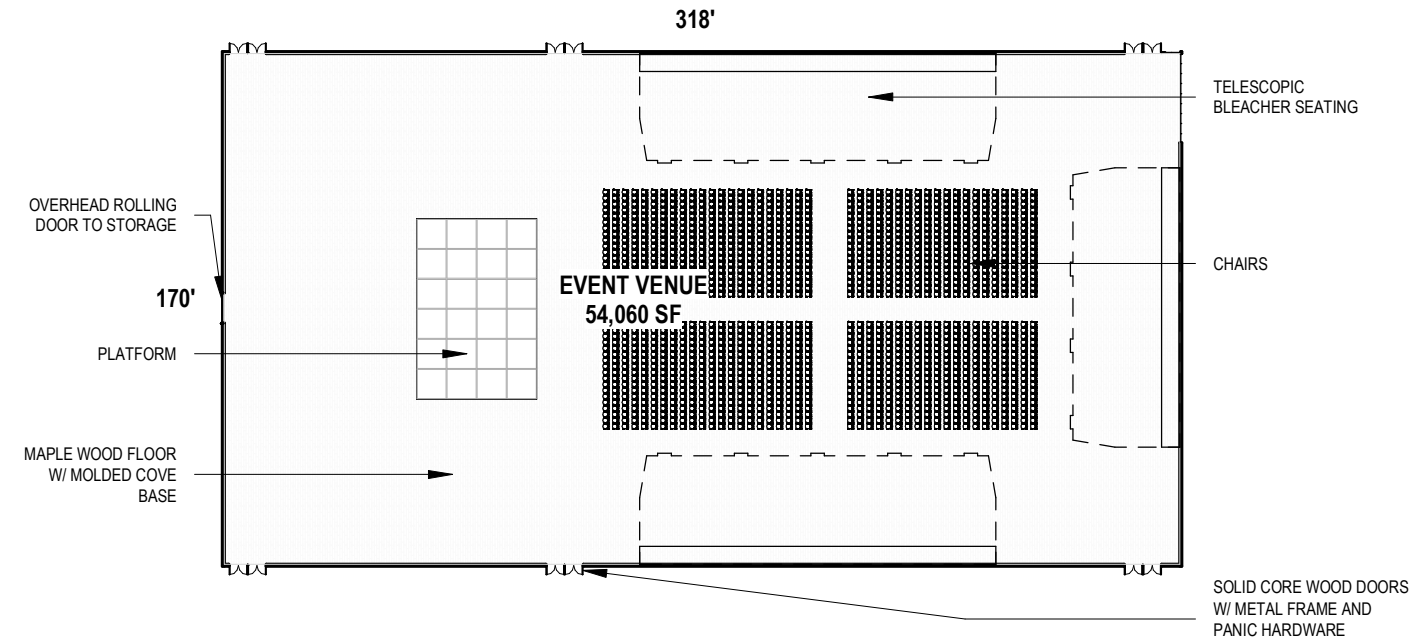
- 78° Max Temperature
- Humidity Control (Higher End Only MFMA Standards Cannot Be Met)
- Dedicated mechanical units for event space with no ducts/drops over courts
- Drinking Fountain and Bottle Filler (Adjacent Wall But Not On Court)

Electrical & Lighting

- 50 [fc]
- 4,000 Kelvin
- Dimmable / Lighting Controls
- House Lighting Only
- Power to be 1200A, 120/208V-3PH
- Distributed 100A trade show power at 8 locations

Fire Protection

- Light Hazard Fire Protection
- No specialty exhaust or smoke removal system is anticipated



INDOOR TRACK

Capacity & Layout

- 10,280 SF
- 10' Wide
- 10' Ceiling
- 50+ Occupants
- A-3 Assembly
- Indoor walking track with 3 lanes on second level used as viewing area for courts and adjacent to COURTS, STAIRS, and ELEVATORS
- Provides upper level concourse with top loaded access to seating during events with removable guardrails
- Guardrail design to include sight-line considerations from seating and toe kick to prevent items from rolling off

Furniture, Fixtures & Equipment

- Chairs (Event Seating)
- Chairs to be provided for additional seating on indoor track during events

Materials & Finishes

- Rubber Floor (Reversable)
- Rubber Base
- Painted Wall Finish
- Exposed Ceiling
- Materials to be high-quality and durable with ability to provide graphics and branding for the event center
- Acoustic wall and ceiling panels

Acoustics & Privacy

- 50 STC
- 30 NC
- Open to SPORT COURTS and EVENT SPACE
- Acoustics to include absorptive wall panels

Security & Access Control

- Security Cameras

AV & Telecom

- House Audio / PA System
- Wi-Fi Access Points

Structural & Loading

- 125 psf Assembly
- Suspended Structure

Mechanical & Plumbing

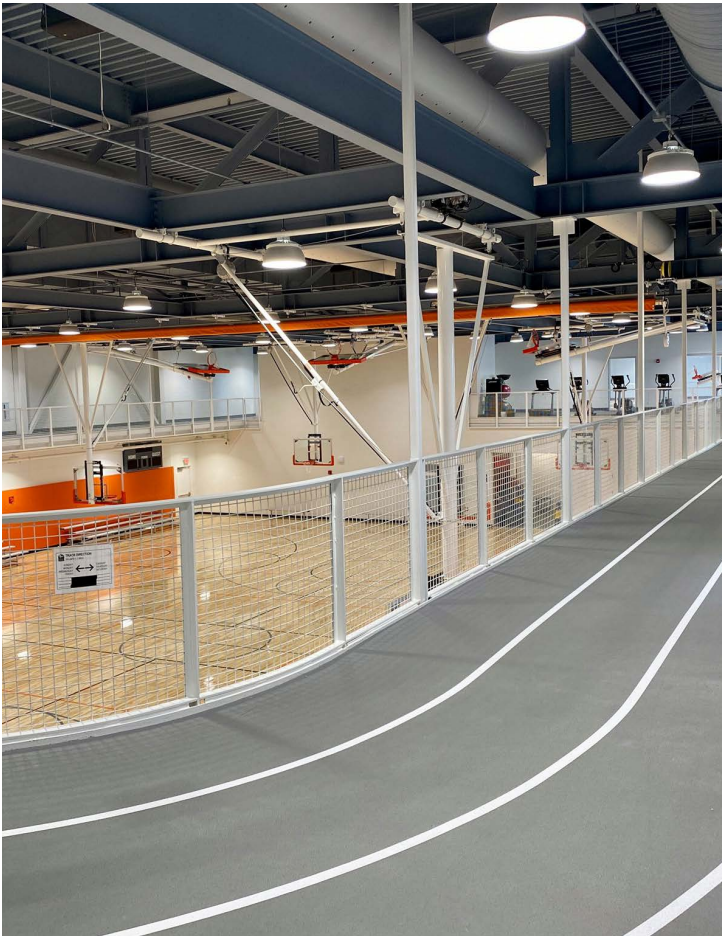
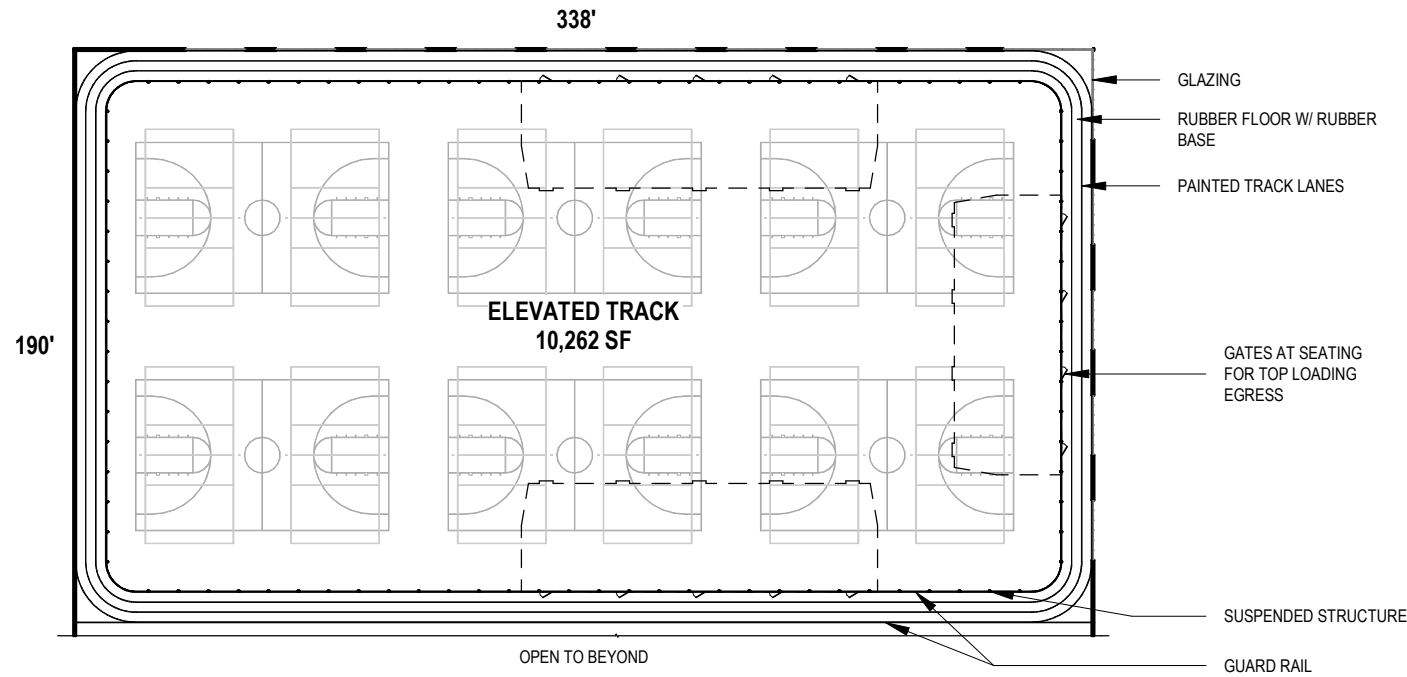
- 78° Max Temperature
- Drinking Fountain and Bottle Filler
- Humidity Control (Higher End Only MFMA Standards Cannot Be Met)

Electrical & Lighting

- 50 [fc]
- 4,000 Kelvin
- Convenience outlets with dedicated 30A for floor scrubber
- Overhead lighting to be impact resistant and above structure
- Dimmable / Lighting Controls

Fire Protection

- Light Hazard Fire Protection



MEETING ROOMS

Capacity & Layout

- 3,600 SF
- 72' x 50'
- 12' Ceiling
- 150 Occupants
- A-3 Assembly
- Meeting rooms to be used for large and small meetings, events, hospitality, team space and adjacent to LOBBY and CONCESSIONS
- Three individual meeting rooms for up to 150 occupants each that can be combined into one large meeting room to support 500 occupants
- Access to natural daylight with storefront system, multiple double doors, and vestibule. Window Treatments W/ Blackout Capability

Furniture, Fixtures & Equipment

- Stackable Chairs
- Training Tables
- Round Banquet Tables
- Tables and chairs to be modular, stackable, and easily configurable for various setups (conference, classroom, U-shape, banquet, etc.)

Materials & Finishes

- Carpet Tile Floor
- Rubber Base
- Painted Wall Finish
- Acoustic Ceiling Tile
- Materials to be high-quality and durable with finishes for ease of maintenance and support of multi-use space
- Acoustic wall and ceiling panels

Acoustics & Privacy

- 50 STC
- 30 NC
- 0.85 NRC Ceiling Tile
- Acoustics to include absorptive wall panels and operable wall divider between meeting rooms w/ STC 45 min

Security & Access Control

- Classroom Lockset
- Card Reader
- Security Cameras
- Ability to separately control access to each room for individual meetings and events

AV & Telecom

- Podium / AV Setup
- Projector / Screen
- Ceiling Speakers
- Wi-Fi Access Points
- Ability for presentations with podium, ceiling mounted projector with drop down projection screen, and speakers in ceiling
- 70A speakers in each room with zones and data to podium and display monitors with HDMI connection

Structural & Loading

- 125 psf Assembly
- Overhead support for operable walls

Mechanical & Plumbing

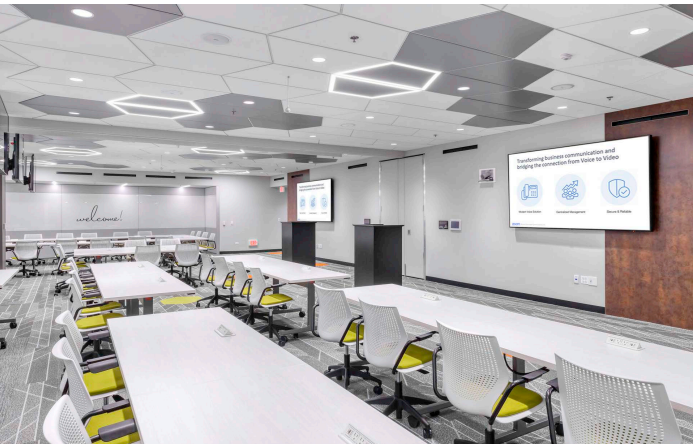
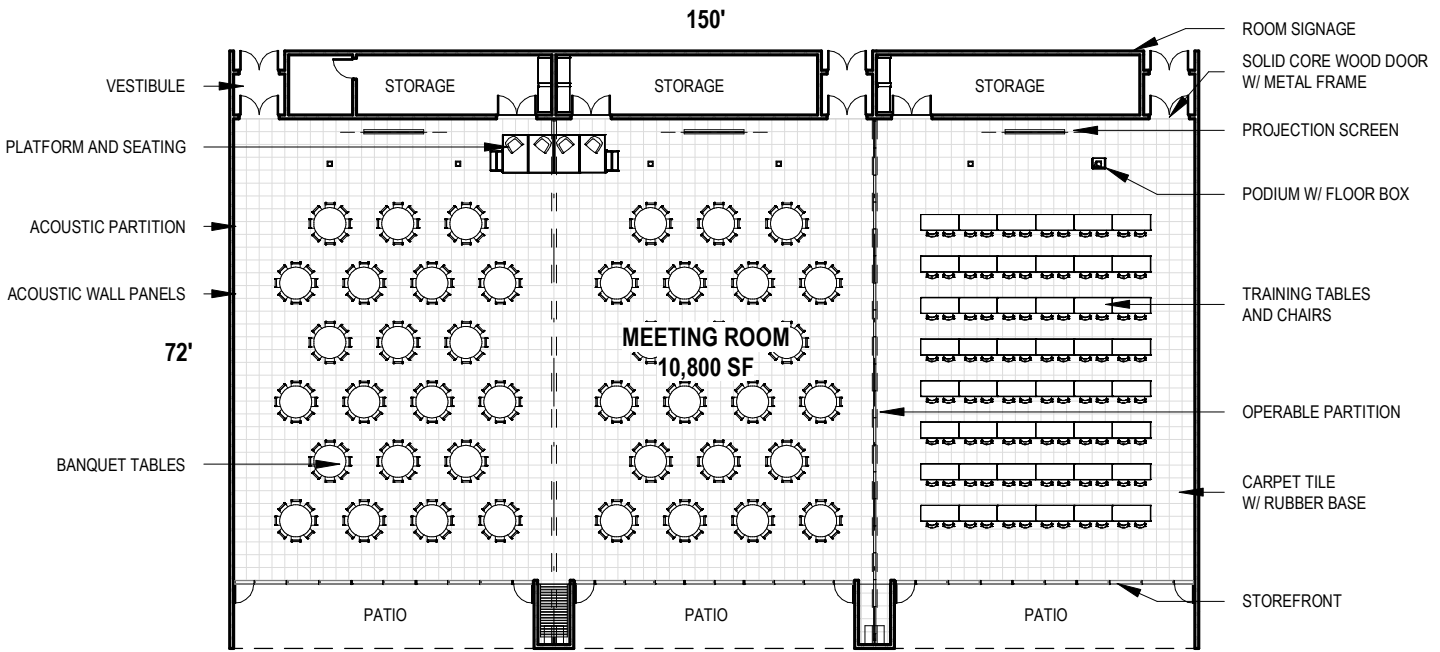
- 78° Max Temperature
- Separate mechanical units for meeting rooms with individual controls

Electrical & Lighting

- 40 [fc]
- 4,000 Kelvin
- Dimmable
- Standard Lighting
- 120V TR duplex receptacles throughout, floor boxes, and power for motorized shades and operable partition

Fire Protection

- Light Hazard Fire Protection



MEETING ROOM STORAGE

Capacity & Layout

- 400 SF
- 10' x 40'
- 12' Ceiling
- 0 Occupants
- S-Storage
- Storage for meeting rooms with shared access and double doors with direct access to MEETING ROOMS

Furniture, Fixtures & Equipment

- Stackable Chairs
- Training Tables
- Round Banquet Tables
- Utility Shelving
- Tables and chairs to be modular, stackable, and easily configurable for various setups (conference, classroom, U-shape, banquet, etc.)
- Open floor space zoned for stackable chairs, training tables, and banquet tables

Materials & Finishes

- Sealed Concrete Floor
- Rubber Base
- FRP / Painted Wall Finish
- Exposed Ceiling
- Added FRP wall panels for impact resistant walls

Acoustics & Privacy

- No Requirement

Security & Access Control

- Storeroom Lockset

AV & Telecom

- Dedicated AV room inside storage room to provide required equipment for meeting room controls, etc...

Structural & Loading

- 125 psf Storage

Mechanical & Plumbing

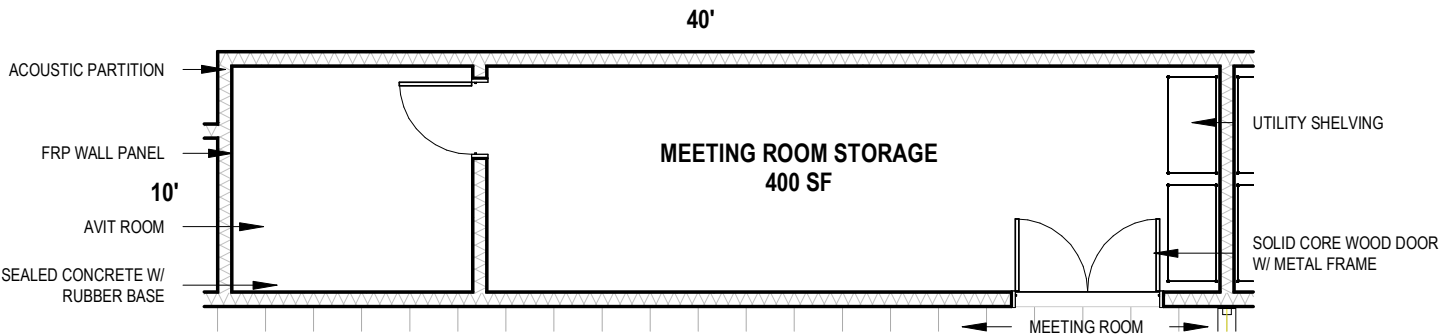
- 78° Max Temperature
- Ordinary Hazard Fire Protection

Electrical & Lighting

- 5 [fc]
- 4,000 Kelvin
- Utility Lighting

Fire Protection

- Light Hazard Fire Protection



LOBBY

Capacity & Layout

- 2,000 SF
- 40' x 50'
- 20' Ceiling
- 150 Occupants
- A-3 Assembly
- Reception area, prefunction area, and check-in for events located at the front of building adjacent to CONCESSIONS and COURTS, FEATURE STAIR
- Access to natural daylight with storefront system, multiple double doors, and vestibule

Furniture, Fixtures & Equipment

- Reception Desk
- Tables and Chairs
- Lounge Furniture
- Furniture to be flexible for prefunction waiting space

Materials & Finishes

- Polished Concrete Floor
- Rubber Base
- Painted Wall Finish
- Exposed Ceiling
- Materials to be high-quality and durable with ability to provide graphics and branding for the event center

Acoustics & Privacy

- 50 STC
- 35 NC
- Acoustics to include absorptive wall + ceilings panels (NRC 0.75 min)

Security & Access Control

- Entry Lockset
- Panic Hardware
- Card Reader
- Security Cameras
- Magnetometers
- Lobby to be the main point of control for the event center with security check point and security cameras

AV & Telecom

- House Audio / PA System
- Display Monitors
- Wi-Fi Access Points
- Data to front desk and display monitors
- 70A distributed audio single zone with background music, PA, and other abilities, visual displays

Structural & Loading

- 125 psf Assembly

Mechanical & Plumbing

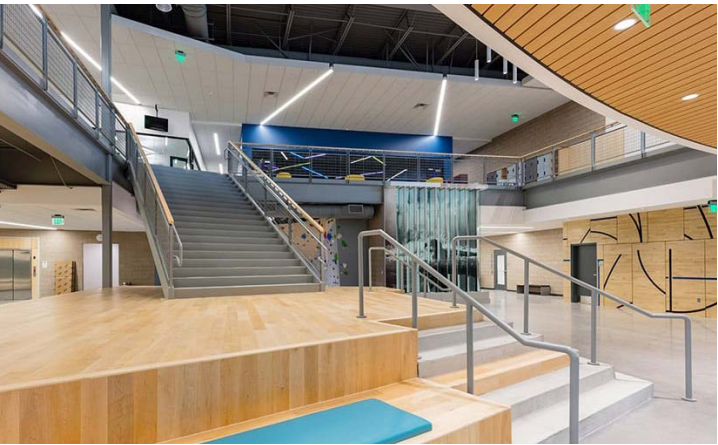
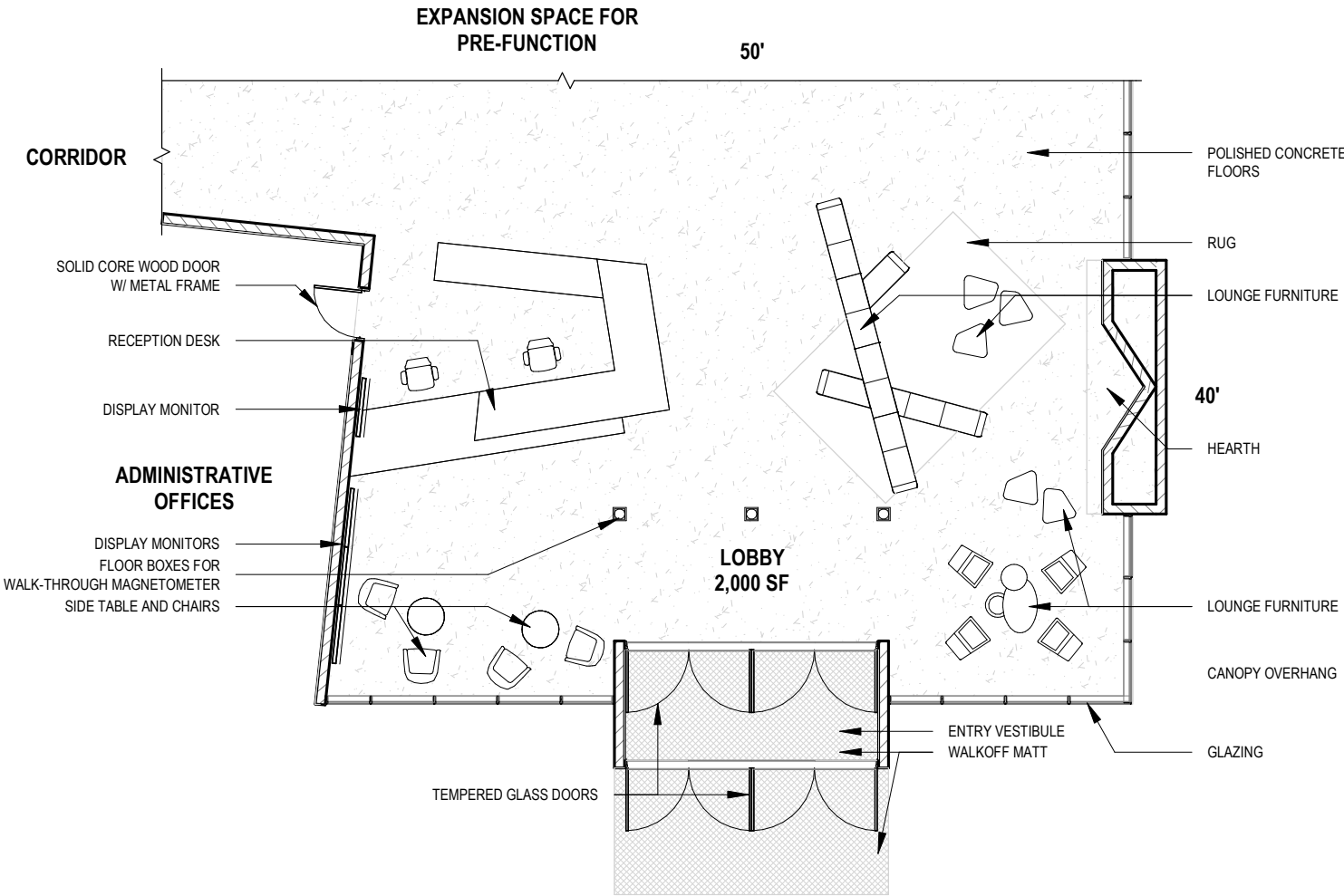
- 78° Max Temperature
- Drinking Fountain and Bottle Filler
- Fireplace

Electrical & Lighting

- 40 [fc]
- 4,000 Kelvin
- Dimmable
- Architectural Lighting
- 120V TR duplex receptacle throughout, LED displays, charging stations, reception desk power, and floor boxes for check-in
- Floor boxes for magnetometers

Fire Protection

- Light Hazard Fire Protection



TICKET OFFICE

Capacity & Layout

- 100 SF
- 10' x 10'
- 10' Ceiling
- 1 Occupant
- B-Business
- Single ticket office for tournament and event check-in adjacent to the LOBBY with window to the exterior for purchase of tickets
- Entry to include single door access

Furniture, Fixtures & Equipment

- Desk (Transaction Counter)
- Chair
- Storage Cabinet
- POS Device
- Transaction counter with chair and storage cabinet for supplies
- Ticket office supplies and POS device

Materials & Finishes

- Polished Concrete Floor
- Rubber Base
- Painted Wall Finish
- Acoustic Ceiling Tile
- Materials to be high-quality and durable with ability to provide graphics and branding for the event center

Acoustics & Privacy

- 45 STC
- 30 NC
- 0.85 NRC Ceiling Tile
- Acoustics to include absorptive wall panels

Security & Access Control

- Office Lockset
- Card Reader
- Security Camera
- Window to include pass-thru for secure transactions

AV & Telecom

- Window Intercom
- Display Monitors
- POS Device
- Data to transaction counter for payment processing and display monitors

Structural & Loading

- 50 psf Office

Mechanical & Plumbing

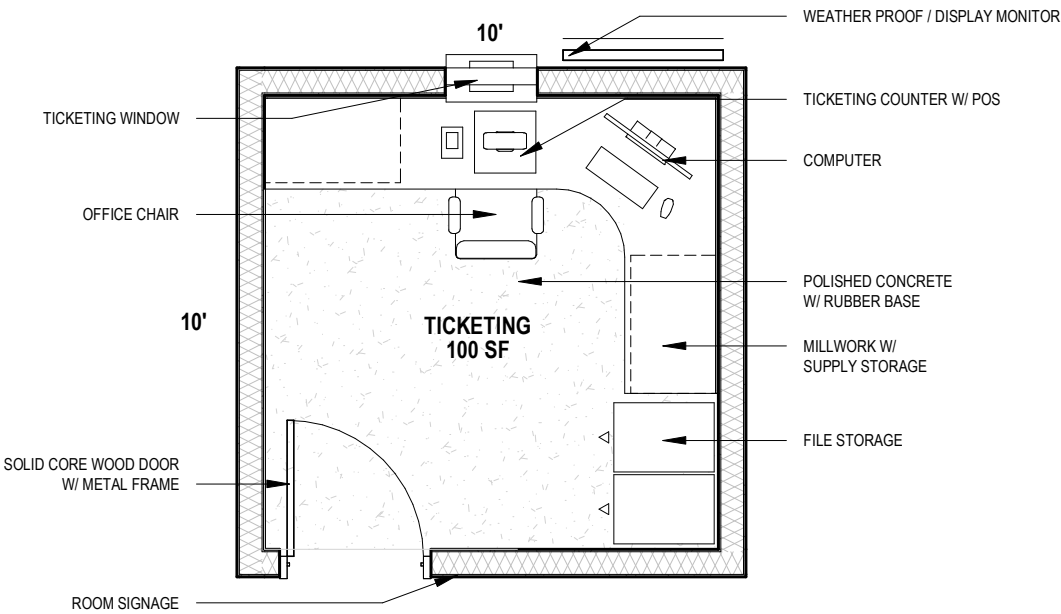
- 78° Max Temperature

Electrical & Lighting

- 30 [fc]
- 4,000 Kelvin
- Dimmable
- Standard Lighting
- 120V TR duplex receptacle throughout, LED displays, and signage

Fire Protection

- Light Hazard Fire Protection



TRAINING / WARMUP ROOM

Capacity & Layout

- 240 SF
- 16 x 15'
- 10' Ceiling
- 3 Occupants
- B-Business
- Area to care for the athletes and adjacent to the COURTS
- Entry to include single door access
- Doubles as First Aid

Furniture, Fixtures & Equipment

- Training Tables and Chairs
- Desk and Chair
- Supply Cabinet
- Ice Machine
- Sink
- Mini Fridge

Materials & Finishes

- Resilient Floor
- Rubber Base
- Painted Wall Finish
- Acoustic Ceiling Tile
- Materials to be high-quality and durable

Acoustics & Privacy

- 40 STC
- 30 NC
- 0.85 NRC Ceiling Tile
- Privacy when getting treated

Security & Access Control

- Office Lockset
- Card Reader
- Wi-Fi Access Points

AV & Telecom

- Display Monitor

Structural & Loading

- 50 psf Office

Mechanical & Plumbing

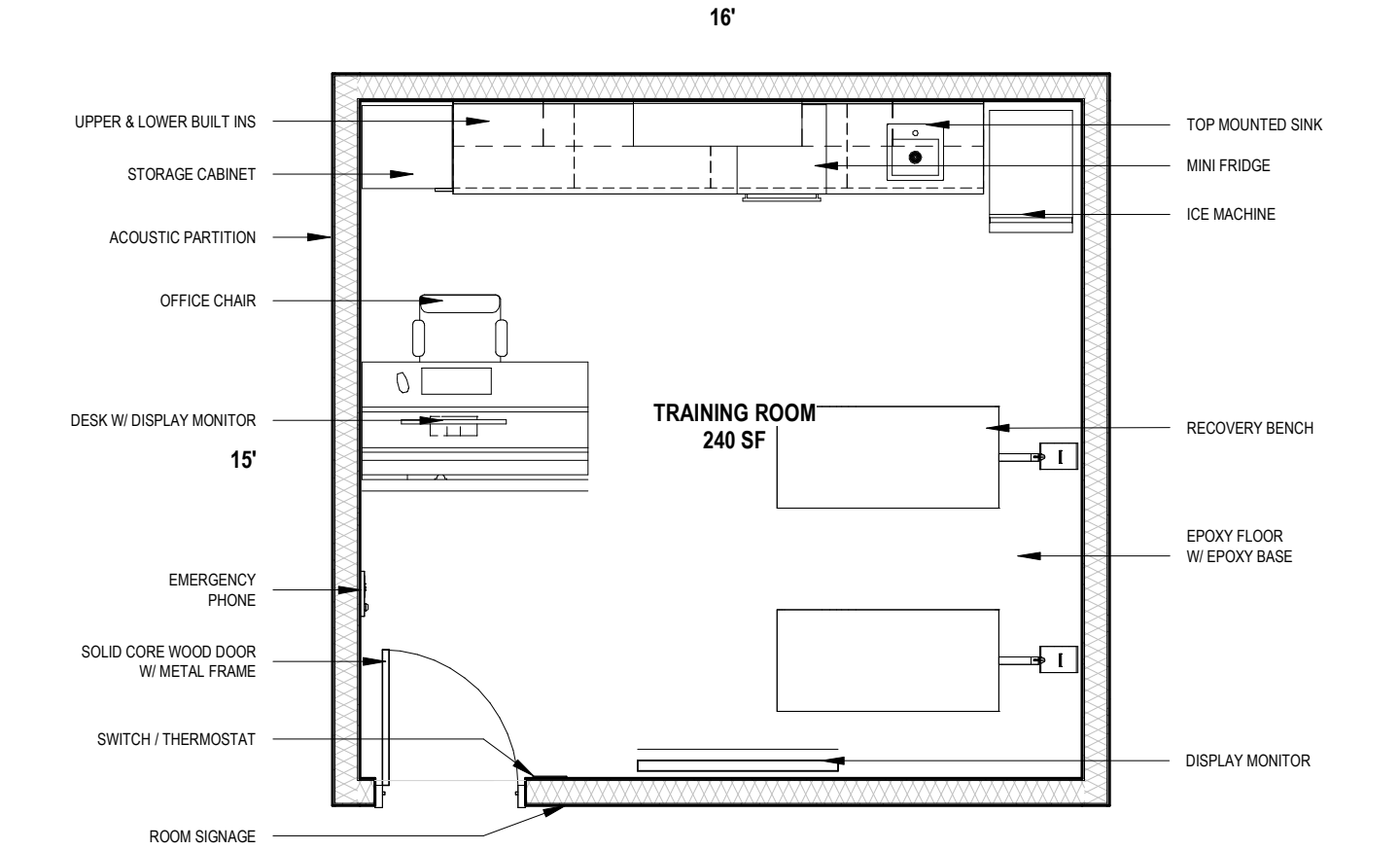
- 78° Max Temperature
- Sink
- Floor Drain

Electrical & Lighting

- 30 [fc]
- 4,000 Kelvin
- Dimmable
- Standard Lighting
- 120V TR duplex receptacle throughout

Fire Protection

- Light Hazard Fire Protection



REFEREE ROOM

Capacity & Layout

- 600 SF
- 32' x 30'
- 10' Ceiling
- 3 Occupants
- B-Business
- Room for Referee's to use during tournaments and other events adjacent to LOBBY, COURTS, MEETING ROOMS, and OFFICES
- Entry to include single door access
- Doubles as Event Green Room for Weddings, Concert, and Tournaments

Furniture, Fixtures & Equipment

- Chairs and Sofas
- Lockers
- High Top Table
- High Top Chairs
- Sink
- Mini Fridge
- ADA Shower & Restroom
- Open lounge space with flexible furniture

Materials & Finishes

- Carpet Tile Floor
- Rubber Base
- Painted Wall Finish
- Acoustic Ceiling Tile
- RR-Polished Concrete Floor
- RR-Tile Base
- RR-Wall Tile
- RR-Gypsum Ceiling
- Materials to be high-quality and durable

Acoustics & Privacy

- 45 STC
- 35 NC
- 0.85 NRC Ceiling Tile
- Privacy for Referee's

Security & Access Control

- Office Lockset
- Card Reader
- Wi-Fi Access Points

AV & Telecom

- Display Monitor
- Game Clocks
- Speakers (Connected To Show Audio)

Structural & Loading

- 50 psf Office

Mechanical & Plumbing

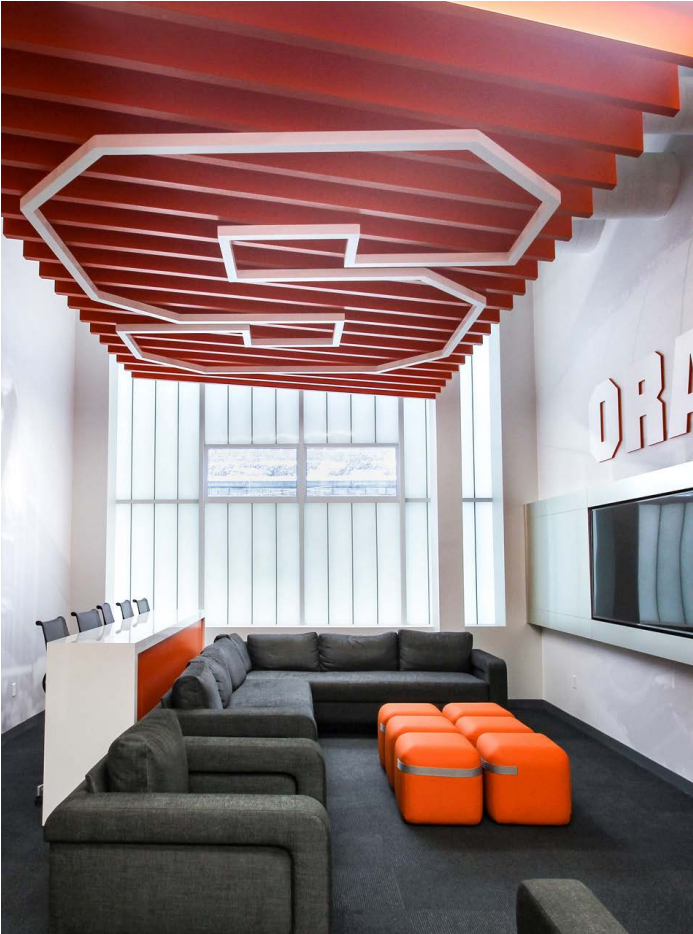
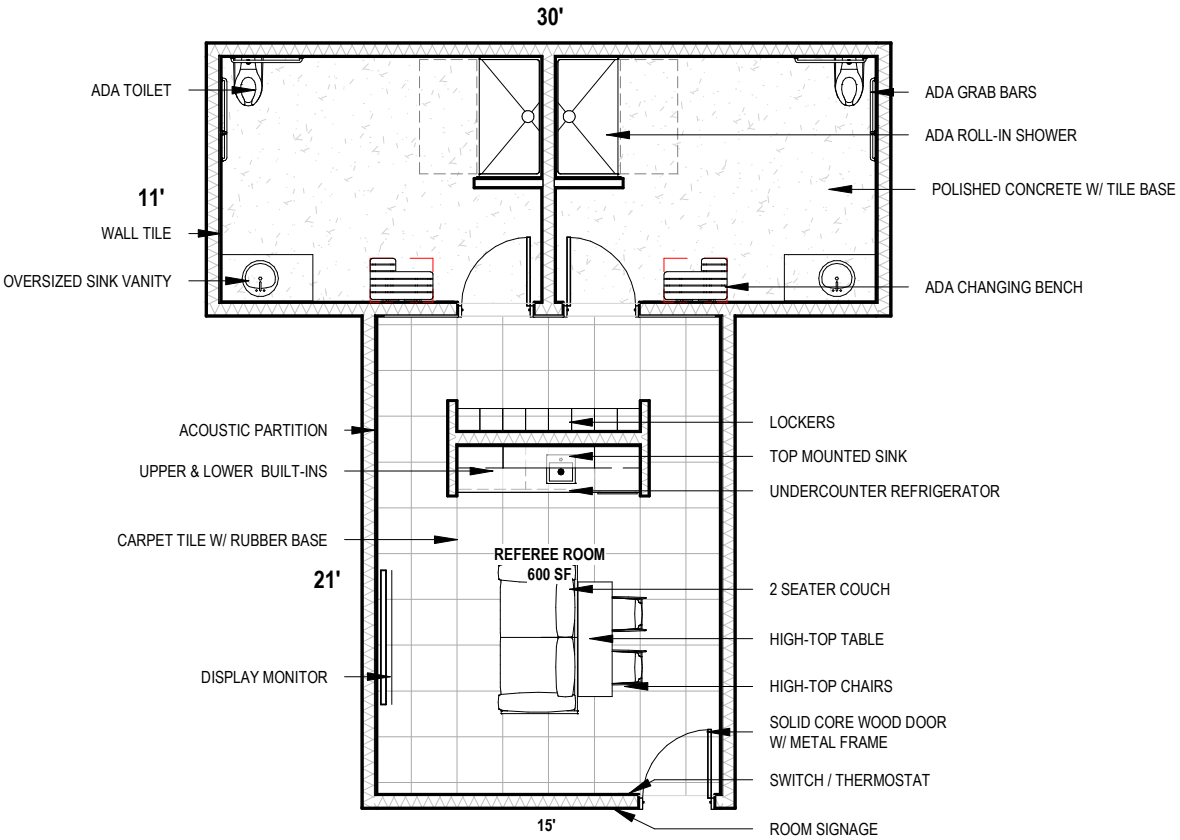
- 78° Max Temperature
- Sink
- Restrooms

Electrical & Lighting

- 30 [fc]
- 4,000 Kelvin
- Dimmable
- Standard Lighting
- 120V TR duplex receptacle throughout

Fire Protection

- Light Hazard Fire Protection



Conceptual Program

EVENT SUPPORT

EVENT SPACE STORAGE

Capacity & Layout

- 6,500 SF
- 35' x 185'
- 15' Ceiling
- 0 Occupants
- S-Storage
- Storage for equipment for the courts, stage, event furniture, and special event equipment located back of house adjacent to loading zone
- Entry to include double door access with large 12' x 12' overhead door for equipment to loading zone and courts

Furniture, Fixtures & Equipment

- Utility Shelving and Racks
- Forklift
- Roll-up Door
- Desk and Chair
- Facility Managers Desk / Operations

Materials & Finishes

- Sealed Concrete Floor
- Rubber Base
- FRP / Painted Wall Finish
- Exposed Ceiling
- Added FRP wall panels for impact resistant walls, painted walls at blocking locations for shelving and mounting

Acoustics & Privacy

- No Requirement

Security & Access Control

- Storeroom Lockset
- Card Reader
- Security Cameras

AV & Telecom

- No Requirement

Structural & Loading

- 125 psf Storage

Mechanical & Plumbing

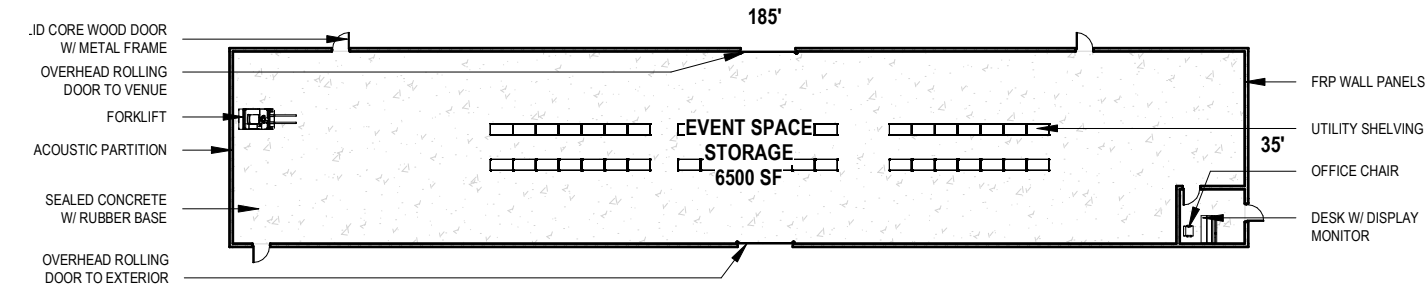
- 78° Max Temperature
- Mop Sink

Electrical & Lighting

- 5 [fc]
- 4,000 Kelvin
- Utility Lighting
- 120V TR duplex receptacles, 30A for floor scrubber, 30A for forklift charging station

Fire Protection

- Ordinary Hazard Fire Protection



Conceptual Program

EVENT SUPPORT

CONCESSIONS

Capacity & Layout

- 220 SF
- 11' x 21'
- 10' Ceiling
- 6 Occupants
- A-2 Assembly
- Concessions provide food and drink to guests and adjacent to LOBBY, COURTS, and KITCHEN
- Provide access to trash / recycle and loading dock through back of house
- Two way door with kick plates for food delivery and overhead doors for serving window

Furniture, Fixtures & Equipment

- Counters and Shelving
- Shelves
- Prep Tables
- Food Service Equipment
- Shelving and prep tables provided for small-ware's, supplies, and equipment
- Equipment to include cooler/freezer, soda machine, ice machine, and heating lamps

Materials & Finishes

- Epoxy Floor
- Epoxy Base
- FRP / Painted Wall Finish
- Washable Ceiling Tile
- Added FRP wall panels for cleanable walls

Acoustics & Privacy

- 45 STC
- 35 NC
- 0.75 NRC Ceiling Tile

Security & Access Control

- Storeroom Lockset
- Security Camera
- Roll-up Door
- Card Reader
- Security cameras to cover POS and alcohol sales

AV & Telecom

- Display Monitors / Menus
- Wi-Fi Access Point
- POS Device
- Data to transaction counter for payment processing and display monitors

Structural & Loading

- 125 psf Assembly

Mechanical & Plumbing

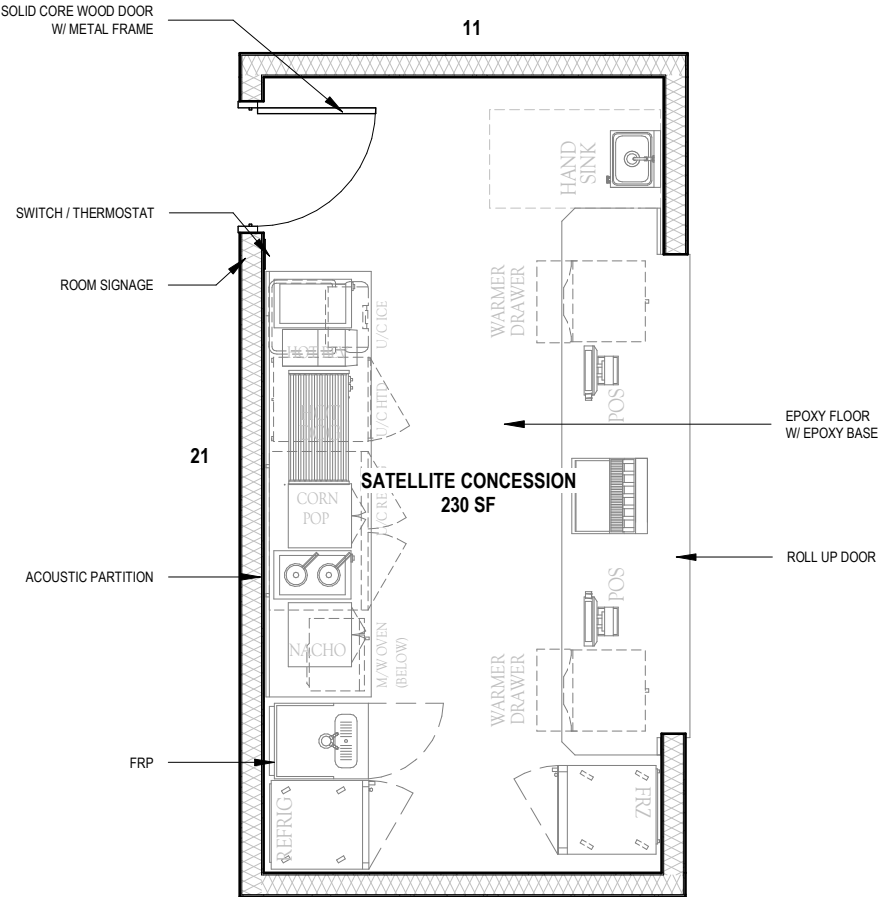
- 78° Max Temperature
- Plumbing to include Ice machine, hand sinks and floor drains

Electrical & Lighting

- 40 [fc]
- 4,000 Kelvin
- Standard Lighting
- 120V TR duplex receptacle throughout, LED displays, and POS device
- Power requirements per food service equipment

Fire Protection

- Ordinary Hazard Fire Protection



KITCHEN

Capacity & Layout

- 3,400 SF
- 85' x 40'
- 10' Ceiling
- 12 Occupants
- A-2 Assembly
- Kitchen for prep and cooking providing food and drink adjacent to CONCESSIONS and MEETING ROOMS
- Provide access to trash / recycle and loading dock through back of house
- Two way door with kick plates for food delivery and exterior access

Furniture, Fixtures & Equipment

- Counters and Shelving
- Shelves
- Prep Tables
- Food Service Equipment
- Shelving and prep tables provided for small-ware's, supplies, and equipment
- Equipment to include cooler/freezer, soda machine, ice machine, heating lamps, ranges, ovens, fryers, grills, mixers, and food processors

Materials & Finishes

- Epoxy Floor
- Epoxy Base
- FRP / Painted Wall Finish
- Washable Ceiling Tile
- Added FRP wall panels for cleanable walls

Acoustics & Privacy

- 45 STC
- 35 NC
- 0.75 NRC Ceiling Tile

Security & Access Control

- Storeroom Lockset
- Security Camera
- Card Reader

AV & Telecom

- KDS Device
- Wi-Fi Access Point
- Data to kitchen display system for food service orders

Structural & Loading

- 125 psf Assembly

Mechanical & Plumbing

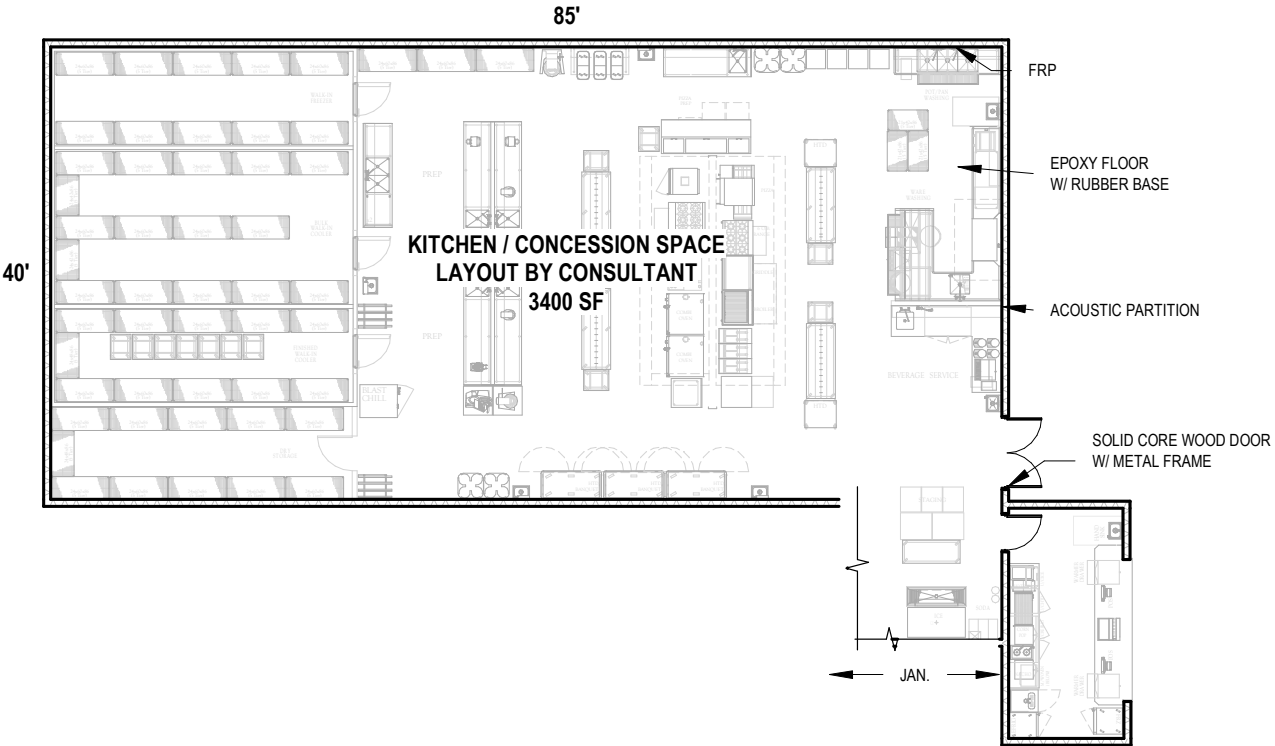
- 78° Max Temperature
- Ansul System
- Grease Interceptor
- Plumbing to include hand sinks, floor drains, dishwashers, Ice Machine, and three-compartment sink
- Hood exhaust, makeup air and fire suppression system

Electrical & Lighting

- 40 [fc]
- 4,000 Kelvin
- Standard Lighting
- 120V TR duplex receptacle throughout and KDS device
- Power requirements per food service equipment

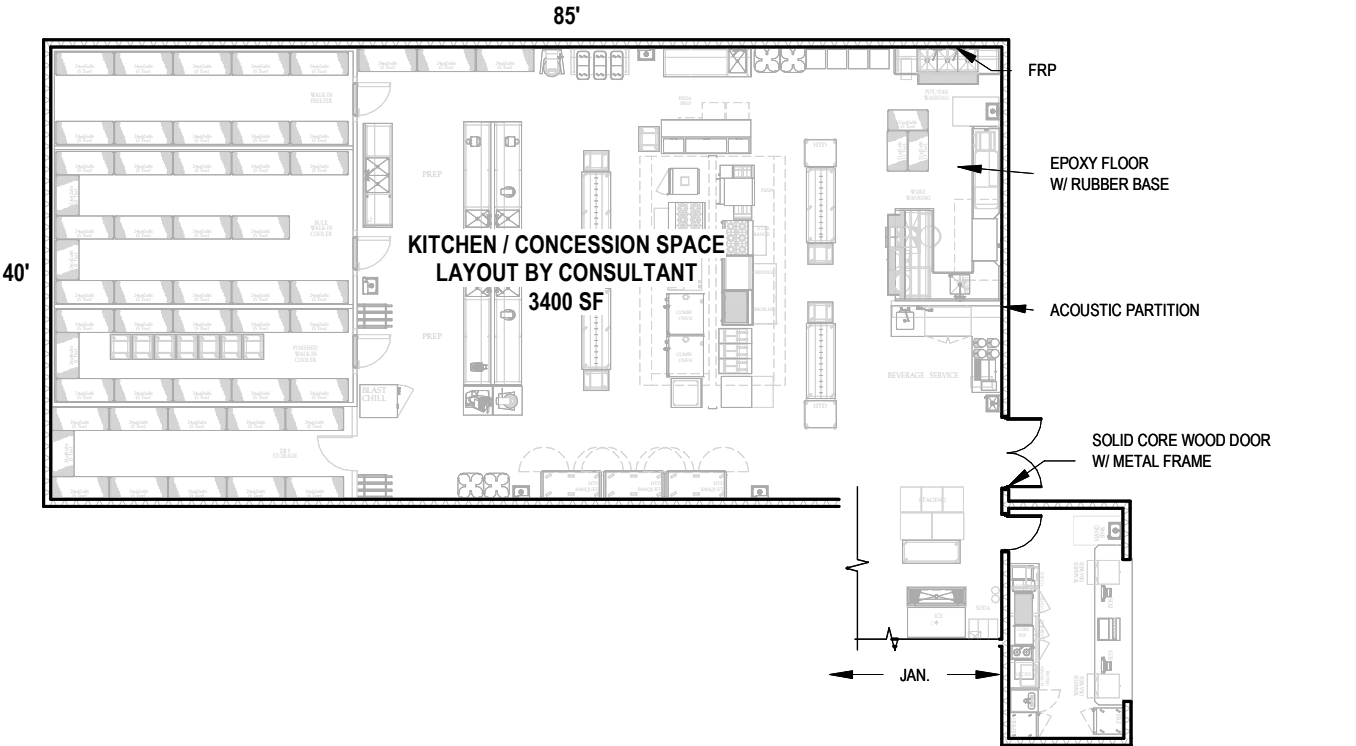
Fire Protection

- Ordinary Hazard Fire Protection



KITCHEN EQUIPMENT LIST

Equipment Description	Qty	Manufacturer	Model #	DIMENSIONS
Dunnage Rack	1	Metro	DR1836N	18" D × 36" W × 8" H
Hot Food Drop-In Well	2	Duke	ADI-3E-SW	47" L × 14" W × 11" H (3-well)
Hot Food Drop-In Well	2	Duke	ADI-2E-SW	32" L × 14" W × 11" H (2-well)
Refrigerated Drop-In Well	2	Duke	ADI-4M-TC	56" L × 26" W × 25" H
Heated Shelf	2	Duke	E303SWHD-208	36" L × 24" W × 3" H
Ice Bin	2	Scotsman	B530P	30" W × 34" D × 50" H; 536 lb capacity
Ice Maker	2	Scotsman	C0330MA-1	Approx: 30" W × 24" D × 23" H; 350 lb/day output
Coffee Brewer	1	Bunn	CWTF15-APS	9" W × 18" D × 23" H
Coffee Grinder	1	Bunn	G9-2T DBC	12" W × 18" D × 30" H
Blender	2	Vita Mix	62825	8.5" W × 10.7" D × 18" H
Hot Water Dispenser	1	Cecilware	HWD5	8" W × 17" D × 24" H
Juice Dispenser	1	Bunn	JDF-4S	10" W × 27" D × 33" H
Soft Drink Dispenser	1	Lancer	4500-12	30" W × 27" D × 36" H
POS System	1	By Others	—	14" screen with 10" D base
Undercounter Refrigerator	3	True	TUC-48	48-3/8" W × 30-1/8" D × 29-3/4" H
Prep Table Refrigerator	1	True	TSSU-60-16	60-3/8" W × 30-1/8" D × 36" H
Microwave Oven	3	Panasonic	NE-1054F	20" W × 16" D × 12" H
Countertop Charbroiler	1	Vulcan	VACB36	36" W × 27" D × 16" H
Gas Range w/ Oven	1	Vulcan	V36-S	36" W × 34" D × 58" H
Gas Fryer	2	Pitco	SG14	15-1/8" W × 30-1/8" D × 45-1/8" H
Flat Griddle	1	Vulcan	MSA36	36" W × 31" D × 15" H
Hot Plate	1	Vulcan	VHP636U	36" W × 31" D × 13" H
Salamander Broiler	1	Vulcan	36RB	36" W × 19" D × 17" H
Combi Oven	2	TBD	TBD	38" W × 36" D × 56" H
Roll-In Refrigerator	1	Traulsen	RRI232WUT-HS	77" W × 39" D × 83" H
Roll-In Freezer	1	Traulsen	RRI232WUT-HS	77" W × 39" D × 83" H
Ice Cream Freezer	1	True	T-19F	27" W × 29-1/2" D × 75-1/4" H
Reach-In Refrigerator	2	True	T-49	54-1/8" W × 29-1/2" D × 78-3/8" H
Reach-In Freezer	2	True	T-49F	54-1/8" W × 29-1/2" D × 78-3/8" H
Prep Table Refrigerator	1	True	TSSU-72-18	72-3/8" W × 30-1/8" D × 36" H
Undercounter Freezer	2	True	TUC-48F	48-3/8" W × 30-1/8" D × 29-3/4" H
Work Table	8	Eagle	WT2436S	36" L × 24" W × 34" H
Pot Sink, 3-Compartment	1	Eagle	414-18-3-18 96"	96" W × 31-3/4" D × 44-1/2" H
Hand Sink	6	Eagle	HSCR-1818	18" W × 18" D × 14" H
Dishwasher, Conveyor	1	Hobart	CL44EN-BASE	64" L × 31" D × 64" H
Dishwasher, Glass	1	Hobart	LXEH-2	24" W × 25" D × 34" H
Dishwasher, Undercounter	1	Hobart	LXEH-2	24" W × 25" D × 34" H
Dish Table, Soiled	1	Eagle	DTS60-L	60" L × 30" W × 36" H
Dish Table, Clean	1	Eagle	DTC60-R	60" L × 30" W × 36" H
Dish Rack Dolly	2	Eagle	DRD-20	20" W × 20" D × 8" H
Grease Interceptor	2	Schier	GB-250	45" L × 30" W × 26" H
Trash Receptacle	4	Rubbermaid	2632	22" D × 27-1/4" H
Floor Scale	2	Detecto	PZ-3000	18" L × 18" W × 4" H
Exhuast Hood	1	Type 1	TBD	TBD
Fire Sippression System	1	TBD	TBD	TBD
Electrical Control Package (For Hood)	1	(S.S Wall Flashing)	TBD	TBD
Refrigerated Base	1	True	TRCB-72-HC	72-3/8" x 33-1/8" x 25-1/2"
Portable heated Cabinets	2	Metro	C589-SDS-U	TBD



VENDING

Capacity & Layout

- 50 SF
- 5' x 10'
- 10' Ceiling
- 1 Occupants
- A-2 Assembly
- Vending to support event center and adjacent to LOBBY
- Access during recreation mode

Furniture, Fixtures & Equipment

- Vending Machines

Materials & Finishes

- Polished Concrete Floor
- Rubber Base
- Painted Wall Finish
- Gypsum Ceiling
- Materials to provide graphics and branding for the event center

Acoustics & Privacy

- No Requirement

Security & Access Control

- No Requirement

AV & Telecom

- Vending POS

Structural & Loading

- 125 psf Assembly

Mechanical & Plumbing

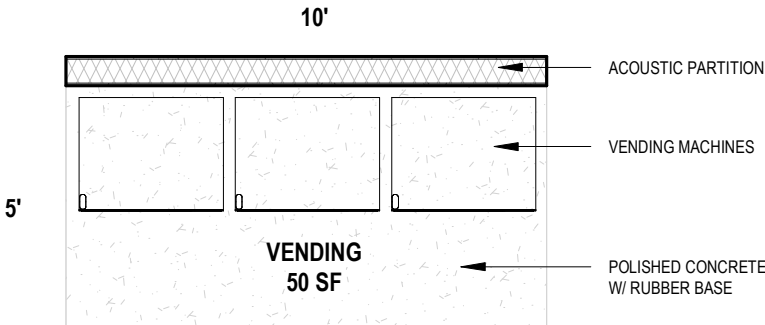
- 78° Max Temperature

Electrical & Lighting

- 10 [fc]
- 4,000 Kelvin
- Standard Lighting
- 120V TR duplex receptacle for vending machines

Fire Protection

- Light Hazard Fire Protection



MANAGER OFFICE

Capacity & Layout

- 150 SF
- 10' x 15'
- 10' Ceiling
- 1 Occupants
- B-Business
- Administration area for facility and staff adjacent to OPEN OFFICE
- Offices available for special event management and dedicated Safe Room
- Single door with glass sidelights

Furniture, Fixtures & Equipment

- Office Desk
- Office Chair
- File Storage Cabinet
- Marker Board
- Safe (Safe Room)
- Furniture to be systems furniture
- Safe Room to include secure safe

Materials & Finishes

- Carpet Tile Floor
- Rubber Base
- Painted Wall Finish
- Acoustic Ceiling Tile
- Materials to be high-quality and durable

Acoustics & Privacy

- 50 STC
- 30 NC
- 0.85 NRC Ceiling Tile

Security & Access Control

- Office Lockset
- Card Reader (Safe Room)
- Security Camera (Safe Room)
- Dedicated Safe Room to include card reader and 360 security camera

AV & Telecom

- Data (Desk)
- Display Monitor

Structural & Loading

- 50 psf Office

Mechanical & Plumbing

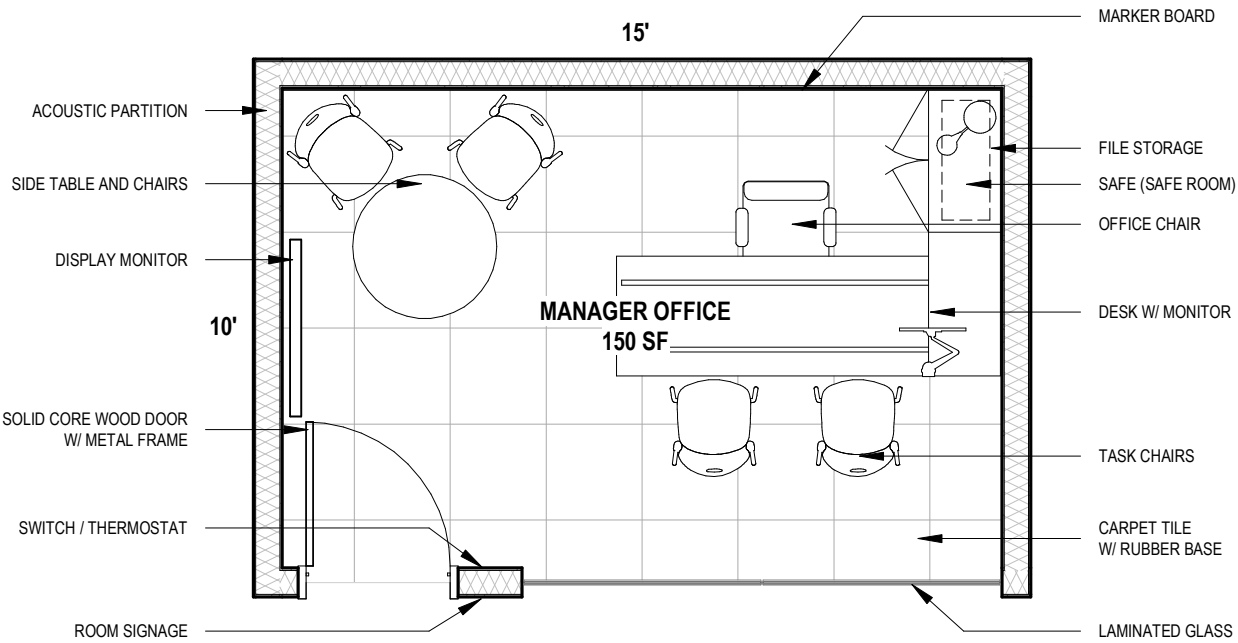
- 78° Max Temperature

Electrical & Lighting

- 30 [fc]
- 4,000 Kelvin
- Dimmable
- Standard Lighting
- 120V TR duplex receptacle throughout

Fire Protection

- Light Hazard Fire Protection



Conceptual Program

ADMIN SUPPORT

OPEN OFFICE

Capacity & Layout

- 1,125 SF
- 25' x 45'
- 10' Ceiling
- 8 Occupants
- B-Business
- Administration area for facility and staff adjacent to MANAGER OFFICE, visibility to SPORTS COURT for recreation mode w/ security glass
- Open Office available for special event management
- Single door with glass sidelights

Furniture, Fixtures & Equipment

- Workstations
- Office Chairs
- File Storage Cabinet
- Marker Board
- Print/Copy/Scan
- Furniture to be systems furniture
- Millwork for storage and supplies

Materials & Finishes

- Carpet Tile Floor
- Rubber Base
- Painted Wall Finish
- Acoustic Ceiling Tile
- Materials to be high-quality and durable

Acoustics & Privacy

- 50 STC
- 30 NC
- 0.90 NRC Ceiling Tile

Security & Access Control

- Office Lockset
- Card Reader

AV & Telecom

- Data (Workstations)
- Display Monitor
- Wi-Fi Access Point
- Data to be provided at workstations and print area
- Display monitors to be provided at workstations and large wall displays

Structural & Loading

- 50 psf Office

Mechanical & Plumbing

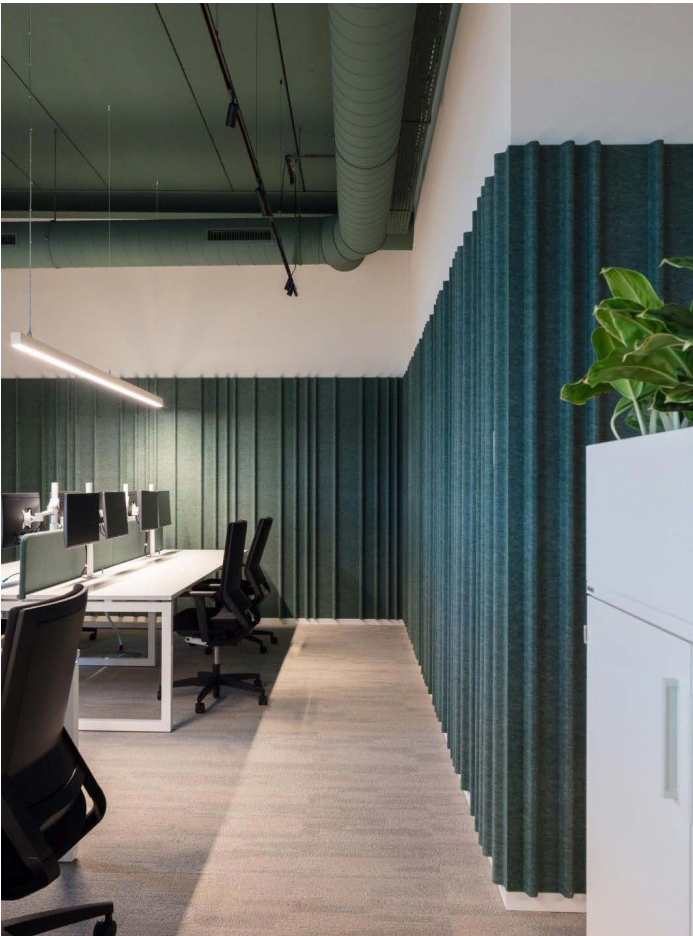
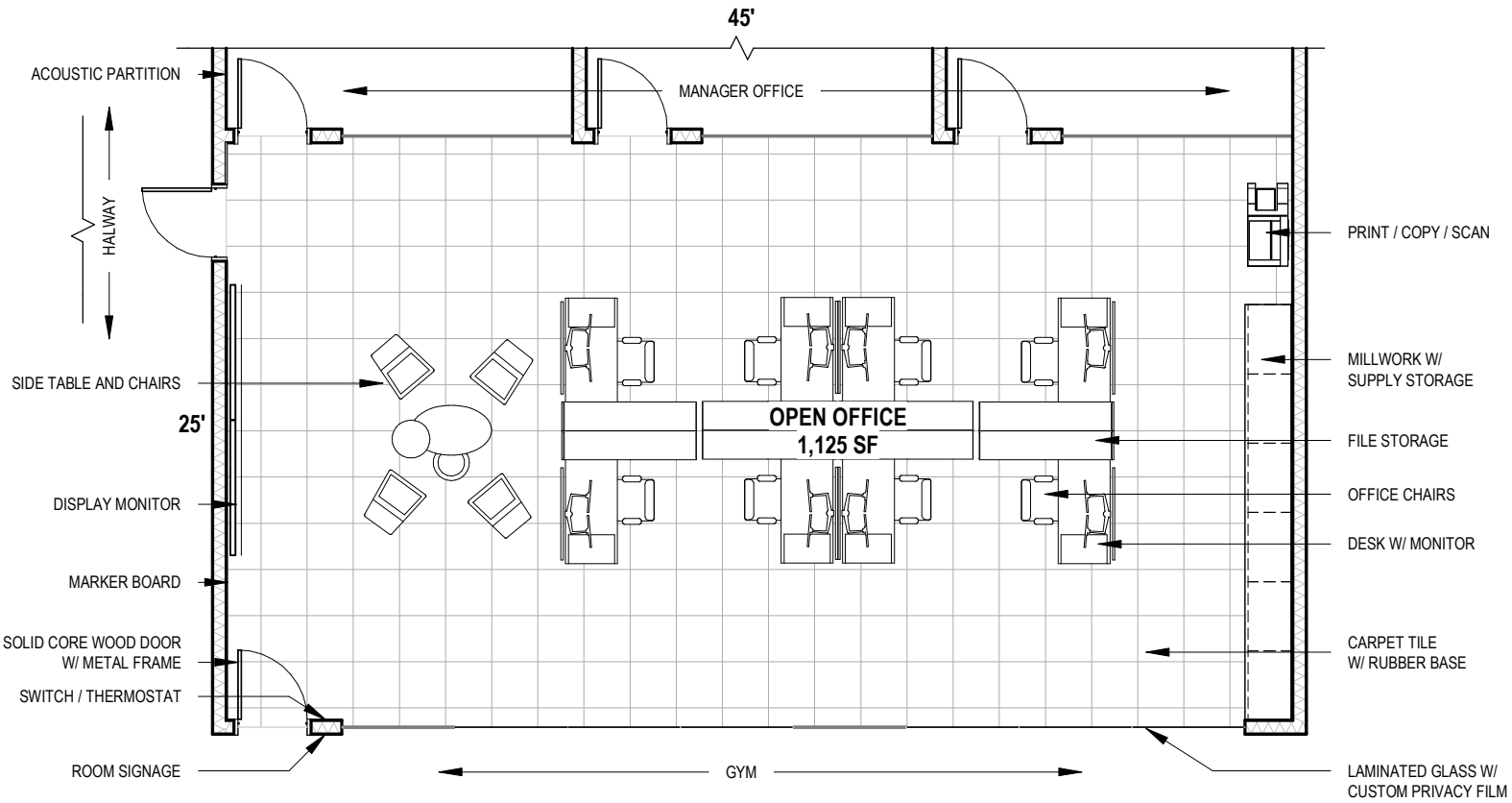
- 78° Max Temperature

Electrical & Lighting

- 30 [fc]
- 4,000 Kelvin
- Dimmable
- Standard Lighting
- 120V TR duplex receptacle throughout (floor boxes to open desks), print area, and display monitors

Fire Protection

- Light Hazard Fire Protection



WOMEN’S RESTROOMS

Capacity & Layout

- 1200 SF
- 40' x 30'
- 10' Ceiling
- 16 Occupants
- B-Business
- Restrooms to support the event center and adjacent to the LOBBY, COURTS, and MEETING ROOMS
- Ability for a portion of the restrooms to be available for meetings

Furniture, Fixtures & Equipment

- Specialty Equipment
- Specialty equipment to include mirror, paper towel dispenser, toilet paper holder, soap dispenser, robe hook, ADA accessories, floor mount partitions, and baby changing station

Materials & Finishes

- Polished Concrete Floor
- Tile Base
- Wall Tile
- Gypsum Ceiling
- Materials to be high-quality and durable
- Polished concrete floor to include anti-slip sealer

Acoustics & Privacy

- 45 STC
- 40 NC

Security & Access Control

- No Requirement

AV & Telecom

- House Audio / PA System
- Provide speakers for house audio and ambient noise

Structural & Loading

- 50 psf Office

Mechanical & Plumbing

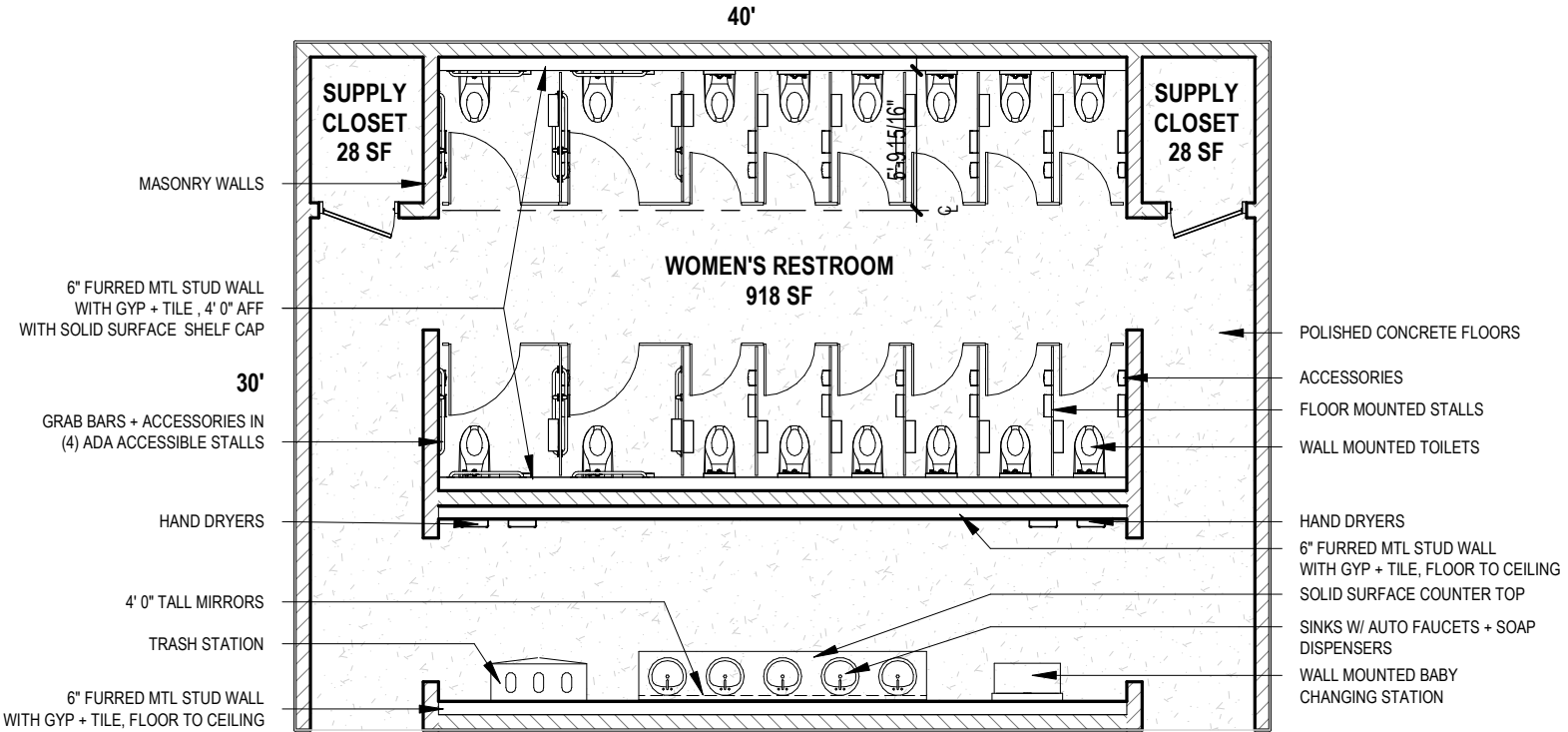
- 78° Max Temperature
- Floor Drain
- Plumbing Fixtures
- Mechanical to include exhaust fans
- Plumbing to include sinks, faucets, toilets, urinals, floor drains, and drinking fountains with bottle filler

Electrical & Lighting

- 10 [fc]
- 4,000 Kelvin
- Motion Sensor
- Standard Lighting
- 120V TR duplex receptacle throughout (GFCI)

Fire Protection

- Light Hazard Fire Protection



MEN’S RESTROOMS

Capacity & Layout

- 900 SF
- 30’ x 30’
- 10’ Ceiling
- 12 Occupants
- B-Business
- Restrooms to support the event center and adjacent to the LOBBY, COURTS, and MEETING ROOMS
- Ability for a portion of the restrooms to be available for meetings

Furniture, Fixtures & Equipment

- Specialty Equipment
- Specialty equipment to include mirror, paper towel dispenser, toilet paper holder, soap dispenser, robe hook, ADA accessories, floor mount partitions, and baby changing station

Materials & Finishes

- Polished Concrete Floor
- Tile Base
- Wall Tile
- Gypsum Ceiling
- Materials to be high-quality and durable
- Polished concrete floor to include anti-slip sealer

Acoustics & Privacy

- 45 STC
- 40 NC

Security & Access Control

- No Requirement

AV & Telecom

- House Audio / PA System
- Provide speakers for house audio and ambient noise

Structural & Loading

- 50 psf Office

Mechanical & Plumbing

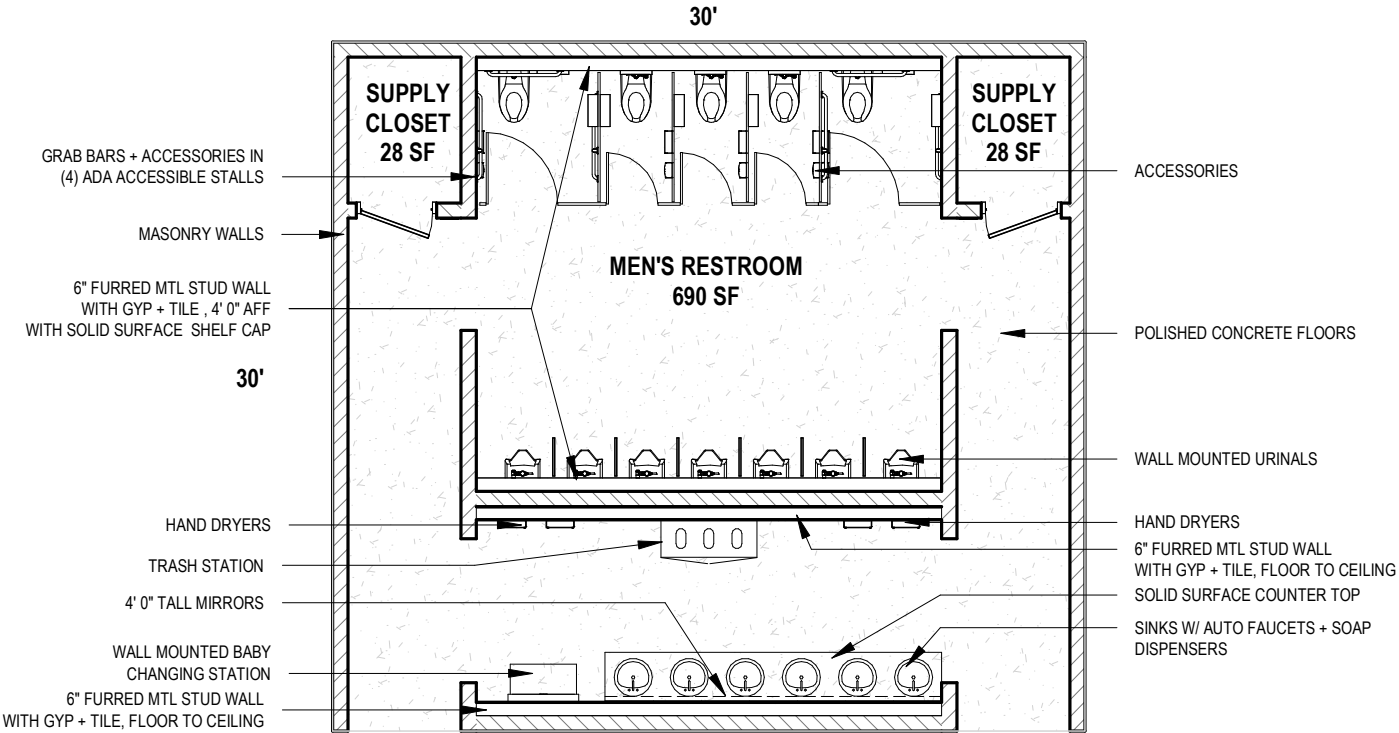
- 78° Max Temperature
- Floor Drain
- Plumbing Fixtures
- Mechanical to include exhaust fans
- Plumbing to include sinks, faucets, toilets, urinals, floor drains, and drinking fountains with bottle filler

Electrical & Lighting

- 10 [fc]
- 4,000 Kelvin
- Motion Sensor
- Standard Lighting
- 120V TR duplex receptacle throughout (GFCI)

Fire Protection

- Light Hazard Fire Protection



FAMILY RESTROOM

Capacity & Layout

- 100 SF
- 10' x 10'
- 10' Ceiling
- 1 Occupant
- B-Business
- Restrooms to support the event center and adjacent to the LOBBY, COURTS, and MEETING ROOMS
- Ability for a portion of the restrooms to be available for meetings

Furniture, Fixtures & Equipment

- Specialty Equipment
- Specialty equipment to include mirror, paper towel dispenser, toilet paper holder, soap dispenser, robe hook, ADA accessories, and adult changing station

Materials & Finishes

- Polished Concrete Floor
- Tile Base
- Wall Tile
- Gypsum Ceiling
- Materials to be high-quality and durable
- Polished concrete floor to include anti-slip sealer

Acoustics & Privacy

- 45 STC
- 40 NC

Security & Access Control

- Privacy Lockset

AV & Telecom

- House Audio / PA System
- Provide speakers for house audio and ambient noise

Structural & Loading

- 50 psf Office

Mechanical & Plumbing

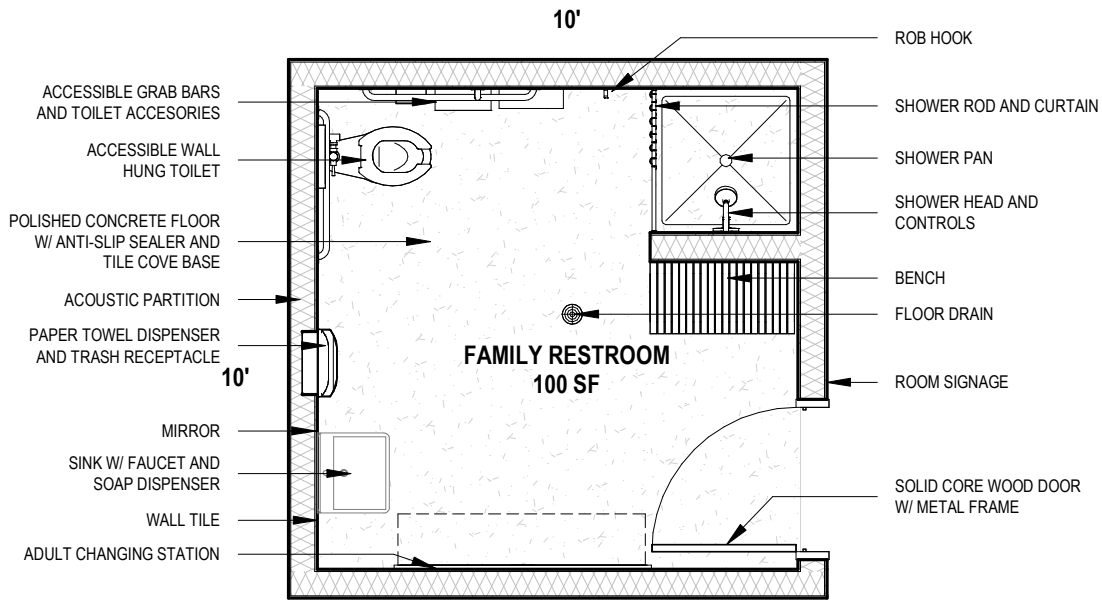
- 78° Max Temperature
- Floor Drain
- Plumbing Fixtures
- Mechanical to include exhaust fans
- Plumbing to include sink, faucet, toilet, shower, and floor drain

Electrical & Lighting

- 10 [fc]
- 4,000 Kelvin
- Motion Sensor
- Standard Lighting
- 120V TR duplex receptacle throughout (GFCI)

Fire Protection

- Light Hazard Fire Protection



JANITOR

Capacity & Layout

- 100 SF
- 10' x 10'
- 10' Ceiling
- 0 Occupants
- B-Business
- Janitor room to be adjacent to COURTS, RESTROOMS, CONCESSIONS and KITCHEN
- Entry to include single door access

Furniture, Fixtures & Equipment

- Utility Shelving
- Broom and Mop Holder

Materials & Finishes

- Sealed Concrete Floor
- Rubber Base
- FRP / Painted Wall Finish
- Exposed Ceiling
- Added FRP wall panels for cleanable walls
- Sealed concrete floor to include anti-slip sealer

Acoustics & Privacy

- No Requirement

Security & Access Control

- Storeroom Lockset

AV & Telecom

- No Requirement

Structural & Loading

- 75 psf Utility

Mechanical & Plumbing

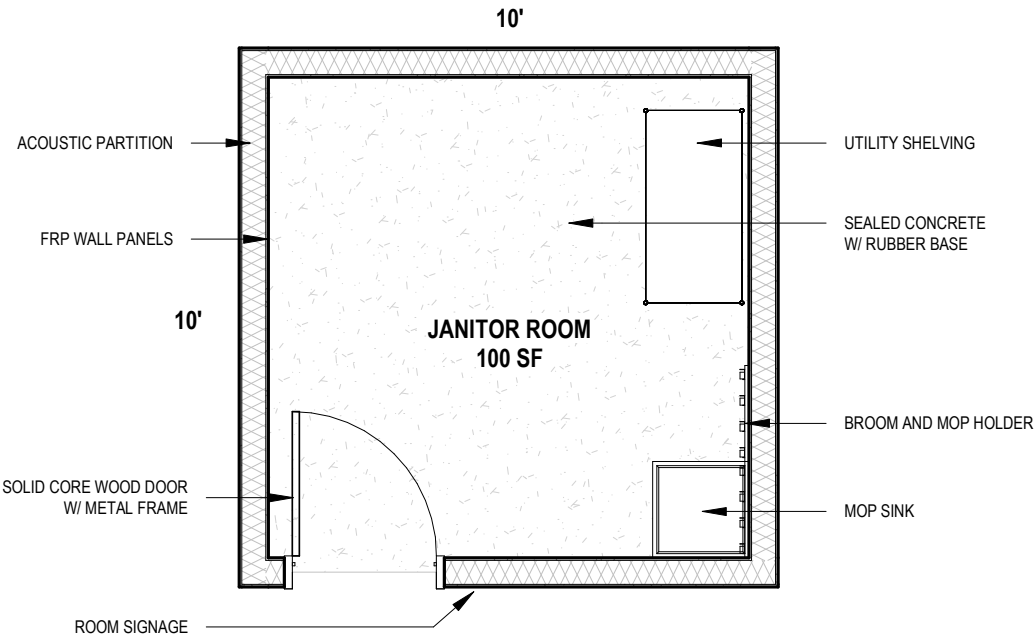
- 78° Max Temperature
- Plumbing Fixtures
- Plumbing Fixtures to include mop sink and floor drain

Electrical & Lighting

- 10 [fc]
- 4,000 Kelvin
- Utility Lighting
- 120V TR duplex receptacle throughout (GFCI)

Fire Protection

- Light Hazard Fire Protection



STAIRS

Capacity & Layout

- 200 SF - 300 SF
- 10' x 20' or 15' x 20'
- 10' Ceiling
- 0 Occupants
- B-Business
- Stairs to be provided as feature stair in lobby and as egress (standard stair) for second level adjacent to LOBBY, COURTS, and INDOOR TRACK

Furniture, Fixtures & Equipment

- No Requirement

Materials & Finishes

- Polished Concrete Floor
- Steel Stringer Base
- Painted Wall Finish
- Exposed Ceiling
- Materials to be high-quality and durable
- Polished concrete floor to include anti-slip sealer

Acoustics & Privacy

- No Requirement

Security & Access Control

- Security Camera
- Provide security cameras at top and bottom of stairs

AV & Telecom

- No Requirement

Structural & Loading

- 75 psf Utility

Mechanical & Plumbing

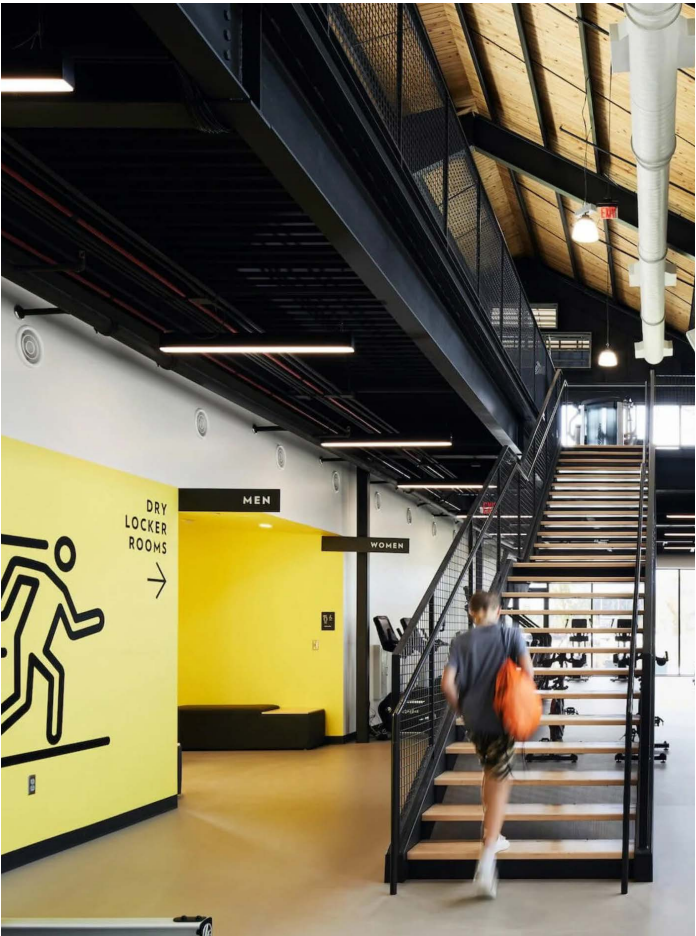
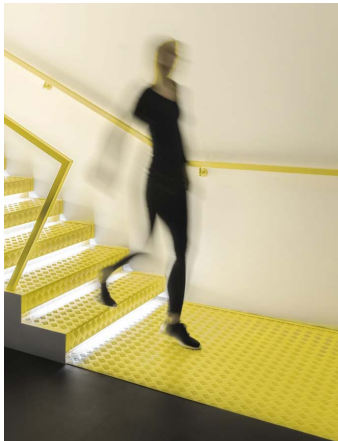
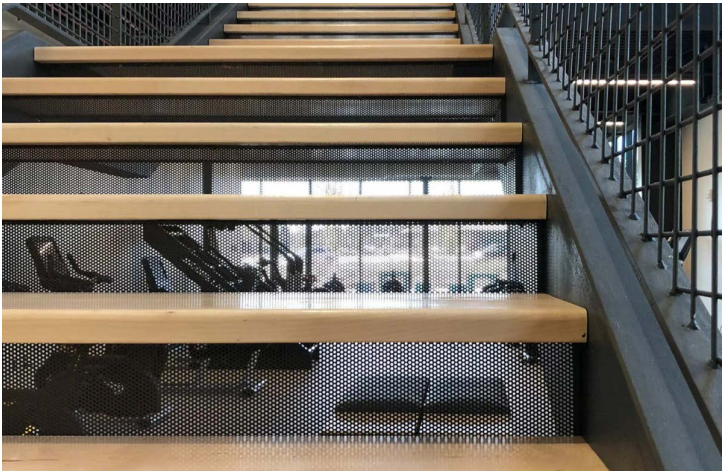
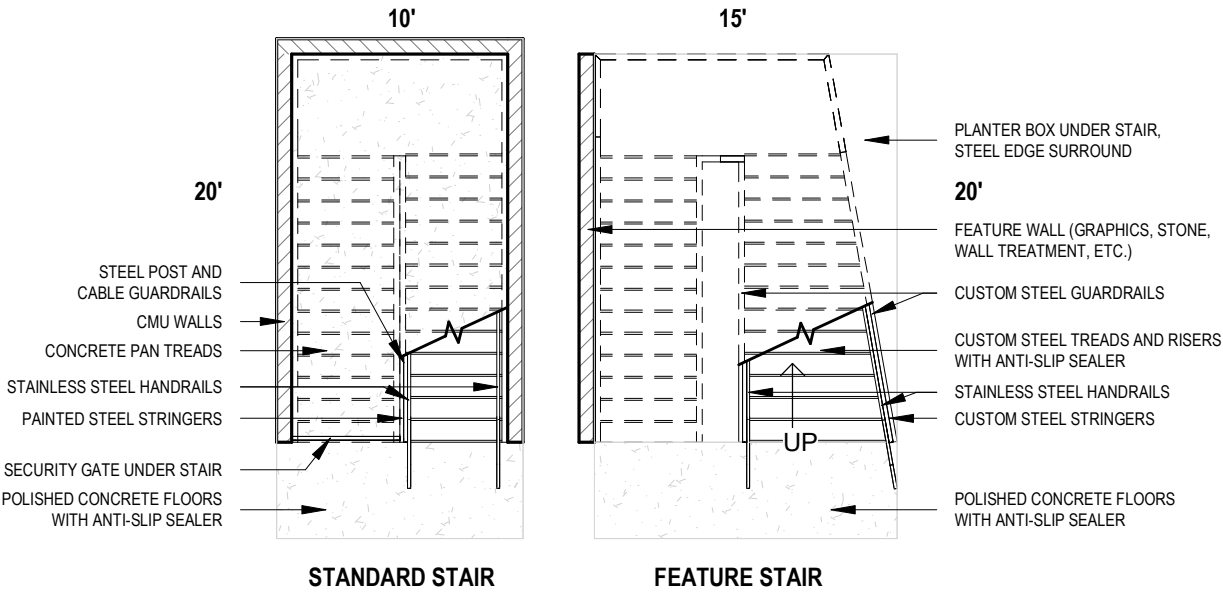
- 78° Max Temperature

Electrical & Lighting

- 10 [fc]
- 4,000 Kelvin
- Motion Sensor
- Standard Lighting

Fire Protection

- Light Hazard Fire Protection



ELEVATOR

Capacity & Layout

- 100 SF
- 10' x 10'
- 8' Ceiling
- 10 Occupants
- B-Business
- Passenger elevator to provide guest access to second level and stretcher compliant
- Elevator to be Hydraulic MRL, 3500lbs, and 150 fpm
- Fire rated wall assembly

Furniture, Fixtures & Equipment

- No Requirement

Materials & Finishes

- Elevator Cab Floor
- Elevator Cab Base
- Elevator Cab Finish
- Elevator Cab Ceiling
- Materials per Elevator Manufacturer (Basis of Design to be Stainless Steel)

Acoustics & Privacy

- No Requirement

Security & Access Control

- Elevator Controls
- Card Reader
- Security Camera

AV & Telecom

- Elevator Controls

Structural & Loading

- 75 psf Utility
- Hoist Beam
- Description

Mechanical & Plumbing

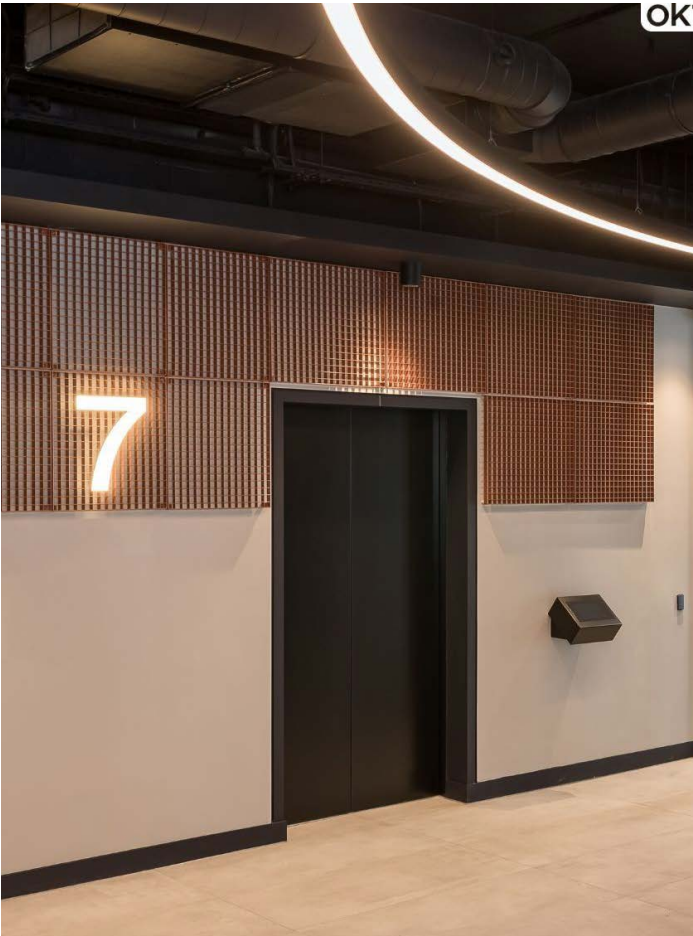
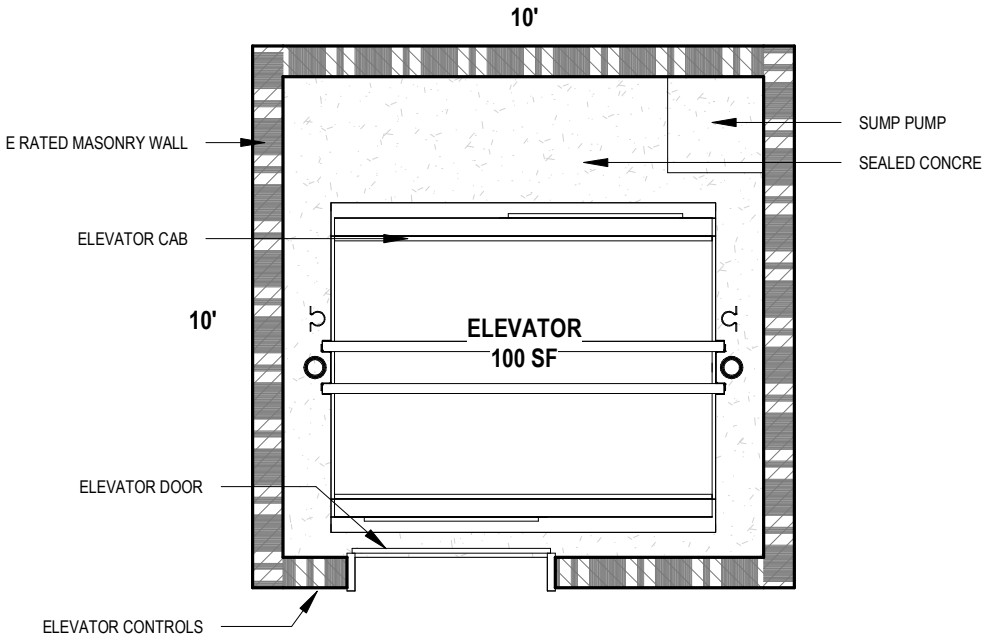
- 78° Max Temperature
- Dedicated mechanical units for elevator

Electrical & Lighting

- 20 [fc]
- 4,000 Kelvin
- Elevator Cab Lighting
- Power to be 480V / 3PH / 60 HZ

Fire Protection

- Ordinary Hazard Fire Protection



BUILDING SUPPORT

STORAGE ROOM

Capacity & Layout

- 100 SF
- 10' x 10'
- 10' Ceiling
- 0 Occupants
- S-Storage
- Storage for building supplies
- Entry to include single door access

Furniture, Fixtures & Equipment

- Utility Shelving

Materials & Finishes

- Sealed Concrete Floor
- Rubber Base
- Added FRP wall panels for impact resistant walls
- Blocking along walls for shelving
- FRP / Painted Wall Finish
- Exposed Ceiling

Acoustics & Privacy

- No Requirement

Security & Access Control

- Storeroom Lockset

AV & Telecom

- No Requirement

Structural & Loading

- 125 psf Storage

Mechanical & Plumbing

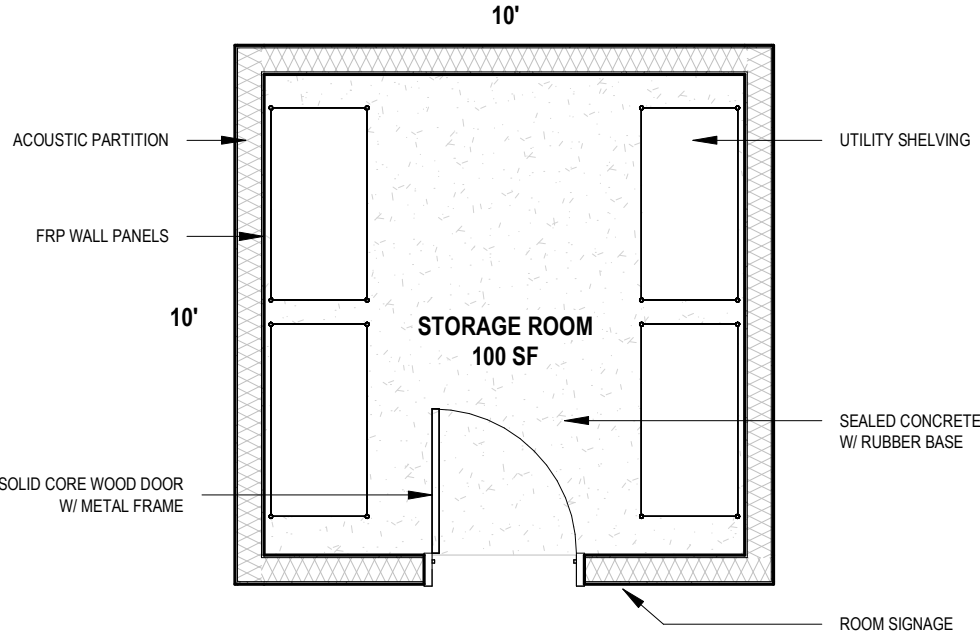
- 78° Max Temperature

Electrical & Lighting

- 5 [fc]
- 4,000 Kelvin
- Utility Lighting
- 120V TR duplex receptacles

Fire Protection

- Ordinary Hazard Fire Protection



ELECTRICAL ROOM

Capacity & Layout

- 200 SF
- 20' x 10'
- 10' Ceiling
- 0 Occupants
- B-Business
- Electrical Room to support transformers, electrical panels, lighting panels, and access controls
- Entry to include single door access
- Fire rated wall assembly

Furniture, Fixtures & Equipment

- No Requirement

Materials & Finishes

- Sealed Concrete Floor
- Rubber Base
- Painted Wall Finish
- Exposed Ceiling

Acoustics & Privacy

- 55 STC
- K-13 or Ductliner to reduce reverberation

Security & Access Control

- Storeroom Lockset

AV & Telecom

- Data
- Provide data to lighting controls and access controls
- Isolation transformer for AV

Structural & Loading

- 75 psf Utility

Mechanical & Plumbing

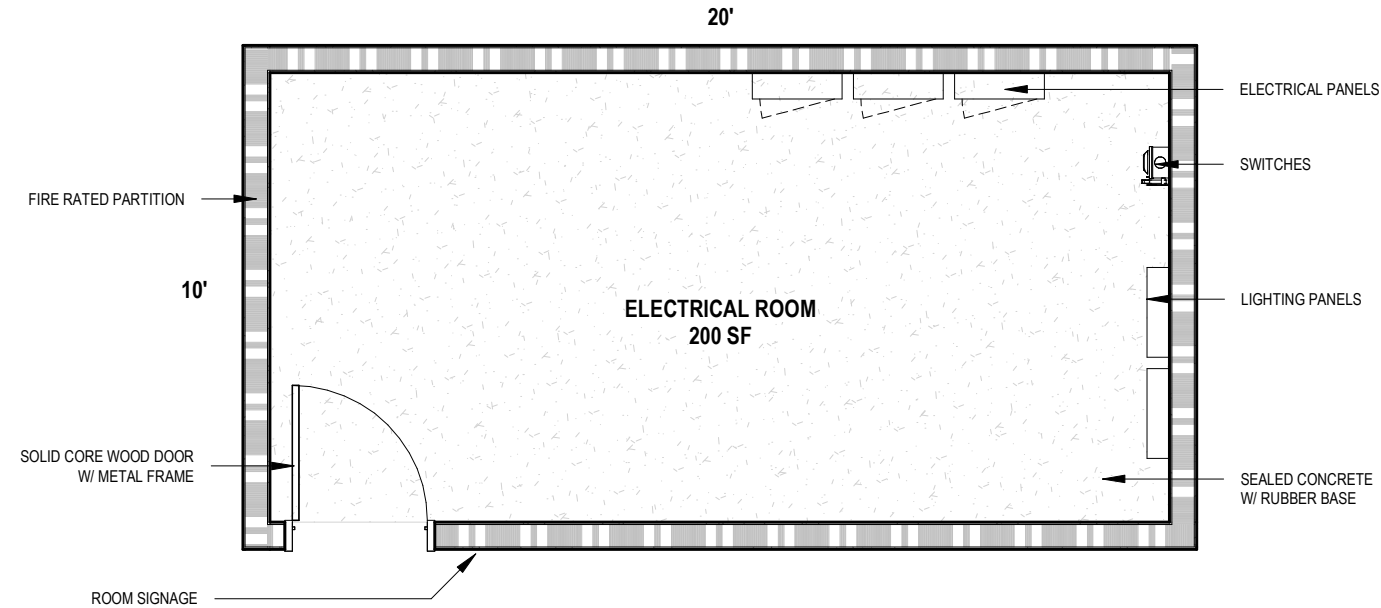
- 78° Max Temperature

Electrical & Lighting

- 5 [fc]
- 4,000 Kelvin
- Utility Lighting
- 120V TR duplex receptacles, transformers, electrical panels, lighting panels, and access controls

Fire Protection

- Ordinary Hazard Fire Protection



MDF / IDF ROOM

Capacity & Layout

- 200 SF
- 10' x 20'
- 10' Ceiling
- 0 Occupants
- B-Business
- MDF / IDF Room to support all data for building AV, security cameras, and access control systems
- Entry to include single door access
- Fire rated wall assembly

Furniture, Fixtures & Equipment

- Server Racks
- Cable Trays
- Telecom Cabinets

Materials & Finishes

- Sealed Concrete Floor
- Rubber Base
- Plywood / Painted Wall Finish
- Exposed Ceiling
- Added fire rated plywood wall panels for mounting of equipment
- Sealed concrete floor to include anti-static sealer

Acoustics & Privacy

- 55 STC
- K-13 or Ductliner to reduce reverberation

Security & Access Control

- Storeroom Lockset
- Card Reader
- Security Camera

AV & Telecom

- Data
- Provide data to server racks, and telecom cabinets for AV, security cameras, and access control systems

Structural & Loading

- 75 psf Utility

Mechanical & Plumbing

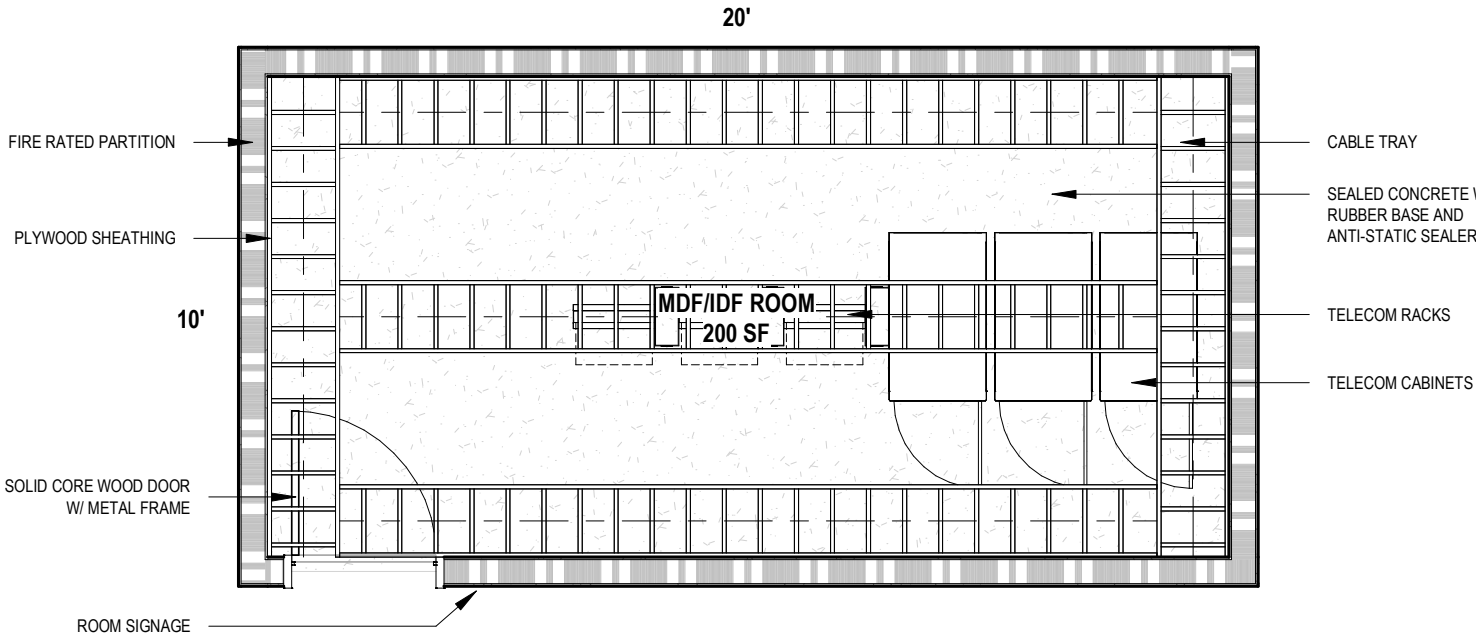
- 78° Max Temperature
- Potential for dedicated HVAC on emergency power and redundant cooling source pending generator discussion

Electrical & Lighting

- 20 [fc]
- 4,000 Kelvin
- Utility Lighting
- 120V TR duplex receptacles (dedicated circuits), 220V w/ Twist Lock, and 110V at ceiling

Fire Protection

- Ordinary Hazard Fire Protection



MECHANICAL ROOM

Capacity & Layout

- 200 SF
- 10' x 20'
- 10' Ceiling
- 0 Occupants
- B-Business
- Mechanical Room to provide support for water heaters, pumps, and RO systems
- Entry to include single door access

Furniture, Fixtures & Equipment

- No Requirement

Materials & Finishes

- Sealed Concrete Floor
- Rubber Base
- Painted Wall Finish
- Exposed Ceiling
- Sealed concrete floor to include anti-slip sealer

Acoustics & Privacy

- 55 STC
- K-13 or Ductliner to reduce reverberation

Security & Access Control

- Storeroom Lockset

AV & Telecom

- Data
- Provide data to building control systems

Structural & Loading

- 75 psf Utility

Mechanical & Plumbing

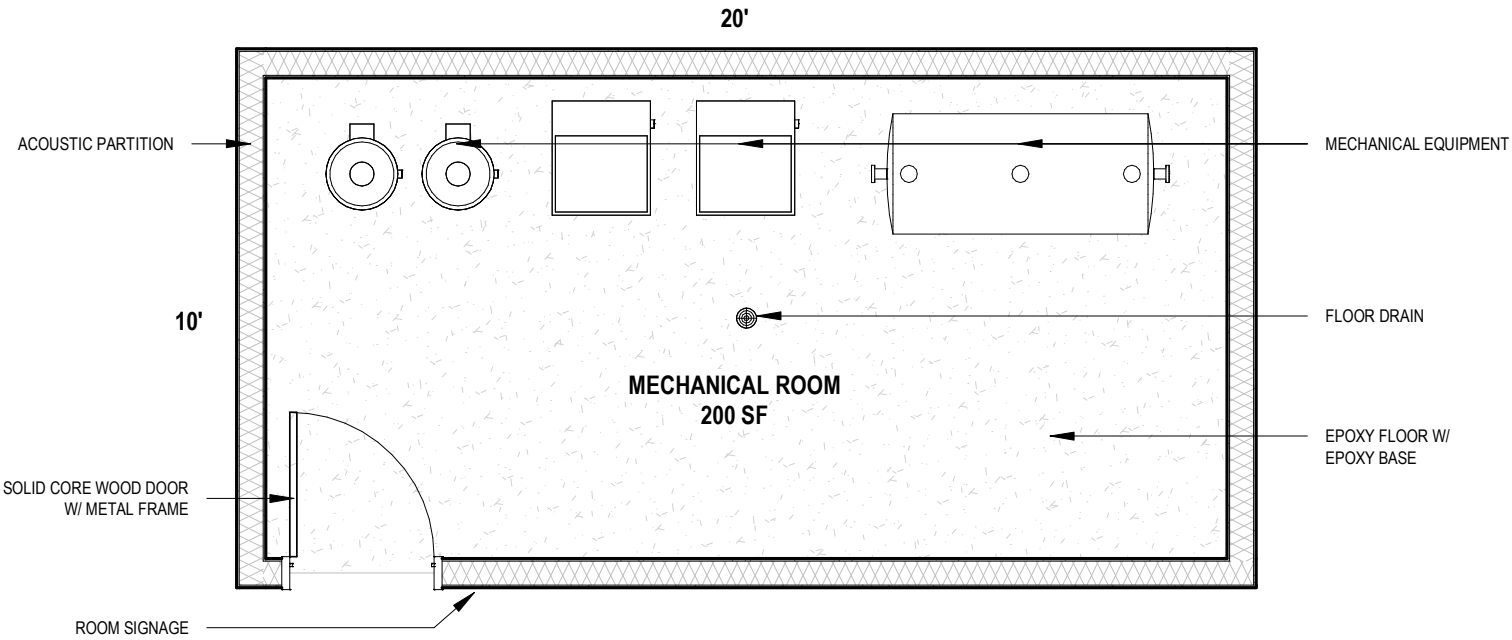
- 78° Max Temperature
- Floor Drain

Electrical & Lighting

- 20 [fc]
- 4,000 Kelvin
- Utility Lighting
- 120V TR duplex receptacles, dedicated circuits to mechanical equipment

Fire Protection

- Ordinary Hazard Fire Protection



FIRE RISER ROOM

Capacity & Layout

- 100 SF
- 10' x 10'
- 10' Ceiling
- 0 Occupants
- B-Business
- Fire Riser Room to support FDC, Fire Riser, and Fire Alarm Panel
- Entry to include single door access
- Fire rated wall assembly

Furniture, Fixtures & Equipment

- No Requirement

Materials & Finishes

- Sealed Concrete Floor
- Rubber Base
- Painted Wall Finish
- Exposed Ceiling
- Sealed concrete floor to include anti-slip sealer

Acoustics & Privacy

- No Requirement

Security & Access Control

- Storeroom Lockset
- Knox Box

AV & Telecom

- Data
- Provide data for fire alarm panel

Structural & Loading

- 75 psf Utility

Mechanical & Plumbing

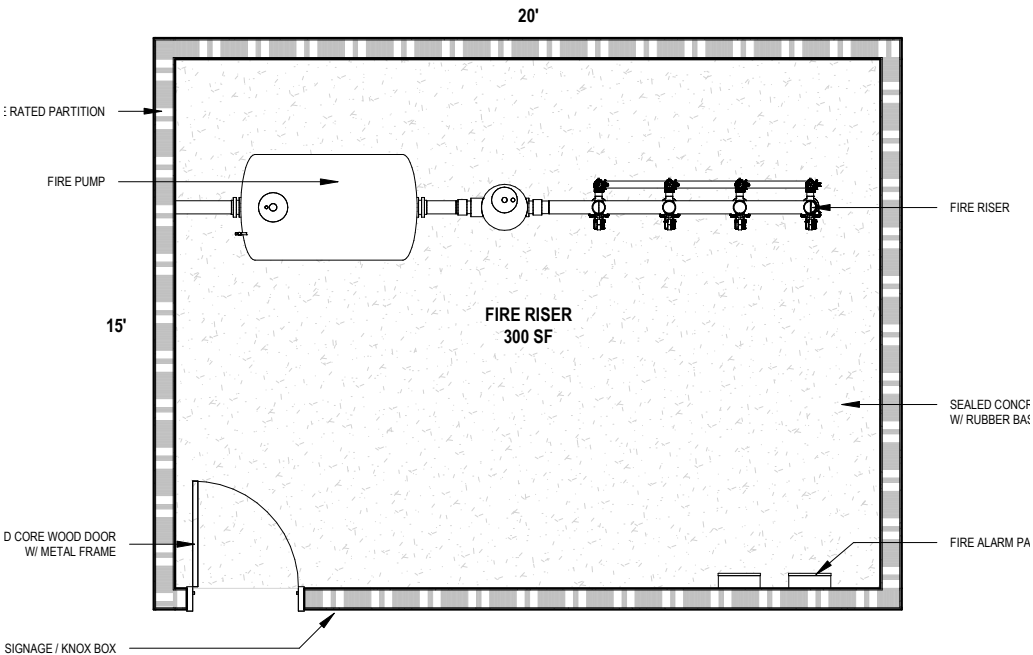
- 78° Max Temperature

Electrical & Lighting

- 20 [fc]
- 4,000 Kelvin
- Utility Lighting
- 120V TR duplex receptacles, dedicated circuits to fire alarm panel

Fire Protection

- Ordinary Hazard Fire Protection
- Fire Riser





CONCEPT

03

Concept

CODE SUMMARY

CITY OF SHOW LOW BUILDING CODES AND STANDARDS
(Updated: 7/8/2021) (Title 18 BUILDING - Chapter 18.05 BUILDING CODES)

TITLE	CODE	EDITION	AMENDMENT
BUILDING	INTERNATIONAL BUILDING CODE (IBC)	2018	YES
FIRE	INTERNATIONAL FIRE CODE (IFC)	2018	YES
MECHANICAL	INTERNATIONAL MECHANICAL CODE (IMC)	2018	YES
PLUMBING	INTERNATIONAL PLUMBING CODE (IPC)	2018	YES
ENERGY	INTERNATIONAL ENERGY CONSERVATION CODE (IECC)	2018	YES
FUEL GAS	INTERNATIONAL FUEL GAS CODE (IFGC)	2018	YES
ELECTRICAL	NFPA 70 NATIONAL ELECTRICAL CODE (NEC)	2017	YES
ACCESSIBILITY	ICC A117.1-2017 STANDARD FOR ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES	2009	NO
ACCESSIBILITY	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN	2010	NO

Occupancy Group	TABLE 504.3 Height Above Grade Plane (NS) / (S) (a)	TABLE 504.4 Stories Above Grade Plane (NS) / (S)	TABLE 506.2 Allowable Area Factor in Feet (NS) (a,b)	TABLE 506.2 Allowable Area Factor in Feet (At) (S1)	TABLE 506.2 Allowable Area Factor in Feet (At) (SM)
A-2	55 / 75	2 / 3	9,500	38,000	28,500
A-3	55 / 75	2 / 3	9,500	38,000	28,500
A-4	55 / 75	2 / 3	9,500	38,000	28,500
B	55 / 75	3 / 4	23,000	92,000	69,000
S-1	55 / 75	2 / 3	17,500	70,000	52,500
S-2	55 / 75	3 / 4	26,000	104,000	78,000

AREA SUMMARY LEVEL 1

Section 508.2 - A-2 as Accessory
Section 507.4 - Groups A-4, B, S-1, S-2

Occupancy

Group	Area	%
A-2	15,918.5 SF	12.7%
A-4	92,072.4 SF	73.4%
B	8,240.7 SF	6.6%
S-1	8,672.2 SF	6.9%
S-2	589.1 SF	0.5%
LEVEL 1	125,492.9 SF	100.0%

AREA SUMMARY LEVEL 1
MEZZANINE CALC

Level 1 area with Mezzanine above.
Refer to Area Summary Level 1...

Occupancy

Group	Area	%
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AREA SUMMARY LEVEL 2
MEZZANINE

Occupancy

Group	Area	%
A-4	13,928.2 SF	71.7%
S-2	5,486.3 SF	28.3%
LEVEL 2	19,414.5 SF	100.0%

AREA SUMMARY LEVEL 2
EQUIPMENT PLATFORM

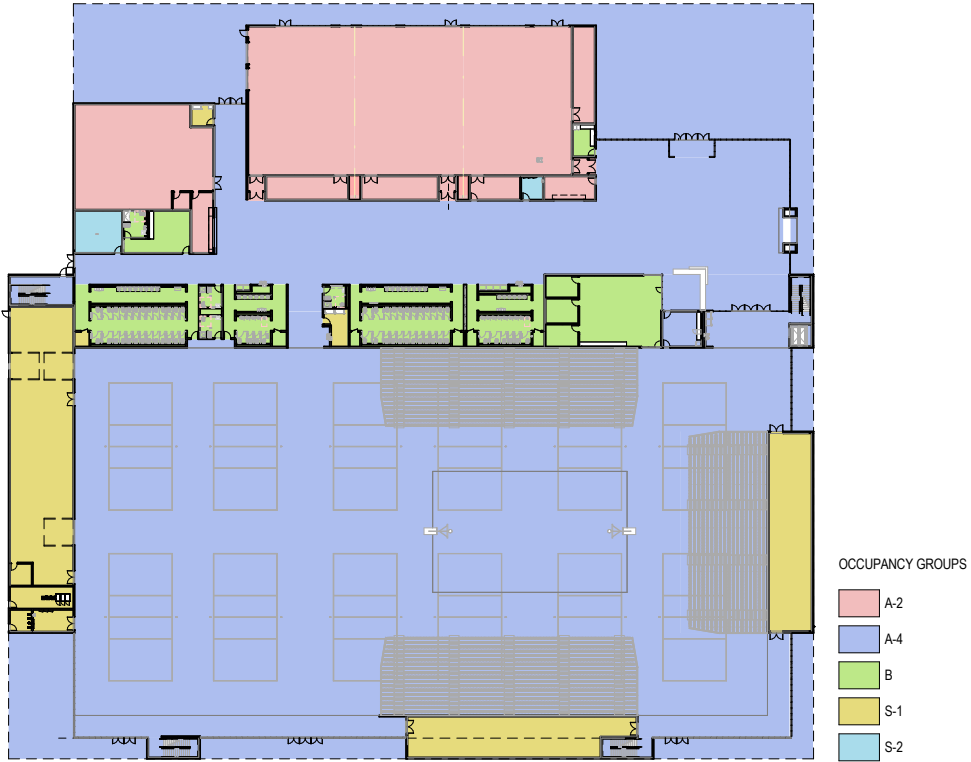
Occupancy

Group	Area	%
S-2	5,486.3 SF	100.0%
LEVEL 2	5,486.3 SF	100.0%

AREA SUMMARY LEVEL 2
MEZZANINE + EQUIPMENT
PLATFORM

Occupancy

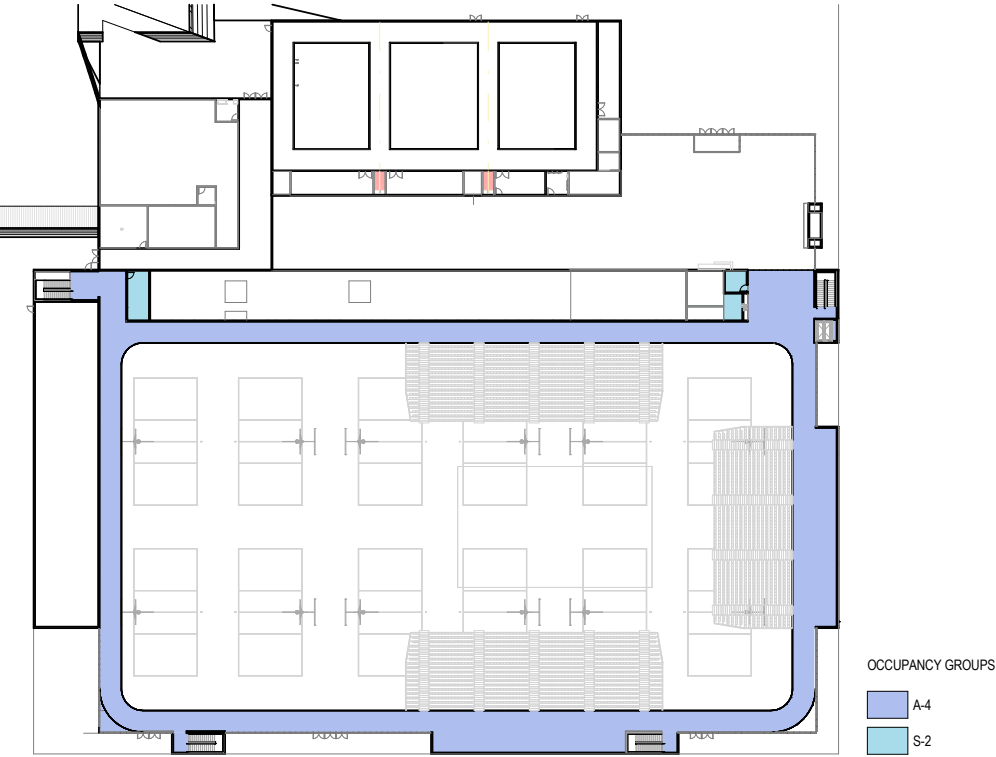
Group	Area	%
A-4	13,928.2 SF	71.7%
S-2	5,486.3 SF	28.3%
LEVEL 2	19,414.5 SF	100.0%



1 CODE PLAN LEVEL 1 OCCUPANCY GROUPS

1" = 50'-0"

0' 50' 100' 200'



2 CODE PLAN LEVEL 2 (MEZZANINE) OCCUPANCY GROUPS

1" = 50'-0"

0' 50' 100' 200'

PROJECT DESCRIPTION:	A new event center with retractable spectator seating as a multi-use facility for sports, concerts, and trade shows. A banquet hall with access to outdoor covered seating is serviced by an adjacent commercial kitchen.
CONSTRUCTION CLASSIFICATION:	Section 602 Construction Classification 602.2 Type II (Type II-B) Type II construction are those types of construction in which the building elements listed in Table 601 are of noncombustible materials, except as permitted in Section 603 and elsewhere in this code.
UNLIMITED AREA BUILDING	Section 507 Unlimited Area Buildings 507.4 Sprinklered, One-Story Buildings The area of a Group A-4 building not more than one story <i>above grade plane</i> of other than Type V construction, or the area of a Group B, F, M or S building no more than <i>one story above grade plane</i> of any construction type, shall not be limited where the building is provided with an <i>automatic sprinkler system</i> throughout in accordance with Section 903.3.1.1 and is surrounded and adjoined by <i>public ways</i> or yards not less than 60 feet in width. * Occupancy Groups A-4, B, S allowed. * <i>Automatic sprinkler system provided.</i> * <i>Public ways</i> or yards not less than 60 feet in width provided. 507.4.1 Mixed Occupancy Buildings With Groups A-1 and A-2 Group A-1 and A-2 occupancies of other than Type V construction shall be permitted within mixed occupancy buildings of unlimited area complying with Section 507.4, provided all of the following criteria are met: (See Unlimited Area Summary on this sheet) Section 508 Mixed Use and Occupancy 508.3 - Nonseparated Uses. Buildings or portions of buildings that comply with the provisions of this section shall be considered as nonseparated occupancies. 508.2 Accessory Occupancies Accessory occupancies are those occupancies that are ancillary to the main occupancy of the building or portion thereof. Accessory occupancies shall comply with the provisions of Sections 508.2.1 through 508.2.4. 508.2.2 Allowable Building Height The allowable height and number of stories of the building containing accessory occupancies shall be in accordance with Section 504 for the main occupancy of the building. 508.2.3 Allowable Building Area The allowable area of the building shall be based on the applicable provisions of Section 506 for the main occupancy of the building. Aggregate accessory occupancies shall not occupy more than 10 percent of the floor area of the story in which they are located and shall not exceed the tabular values for nonsprinklered buildings in Table 506.2 for each such accessory occupancy. * Occupancy Group A-2.
AUTOMATIC FIRE SPRINKLER SYSTEM:	Required (IBC Section 903 / NFPA 13)
FIRE ALARM AND DETECTION SYSTEM:	Required (IBC/IFC Section 907 / NFPA 72)
MANUAL FIRE ALARM SYSTEM:	Not Required per Exception (IBC 907.2.1 Group A) Automatic Sprinkler system provided. Exception: Manual fire alarm boxes are not required with an automatic sprinkler system installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler flow.

OCCUPANT NOTIFICATION SYSTEM:	Required (IBC 907.2)
EMERGENCY VOICE / ALARM COMMUNICATIONS SYSTEM:	Required (IBC 907.2.1.1 System initiation in Group A occupancies with an occupant load of 1,000 or more. System in accordance with Section 907.5.2.2.
TWO-WAY COMMUNICATION SYSTEM:	Required (IBC/IFC 1009.8)
EMERGENCY LIGHTING:	Required (IBC Section 1008)
EMERGENCY RESPONDER RADIO COVERAGE:	Required (IBC Section 914)
HAZARDOUS MATERIALS:	None
NUMBER OF FLOORS:	1 Story w/ a Mezzanine, Mech. Equip. Platform, No Basement
MAXIMUM FLOOR ELEVATION ABOVE FIRE SERVICE ELEVATION:	Level 1
MAXIMUM BUILDING HEIGHT:	Sloped Roof Highest Point +/-57'-6"
ASSEMBLY SEATING	Telescoping bleacher seating (IBC Section 1029.1.1) to comply with ICC 300.

MEZZANINES AND EQUIPMENT PLATFORMS
Section 505 Mezzanines and Equipment Platforms

505.1 General
Mezzanines shall comply with Section 505.2.
* **Level 2 Track complying with area limitations for Type II construction.**
Equipment platforms shall comply with Section 505.3.
* **Level 2 Track complying with the aggregate area limitations.**

505.2 Mezzanines
A *mezzanine* or *mezzanines* in compliance with Section 505.2 shall be considered a portion of the story below. Such mezzanines shall not contribute to either the *building area* or number of stories as regulated by Section 503.1. The area of the *mezzanine* shall be included in determining the *fire area*. The clear height above and below the *mezzanine* floor construction shall be not less than 7 feet (2134 mm).
* **Level 2 Track considered as a portion of the Sports Courts portion of the story below.**

505.2.1 Area Limitation
The aggregate area of a *mezzanine* or *mezzanines* within a room shall be not greater than one-third of the floor area of that room or space in which they are located. The enclosed portion of a room shall not be included in a determination of the floor area of the room in which the *mezzanine* is located. In determining the allowable *mezzanine* area, the area of the mezzanine shall not be included in the floor area of the room.
Exceptions:
2. The aggregate area of *mezzanines* in buildings and structures of Type I or II construction shall be not greater than one-half of the floor area of the room in buildings and structures equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1 and an *approved emergency voice/alarm communication system* in accordance with Section 907.5.2.2.

* **Level 2 Track + Electrical Rm complying with area limitations (Refer to 505.2.3 for Electrical Rm openness):**
* **Construction Type II-B with automatic sprinkler system and emergency voice/alarm communication system**

Sports Courts	=	57,640 SF
	=	57,640 sf / 2
	=	28,820 sf

Mezzanine	=	13,113 sf
Track + Electrical Rm	=	13,113 sf < 28,820 sf Therefore Ok

505.2.1.1 Aggregate Area of Mezzanines and Equipment Platforms
Where a room contains both a *mezzanine* and an *equipment platform*, the aggregate area of the two raised floor levels shall be not greater than two-thirds of the floor area of that room or space in which they are located. The area of the *mezzanine* shall not exceed the area determined in accordance with Section 505.2.1.

* Allowable Floor Area of Mezzanine + Equipment Platform	
	= 57,640 sf * 2/3
	= 38,426 sf

Mezzanine + Equipment Platform	=	18,172 sf
	=	18,172 sf < 38,426 sf Therefore Ok

505.2.2 Means of Egress

The *means of egress* for *mezzanines* shall comply with the applicable provisions of Chapter 10.

505.2.3 Openness

A *mezzanine* shall be open and unobstructed to the room in which such *mezzanine* is located except for walls not more than 42 inches (1067 mm) in height, columns and posts.

Exceptions:

- 1. *Mezzanines* or portions thereof are not required to be open to the room in which the mezzanines are located, provided that the occupant load of the aggregate area of the enclosed space is not greater than 10.

* Level 2 Electrical Room occupant load < 10; therefore Ok.

- 3. *Mezzanines* or portions thereof are not required to be open to the room in which the mezzanines are located, provided that the aggregate floor area of the enclosed space is not greater than 10 percent of the mezzanine area.

* Level 2 Electrical Room occupant load < 10% of the mezzanine area; therefore Ok.

505.3 Equipment Platforms

Equipment platforms in buildings shall not be considered as a portion of the floor below. Such *equipment platforms* shall not contribute to either the *building area* or the number of stories as regulated by Section 503.1. The area of the *equipment platform* shall not be included in determining the fire area in accordance with Section 903. *Equipment platforms* shall not be a part of any *mezzanine* and such platforms and the walkways, *stairways*, *alternating tread devices* and ladders providing access to an *equipment platform* shall not serve as a part of the *means of egress* from the building.

505.3.1 Area Limitation

The aggregate area of all *equipment platforms* within a room shall be not greater than two-thirds of the area of the room in which they are located. Where an equipment platform is located in the same room as a *mezzanine*, the area of the *mezzanine* shall be determined by Section 505.2.1 and the combined aggregate area of the *equipment platforms* and *mezzanines* shall be not greater than two-thirds of the room in which they are located. The area of the *mezzanine* shall not exceed the area determined in accordance with Section 505.2.1.

505.3.2 Automatic Sprinkler System

Where located in a building that is required to be protected by an *automatic sprinkler system*, *equipment platforms* shall be fully protected by sprinklers above and below the platform, where required by the standards referenced in Section 903.3.

505.3.3 Guards

Equipment platforms shall have guards where required by Section 1015.2.

UNLIMITED AREA BUILDINGS

Section 507 Unlimited Area Buildings

507.1 General.

The area of buildings of the occupancies and configurations specified in Sections 507.1 through 507.13 shall not be limited. Basements not more than one story below grade plane shall be permitted.

Option 1 for Group A-2 Occupancy

507.1.1 Accessory occupancies.

Accessory occupancies shall be permitted in unlimited area buildings in accordance with the provisions of Section 508.2, otherwise the requirements of Sections 507.3 through 507.13 shall be applied, where applicable.

* This building contains Occupancy Groups A-2, A-4, B, and S as an Unlimited Area Building.

Section 507.4 Sprinklered, One-Story Buildings allows for Groups A-4, B, and S allowed.

508.2 Accessory Occupancies.

Aggregate accessory occupancies shall not occupy more than 10 percent of the floor area of the story in which they are located and shall not exceed the tabular values for nonsprinklered buildings in Table 506.2 for each such accessory occupancy.

* Group A-2 as an accessory occupancy.

Level 1	= 125,492 sf
10% of Floor Area	= 125,492 sf
Group A-2	= 14,957 sf > 12,549 sf (Option > 10% allowed, needs further review)

507.4 Sprinklered, One-Story Buildings

The area of a Group A-4 building not more than one story *above grade plane* of other than Type V construction, or the area of a Group B, F, M or S building no more than *one story above grade plane* of any construction type, shall not be limited where the building is provided with an *automatic sprinkler system* throughout in accordance with Section 903.3.1.1 and is surrounded and adjoined by *public ways* or yards not less than 60 feet in width.

* 1-Story Building with a Mezzanine Level.

* Considered as S1 = 1-Story above grade plane equipped throughout with an automatic sprinklers system.

* Surrounded by public ways or yards not less than 60 feet in width.

* Occupancy Groups A-3, B and S.

* Occupancy Group A-2 is allowed per 1 of 2 options:

Option 1: Group A-2 as an Accessory Occupancy not more than 10% of the floor area of the story (Level 1)

Option 2: Group A-2 allowed under Section 507.4.1 if all the criteria are met.

Option 2 for Group A-2 Occupancy

507.4.1 Mixed Occupancy Buildings With Groups A-1 and A-2

Group A-1 and A-2 occupancies of other than Type V construction shall be permitted within mixed occupancy buildings of unlimited area complying with Section 507.4, provided all of the following criteria are met:

Exceptions:

1. Buildings and structures of Type I or II construction for rack storage facilities that do not have access by the public shall not be limited in height, provided that such buildings conform to the requirements of Sections 507.4 and 903.3.1.1 and Chapter 32 of the *International Fire Code*.

2. The *automatic sprinkler system* shall not be required in areas occupied for indoor participant sports, such as tennis, skating, swimming and equestrian activities in occupancies in Group A-4, provided that all of the following criteria are met:

* Automatic sprinkler system to be provided for the mixed use Sports Court room.

2.1 *Exit* doors directly to the outside are provided for occupants of the participant sports areas.

* Exit Doors directly to the outside provided.

2.2 The building is equipped with a *fire alarm system* with *manual fire alarm boxes* installed in accordance with Section 907.

* Building will be equipped with a fire alarm system with manual fire alarm boxes.

2.3 An *automatic sprinkler system* is provided in storage rooms, press boxes, concession booths or other spaces ancillary to the sport activity space.

* An automatic sprinkler system to be provided in storage room, concession booths and all other spaces ancillary to the sport activity space.

507.4.1 Mixed Occupancy Buildings With Groups A-1 and A-2

Group A-1 and A-2 occupancies of other than Type V construction shall be permitted within mixed occupancy buildings of unlimited area complying with Section 507.4, provided all of the following criteria are met:

* Type II-B construction.

1. Group A-1 and A-2 occupancies are separated from other occupancies as required for separated occupancies in Section 508.4.4 with no reduction allowed in the fire-resistance rating of the separation based upon the installation of an automatic sprinkler system.

* TABLE 508.4 - Required Separation of Occupancies for Occupancy Group A-2.

Group A-4 = N (0 Hr)

Group B = 1 Hr

Group S-1 = 1 Hr

Group S-2 = N (0 Hr)

Option 2 for A-2 Occupancy Group

2. Each area of the portions of the building used for Group A-1 or A-2 occupancies shall not exceed the maximum allowable area permitted for such occupancies in Section 503.1.

* Allowable Area for Group A-2 - TABLE 506.2

Group A-2 is on Level 1 of a 1-Story Building with a Mezzanine Level.

Considered as S1 = 1-Story above grade plane equipped throughout with an automatic sprinklers system.

3. Exit doors from Group A-1 and A-2 occupancies shall discharge directly to the exterior of the building.

* Group A-2 Banquet Hall and Kitchen.

Banquet Halls discharge directly to the exterior to the North

Kitchen discharge directly to the exterior to the North.

505.2.2 Means of Egress

The *means of egress* for *mezzanines* shall comply with the applicable provisions of Chapter 10.

505.2.3 Openness

A *mezzanine* shall be open and unobstructed to the room in which such *mezzanine* is located except for walls not more than 42 inches (1067 mm) in height, columns and posts.

Exceptions:

- 1. *Mezzanines* or portions thereof are not required to be open to the room in which the mezzanines are located, provided that the occupant load of the aggregate area of the enclosed space is not greater than 10.

* Level 2 Electrical Room occupant load < 10; therefore Ok.

- 3. *Mezzanines* or portions thereof are not required to be open to the room in which the mezzanines are located, provided that the aggregate floor area of the enclosed space is not greater than 10 percent of the mezzanine area.

* Level 2 Electrical Room occupant load < 10% of the mezzanine area; therefore Ok.

505.3 Equipment Platforms

Equipment platforms in buildings shall not be considered as a portion of the floor below. Such *equipment platforms* shall not contribute to either the *building area* or the number of stories as regulated by Section 503.1. The area of the *equipment platform* shall not be included in determining the fire area in accordance with Section 903. *Equipment platforms* shall not be a part of any *mezzanine* and such platforms and the walkways, *stairways*, *alternating tread devices* and ladders providing access to an *equipment platform* shall not serve as a part of the *means of egress* from the building.

505.3.1 Area Limitation

The aggregate area of all *equipment platforms* within a room shall be not greater than two-thirds of the area of the room in which they are located. Where an equipment platform is located in the same room as a *mezzanine*, the area of the *mezzanine* shall be determined by Section 505.2.1 and the combined aggregate area of the *equipment platforms* and *mezzanines* shall be not greater than two-thirds of the room in which they are located. The area of the *mezzanine* shall not exceed the area determined in accordance with Section 505.2.1.

505.3.2 Automatic Sprinkler System

Where located in a building that is required to be protected by an *automatic sprinkler system*, *equipment platforms* shall be fully protected by sprinklers above and below the platform, where required by the standards referenced in Section 903.3.

505.3.3 Guards

Equipment platforms shall have guards where required by Section 1015.2.

UNLIMITED AREA BUILDINGS

Section 507 Unlimited Area Buildings

507.1 General.

The area of buildings of the occupancies and configurations specified in Sections 507.1 through 507.13 shall not be limited. Basements not more than one story below grade plane shall be permitted.

Option 1 for Group A-2 Occupancy

507.1.1 Accessory occupancies.

Accessory occupancies shall be permitted in unlimited area buildings in accordance with the provisions of Section 508.2, otherwise the requirements of Sections 507.3 through 507.13 shall be applied, where applicable.

* This building contains Occupancy Groups A-2, A-4, B, and S as an Unlimited Area Building.

Section 507.4 Sprinklered, One-Story Buildings allows for Groups A-4, B, and S allowed.

508.2 Accessory Occupancies.

Aggregate accessory occupancies shall not occupy more than 10 percent of the floor area of the story in which they are located and shall not exceed the tabular values for nonsprinklered buildings in Table 506.2 for each such accessory occupancy.

* Group A-2 as an accessory occupancy.

Level 1	= 125,492 sf
10% of Floor Area	= 125,492 sf
Group A-2	= 14,957 sf > 12,549 sf (Option > 10% allowed, needs further review)

507.4 Sprinklered, One-Story Buildings

The area of a Group A-4 building not more than one story *above grade plane* of other than Type V construction, or the area of a Group B, F, M or S building no more than *one story above grade plane* of any construction type, shall not be limited where the building is provided with an *automatic sprinkler system* throughout in accordance with Section 903.3.1.1 and is surrounded and adjoined by *public ways* or yards not less than 60 feet in width.

* 1-Story Building with a Mezzanine Level.

* Considered as S1 = 1-Story above grade plane equipped throughout with an automatic sprinklers system.

* Surrounded by public ways or yards not less than 60 feet in width.

* Occupancy Groups A-3, B and S.

* Occupancy Group A-2 is allowed per 1 of 2 options:

Option 1: Group A-2 as an Accessory Occupancy not more than 10% of the floor area of the story (Level 1)

Option 2: Group A-2 allowed under Section 507.4.1 if all the criteria are met.

Option 2 for Group A-2 Occupancy

507.4.1 Mixed Occupancy Buildings With Groups A-1 and A-2

Group A-1 and A-2 occupancies of other than Type V construction shall be permitted within mixed occupancy buildings of unlimited area complying with Section 507.4, provided all of the following criteria are met:

Exceptions:

1. Buildings and structures of Type I or II construction for rack storage facilities that do not have access by the public shall not be limited in height, provided that such buildings conform to the requirements of Sections 507.4 and 903.3.1.1 and Chapter 32 of the *International Fire Code*.

2. The *automatic sprinkler system* shall not be required in areas occupied for indoor participant sports, such as tennis, skating, swimming and equestrian activities in occupancies in Group A-4, provided that all of the following criteria are met:

* Automatic sprinkler system to be provided for the mixed use Sports Court room.

2.1 *Exit* doors directly to the outside are provided for occupants of the participant sports areas.

* Exit Doors directly to the outside provided.

2.2 The building is equipped with a *fire alarm system* with *manual fire alarm boxes* installed in accordance with Section 907.

* Building will be equipped with a fire alarm system with manual fire alarm boxes.

2.3 An *automatic sprinkler system* is provided in storage rooms, press boxes, concession booths or other spaces ancillary to the sport activity space.

* An automatic sprinkler system to be provided in storage room, concession booths and all other spaces ancillary to the sport activity space.

507.4.1 Mixed Occupancy Buildings With Groups A-1 and A-2

Group A-1 and A-2 occupancies of other than Type V construction shall be permitted within mixed occupancy buildings of unlimited area complying with Section 507.4, provided all of the following criteria are met:

* Type II-B construction.

1. Group A-1 and A-2 occupancies are separated from other occupancies as required for separated occupancies in Section 508.4.4 with no reduction allowed in the fire-resistance rating of the separation based upon the installation of an automatic sprinkler system.

* TABLE 508.4 - Required Separation of Occupancies for Occupancy Group A-2.

Group A-4 = N (0 Hr)

Group B = 1 Hr

Group S-1 = 1 Hr

Group S-2 = N (0 Hr)

Option 2 for A-2 Occupancy Group

2. Each area of the portions of the building used for Group A-1 or A-2 occupancies shall not exceed the maximum allowable area permitted for such occupancies in Section 503.1.

* Allowable Area for Group A-2 - TABLE 506.2

Group A-2 is on Level 1 of a 1-Story Building with a Mezzanine Level.

Considered as S1 = 1-Story above grade plane equipped throughout with an automatic sprinklers system.

3. Exit doors from Group A-1 and A-2 occupancies shall discharge directly to the exterior of the building.

* Group A-2 Banquet Hall and Kitchen.

Banquet Halls discharge directly to the exterior to the North

Kitchen discharge directly to the exterior to the North.

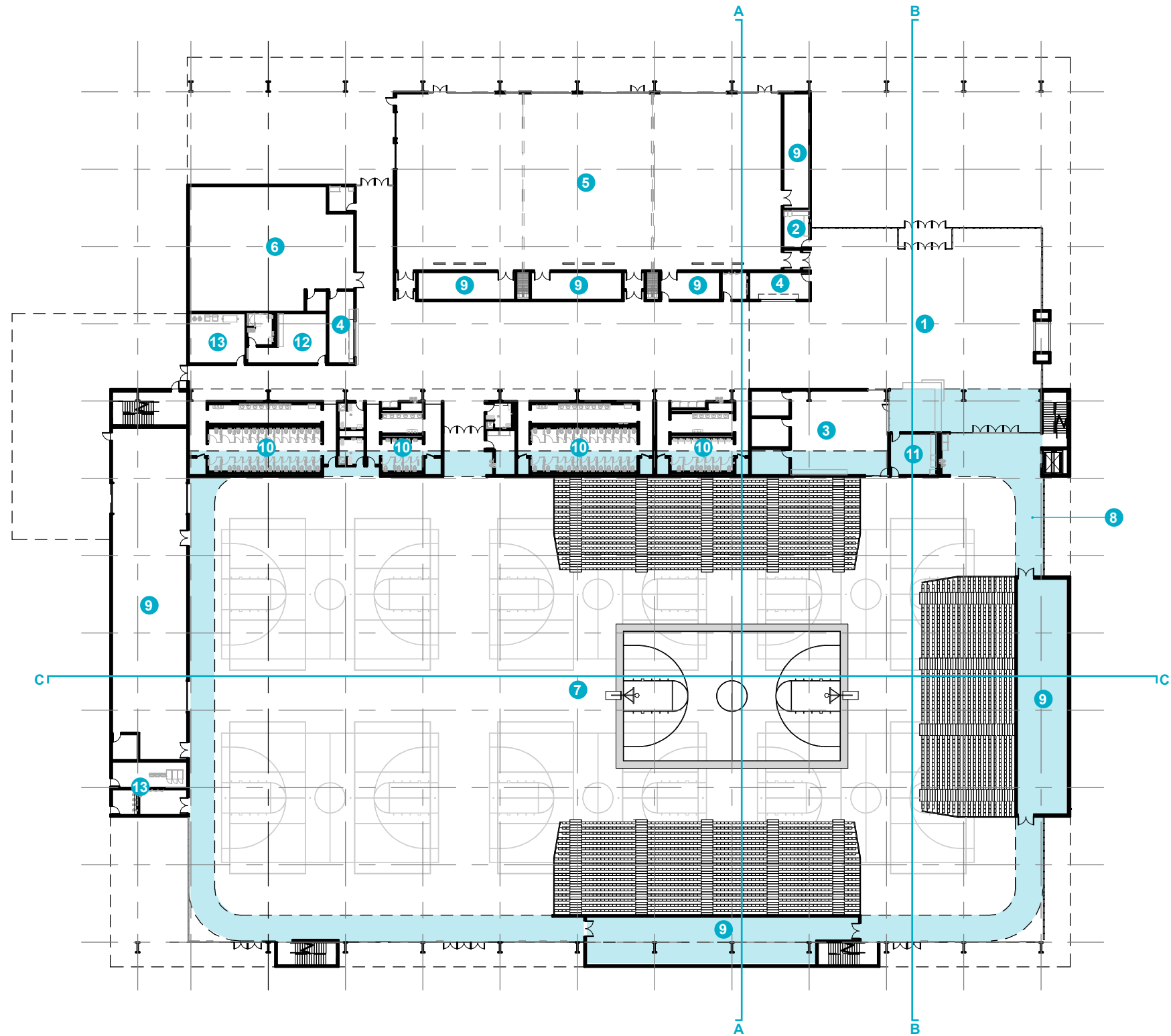
IBC (2018) TABLE 2902.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES (a)

a.The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of personasindicated. The number of occupants shall be determined by this code.
d.The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
e.For business and mercantile classifications with an occupant load of 15 or fewer, a service sink shall not be required.

DESCRIPTION	WATER CLOSETS		LAVATORIES		BATHTUBS / SHOWERS	DRINKING FOUNTAINS	OTHER
	MALE	FEMALE	MALE	FEMALE			
Assembly							
Restaurants, banquet halls and food courts (d)	1 per 75	1 per 75	1 per 200	1 per 200	—	1 per 500	1 service sink
Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums (d)	1 per 125	1 per 65	1 per 200	1 per 200	—	1 per 500	1 service sink
Coliseums, arenas, skating rinks, pools and tennis courts for indoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per 1000	1 service sink
Business							
Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial, ambulatory care and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80	—	1 per 100	1 service sink (e)
Storage							
Structures for the storage of goods, warehouses, storehouses and freight depots, low and moderate hazard	1 per 100	1 per 100	1 per 100	1 per 100	—	1 per 100	1 service sink

PLUMBING MINIMUM REQUIRED FIXTURE COUNTS

LEVEL	OCCUPANT LOAD/ NUMBER OF UNITS	WATER CLOSETS		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAINS	SERVICE SINKS	OTHER		
		MALE	FEMALE	MALE	FEMALE				KITCHEN SINKS	WASHING MACHINES	
ASSEMBLY											
A-2											
RESTAURANTS, BANQUET HALLS AND FOOD COURTS											
1	500	3.33	3.33	1.25	1.25	0	1	1	0	0	
	500	3.33	3.33	1.25	1.25	0	1	1	0	0	
A-4											
COLISEUMS, ARENAS, SKATING RINKS, POOLS AND TENNIS COURTS FOR INDOOR SPORTING EVENTS AND ACTIVITIES											
1	5000	28.33	54.33	12.5	16.67	0	5	1	0	0	
2	100	0.67	1.25	0.25	0.33	0	0.1	1	0	0	
	5100	29	55.58	12.75	17	0	5.1	2	0	0	
BUSINESS											
B											
BUILDINGS FOR THE TRANSACTION OF BUSINESS, PROFESSIONAL SERVICES, OTHER SERVICES INVOLVING MERCHANDISE, OFFICE BUILDINGS, BANKS, LIGHT INDUSTRIAL AND SIMILAR USES											
1	50	1	1	0.63	0.63	0	0.5	1	0	0	
	50	1	1	0.63	0.63	0	0.5	1	0	0	
STORAGE											
S-1											
STRUCTURES FOR THE STORAGE OF GOODS, WAREHOUSES, STOREHOUSES AND FREIGHT DEPOTS, MODERATE HAZARD											
1	2	0.01	0.01	0.01	0.01	0	0	1	0	0	
	2	0.01	0.01	0.01	0.01	0	0	1	0	0	
S-2											
STRUCTURES FOR THE STORAGE OF GOODS, WAREHOUSES, STOREHOUSES AND FREIGHT DEPOTS, LOW HAZARD											
1	2	0.01	0.01	0.01	0.01	0	0	1	0	0	
2	2	0.01	0.01	0.01	0.01	0	0	1	0	0	
	4	0.02	0.02	0.02	0.02	0	0	2	0	0	
FIXTURE SUBTOTALS	5656	33.36	59.94	14.66	18.91	0	6.6	7	0	0	



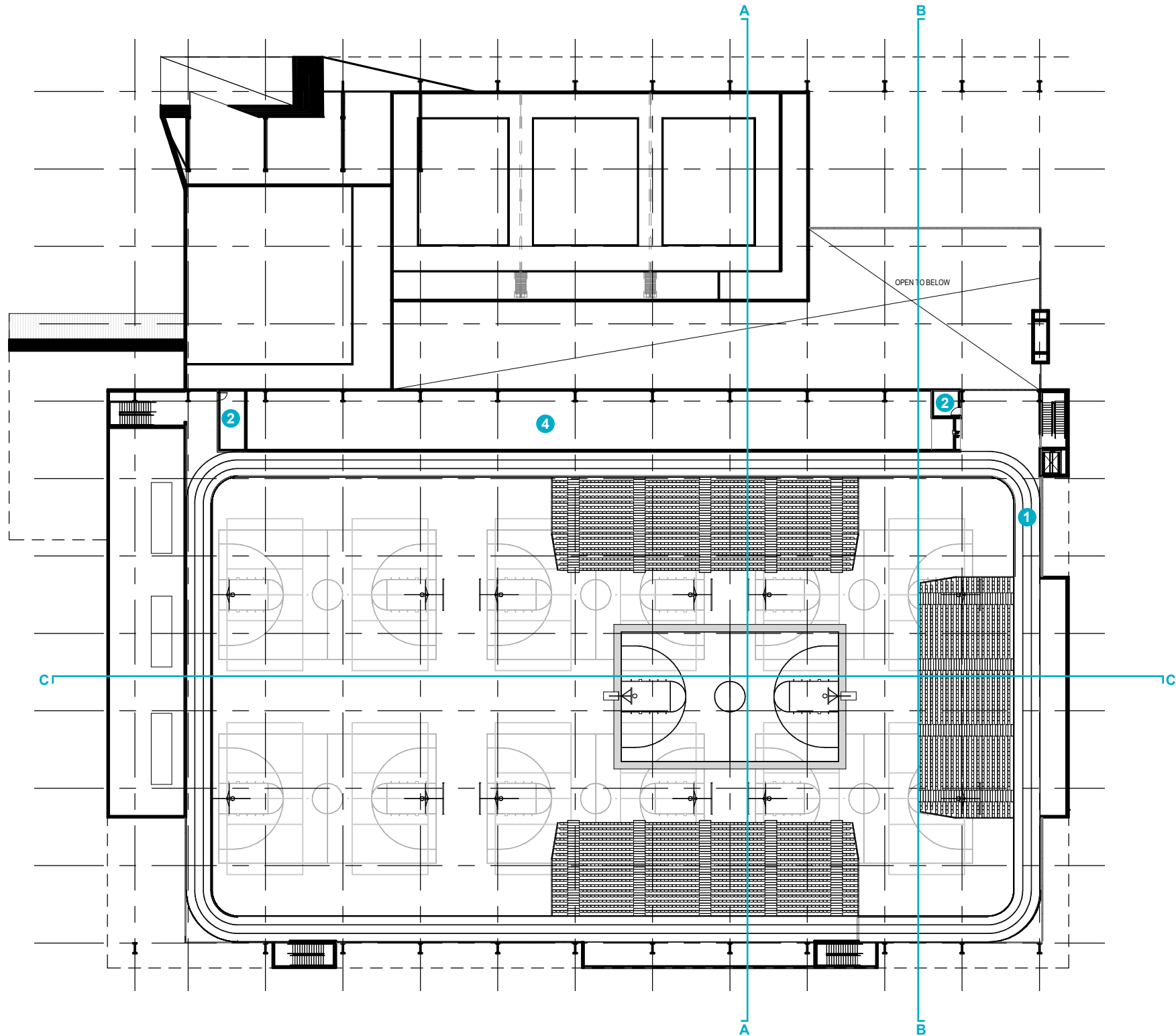
LEGEND

1	LOBBY / PRE-FUNCTION	15,295 SF
2	TICKETING	147 SF
3	OFFICES	1,708 SF
4	CONCESSIONS	530 SF
5	BANQUET HALL / MEETING ROOMS	10,291 SF
6	KITCHEN	2,908 SF
7	SPORT COURTS	58,750 SF
8	ELEVATED TRACK	
9	STORAGE	7,214 SF
10	RESTROOMS	4,476 SF
11	TRAINING	290 SF
12	GREEN ROOM / REFEREE	567 SF
13	BUILDING SUPPORT	2,116 SF

LEVEL 1	104, 292 SF
LEVEL 2	13,087 SF
OVERALL	117, 379 SF

FLOOR PLAN - LEVEL 1

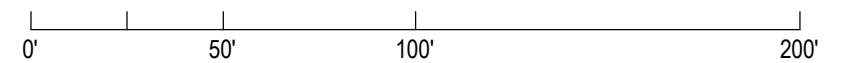
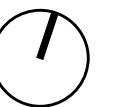




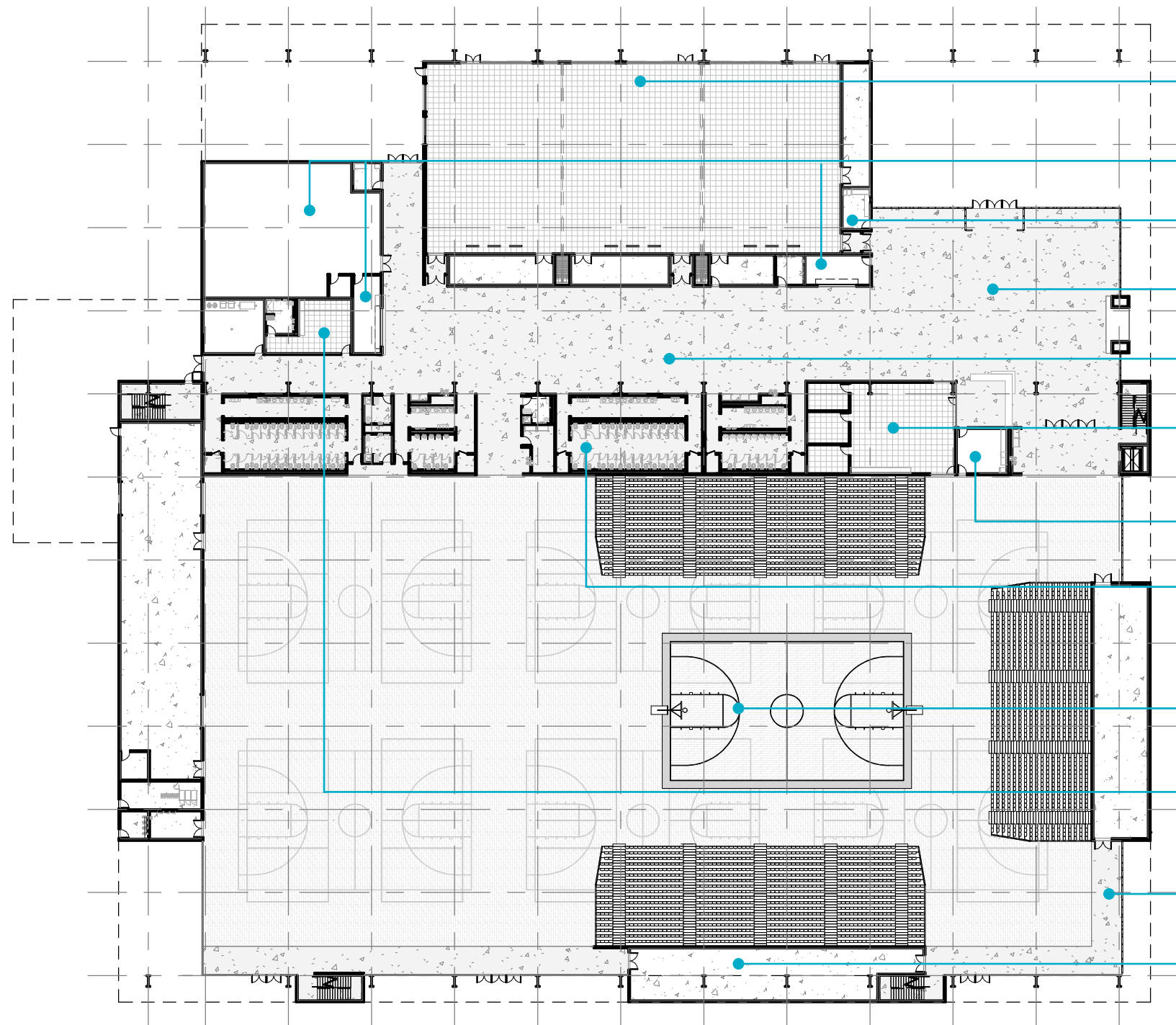
LEGEND

- ① ELEVATED TRACK 12,757 SF
- ② ELECTRICAL ROOM 330 SF
- ③ MECHANICAL SHAFT

LEVEL 1	104,292 SF
LEVEL 2	13,087 SF
OVERALL	117,379 SF



FLOOR PLAN - LEVEL 2



BANQUET HALL / MEETING ROOMS

Carpet Tile Floor, Rubber Base, Painted Wall Finish, Acoustic Wall Panels, Gypsum Ceiling Soffit, Acoustic Ceiling treatment

KITCHEN / CONCESSIONS

Epoxy Floor, Epoxy Base, FRP / Painted Wall Finish, Washable Ceiling Tile

TICKETING

Polished Concrete Floor, Rubber Base, Painted Wall Finish, Acoustic Ceiling Tile

LOBBY

Polished Concrete Floor, Rubber Base, Painted Wall Finish, Wood Ceiling

PRE-FUNCTION

Polished Concrete Floor, Rubber Base, Painted Wall Finish, Acoustic Ceiling Treatment

OFFICE

Carpet Tile Floor, Rubber Base, Painted Wall Finish, Acoustic Ceiling Tile

TRAINING

Resilient Floor, Rubber Base, Painted Wall Finish, Acoustic Wall Panel, Acoustic Ceiling Tile

RESTROOMS

Polished Concrete Floor, Tile Base, Wall Tile, Gypsum Ceiling

SPORT COURTS

Maple Wood Floor, Molded Cove Base, Painted Wall Finish, Acoustic Wall Panels, Perforated Acoustic Metal Ceiling

GREEN ROOM / REFEREE

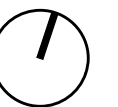
Carpet Tile Floor, Rubber Base, Painted Wall Finish, Gypsum Ceiling
RR - Polished Concrete Floor, Tile Base, Wall Tile, Gypsum Ceiling

ELEVATED TRACK

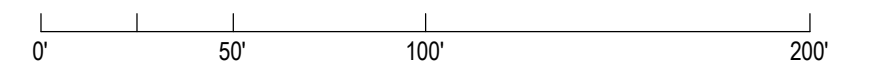
Rubber Floor, Rubber Base, Painted Wall Finish, Exposed Ceiling

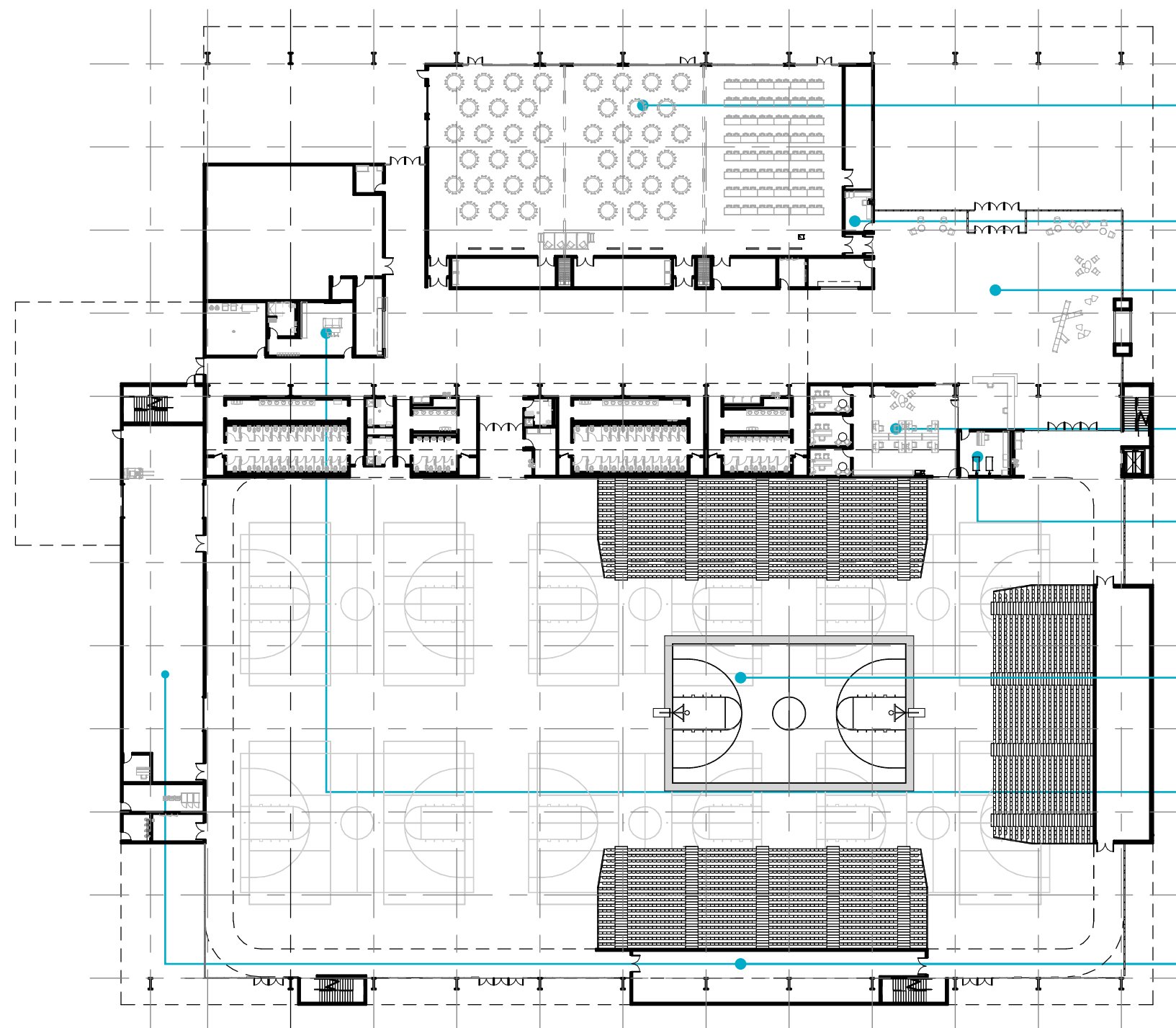
STORAGE

Sealed Concrete Floor, Rubber Base, FRP / Painted Wall Finish, Exposed Ceiling



FINISH PLAN - LEVEL 1





BANQUET HALL / MEETING ROOMS

Stackable Chairs, Training Tables, Round Banquet Tables, Podium

TICKETING

Desk, Chair, Storage Cabinet, POS Device

LOBBY / PRE-FUNCTION

Reception Desk, Tables and Chairs, Lounge Furniture, High Top Tables

OFFICE

Workstations, Office Desks, Office Chairs, File Storage Cabinets, Marker Boards, Print/Copy/Scan, Safe, Millwork

TRAINING

Training Tables and Chairs, Desk and Chair, Sink, Millwork, Mini Fridge, Ice Machine, Storage Cabinet

SPORT COURTS

Retractable bleachers, portable bleachers, Scoring Tables, Stackable Chairs, Ceiling Hung Basketball Hoops, Portable Basketball Hoops, In-ground Volleyball Sleeves, Divider Curtains

GREEN ROOM / REFEREE

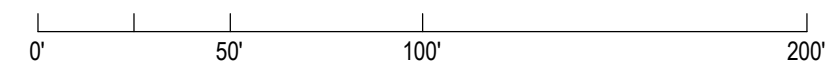
Chairs and Sofas, Lockers, High Top Table, High Top Chairs, Sink, Mini Fridge,

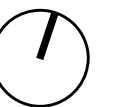
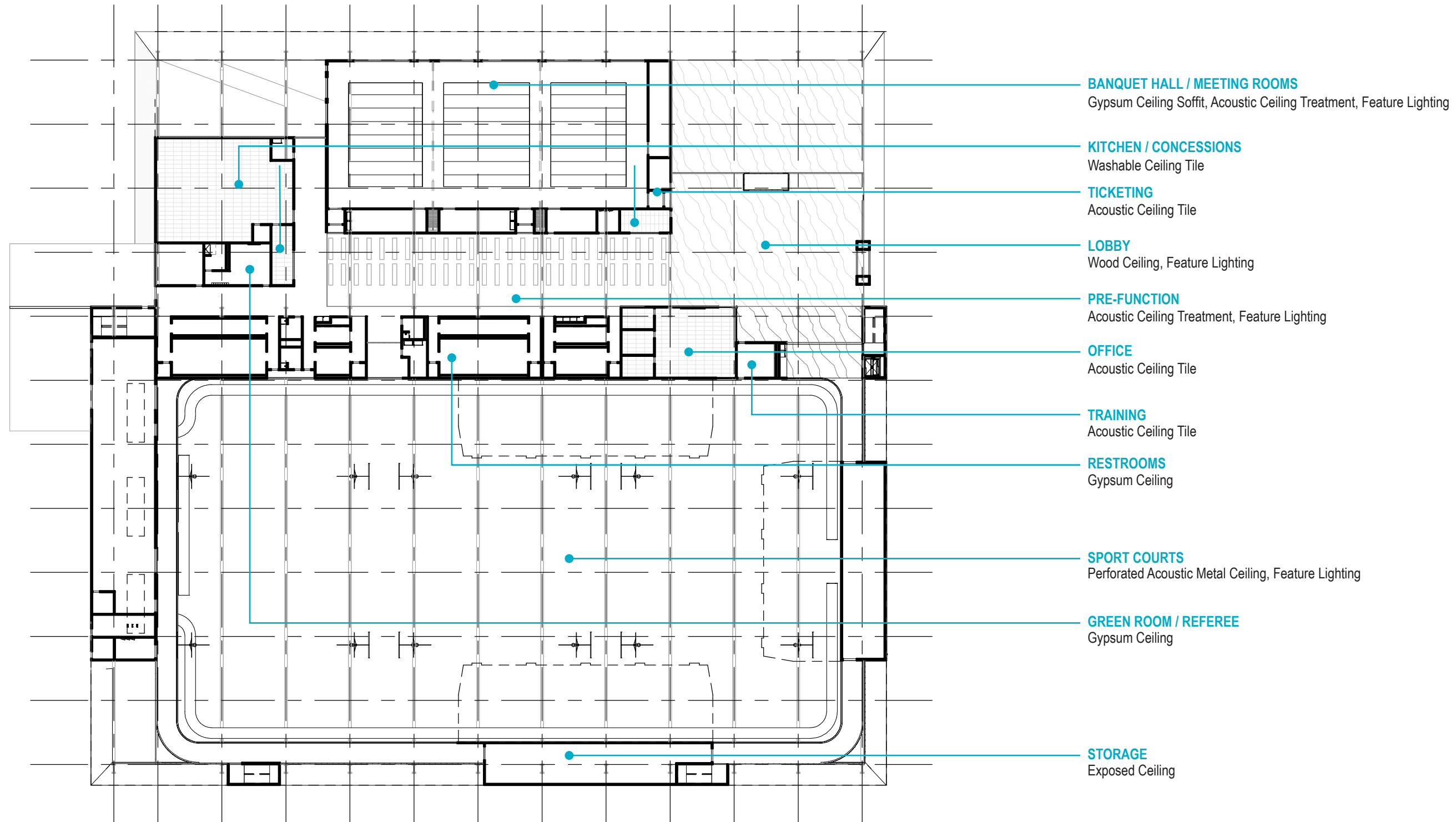
STORAGE

Utility Shelving Racks, Forklift, Desk and Chair

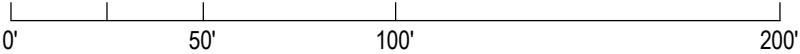


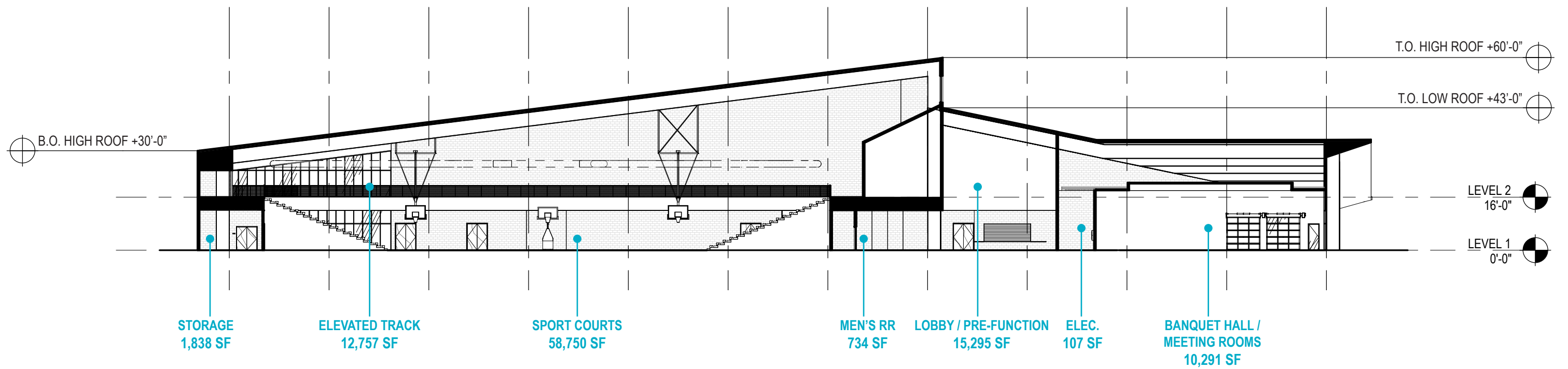
FURNISHING PLAN - LEVEL 1



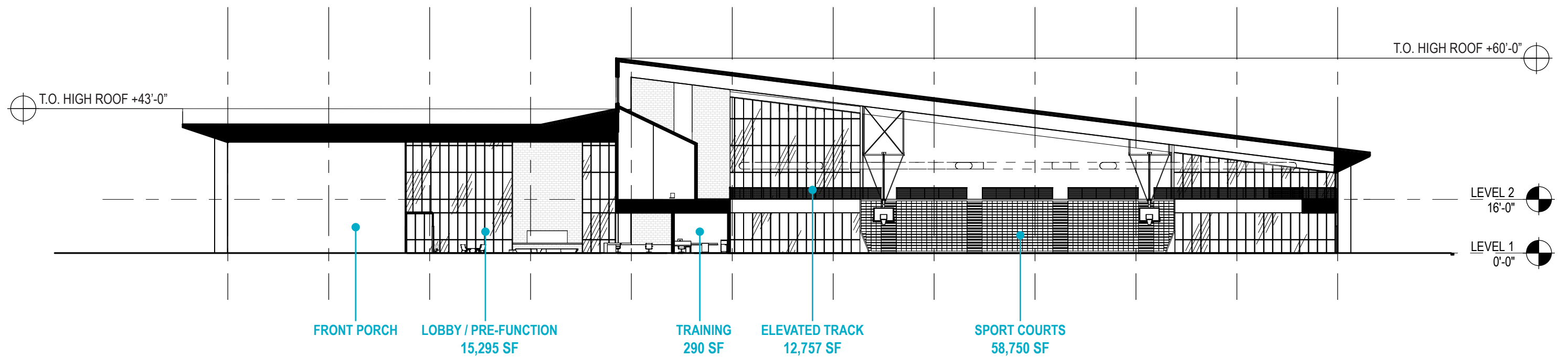


REFLECTED CEILING PLAN - LEVEL 1

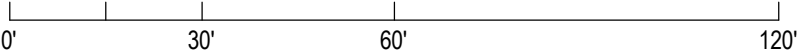


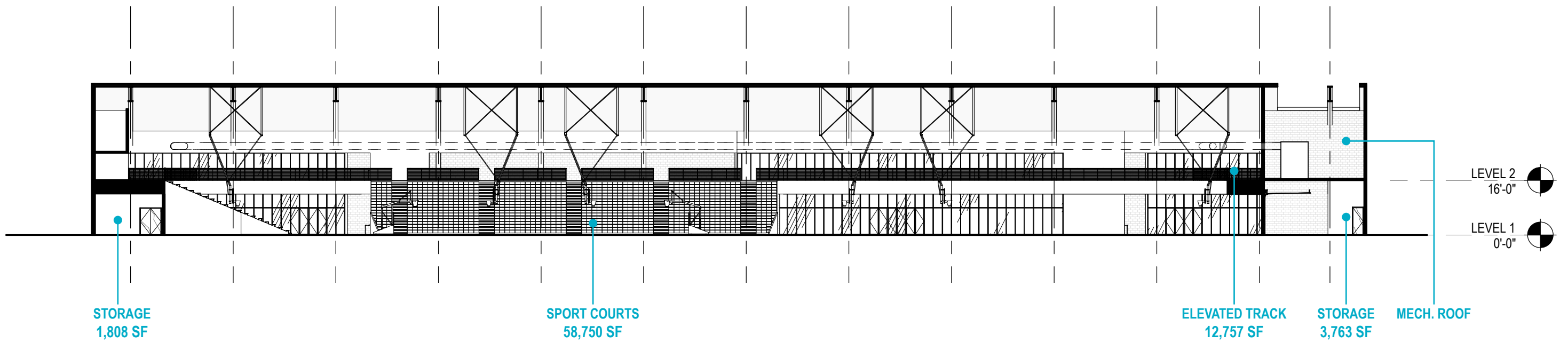


SECTION A LOOKING WEST



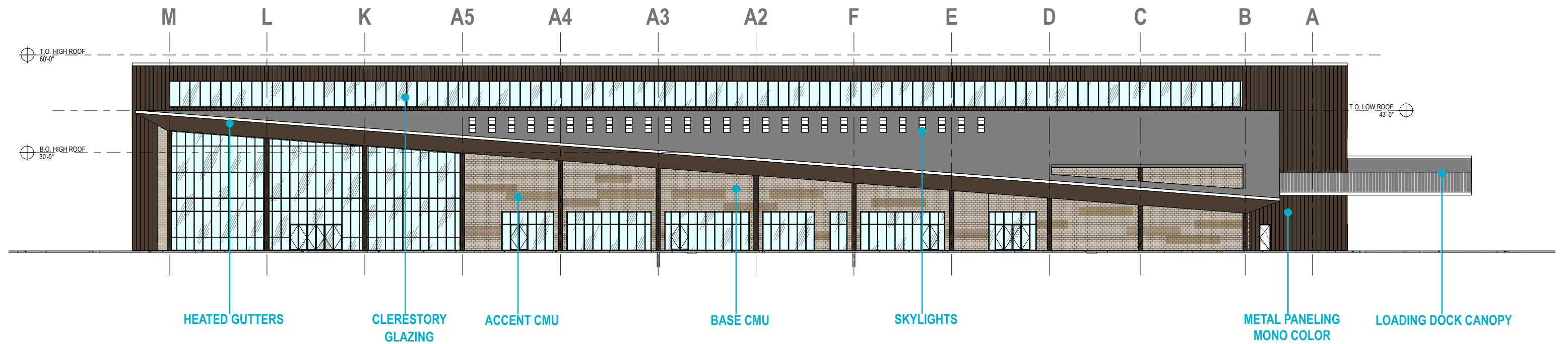
SECTION B LOOKING EAST



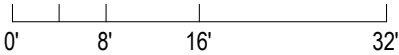


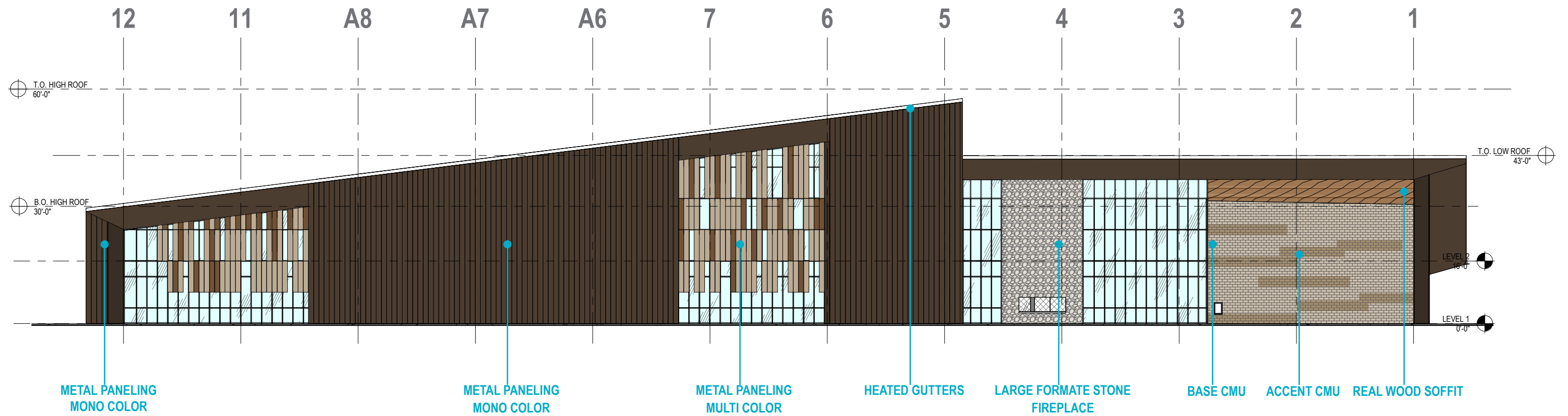
SECTION C LOOKING SOUTH



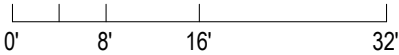


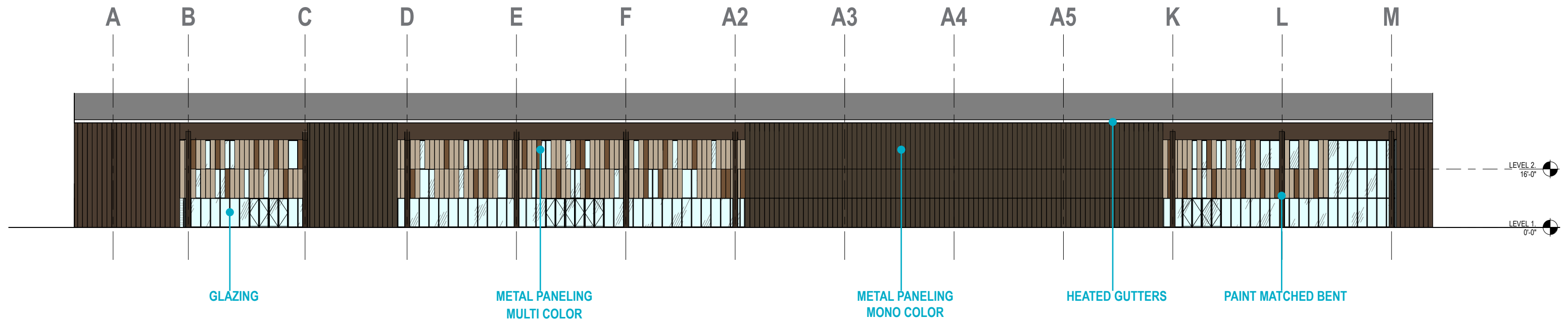
NORTH EXTERIOR ELEVATION



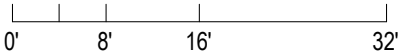


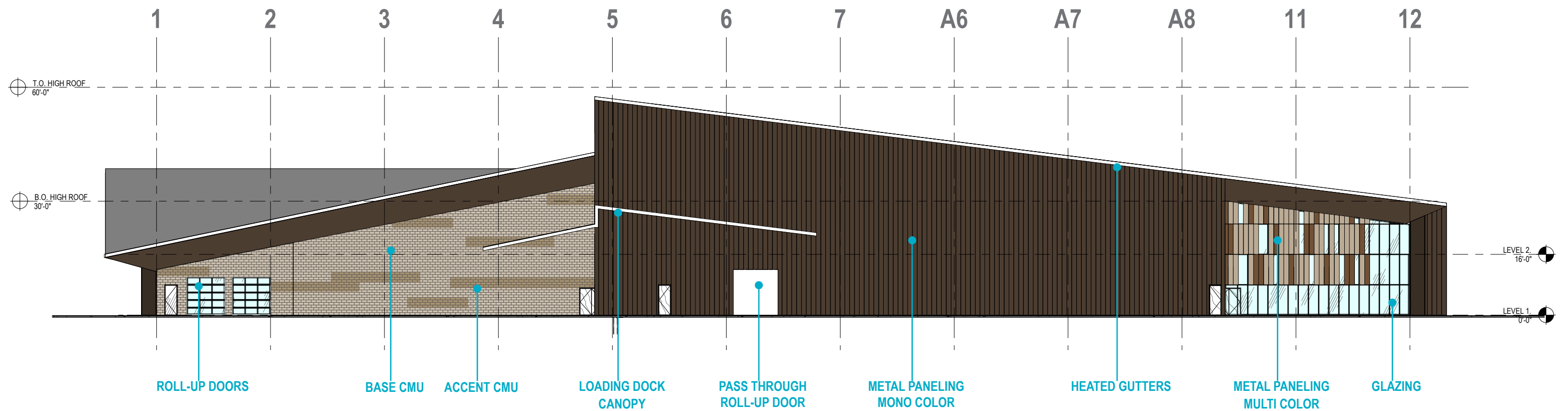
EAST EXTERIOR ELEVATION



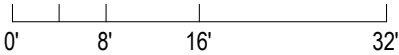


SOUTH EXTERIOR ELEVATION





WEST EXTERIOR ELEVATION



SITE PLAN



6'-0" TALL CMU SCREEN WALL; TYP.

AT GRADE DROP OFF AREA

SECURED PATIO

MECHANICAL YARD

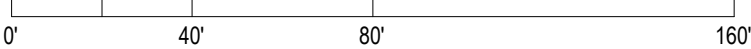
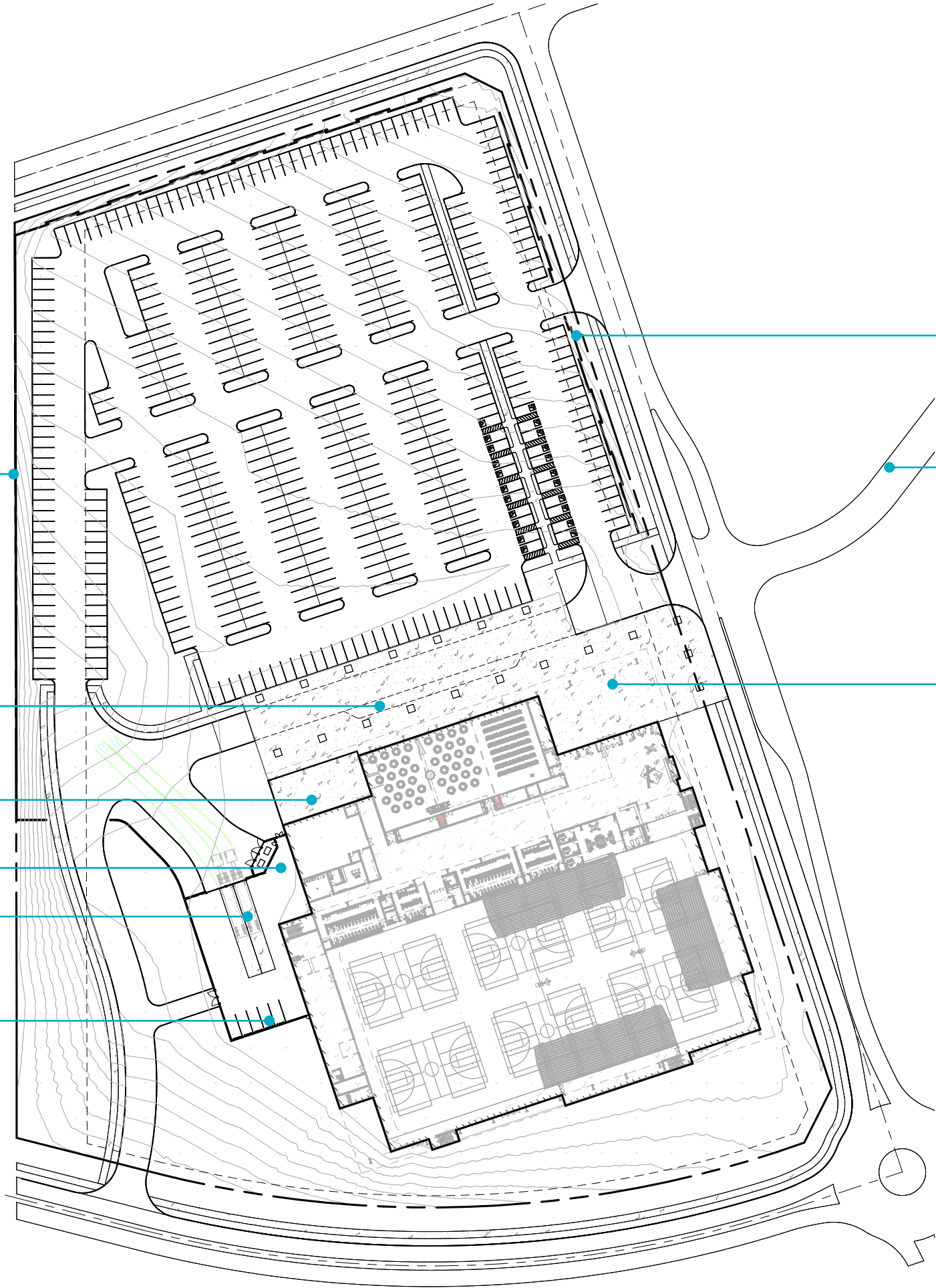
LOADING DOCK

8'-0" TALL CMU SCREEN WALL; TYP.

3'-4" TALL CMU SCREEN WALL; TYP.

ADDITIONAL PARKING ACCESS

ENTRY PLAZA



METAL PANELING (Taylor Metals)

Contour Classic Series™

Taylor Metal Products' concealed-fastener architectural panel system designed for vertical or horizontal wall applications, soffits, and custom façade profiles. Panels are interchangeable, available in multiple depths, gauges, and clip systems, with extensive color and finish options.

Contour Classic Series™ (Concealed-Fastener Panel)

Type: Architectural concealed-fastener panel
Use: Walls, soffits, vertical/horizontal applications, custom profiles

Property	Range / Info
Lengths	2'-20' 10" typ.
Widths	12" or 16"
Thickness	3/4", 1-1/4", 1-1/2"
Thermal (R-Values)	R-16.7 (2"), R-23 (2.75"), R-33.5 (4")
Finish	Embossed or smooth flat panels
Fastening	Concealed, pressure-equalized joint
Substrate	24 & 22 gauge Tru-Gauge™ steel .032 & .040 aluminum 20 & 18 gauge alumi num available (.050, .063) – inquire

Material Specifications

Steel Options

24 ga Kynar 500® Painted Steel — .0236" (before paint), G-90 or Zincalume® AZ-50 per ASTM A-792

22 & 24 ga Zincalume® Plus AZ-55 per ASTM A-792 (no finish warranty, 25-year perforation warranty)

22 ga Kynar 500® Painted Steel — .029" (before paint), G-90 or AZ-50 per ASTM A-792

Aluminum Options

.032" Kynar 500® Painted Aluminum (select colors; inquire)

Finishes

- Color Options
- 21 Standard Colors
 - 5 Metallic Colors
 - 4 Specialized Colors
 - Vintage® finish – directionally variable, batch-to-batch variation

Coating System

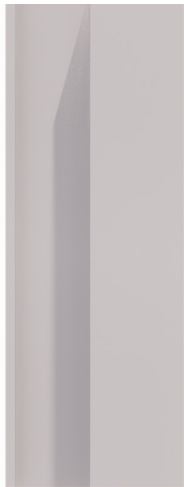
- Kynar 500® high-performance paint
- "Cool" pigments reduce heat gain and comply with ENERGY STAR® criteria
- Two-coat, 70% resin finish applied at 1 mil thickness

Warranties

- 40-year residential paint warranty
- 20- and 30-year commercial paint warranties (contact TMP for specifications)



TRINITY (Taylor Metals)



CT-4

Contour™ Trinity Series CT-4 (CR-A)
Interchangeable single-skin metal wall/soffit panel with 12" [305 mm] coverage and 1"-1 ½" [25-38 mm] deep ribs. Available with clip or screw-flange attachment for vertical or horizontal applications, including soffit use.

PANEL LENGTH

Lengths 2' [0.61 m] – 20'-10" [6.35 m] 20' [6.10m] max

Width 12" [305 mm]

Depth 1"-1 ½" [25-38 mm]

Surface Finish Standard: Smooth

Optional: Embossed

Substrate Standard: 22-24 ga G-90 Galvanized, AZ-50/55

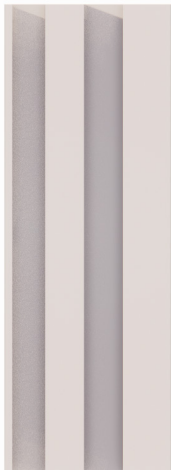
Zincalume®, .032 Aluminum

Optional: Rusteel Plus™ (A606), 16 / 20 oz

Copper, True Zinc (.8-1.0 mm)

Testing ASTM E283, E331, E1592, E1646, E1680 ICC-ESR #5045

Finish Kynar 500® two-coat system, 21 standard



CT-8

Contour™ Trinity Series CT-8 (C8-B)
Architectural single-skin metal panel with 16" [406 mm] coverage and 1 ¼" [32 mm] deep profile. Clip or screw-flange attachment, suitable for vertical or horizontal wall or soffit applications with optional perforations.

PANEL LENGTH

Lengths 2' [0.61 m] – 20'-10" [6.35 m]

Width 12" [305 mm]

Depth 1 ¼" [32 mm]

Surface Finish Standard: Smooth

Optional: Embossed

Substrate Standard: 22-24 ga G-90 Galvanized, AZ-50/55

Zincalume®, .032 Aluminum

Optional: Rusteel Plus™ (A606), 16 / 20 oz

Copper, True Zinc (.8-1.0 mm)

Testing ASTM E283, E331, E1592, E1646, E1680 ICC-ESR #5045

Finish Kynar 500® two-coat system, 21 standard



CT-11

High-performance single-skin wall/soffit panel with 12" [305 mm] coverage and " [22 mm] deep ribs. Available in 24 – 18 ga steel and .032 – .063 aluminum, clip or screw-flange attachment. Tested for both wall and roof negative/positive pressures.

PANEL LENGTH

Lengths 2' [0.61 m] – 20'-10" [6.35 m] 20' [6.10m] max

Width 12" [305 mm]

Depth " [22 mm]

Surface Finish Standard: Smooth

Optional: Embossed

Substrate Standard: 22-24 ga G-90 Galvanized, AZ-50/55

Zincalume®, .032 Aluminum

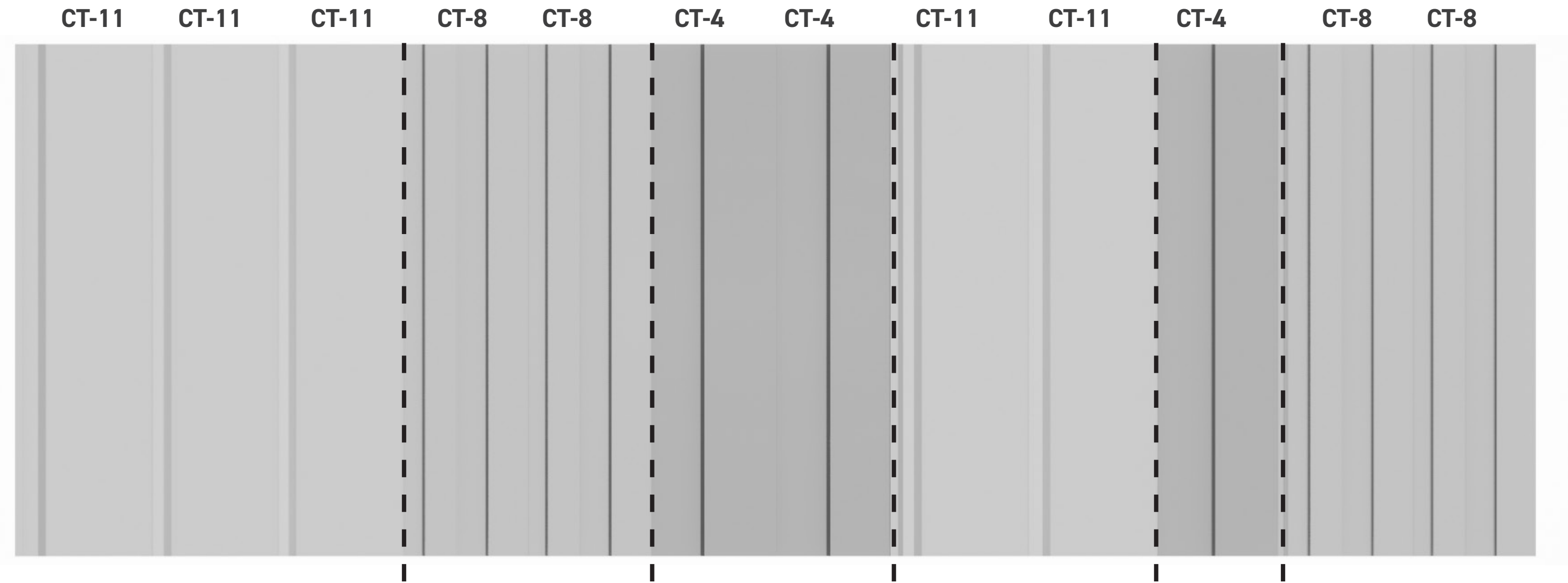
Optional: Rusteel Plus™ (A606), 16 / 20 oz

Copper, True Zinc (.8-1.0 mm)

Testing ASTM E283, E331, E1592, E1646, E1680 ICC-ESR #5045

Finish Kynar 500® two-coat system, 21 standard

TRINITY (ABC PATTERN)



CT-4

Contour™ Trinity Series CT-4 (CR-A)
Interchangeable single-skin metal wall/soffit panel with 12" [305 mm] coverage and 1"-1 ½" [25-38 mm] deep ribs. Available with clip or screw-flange attachment for vertical or horizontal applications, including soffit use.

PANEL LENGTH

Lengths	20' base - additional panels as required
Width	16" [406 mm]
Depth	1"-1 ½" [25-38 mm]

CT-8

Contour™ Trinity Series CT-8 (C8-B)
Architectural single-skin metal panel with 16" [406 mm] coverage and 1 ¼" [32 mm] deep profile. Clip or screw-flange attachment, suitable for vertical or horizontal wall or soffit applications with optional perforations.

PANEL LENGTH

Length	20' base - additional panels as required
Width	16" [406 mm]
Depth	1 ¼" [32 mm]

CT-11

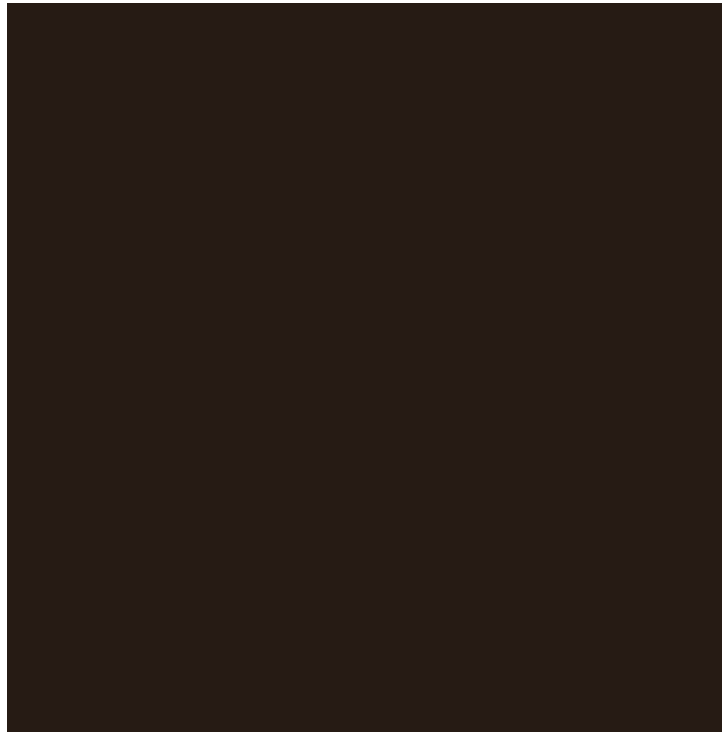
High-performance single-skin wall/soffit panel with 12" [305 mm] coverage and " [22 mm] deep ribs. Available in 24 - 18 ga steel and .032 - .063 aluminum, clip or screw-flange attachment. Tested for both wall and roof negative/positive pressures.

PANEL LENGTH

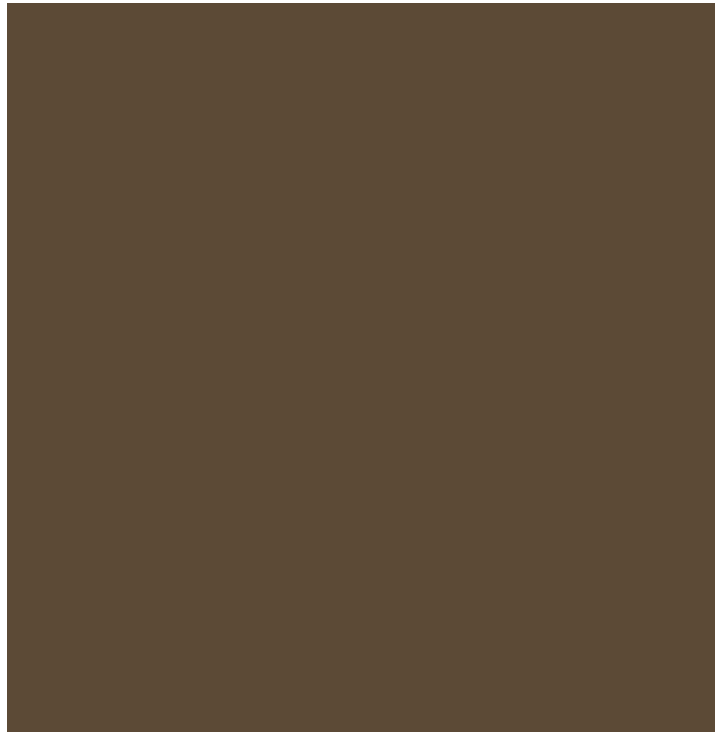
Lengths	20' base - additional panels as required
Width	16" [406 mm]
Depth	1 ¼" [32 mm]



STANDARD KYNAR 500 (color palette)



Musket



Saddle-Tan



Sierra Tan

CMU STONE

INTENT - Provide a durable, natural base material emphasizing entry features and key façades — warm, regional tone with texture and permanence.

Application - Would wrap all sides of the meeting rooms to a certain cut off point.

Trendstone

a ground-face, integrally colored CMU with a smooth, polished finish that exposes natural aggregates. It includes a factory-applied acrylic sealant for enhanced color, moisture resistance, and durability. The product offers high impact, fire, and mold resistance, comes in a wide range of colors, and works for both structural CMU walls and masonry veneer. It's a low-maintenance, refined alternative to split-face block, available in multiple sizes and shapes.



Accent CMU- Hopi Sandstone

- 8F8 Hollow — 7 9/16" × 7 5/8" × 7 5/8"
- 8F8 Solid — 7 9/16" × 7 5/8" × 7 5/8" (solid)
- 8F — 7 9/16" × 7 5/8" × 15 5/8"
- 8FT — 7 9/16" × 7 9/16" × 15 5/8"
- 4F — 3 9/16" × 7 5/8" × 15 5/8"
- 6F — 5 9/16" × 7 5/8" × 15 5/8"
- 10F — 9 9/16" × 7 5/8" × 15 5/8"

Corner units, oversized units, sound-absorbing units available too.



Base CMU- Pebble Beach

- 8F8 Hollow — 7 9/16" × 7 5/8" × 7 5/8"
- 8F8 Solid — 7 9/16" × 7 5/8" × 7 5/8" (solid)
- 8F — 7 9/16" × 7 5/8" × 15 5/8"
- 8FT — 7 9/16" × 7 9/16" × 15 5/8"
- 4F — 3 9/16" × 7 5/8" × 15 5/8"
- 6F — 5 9/16" × 7 5/8" × 15 5/8"
- 10F — 9 9/16" × 7 5/8" × 15 5/8"

Corner units, oversized units, sound-absorbing units available too.



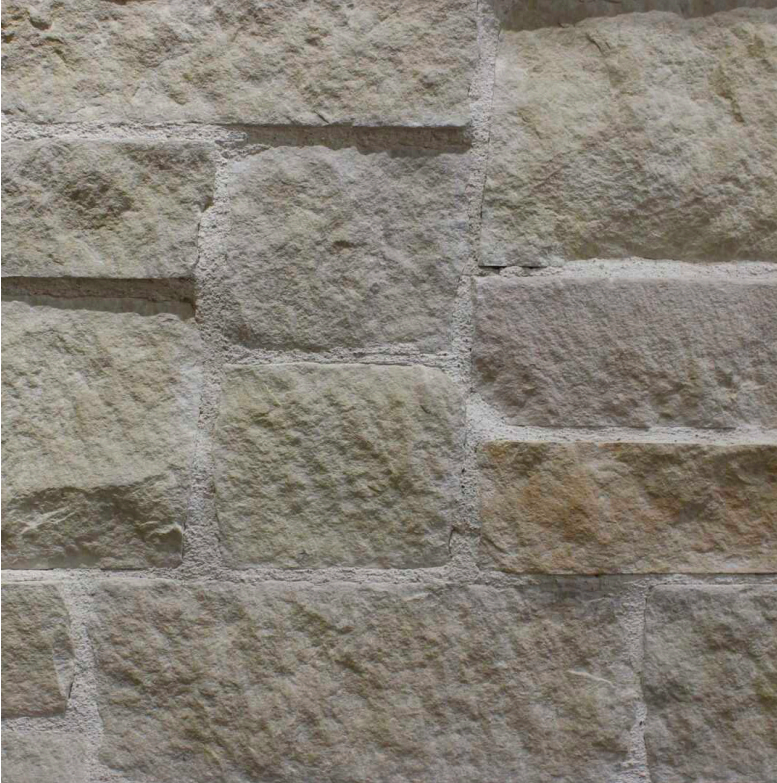
ECHELON™

STONE VENEER

Application - Large fire place in the lobby

Solstice Stone

Solstice Stone produces high-quality natural stone veneers—limestone, sandstone, and quartzite—crafted with authentic texture, regional sourcing, and consistent fabrication. Their collections range from rustic fieldstone to refined coursed styles, all designed for durable, architectural-grade interior and exterior applications.



Sonoma Lueders Buff

Color: Tan
Stone Type: Limestone
Standard Dimensions: 4", 6", 8 1/2" heights × random lengths
LRV (Estimated): 33.62%
Variation Level: V2 (slight variation)
Recommended Sealer: N/A
Recommended Setting Material: Laticrete
Thin Brick Mortar
Format: Stone Veneer



Tuscany Cream

Color: Beige & Cream
Stone Type: Limestone
Standard Dimensions: 3"–8" heights × random lengths
LRV (Estimated): 50.51%
Variation Level: V3 (moderate variation)
Recommended Sealer: N/A
Recommended Setting Material: Laticrete
Thin Brick Mortar
Format: Stone Veneer

STOREFRONT / GLAZING SYSTEM

INTENT - Durable, high-visibility aluminum storefront system with energy-efficient insulated glass for public façades and main entries.

MANUFACTURERS

- Arcadia (Basis of Design)
- Oldcastle (Approved Equal)
- Vitro for glazing

SYSTEM TYPE - insulated, center-glazed or offset-glazed system, Clear anodized or bronze finish (TBD)



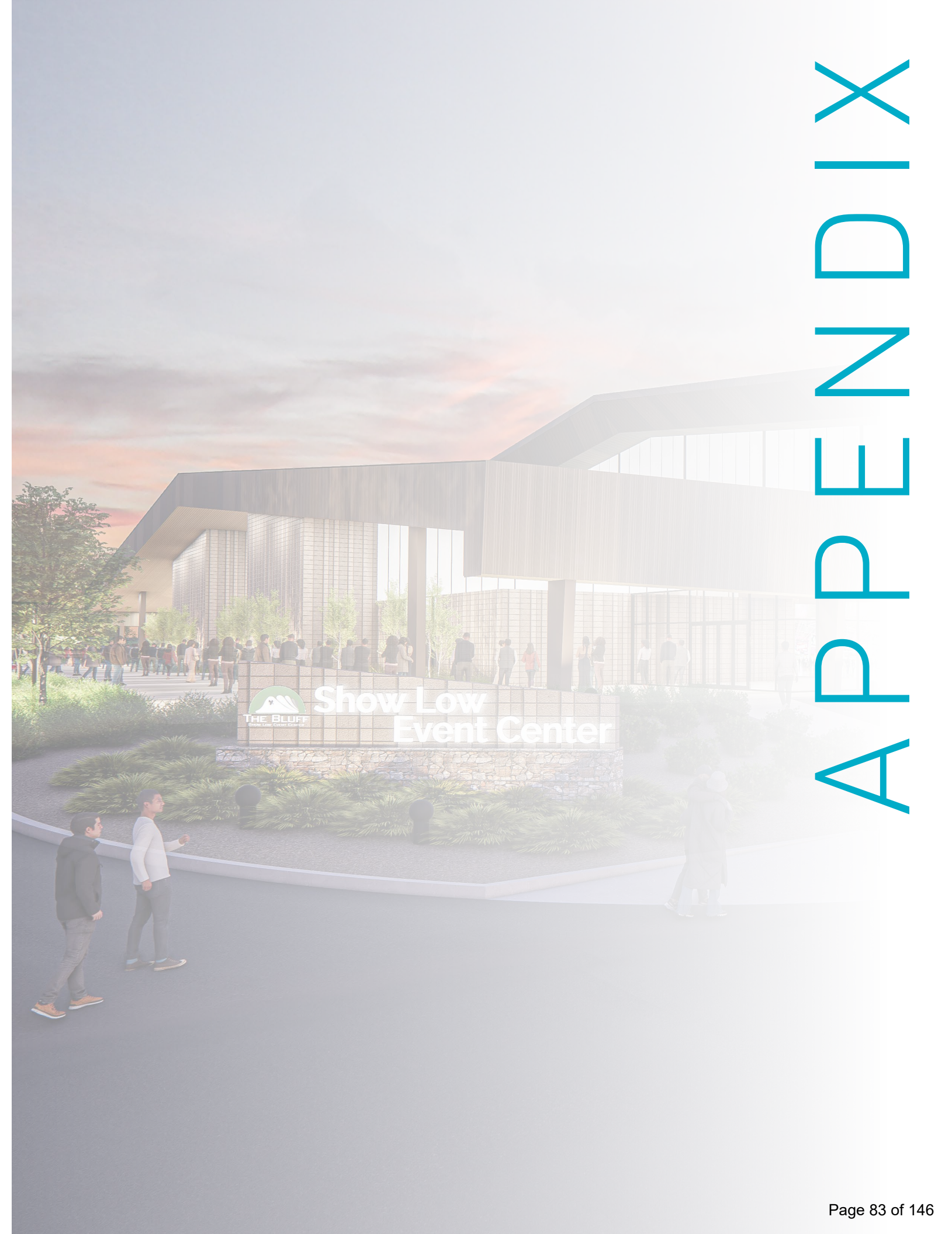
18. Bronze
UC110460
SRI 2



20. Bronze
UC109850
SRI 2

Parameter	Minimum / Target (Show Low / Common Code)	Notes
Wind Load Resistance	90 mph, Exposure	The City of Show Low adopts a 90 mph wind speed. ([Show Low, AZ][1]) Also the city's code lists Exposure
Deflection Limit	L/175 (or per manufacturer)	typical storefront glass deflection limit (L/175) to keep glass sealants safe
U-Factor (Thermal)	≤ 0.38	maximum window U-factor of 0.35 for commercial fenestration
Solar Heat Gain Coefficient (SHGC)	≤ 0.48 (or lower for west/south façades)	SHGC capped (≤ ~0.38) to reduce cooling loads
Visible Light Transmittance (VLT)	0.55 – 0.70 (or as specified)	occupant comfort guideline so you get good daylighting without excessive glare.
Glass Type	Insulating (dual-pane) tempered or laminated	To meet safety glazing requirements and thermal performance. The code requires safety glazing in hazardous locations;
Frame Thermal Break	Required (i.e. thermal framing system)	thermal frames are standard in commercial storefront systems when energy performance is required.
Finish / Coating	Kynar / PVDF or equivalent durable finish	use high-durability finishes (PVDF / Kynar) or anodized that withstand the climate and ensure long life.

Arcadia Equivalent System	Description / Use	Expected Performance	Notes
Arcadia TC470	Standard storefront, 1" IG	Moderate thermal, structural	Must check with manufacturer for 90 mph / Exposure C load tables
Arcadia A450 / AR450+	Center-glazed with thermal break	Better U-factor, improved structural	Good mid-tier option
Arcadia AF450+ / AG451T Offset	thermal glazing	Strong thermal & structural	Best for higher performance façades



APPENDIX



7434 E. McDonald Drive | Scottsdale, AZ 85250
480.922.8854 | www.pkastructural.com

STRUCTURAL INTEGRITY | COLLABORATIVE SOLUTIONS

SHOW LOW SPORTS AND EVENT CENTER BASIS OF DESIGN STRUCTURAL NARRATIVE

Date: November 14, 2025

Location: Show Low, AZ

Client: Architekton
4Line Studio

General Contractor: Haydon

Prepared by: Steven C. Slonaker, P.E., S.E. – PK Associates, LLC
Armando Aguirre, P.E. – PK Associates, LLC

BASIS OF DESIGN

GENERAL PROJECT SCOPE

The project consists of a large indoor sports facility totaling approximately 114,000 square feet. The development includes an indoor track and event center. The building will feature a composite concrete-over-steel mezzanine that provides elevated viewing areas for sporting events and supports an indoor elevated track. The primary structural system will be a pre-engineered metal building (PEMB) utilizing moment frames and braced frames, supported on conventional spread footings. The roof design will incorporate mechanical wells to house building mechanical equipment.

BUILDING CODE

Building Code : 2018 International Building Code w/City of Show Low Amendments

Design Codes : ACI 318-14
ASCE 7-16
AISC 341-16
AISC Steel Construction Manual, 16th Ed.
Others as referenced by 2018 IBC

STRUCTURAL DESIGN LIVE LOADS

Floors :	Lobby/Viewing Areas	100 psf (Not Reducible)
	Other Common Areas	100 psf (Not Reducible)
	Seating Areas	60 psf (Not Reducible)
	Stairs and Exit Ways	100 psf (Not Reducible)
	Storage	125 psf (Not Reducible)
	Catwalks	40 psf (Reducible)
Roofs:	Roof (non-occupiable)	20 psf (reducible*)
	Snow	35 psf
	Mechanical Well	125 psf (Not Reducible)

(*) Floor/Roof live load reduction as permitted by IBC Section 1607.10 and 1607.12.

MATERIALS

Cast-in-place Concrete :	
Slab on Grade	4,500 psi (w/c = 0.45)
Foundations	4,000 psi*
Topping for Steel Deck	3,500 psi
Concrete Walls	4,000 psi
Other Not Listed	3,000 psi
*Higher strengths will be specified where required by structural loads.	
Masonry (CMU) :	
Units	ASTM C90 Grade N, Type 1, Medium Wt.
Grout	2,500 psi
Mortar	Type S, 1800 psi
Net Design Strength, F'm	2,000 psi
Steel :	
Wide Flange Structural Shapes	ASTM A992 (Fy = 50 ksi)
Tube Steel (HSS) Shapes	ASTM A500 Gr. B (Fy = 46 ksi)
Channels, Angles, Plates, Etc.*	ASTM A36 (Fy = 36 ksi)
Bolts*	ASTM A325 or A490

*Plates in moment connections and where otherwise noted shall be Grade 50 (Fy = 50 ksi). Bolts in moment connections to be slip critical where indicated on drawings.

Steel Deck:	ASTM A653 Grade 50, Galvanized G60 (Fy = 50 ksi)
Rebar:	All bars ASTM A615 Grade 60 (Fy = 60 ksi) except: Weldable rebar: ASTM A706 Grade 60 (Fy = 60 ksi)

DELEGATED DESIGN AND/OR DEFERRED SUBMITTAL ITEMS TO BE DESIGNED BY OTHERS (AS APPLICABLE)

- Glass Guardrail Systems
- Cable Guardrail Systems
- Pre-engineered metal building (PEMB) components and connections
- Prefabricated Elements
- Non-bearing Cold Formed Metal Stud Framing
- Steel Stairs
- Curtainwall Systems
- Window Wash System / Davits

GEOTECHNICAL REPORT

Geotech report for new site is pending as of this date.

In accordance with the recommendations of the previous geotechnical report from the previous building site (Terracon Project No. 65255013), the building is assumed to be supported on spread footings founded on engineered fill. Foundations shall bear on native soils/bedrock or engineered fill soils as outlined in Geotechnical report. Bottom of footing shall be 30" below grade. Bearing Value = 4,000 psf.

FOUNDATION SYSTEM

- The foundation system consists of conventional reinforced concrete spread footings in accordance with the project Geotech Report. Design bearing pressure = 4,000 psf allowable (net).
- Spread footings shall bear on compacted engineered fill per Geotech Report specifications.
- Minimum bottom of footing elevation shall not be less than 2'-6" typical. Minimum top of footing elevation shall be 1'-4" below finished floor or finished grade within 5'-0" of edge of footing.
- Bearing strata for all foundations shall be inspected by the Geotechnical Engineer during construction prior to placement of footing concrete.
- Refer to the project Geotech Report for all additional information and specifications. All foundation work shall be in accordance with the project Geotech Report specifications.

SLAB ON GRADE

- The slab on grade for the building shall be minimum 6" thick concrete slab, 4,500 psi (W/C=0.45 max), reinforced with #4 at 12" o.c. each way centered.
- Unsuitable fill, topsoil, organics, or other deleterious materials should be removed from below the slabs as specified by the Geotech Report.
- Slab subbase shall consist of 4" layer of free-draining aggregate base course as per Geotech Report specs.
- Provide vapor barrier beneath slab on grade per Architectural specs.
- Provide sawcut joints in building slab on grade at 15' x 15' max. spacing. Length to width ratio of sawcut joints in any area shall not exceed 1.5:1.

- Refer to the project Geotech Report for all additional information and specifications. All slab on grade construction shall be in accordance with the project Geotech Report and Architectural specifications.

PEMB STRUCTURE

- The high-volume court areas (basketball and track court) are to be constructed of pre-engineered metal building systems provided by the supplier.
- Pre-engineered building supplier to provide structure for primary steel frames, columns, roof purlins, roof decking, wall system, wind girts, cladding, and associated connections.
- PKA to provide foundation design for primary steel frames upon receipt of PEMB reactions.

INTERIOR VIEW MEZZANINE AND PERIMETER ELEVATED TRACK

- Concrete over metal deck system: 4½" normal-weight concrete (3,500 psi min.) with 6x6-W2.9xW2.9 WWF over 3 x 20 ga. galvanized steel deck (7.5" total).
- Floor framing to consist wide-flange steel beams provided by the PEMB supplier.
- For pricing purposes all beams shall have headed studs for composite action as follows:
Secondary Beams: 3/4" x 4" headed studs at 12" o.c. (1 row)
Girders: (2) – 3/4" x 4" headed studs at 12" o.c. (2 rows)

EXTERIOR METAL STUD FRAMING

- Exterior metal stud framing shall be 6" x 18 gage min. (600S137-43) at 16" o.c. max.
- Provide exterior gyp sheathing per architectural plans and specifications where indicated.

NONBEARING INTERIOR MASONRY WALLS

- 8" thick reinforced grouted CMU walls as noted in architectural drawings.

NONBEARING EXTERIOR MASONRY WALLS

- 8" thick reinforced grouted CMU walls braced by PEMB wind girts at maximum of 15'-0" O.C. max vertically.

Stair Framing

- All stairs will be structural steel construction with concrete filled metal pans.
- Stair stringers to be C12x20.7 steel channel.
- Landing pans and tread pans to be 12 ga. metal.
- Concrete fill to be 2" normal weight concrete reinforced with 6x6-W2.1xW2.1 welded wire fabric.

ELEVATORS

- 1. Elevator walls to be 8” solid grouted CMU, with #5 vertical reinforcing at 24” o.c., and 2 #5 horizontals at 48” o.c. – typical full height.
- 2. Elevator pit to consist of cast-in-place concrete mat foundation, with sump pit as required by elevator and plumbing codes. Pit walls to consist of 8” thick CIP concrete reinforced with #5 at 12” o.c. each way.
- 3. Elevator hoist beams to be W8x40 typical.

SITE WALLS

- 1. Site wall shall be 8” solid grouted CMU walls with footings min 30” below finish grade.

BUILDING LATERAL FORCE RESISTING SYSTEM

Seismic Design (IBC 2018/ASCE 7-16):

Seismic Design Category = C
Soil Site Class = B
Risk Category III
Seismic Importance Factor = 1.25
Ss = 0.255g; S1=0.079g
Fa = 0.9; Fv = 0.8
Analysis Method = ASCE 7-16 12.8 “Equivalent Lateral Force Procedure”

Seismic Force Resisting System:

System = Ordinary Steel Moment Frames
Response Modification Coefficient, R = 3.5
Overstrength Factor, Ωo = 3.0
Deflection Amplification Factor, Cd = 3.0

Wind Design (IBC 2018/ASCE 7-16):

Risk Category III
Basic Wind Speed (3 Second Gust) = 110 mph (Ultimate)
Exposure Category = C
Wind Enclosure Classification = Enclosed Structure
Analysis Method = ASCE 7-16 Method 2 Analytical Procedure

MISCELLANEOUS STEEL:

Steel canopy and/or shade structures
Guardrails
Stairs
Elevator Hoist Beams, Spreader Beams, and Guiderail Columns
Ledge angles for stone veneer
Decorative steel elements

SPECIAL INSPECTIONS (PER IBC CHAPTER 17):

Structural Steel Erection
Welding
Bolting
Steel Decking
Concrete
Masonry
Reinforcing
Anchor Bolts
Expansion and Screw Anchors
Epoxy anchors
Soils (by Geotechnical Engineer)

CODES, REGULATIONS, AND STANDARDS

1. THE FOLLOWING CODES, REGULATIONS, AND STANDARDS SHALL BE USED IN THE DESIGN OF THIS PROJECT:
- A. International Energy Conservation Code 2018

B. International Building Code 2018

C. International Mechanical Code 2018

D. International Plumbing Code 2018

E. International Fuel Gas Code 2018

F. International Fire Code 2018

G. International Fuel Gas Code 2018

H. ASHRAE 62.1, latest version

I. ASHRAE 55, latest version

J. National Electrical Code 2017

K. National Fire Protection Association (NFPA)

1. NFPA 13, “Installation of Sprinkler Systems”, 2016 Edition

2. NFPA 14, “Installation of Standpipes and Hose Systems”, 2016 Edition

3. NFPA 20, “Standard for the Installation of Stationary Pumps for Fire Protection”, 2016 Edition

4. NFPA 24, “Standard for the Installation of Private Fire Service Mains and Their Appurtenances”, 2016 Edition

5. NFPA 25, “Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2017 Edition

6. NFPA 72, “National Fire Alarm and Signaling Code”, 2016 Edition

7. NFPA 291, “Recommended Practice for Water Flow Testing and Marking of Hydrants”, 2016 Edition

L. ADA - Americans with Disabilities Act Accessibility Guidelines (ADAAG), U. S. Architectural and Transportation Barriers Compliance Board

M. ANSI/CABO A117.1 - Access and Usable Buildings and Facilities

N. Sheet Metal and Air Conditioning Contractors’ National Association (SMACNA), HVAC Duct Construction Standards, 1995.

O. American National Standards Institute (ANSI).

P. Underwriters Laboratories (UL)

Q. American Society for Testing and Materials (ASTM)

R. American Society of Mechanical Engineers (ASME)

S. ANSI/TIA 568 – Telecommunications Standards (including all sub-standards under 568)

T. ANSI/TIA 569-C – Telecommunications Pathways and Spaces

DIVISION 23 HVAC

1.1 DESIGN CONDITIONS

- A. ASHRAE Fundamentals 2017 Design Conditions (Show Low, AZ):

1. Summer: 90.2°F dry-bulb/ 56.6°F wet-bulb (ASHRAE 0.4% Cooling DB/MCWB)

2. Winter: 9.8°F dry-bulb (ASHRAE 99.6% Heating Dry Bulb)
- B. Indoor Design Conditions:

1. All space temperatures will be controlled to ±2°F of setpoint in table below.

Space Type	Space Temp Summer (Deg °F)	Space Temp Winter (Deg °F)	Space Humidity (%RH)
Sport and Event Spaces	75	70	50% max
Community Spaces	75	70	50% max
Event Support Spaces	75	70	50% max
Admin Support Spaces	75	70	50% max
Restrooms	75	70	50% max
IT/AV	75	70	--
Kitchen	75	70	50% max
Office	75	70	50% max
Storage/MEP	75	70	--

2. The Maple Flooring Manufacturers Association, Inc. (MFMA) recommends that spaces with wood floors be maintained with a temperature range between 55-75 deg-F with coincident relative humidity ranges between 35-50% year-round. The space temperatures and humidity setpoints in the table above are industry standard and additional humidification and dehumidification will not be provided to maintain the MFMA recommendations.

- C. Ventilation Air Requirements:

1. Ventilation air will be provided per International Mechanical Code.

1.2 ENERGY AND SUSTAINABILITY DESIGN CONCEPTS

- A. The following concepts are planned to be implemented into the project:

1. High-efficiency RTUs will be specified.

2. Airside Economizer

3. Demand Control Ventilation (DCV)

4. Variable Speed Fans

5. Duct Static Pressure Reset

6. Supply Air Temperature Reset

1.3 HVAC SYSTEMS

- A. Packaged HVAC System Descriptions

1. The project will utilize packaged HVAC equipment for mechanical heating and cooling as described below.

2. Cooling will be provided by Direct Expansion (DX) systems utilizing condensing units with refrigerant compressors. A minimum of one modulating compressor per system will be provided for capacity modulation and load matching. Condensing units will be air-cooled.

3. Heating will be provided by natural gas heating coils.

4. Packaged Rooftop Units (RTUs)
 - a. Units will be provided with exterior rated casing with insulation, access panels/doors, filters, supply fan with VFD, relief/exhaust fan with VFD, cooling coil with drain pan, heating section, dampers, economizer operation, and unit mounted DDC controls. Units will be mounted on roof curbs.
 - b. Units will be provided with factory-mounted return air and outside air control dampers. Outside airstreams will be provided with airflow monitoring stations for ventilation air control. Space ventilation air will be provided through the RTU outside air intake opening.
 - c. Additional unit options such as heat recovery wheel and hot-gas reheat coil for dehumidification will be provided as indicated in the equipment schedule.
 - d. Single zone VAV (SZ VAV) RTU systems will modulate supply airflow and heating/cooling to meet space temperature and humidity requirements.
 - e. Multi-zone VAV (MZ VAV) RTU systems will modulate supply airflow and heating/cooling to meet duct pressure and supply air temperature setpoints. RTU supply air will be ducted to zone terminal units (VAV, etc.) for space temperature and humidity control.
 - f. RTUs serving the sports courts will be located on the roof.
 - g. RTUs serving spaces other than the sports courts will be located outdoors on grade. Ductwork to/from outdoor units will be located within chases.
 5. FCU DX Split Systems
 - a. Cooling Only, with/without aux heat
 - b. Condensing units to be mounted outdoors.
 - c. Refrigerant piping shall be routed between the indoor and outdoor units and will be insulated.
 6. Dedicated Outdoor Air Systems (DOAS)
 - a. The sports courts will be served by a combination of DOAS units and recirculating RTUs.
 - b. Units will be provided with exterior rated casing with insulation, access panels/doors, filters, supply fan with VFD, relief/exhaust fan with VFD, cooling coil with drain pan, heating section, dampers, economizer operation, and unit mounted DDC controls. Units will be mounted on roof curbs.
 - c. Units will be provided with factory-mounted exhaust air and outside air control dampers. Outside airstreams will be provided with airflow monitoring stations for ventilation air control. Space ventilation air will be provided through the RTU outside air intake opening.
 - d. Additional unit options such as heat recovery wheel and hot-gas reheat coil for dehumidification will be provided as indicated in the equipment schedule.
 - e. Single zone VAV (SZ VAV) systems will modulate supply airflow and heating/cooling to meet space temperature and humidity requirements.
 - f. Demand control ventilation shall be utilized to reduce outside airflow when not needed.
 7. Kitchen Exhaust and Makeup Air System
 - a. Units will be provided with exterior rated casing with insulation, access panels/doors, filters, supply fan with VFD, cooling coil with drain pan, gas heating section, dampers, and unit mounted DDC controls. Units will be mounted on roof curbs.
 - b. Exhaust fans will be provided for Type I and/or Type II hoods. Hoods will be selected and specified by the food service consultant.
- B. HVAC System Requirements
1. The return air path for the facility shall utilize the plenum above the ceiling. The central air handling systems shall be ducted at minimum to each level or zone served. Shafts shall not be utilized as air pathways. Z or U type transfer boots sized at 350 FPM shall be provided in walls above all spaces to communicate with the common plenum. The return air path for the sports courts shall utilize low wall return louvers located in the court.

2. Energy recovery return/exhaust air pathways shall be fully ducted for exhaust portions of the system. Return portions may utilize ceiling plenums as a return/relief air path, however return ductwork shall be installed to the extent necessary to maintain all required pressure relationships in the facility.
3. Fan coil units serving occupied spaces will be provided with MERV 13 filters. Fan coil units serving unoccupied spaces will be provided with MERV 8 filters.
4. RTUs serving occupied spaces will be provided with MERV 13 filters. Units serving only unoccupied spaces (storage, elec, IT/AV, etc.) will be provided with MERV 8 filters.
5. Supply and/or return air duct smoke detectors will be provided on each air handling unit that is over 2,000 CFM or shares a common air plenum over 2,000 CFM as required by local code.
6. All indoor HVAC units with cooling capability will be provided with an auxiliary drain pan with flood detector for unit shutdown and BAS alarm.
7. All outdoor air, exhaust air (not including grease exhaust), and relief air ducts will be provided with a motorized control damper for positive shutoff from the outdoors.
8. Terminal Units
 - a. Supply Air Terminal Units
 - 1) Variable Air Volume (VAV) Units will be provided for each temperature control zone on multi-zone VAV air handling systems with the following features.
 - a) Pressure Independent type with DDC control package
 - b) Provide integral disconnect switch.
 - c) Provide dedicated power to individual terminal units.
 - d) Silicon controlled rectifier (SCR) electric reheat coils to be selected for total pressure drop across box less than 0.3".
 - e) Zone Sizing Criteria
 - f) Max 2500 CFM per box
 - g) Maximum of 2 individual use spaces, such offices, per box
 - h) Dedicated box per multi-use space, such as conference, meeting room, suite, etc.
9. Air Devices – Diffusers, Grilles, and Registers
 - a. Devices to be selected for a maximum pressure drop of 0.1" and maximum NC of 30.
 - b. Air devices mounted in hard ceilings or other similar assemblies without permanent access will be provided with cable operated dampers in the branch duct, similar to Metropolitan Air Technologies RT-250. Cable operated dampers will be provided with adjustment from face of device via cable operator mounted to device.
 - c. Types
 - 1) Slot diffusers, 1" single slot (FL-10) for overhead supply, return, and exhaust air in high-end spaces.
 - a) Provide tape and float type borders for concealed, flush mounting of slots in ceilings.
 - b) Provide factory or field fabricated air plenums on supply and exhaust slot devices. Supply plenums to be internally lined with 1/4" thick closed cell liner insulation. Individual plenums to be a maximum of 4 feet long.
 - c) Linear slot diffusers will be provided by Titus, Krueger, Price or Tuttle & Bailey.
 - d) Sizing Criteria
 - i) Maximum 60 CFM per lineal foot of slot for supply and exhaust.
 - ii) Maximum 30 CFM per lineal foot for return.
 - 2) 24"x24" architectural plaque air devices for supply, return, and exhaust air in non-high end areas with ceilings.
 - a) Aluminum construction in wet areas, kitchens, and concessions.

- b) Sizing Criteria
 - i) Maximum 350 CFM per OMNI supply diffuser, approximately one diffuser per 275-350 square feet.
 - ii) Maximum 600 CFM per OMNI return device, approximately one device per 500-600 square feet.
 - iii) Maximum 500 CFM per OMNI exhaust device, approximately on device per
- 3) Wall and duct-mounted supply, return, and exhaust air grilles in storage, electrical, IT/AV, MEP, and other spaces without ceilings and low-end/no finishes.

C. Emergency Ventilation Systems

- 1. For Stages greater than 1,000 sqft, emergency ventilation shall be provided in accordance with the International Building Code.
 - a. A minimum of two heat activated roof vents shall be provided with an aggregate clear opening area of greater than 5% of the stage area. Roof vents shall be located above the center of the stage and supplemental means shall be provided for manual operation of the ventilator.

1.4 MECHANICAL SPECIFICATIONS

A. Noise Control

- 1. Duct silencers, duct lagging, and/or internal duct liner will be utilized as needed to maintain space noise level criteria. All duct silencer sizing and recommendations will be based on Industrial Acoustics Company, Vibro-Acoustics, Ruskin, or similar approved manufacturer's equivalent product. Silencers should be located three equivalent duct diameters upstream and downstream from fan discharges or inlets, duct fittings or other air-flow discontinuities.
- 2. In general ductwork will be sized in accordance with the table below for noise sensitive areas.

Space NC Rating	Main Duct Airflow (fpm)	Branch Duct Airflow (fpm)
30 to 35	840 to 1020	460 to 540
35 to 40	1020 to 1200	540 to 640

- 3. All ducts, pipe, and conduit penetrations will be sealed air-tight to limit sound propagation.

B. Basic Materials

1. Ductwork

- a. Ductwork will be galvanized steel with G90 coating, unless noted otherwise in schedule below. Provide galvanized finish for ductwork to be painted.

Systems	Materials
Type 1 Hood Grease Ducts:	Minimum 16 gauge carbon-steel sheet, fully welded
Type 2 Hood Ducts:	Stainless Steel or Aluminum
Exterior Duct:	Minimum 18 gauge with all joints sealed airtight

b. Duct Pressure Class

- 1) Supply Air Ducts: 3 inches water gauge.
- 2) Primary Supply Air Ducts (upstream of terminal boxes): 4 inches water gauge.
- 3) Secondary Supply Air Ducts (downstream of terminal boxes): 2 inches water gauge
- 4) Return and Outdoor Air Ducts: 2 inches water gauge, negative pressure.
- 5) Exhaust Air Ducts: 2 inches water gauge, negative pressure.

c. Duct Sealing

- 1) All ductwork will be sealed to SMACNA Seal Class A.

d. Ductwork Insulation

Service	Materials
Supply Air Ducts	1-1/2" thick wrap or 1" acoustic duct liner
Outside Air Ducts:	3" thick wrap insulation

Kitchen Grease Duct: 2-layer, 2-hour rated UL fire-rated wrap insulation

- 1) Insulate the following additional duct systems:
 - a) Return Air ductwork within 10 feet of exterior roof and wall penetrations.
 - b) Exhaust and Relief Air Ductwork:
 - c) Within 10 feet of exterior roof and wall penetrations.
 - d) Downstream of heat recovery device (wheel, plate, heat pipe, etc.) to exterior discharge outlet.
 - e) HVAC plenums and unit housings not pre-insulated at factory or lined.
- 2) Externally insulate concealed ductwork with foil backed fiberglass.
- 3) Internally line ductwork exposed to public view and concealed ductwork for sound attenuating purposes.
- 4) Provide aluminum jacket on ductwork with wrap insulation exposed to the outdoors.
- 5) All ductwork exposed to public view shall be painted.
- e. Supply, return, and outside air ductwork will be sized at 0.08 inch wg/100' of duct, unless otherwise noted.
- f. General exhaust ductwork will be sized at 0.08 inch wg/100' of duct, unless noted otherwise.
- g. Flexible duct should only be used in branch duct applications leading to diffusers or grilles, should be at maximum 5-feet in length, and include only one 90-degree bend in its run.
- h. Volume dampers will not be integral with diffusers or grilles. Dampers will be located at the take-off of the trunk or main duct.
- i. Lined ductwork and one 90-degree lined elbow will occur between balancing damper and diffuser at noise critical spaces ($NC \leq 30$).
- j. Grease exhaust ductwork serving Type I cooking hoods will be provided with access doors per code. Grease ducts will be sloped at 1/4" per foot for distances less than 75' and at 1" per foot for distances greater than 75'. Low point drains consisting of 2" black steel pipe with isolation valve will be provided at all low points in grease duct system. Duct will be sized for approximately 2000 FPM.
 - 1) Access ports for cleaning will be provided every 20 feet horizontally, at all changes in direction (elbows), and at every level vertically per code. Permanent access must be provided to access port locations.
 - 2) Factory built and listed grease ductwork may be used at contractor's option.
 - 3) Grease exhaust ductwork routed exterior to the building will be 18 gauge welded stainless steel.

C. Bases and supports

- 1. Concrete housekeeping pads will be provided for all floor mounted mechanical equipment. Minimum depth will be 4". Pad depths will account for condensate drain p-trap depth requirements.

D. Electric Motors

- 1. Provide single and three phase motors in compliance with NEMA design B.
- 2. Motors smaller than 3/4 hp: 120V / 1-phase / 60Hz.
- 3. Motors 3/4 hp and larger: 480V / 3-phase / 60Hz or 208V / 3-phase / 60Hz.
- 4. For motors 1 hp and above, provide "premium high efficiency" motors.
- 5. All motors less than 1hp and greater than 1/12hp will be Electronically Commutated Motors (ECM).
- 6. Provide inverter duty motors when provided with variable frequency drive.
- 7. Motors located in exterior locations will be totally enclosed fan cooled type.

E. Identification

- 1. Ductwork

- a. Plastic engraved duct markers will be provided indicating duct service, airflow direction, and system served. Duct marker will be provided in colors based on air type.
- F. Vibration Isolation
 - 1. Spring and/or neoprene isolators will be provided for all HVAC equipment with rotating parts, excluding packaged equipment with internal isolation.
 - 2. Provide flexible duct, piping, and conduit connections at all equipment with external isolation.
 - 3. All piping connected to externally isolated equipment will have spring isolated piping hangers for a minimum of 50 feet horizontal from the equipment served.
 - 4. Piping installed below or adjacent to noise sensitive areas will be supported on spring and neoprene hangers or mounts as applicable.
 - 5. Vibration isolation will be provided per the following schedule:

Service	Isolator Type
Suspended AHU/FCU/Fans:	2" spring hangers
Suspended Unit Heaters:	2" spring hangers
Roof Exhaust Fans:	Continuous waffle pad between curb and unit
Rooftop Units:	Isolation Curb with 2" spring mounts
- G. Variable Frequency Drives (VFDs)
 - 1. Individually mounted, combination disconnect and adjustable frequency drives will be provided for all fan and pump motors 1hp or greater.
 - 2. 3 phase full wave diode bridge converter.
 - 3. IGBT transistor to provide pulse width modulate (PWM) output wave form.
 - 4. Provide with dual DC bus chokes or AC line reactors, as required, for a total input impedance of 5% or better.
 - 5. Unit will incorporate solid state or thermal overloads, drive protection, and speed protection.
 - 6. VFD enclosures will be NEMA 1 for interior units and NEMA 3R for exterior units.
- H. Building Automation System
 - 1. The building will be provided with a fully automated Building Automation System (BAS) with Direct Digital Control (DDC) for all HVAC equipment.
 - 2. The BAS system will be an open protocol, web-based setup capable of being adjusted/monitored through a web-based application. The system will be password protected but can be adjusted from any computer with an internet connection. The system will be graphical in nature and represent the as-built building floor plan.
 - 3. All actuators will be electric.
 - 4. The following non-mechanical systems will be connected to the Building Management system for monitoring and/or control:
 - a. Domestic water meters
 - b. Domestic hot water heating systems including water heaters and recirculation pumps
 - c. Domestic water booster pumps
 - d. Sewage ejectors
 - e. Sump pumps
 - f. Elevator sump pumps
 - g. Water softeners
 - h. Electrical meters
 - i. Leak detection
- I. Test and Balance, System acceptance testing
 - 1. Air system balance will be provided by an independent contractor that is NEBB certified.

- 2. Air systems will be balanced to within 10% of design values at individual terminal devices and within 5% of design values at main ducts and air handling equipment.
- 3. Grease ductwork will be tested per local code using light or water to test for leaks.

PLUMBING

A. Overview

1. A dedicated domestic water entry with an individual water meter and backflow preventer will be provided. Sanitary waste will exit the building and connect to the sanitary main. The building will utilize architectural scuppers with exposed downspouts discharging onto grade. Energy efficient equipment and low flow plumbing fixtures will be provided. Domestic hot water will be provided by gas fired tank-type water heaters. A small incline recirculation pump will circulate hot water.
 - a) Natural gas will be provided for heating water and commercial kitchen as needed.
 - (1) Commercial kitchen gas loads to be determined by the kitchen design.

B. Events Center

1. Domestic water will enter the building in mechanical room. An interior backflow preventor will be provided immediately upon daylighting in room.
2. Sanitary sewer line will exit the building with double cleanout.
3. Sanitary main size is projected to be 8”.
4. Grease conveying pipelines shall be heat traced to prevent coagulation of grease in pipelines.
5. Electric water coolers with bottle fillers will be located on first floor pre-function area(s) and second floor track.
6. General plumbing fixtures included:
 - a) Wall mounted water closets with automatic battery-powered flush valves.
 - b) Urinals will utilize automatic battery-powered flush valves.
 - c) Wall hung lavatories with hardwired sensor faucets with insulated p-trap covers for access.
 - d) All other fixtures using hot water will be provided with a point of use thermostatic mixing valve.
 - e) Floor drains will be provided at each restroom.
 - f) The kitchen will be provided with convenient area floor drains, 140 deg hot water, floor sinks, and a grease waste system. A large plastic buried grease interceptor will serve the kitchen located for on-site with associated test port. The interceptor will be in a vehicle assessable area for regular maintenance and cleanout.
 - g) All floor drains and floor sinks will be provided with trap seals.
 - h) Bar/Concessions will incorporate a hand sink for convenience hand washing. Grease producing equipment and washing will be incorporated in the kitchen. Floor sink will be provided for water/liquid dispensing equipment.

C. Building Support

1. Restrooms will be provided isolation valves for water isolation and floor drains.
2. Janitors room will have mop sink, backflow preventer for chemical equipment connection, and convenient area floor drain.
3. Fire riser room will have a convenient floor drain.
4. Rooms housing water heaters will have a convenience floor drain for heater maintenance.

2. PLUMBING FIXTURES

- A. Plumbing fixture manufacturers will be Chicago & Sloan. All plumbing fixtures will be High Efficiency Type to achieve project sustainability criteria, and maintain the following water consumption values:

Water Closet (flush valve)	1.28 GPF
Urinal	.125 GPF
Lavatory	0.5 GPM
Sinks	1.5 GPM

- B. Water closets will be wall hung vitreous china with Chicago Faucets or Sloan battery sensor operated electronic flush valves.
- C. Urinals will be wall hung vitreous china with Chicago Faucets or Sloan battery sensor operated electronic flush valves.
- D. Lavatories will be vitreous china wall mounted or under-counter type with battery sensor faucets by Chicago, Delta or Zurn, or Chicago Faucets with 0.5 gpm flow restrictors and ADA insulation kits.
- E. Sinks in break rooms will be stainless steel single or double compartment type with ADA compliant faucets.
- F. Janitor’s mop sinks shall be 24” x 24” x 10” terrazzo floor mounted type. A separate water stub-out will be provided for chemical mixer.
- G. Water fountains shall be Elkay electric water coolers with bottle filling stations.
- H. General-purpose floor drains with removable nickel bronze grates will be in each toilet room, including toilet rooms with one water closet and lavatory.
- I. Recessed box type cold-climate wall hydrants will be on the exterior of the building near each entrance or at a maximum of every 100 feet around the perimeter of the building.
- J. Fixtures will be provided with chromium plated brass trim and individual stop valves.
- K. Appropriate 'barrier free' fixtures will be provided in accordance with the "Americans with Disabilities Act" (ADA). Where shown on architectural plans, fixtures will be mounted at appropriate accessible elevations.
- L. Floor drains for general use will be provided with removable nickel bronze grates and trap guards.

3. DOMESTIC WATER SYSTEM:

- A. Domestic hot and cold water will be provided for all domestic plumbing fixtures and devices that require potable water. An existing central Reduced Pressure Zone assembly (RPZ) serves all buildings on site. A domestic cold water meter shall be provided at each building for main service.
- B. Booster pump is recommended given the high demand during sports events.
- C. Type L copper tubing will be used for above ground domestic hot, hot water return, and cold-water piping with soldered joints.
- D. The cold water distribution piping will be sized for a maximum velocity of 8 FPS.
- E. Quarter turn ball valves with solid metal stem for isolation valves will be used. For pipe sizes 2-1/2” and over butterfly valves will be used.
- F. Isolation valves will be provided throughout the facility to enable servicing of any part of the facility without interruption of plumbing services to adjacent spaces. In addition, isolation valves will be provided on mains and branches to isolate piping sections for maintenance.
- G. Water hammer arresters will be installed on all domestic water piping in accordance with PDI (Plumbing & Drainage Institute) Standards.
- H. All interior exposed insulated piping & fittings will be provided with PVC jackets. Jackets will be plenum rated where applicable.
- I. All piping will be identified in accordance ASME A13.1 with preprinted self-adhesive or self-banding markers spaced at a maximum of 50’ or 25’ in congested areas.

4. DOMESTIC HOT WATER:

- A. Gas fired storage type water heaters will be installed.
 1. Commercial kitchen will have a dedicated gas fired water heater.
- B. Point-of-use ASSE listed thermostatic mixing valves will be installed at the plumbing fixtures to dispense hot water at the required lower temperatures
- C. Kitchen will be serviced with 140°F water with thermostatic mixing valves at hand sinks.
- D. Hot water balancing valves will be installed to maintain adequate water temperature in all sections of piping.

- a. Flow Control Valves: Lead free stainless steel 2-piece with removable flow control cartridge and screwed ends or thermostatically self-adjusting all stainless valve with union connection and two isolation valves.
- b. Hot water recirculation loop will be utilized to maintain hot water for all fixtures in facility.
- E. The hot water distribution piping will be sized for a maximum velocity of 5 FPS.
- F. All domestic hot, and hot water return piping will be insulated with minimum 1” thick fiberglass insulation with “all service jacket”.
- G. All insulating materials, adhesives, coatings, etc., will have a flame spread of 25 or less and smoke developed rating not higher than 50. All containers for mastics and adhesives will have U.L. Label.

5. SANITARY, WASTE AND VENT SYSTEM:

- A. Cast iron pipe and fittings with Heavy duty corrugated stainless steel couplings, will be used above grade for Waste and Vent piping. Schedule 40 solid wall PVC piping with solvent cement fittings will be used below grade for Waste and Vent piping. PVC pipe and fittings by JM Eagle will not be specified. Sanitary, waste, and vent system will be sized for the demand anticipated during sporting event(s).
- B. Floor drains shall be provided with trap guards where required.
- C. Cleanouts shall be provided on ground level to facilitate maintenance.
- D. Double cleanouts will be located at the exterior of the facility.

6. NATURAL GAS SERVICE:

- A. Natural gas piping will be extended to a new gas meter, regulator assembly, and seismic valve which will be provided by the local gas company at the new building in a location coordinated with the Architect. The downstream pressure of the utility company supplied and installed gas meter and regulator assembly will be 2 PSI Point of use gas pressure regulators vented to the exterior of the building.

7. STORM WATER DRAINAGE SYSTEM:

- A. A gutter storm drainage system will be provided for the facility. The storm drainage system will be sized based upon the local rainfall rate of 3 inch per hour. Downspout boots will be provided to connect to civil storm drainage underground.



PART 1 - ELECTRICAL

1.1 NORMAL POWER BASIS OF DESIGN:

- A. Power requirements are estimated as follows:
 - 1. General power is estimated at approximately 24 W/Sq Ft. This includes HVAC, Interior/Exterior Lighting, Miscellaneous Power, Kitchen Power, General Power, Miscellaneous Motors, & Elevators.
- B. A single 3,000A, 480Y/277V, 3-phase, 4-wire service entrance shall be provided for the facility. Arizona Public Service (APS) shall furnish and install the outdoor pad-mounted transformer, including all underground primary feeders, and shall install the secondary service conductors extending from the transformer to the customer’s service entrance. The main switchboard, furnished and installed by the Electrical Contractor, shall include an APS-approved CT section designed to accommodate utility-owned metering equipment. APS shall furnish and install the CTs and all metering components within this section. The final metering location, including the CT compartment within the switchboard, shall be submitted to APS for review and approval. The Electrical Contractor shall furnish and install the complete primary conduit system, as well as all secondary service conduits routed from the transformer to the main switchboard in the Electrical Room. In addition, the Electrical Contractor shall furnish and install all required concrete pads for APS equipment, along with the main switchboard, grounding system, and all associated service entrance equipment.
- C. Distribution of power shall be from a 480Y/277-volt circuit breaker switchboard located in the Electrical room. From there, 480Y/277-volt branch circuit panelboards and 208Y/120-volt branch circuit panelboards shall be installed at strategic locations throughout the facility for efficient distribution of power. Main switchboard and panelboards serving sensitive equipment and exterior lighting shall be equipped with surge protective devices (SPD) to mitigate voltage transients caused by lightning, utility switching, and electro-mechanical or electronic equipment.

1.2 EMERGENCY BACKUP POWER BASIS OF DESIGN

- A. Emergency and standby power will be supplied by a 450 KW, 480Y/277 V, 3-phase, 4-wire diesel generator. The generator will be connected to a 480Y/277 V, 3-phase, 4-wire NEMA 3R generator distribution board with separate sections for life safety, legally required, and optional standby systems. Both the diesel generator and the generator distribution board will be located in the exterior generator yard.
- B. The generators shall be provided complete with level 2 sound attenuating enclosure, skid-mounted 400-gal fuel tank, starters, exhaust system, safety controls, platform in-front of generator, power distribution equipment, and batteries with chargers as required.
- C. Engine generator will have an on-site fuel supply sufficient to operate the system for a minimum of 12 hours at full operating capacity.
- D. The 700, Life Safety, loads shall be comprised of emergency lighting, fire pump, fire alarm systems, and voice evacuation system. Fire pump shall have dedicated feeder from main emergency distribution board. Life Safety 480V panelboard, dry-type step-down transformer, and 208V panelboard will also be provided.
- E. The 701/legally Required 480V panelboard, dry-type step-down transformer, and 208V panelboard will be provided.
- F. The 702, Optional Stand-by, loads shall be comprised of any building systems needing back-up power, such as security system equipment, motorized gates, and IDF room electrical loads. Optional Standby 480V panelboard, dry-type step-down transformer, and 208V panelboard will be provided.
- G. The generator shall conform to the provisions of NFPA 110, Standard for Emergency and Standby Power Systems, Type 10, Level 1, Class 75.
- H. Automatic Transfer Switches shall meet all UL and NFPA requirements for Emergency/ Level 1 installations and shall be 4-pole with bypass isolation
- I. A remote generator and ATS annunciator panel will be provided in the electrical room for monitoring of the generator and transfer switches.

1.3 GENERAL:

- A. Lighting systems for the interior spaces shall be generally LED and powered at 277 volts. Exterior lighting shall be LED and powered at 480 volt or 277 volts depending on load density.
- B. Convenience power, specialty lighting and computer equipment shall be served at 208 volts or 120 volt as required.
- C. Motor loads 3/4 HP and greater shall be powered at 480 volts. All motors shall meet ASHRAE 90.1 and EMO Energy Conservation Policy #060 (Appendix 2) and shall have a minimum service factor of 1.15.
- D. 120-volt outlets for outside events. This will include parking lot Christmas lights, festivals, farmer's market, etc. This also include the plaza spaces.
- E. Receptacles will be provided in each space per program requirements. At a minimum, each regularly occupied space will have at least one receptacle per wall.
- F. Approximately (8) retractable electrical bleachers, each with power rated at 480 V, 3-phase, 1 HP.
- G. (8) power locations, each rated 100 A, shall be served from a 208/120 V, 3-phase, 4-wire panel for event show use/ company switch.

1.4 ELECTRICAL REQUIREMENTS:

- A. Quality Assurance:
 - 1. Independent testing to ensure compliance with the standards and associations of the industry including UL, IEEE, NEMA, NFPA, ICEA, ASTM, OSHA, ANSI, ETL, NETA, where applicable. The testing firm will be a qualified independent testing agency.
- B. Electrical testing:
 - 1. Performance testing of equipment and system installation and operation will be by an accredited testing firm in conformance with criteria by the International Electrical Testing Association.
 - 2. Electrical Equipment and Systems Tested: The following tests will be performed on equipment and systems listed, data tabulated and submitted with equipment submittal (factory) or acceptance checkout (contractor).
 - a. Electrical equipment: All functions.
 - b. Cables (600V): Insulation and continuity.
 - c. Motors: Phase, rotation, characteristics.
 - d. Grounding: Resistance.
 - e. Fire Alarm System: Per NFPA.
 - 3. Electrical Start-up and Commissioning: Electrical system and components will be fully functional, operational, and verified prior to final acceptance by Owner.

1.5 ELECTRICAL SYSTEM COMPONENTS:

- A. Receptacles:
 - 1. All receptacle on this project shall be temper resistant type.
 - 2. All 20 amp, 120V receptacles in restrooms, locker rooms, janitor closets, mechanical rooms, exterior locations, and counter tops with in 6' of sinks will be GFCI type.
 - 3. All receptacles rated for 50 amps or less on 120 volt or 208 volt single phase circuits and all receptacles rated for 100 amps or less on 208 volt three phase circuits will have GFCI protection for personnel when located in food preparation areas.
 - 4. Receptacles for general service will be 20-amp, heavy-duty, grounding type.
 - 5. Receptacles for maintenance, special equipment, and within 25'-0" of the HVAC equipment will be provided as required by Code.
 - 6. Mounting heights shall be per ADA requirements.
- B. Grounding:
 - 1. The electrical service and all switchboards, transformers, panelboards, automatic transfer switches (ATS), motor starters, and separately derived systems will be grounded per the NEC.
 - 2. All devices will contain an equipment ground per NEC.

- 3. Provide a dedicated isolated ground for A/V equipment and company switches/show-use switches.
- 4. Provide a grounding conductor from main AC service panel board to the Telecommunications Main Grounding Bar (TMGB). Division 27 is responsible for all other Telecommunications grounding requirements.
- C. Equipment Connections:
 - 1. Electrical power connections will be made to all equipment requiring line voltage power including but not limited to equipment such as elevators, electrically operated doors, Audio Video/AV systems, and tele/data/AV racks. Furnish of all electrically associated devices such as disconnect switches, lock-out switches, and relays.
 - 2. (8) Electrical connections will be provided for show power use.
 - 3. Main Kitchen and concession Kitchen equipment connection
- D. Mechanical and plumbing Equipment Connections:
 - 1. Electrical power connections will be made to all mechanical and plumbing equipment requiring line voltage power including but not limited to fans, water heaters, and dampers. Furnish all electrically associated devices such as disconnect switches, relays, contactors, starters, and lock-out switches that are not furnished under the Mechanical, Plumbing and Fire Protection Sections.
- E. Switchboards:
 - 1. The low voltage main switchboard shall be completely assembled NEMA Class PB 2, front accessible with copper bus bars, full neutral bus, and separate ground bus. All bus work shall extend the full height of the panel without reduction and shall be braced to withstand available RMS symmetrical fault currents. Protective devices shall be provided with approved barrier between sections and extended load terminals.
 - 2. Main and feeder devices shall be circuit breakers and fully rated for available fault current.
 - 3. Main breakers shall be low voltage AC power type, dead front, stored energy with solid state trip devices. Arcing contacts shall be renewable.
 - 4. Rating will be 3 pole, 600V or 240V as appropriate, 60 cycle with frame size, trip rating, system, voltage, and fully rated for available fault current.
 - 5. Provide an indicator visible from the front of the unit to indicate whether the breaker is open or closed.
 - 6. Provide a mechanical trip button accessible from the front of the door to trip the breaker.
 - 7. Unless otherwise shown on the drawings, breakers 1600 ampere frame size and less shall be manually operated. Breakers larger than 1600 ampere frame size shall be electrically operated.
 - 7. Include provisions for padlocking the breaker in the open position.
 - 8. Trip devices shall have the following features:
 - a. Trip device in each pole.
 - b. Mechanically and electrically trip free.
 - c. Long time element with adjustable pick-up and selective maximum, intermediate, and minimum time delay bands.
 - d. Short time element with adjustable pick-up and selective maximum, intermediate, and minimum time delay bands.
 - e. Ground fault element with adjustable pick-up and selective maximum, intermediate, and minimum time delay bands.
 - f. Final settings of pick-up and time bands shall be as reflected by the Electrical System Protective Device Study.
 - 9. Feeder devices shall be UL listed and labeled molded case circuit breakers, in accordance with the NEC, as shown on the drawings, and as herein specified.
 - 10. Provide molded case, solid state adjustable trip type circuit breakers. Breakers which have same rating shall be interchangeable with each other. Trip units shall have field adjustable tripping characteristics as follows:
 - a. Ampere setting (continuous).

- b. Long Time band.
 - c. Short time trip point.
 - d. Short time delay.
 - e. Instantaneous trip point.
 - f. Ground fault trip point.
 - g. Ground fault trip delay.
11. Provide each switchboard with extra space for a minimum of three 200A, three-pole circuit breakers for future spare capacity.
12. Circuit breakers where the highest continuous current trip setting is rated at or can be adjusted to 1200A or higher will be provided with energy-reducing maintenance switches that reduces the arc flash clearing time when placed into maintenance mode.
13. Circuit breakers where the highest continuous current trip setting is rated at or can be adjusted to 1000A at 480-volts will be provided with ground fault protection.
- F. Electrical metering:
- 1. Provide electrical metering as required by the unitality company.
 - 2. Switchboards will be equipped with Powerlogic meters. Provide one meter for the HVAC loads.
- G. Panelboards – General:
- 1. Provide standard manufactured products. All components of panelboards shall be the product and assembly of the same manufacturer. All similar units of all panelboards to be of the same manufacturer.
 - 2. Branch circuit panelboard will be:
 - a) 480Y/277 volt panelboards shall be equal to Square D type "NF".
 - b) 208Y/120 volt panelboards shall be equal to Square D type "NQ".
 - 3. Distribution Panelboards shall be equal to Square D type "ILINE".
 - 4. Distribution panelboard breakers shall be the thermal magnetic type, quick-make, quick-break, trip indicating, ambient compensated bolt-in type.
 - 5. Typed directories shall be provided in each panelboard. Main breakers shall be provided where required by code.
 - 6. A minimum of 20% spare circuit breakers shall be provided in each panelboard.
 - 7. Panels shall be dead front safety type.
 - 8. Bussing shall be copper and located in the rear of the panelboard cabinet.
 - 9. All new panelboards shall be completely factory assembled with molded case, bolt-on circuit breakers.
 - 10. Panels shall have main breaker or main lugs, bus size, voltage, phase, top or bottom feed, and flush or surface mounting as applicable to design.
 - 11. Panelboards shall have the following features:
 - a. Non-reduced size copper bus bars and connection straps bolted together and rigidly supported on molded insulators. Bus bar taps for panels with single pole branches shall be arranged for sequence phasing of branch circuit devices.
 - b. Full size neutral bar, mounted on insulated supports.
 - c. Ground bar with sufficient terminals for all grounding wires.
 - d. Panelboards shall be labeled with a UL short circuit rating and shall be fully rated. Series ratings will not be allowed.
 - e. Buses braced for the available short circuit current, but not less than 10,000 amperes symmetrical for 208Y/120 volt panelboards and 14,000 amperes symmetrical for 480Y/277 volt panelboards.

- f. All breakers arranged so that it will be impossible to substitute a 2-pole breaker for two single pole breakers, and a 3-pole breaker for three single pole breakers, when frame size is 100 amperes or less.
 - g. Where designated on panel schedule as "space", include all necessary bussing, device support and connections. Provide blank cover for each space.
 - h. In two section panelboards, the main bus in each section shall be full size. The first section shall be furnished with sub-feed lugs on the line side for cable connections to the second section. Panelboard sections with tapped bus or crossover bus shall not be accepted.
 - i. Panelboard covers shall be hinged with piano style.
- H. Transformers (480 Volt, 3-phase, 3-wire primary to 208Y/120V, 3 Phase, 4 Wire secondary):
- 1. Dry type, ventilated, 220°C insulation system temperature class.
 - 2. Copper windings.
 - 3. NEMA standard voltage taps.
 - 4. NEMA standard sound ratings.
 - 5. Transformers serving AV or other specialty equipment will be isolated or will be K-Rated as required by the specialty system requirements
- I. Surge Protection Devices:
- 1. Surge protection devices will be installed on main switchboards, emergency panelboards, distribution boards and panelboards serving sensitive electronic equipment, and panelboards directly serving roof mounted HVAC equipment and exterior light fixtures will be equipped with secondary level SPD protection. Surge protection devices will be mounted integral to switchboards and panelboards.
- J. Disconnect (Safety) Switches:
- 1. Disconnect switches will be heavy duty type with NEMA enclosure rating as required for the environment in which it is installed.
 - 2. Disconnect switches will be horsepower rated, single throw, double throw, fused, or non-fused switches as required.
 - 3. Accessories such as equipment ground kit, neutral kit, auxiliary contact kits, and control power will be provided as required.
- K. Starters and Controls:
- 1. All temperature control and mechanical equipment interlock wiring, raceways and associated devices shall be provided by the Mechanical Contractor or Temperature Controls Contractor. All alarms, plumbing and fire protection control and equipment interlock wiring, raceways and associated devices shall be provided under this Section. All fire detection, alarm and communications wiring, raceways and associated devices shall be provided under this Section.
 - 2. Magnetic starters shall be combination type complete with circuit breaker disconnect, auxiliary contacts, overload relays, individual fused control transformer, hand-off-automatic selector switch and red "run" pilot light.
- L. Cables and conductors
- 1. Cable and wiring shall be 75°C rated insulation, except as noted below, copper conductors and color coded.
 - 2. Lighting and receptacle branch circuit conductors #10 and smaller shall be solid copper, type "THWN" or "THHN". Minimum size shall be #12 AWG, except control wiring may be #14 AWG, type "THHN".
 - 3. Conductors #2 and larger shall be stranded copper with "THWN", "THHN" or "XHHW" insulation.
 - 4. Metal-Clad cable type "MC" will not be allowed except for lighting fixture whips limited to 6 foot lengths.
 - 5. Final wiring connections to motors and dry type transformers shall be run in flexible metal conduit. Liquid tight flexible conduit shall be used in wet locations or where exposed to the weather. Flexible conduits shall be used for connections to vibrating or rotating equipment.

M. Raceways and Conduit Systems

- 1. Unless otherwise specified herein, all wiring shall be installed in color coded conduit.
- 2. Conduit size will be in accordance with the NEC, but not less than 3/4” for all above ground installation and 1-inch for all underground installation, unless otherwise shown. Where permitted by the NEC, ½” flexible conduit may be used for tap connections to recessed lighting fixtures.
- 3. Conduit shall be rigid, galvanized, heavy wall steel, intermediate metal conduit or rigid aluminum for all raceways where subject to damage, all stub-ups in concrete, all stub-outs thru concrete walls or from slabs, or where exposed to weather . Aluminum conduit shall not be buried in concrete or directly in earth.
- 4. Electrical metallic tubing (EMT) shall be allowed indoors in dry areas where not subjected to damage. EMT shall not be installed in slabs on grade, underground, building exterior, or where prohibited by Code, in which case rigid metallic conduit as described above shall be used.
- 5. PVC conduit may be used for underground conduit runs in the horizontal portion only. Rigid metallic conduit shall be required for elbows and vertical transitions for all underground conduit installations.
- 6. Rigid steel conduit shall have steel or malleable iron threaded couplings, locknuts, bushings, and elbows.
- 7. Rigid aluminum conduit fittings shall have malleable iron, steel, or aluminum alloy threaded couplings, locknuts, bushings, and elbows. Zinc or cadmium plate iron or steel fittings shall not be allowed. Aluminum fittings containing more than 0.4 percent copper shall not be allowed.
- 8. Electrical metallic tubing fittings shall comply with the following:
 - a. Raintight or steel type using a split corrugated compression ring and tightening nut or stainless steel locking disc.
 - b. Steel set screw fittings are not permitted.
 - c. Indenter, drive-on and pressure cast or die-cast type connectors or couplings are not permitted.
- 9. Conduit supports, couplings and fittings, pullboxes and other wiring materials and devices shall be provided as required.

N. Light Switches, Receptacles and Coverplates:

- 1. Lighting switches shall be quiet type, toggle or key type, heavy duty specification grade, ivory; Hubbell #1221 Series, or approved equal.
- 2. Low voltage light switches will be by the same manufacturer as and compatible with the lighting control devices or control system being used.
- 3. Duplex receptacles shall be specification grade, grounding type, ivory; Hubbell #5362, UL verified to Federal Spec. WC596-F, or approved equal.
- 4. Cover plates for switches and receptacles will be UL listed.
- 5. Floor boxes and poke-thrus will be flush mounted with wiring devices mounted recessed below finish floor level for meeting and/or conference rooms and in floor service fittings in concourse or open areas.
- 6. Wiring devices, cover plates, and floor box / poke-thru cover plate finishes will be as directed by the Architect.
- 7. Damp location cover plates for wall devices will be UL listed wet location die-cast, gasketed self-closing cover.
- 8. Wall plates for switches and receptacles shall be UL listed brushed stainless steel type 302.. Oversize plates shall not be acceptable.
- 9. All plates for multiple gang requirements shall be one-piece combination.
- 10. Floor service fittings shall be combination type (duplex receptacle and telephone service), back-to-back design, and extruded aluminum.

O. Concrete pads”

- 1. Concrete housekeeping pads will be provided for floor and grade mounted electrical equipment.
- 2. Concrete pads complying with utility company requirements will be provided by the contractor for exterior pad mounted utility transformers.

P. Electrical Identification:

- 1. Sign(s):
 - a. Black letters on white background.
 - b. Text size 1” height, Arial font.
 - c. Uniform sign size to coordinate with maximum amount of text.
 - d. When installed on electrical cabinets or meter panel, provide attachment with double-sided stick tape over a minimum of 50 percent of the backside of the sign (3M 200MP or equal). Do not drill into or penetrate in any way the electrical cabinets or meter panel.
- 2. Nameplates:
 - a. White letters on black background.
 - b. Use 1/4” letter height, except inside breaker panels use 1/8” letters for identifying individual breaker number, function, equipment and loads.
 - c. Uniform sign size to coordinate with maximum amount of text.
 - d. Text: Label text with common name of each piece and additionally with the unique identifier lettering shown on the as-built electrical drawings.
 - e. Mount on or adjacent to each device for interior items. Mount on the inside of access panels for exterior located items.

1.6 LIGHTING SYSTEMS:

- A. General Requirements: Illumination levels for all spaces shall be as recommended by IES standards of good practice. Illumination levels referenced are maintained levels measured at 30” AFF or at an actual work surface and represent an average level for the area.

TABLE 1 - LIGHTING CRITERIA

Room Description	Light Level	General Illumination			Notes. Emergency Lighting Required
		Lamp Type	Switching Method	Lamp Type	

PART 1 - DIVISION 21 – FIRE PROTECTION**1.1 UTILITY SERVICES**

- A. The design of the fire protection utility services beyond five feet from the building will be by the civil engineer. Henderson Engineers will work in conjunction with the civil engineer to develop the fire protection utility entrance(s) into the building.
- B. Based on preliminary flow test data dated 10/16/2025, available water pressure in the vicinity of the project is 100-psi static, 80-psi residual at a flow of 2216 GPM.
- C. It is recommended that a new flow test be performed to ensure accurate information. Flow test data shall include:
 - 1. Three hydrant flow test in accordance with NFPA 291.
 - 2. Test location, date, time
 - 3. Name and phone number of witnesses and staff present
 - 4. General direction of water supply from municipal tanks/pumps
 - 5. To scale site map of the hydrant test layout including:
 - a. Location of one (1) test (static/residual) hydrant
 - b. Location of two (2) flow hydrants
 - c. Elevation of all three hydrants
 - d. Size and routing of water mains serving the hydrants
 - e. North arrow
 - 6. Flow Hydrant Data
 - a. Flow orifice size and quantity
 - b. Flow orifice coefficient of discharge
 - c. Pitot pressure
 - d. Resultant flow
- D. Once complete flow test data is available, the sizing of the fire protection service line and fire pump can be completed.

1.2 FIRE WATER SERVICE:

- A. A minimum 8-inch, cement lined ductile iron or CPVC fire protection service line will be extended into the building from a point 5 feet outside the building line. An approved backflow preventer with monitored OS&Y valves will be installed in the fire service line inside the building.

1.3 FIRE SPRINKLER SYSTEM

- A. The sprinkler system will be designed and installed in accordance with the requirements of the referenced building and fire codes. Additional design requirements will be in accordance with the applicable National Fire Protection Association (NFPA) Standards.
- B. The fire sprinkler system design and components shall also comply with Timber Mesa Fire & Medical District code amendments.
- C. At this time, it is not anticipated that the requirements of FM Global will be applicable to this project. If the building is insured by FM global, additional design requirements will need to be included.
- D. All portions of the building will be provided with an automatic fire sprinkler system. The building shall utilize a combination sprinkler/standpipe system which shall be supplied by the municipal water distribution system supplemented by a fire pump.
- E. All heated areas of the building will be provided with a wet-pipe sprinkler system, hydraulically designed in accordance with NFPA 13. The fire sprinkler system will be supplied by the fire protection service and fire booster pump.
- F. Any covered patios or overhangs of combustible construction shall be provided with dry sidewalls where possible or an automatic dry sprinkler system.

- G. Provide a dry-pipe sprinkler system for un-heated spaces and other areas of the building subject to freezing including the loading docks and canopies, mansards, and balconies. Portions of systems subject to freezing or temperatures below 40° F shall be protected against freezing as required by NFPA 13.
- H. Provide dry, concealed pendent type sprinklers connected to the overhead wet-pipe system within walk-in cooler/freezers.
- I. Where provided, dry-pipe systems shall be filled with compressed nitrogen.
- J. Wet system risers will be limited to 52,000 ft² maximum for Light and Ordinary Hazard areas and 40,000 ft² for Extra Hazard areas. Dry sprinkler system size shall be in accordance with NFPA 13 and be determined based on available delivery times to be determined by the installing contractor.
- K. All fire protection system water supply control valves on the system side of the fire-service entry shall be equipped with electronically supervised control valves. Dry sprinkler system riser(s) (as required) shall be equipped with a water flow alarm pressure switch and low/high air pressure supervisory switch. The wet sprinkler system(s) shall be equipped with a waterflow switch.
- L. All wet pipe sprinkler systems shall be provided with an air release valve utilizing a UL Listed automatic valve.
- M. All equipment shall be UL listed.
- N. Design Criteria
 - 1. Sprinkler spacing and pipe sizing shall be designed for hazards present based on building area occupancy and use with pipe sizing based on the hydraulic calculations of the system.
 - 2. All hazard criteria and sprinkler designs shall be verified against the building insurer requirements for the property. Where required, plans and calculations shall be provided for review by the insurance agency.
 - 3. Automatic fire protection system hydraulic calculations shall be based upon 90 percent of the available water supply as determined by the local water purveyor or flow test information.
 - 4. A minimum Extra Hazard Group II design criteria (0.40 GPM/SF over 2500 SF hydraulic remote area) shall be provided throughout the building, specifically main event spaces, unless required otherwise. Hose allowance per NFPA 13 is to be included on base of riser.
 - 5. A minimum Light Hazard design criteria (0.10 GPM/SF over 1500 SF hydraulic remote area) shall be provided throughout meeting rooms, ticket offices, training rooms, locker rooms, offices, restrooms, and other similar spaces. Hose allowance per NFPA 13 is to be included on base of riser.
 - 6. A minimum Ordinary Hazard Group I design criteria (0.15 GPM/SF over 1500 SF hydraulic remote area) shall be provided throughout mechanical and electrical areas, kitchen and serving areas, concessions, and custodial closets. Hose allowance per NFPA 13 is to be included on base of riser.
 - 7. A minimum Ordinary Hazard Group II design criteria (0.20 GPM/SF over 1500 SF hydraulic remote area) shall be provided throughout general storage areas and receiving. Hose allowance per NFPA 13 is to be included on base of riser.
 - 8. A minimum Extra Hazard Group II design criteria (0.40 GPM/SF over 2500 SF hydraulic remote area) shall be provided throughout areas with high-piled storage, compact storage, and event storage spaces. Hose allowance per NFPA 13 is to be included on base of riser.
 - 9. Where ceiling level sprinklers exceed 30 feet above the floor, the following increases shall be provided:
 - a. Ordinary Hazard Group I
 - 1) Increase design area by 30%: 1,950 SF
 - b. Ordinary Hazard Group II – Ceilings between 30-40 feet:
 - 1) Increase design density to 0.37 GPM/SF
 - c. Ordinary Hazard Group II – Ceilings exceeding 40 feet:
 - 1) Increase design density to 0.45 GPM/SF
 - 2) Increase design area by 30%: 1,950 SF
 - d. Extra Hazard Group II
 - 1) Increase design density to 0.45 GPM/SF

O. System Pipe

1. All piping 2-inch and smaller:
 - a. With the use of welded or roll grooved fittings: ASTM A135 or 795, Grade A, Schedule 10 or 40, seamless or ERW, black steel pipe.
 - b. With the use of threaded fittings: ASTM A135 or 795, Grade A, Schedule 40, seamless or ERW, black steel pipe. All 1-inch piping shall have threaded ends.
2. All piping 2-1/2" and larger: ASTM A135 or 795, Grade A, Schedule 10, ERW, black steel pipe, threaded or roll grooved ends.
3. All system components shall be listed for the designed system pressures and listed for 175-psig minimum working pressure.
4. Piping used in dry pipe and preaction sprinkler systems shall be ASTM A135 or 795, Type E, Grade A, Schedule 40, black steel pipe, threaded or roll grooved ends.
5. Where system piping is routed exposed piping shall be:
 - a. Routed as high as possible.
 - b. Coordinated with all disciplines, architect, and owner.
 - c. Routed to minimize visibility.
 - d. Painted to match surrounding finishes.
6. All piping on the exterior of the building shall be externally galvanized or painted.

P. Automatic Sprinklers

1. Sprinklers: type and style as indicated or required by application.
2. Sprinklers in light hazard areas shall be quick response type.
3. Sprinkler operating temperatures to comply with NFPA 13. High temperature sprinklers shall be provided in kitchens, concessions, or near other heat-producing sources.
4. Provide listed, heavy-duty sprinkler guards in the gymnasium, where sprinklers are installed below eight feet, and where sprinklers may be subject to damage.
5. Sprinklers shall be located in the center of tiles in all areas with finished ceiling.
6. Sprinkler Finishes: Provide sprinklers with the following finishes:
 - a. Public areas with ceilings: Concealed sprinklers with factory finished white coverplates.
 - b. Public areas without ceilings: Upright or pendent sprinklers with factory finished to match surrounding structure.
 - c. Gymnasium: Upright or pendent sprinklers with factory finished to match surrounding structure.
 - d. Unfinished areas and areas not exposed to view: Upright, pendent, or sidewall type, brass or bronze finish.
 - e. Where sidewall sprinklers are provided, they shall align with the finishes as noted above based on the space in which they are used.
 - f. Sprinklers shall be wax-coated or listed as corrosion resistant where installed in areas of high humidity or where exposed to acids, chemicals, or other corrosive fumes.

1.4 FIRE DEPARTMENT STANDPIPE SYSTEM

- A. Fire standpipe system design, installation and materials shall be in accordance with NFPA 14. System shall also meet all applicable building codes, fire codes and the requirements of the authority having jurisdiction.
- B. Provide a Class I, automatic-wet standpipe system with 2-1/2-inch hose connections.
- C. Fire Department hose connections will be provided at each main level in each enclosed exit stairway and throughout the building to comply with travel distance requirements in accordance with NFPA 14 and jurisdiction requirements.
- D. Where the standpipe system serves the automatic sprinkler system, a minimum 6" riser shall be provided. Where risers are dedicated to the standpipe system, a minimum 4" pipe shall be provided.
- E. All standpipe risers shall be provided with listed and monitored standpipe isolation valves.

- F. Where the roof is accessible, two 2-1/2", freestanding roof level hose valves shall be provided.
- G. Standpipes will be sized to provide 100 psi when 500 GPM at the most remote standpipe.
- H. The standpipe system will be supplied by the fire protection service and fire booster pump.

1.5 FIRE PUMP

- A. A fire pump will be required to meet the pressure demands of the sprinkler and standpipe systems. The pump will be sized to the flow and pressure demand of the sprinkler and standpipe systems as determined by system hydraulic calculations. Final size and necessity of the fire pump will be determined during design development or preliminary hydraulic design.
- B. The fire pump basis of design will be an electric, in-line centrifugal fire pump with an electric motor start up controller with an integral automatic transfer switch. The main source of power will be from the power utility, and the secondary means of power will be addressed by utilizing a transfer switch located in the pump room to switch to the site generator power supply.
- C. All required sprinkler and fire pump functions will be connected into the building fire alarm control panel for monitoring. A remote fire pump monitoring panel shall be provided where required.
- D. Based on preliminary calculations and requirements, the fire pump is estimated to be rated for a flow of 2,000 GPM and a pressure of 75 psi at approximately 150 HP.
- E. The fire pump room shall comply with the following:
 1. Minimum 20'x15' in area.
 2. Provided with direct exterior access.
 3. Provided with a minimum 1-hour fire-rated enclosure.
 4. Enclosure shall be dedicated to fire suppression system supporting equipment and valves.
- F. A fire pump test header shall be sized according to final fire pump size and provided in an exterior location approved by the Fire Department.

1.6 FIRE DEPARTMENT CONNECTION

- A. Fire department connection shall be a flush, wall-mounted type.
- B. The connection will consist of a 5-inch Storz with 30-degree downturn.
- C. Fire department connection shall have UL listed Knox Caps keyed for the Timber Mesa Fire & Medical District.
- D. A weatherproof, horn/strobe, exterior waterflow alarm appliance shall be provided above the fire department connection on the exterior of the building in a location approved by the Fire Department.

PART 2 - DIVISION 28 - FIRE DETECTION AND ALARM SYSTEM**2.1 GENERAL SYSTEM REQUIREMENTS:**

- A. The building shall be equipped with a fully addressable, non-coded manual and automatic fire alarm system installed in accordance with the requirements of National Fire Protection Association (NFPA) Standards 72 and 70, and the International Building and Fire Codes accounting for local amendments.
- B. The fire alarm system shall provide occupant notification utilizing an Emergency Voice/Alarm Communications (EVAC) system.
- C. Fire alarm system will be fully integrated and monitored by a central station monitoring system.
- D. The system shall provide automatic fire detection and alarm, complete with manual pull stations, ceiling mounted smoke/heat detectors, air handling unit shutdown, notification appliances, sprinkler monitoring, fire pump monitoring, elevator recall, emergency responder radio amplification system monitoring, stairway lock release, fire/smoke door hold release, battery stand-by and off-site monitoring.
- E. Two separate and reliable power supplies are required for the fire alarm control panel in accordance with NFPA 72.
- F. The system shall utilize a digital alarm communicator transmitter (DACT) which shall be acceptable to the central station and shall comply with UL 864.

- G. An Emergency Key Cabinet (Knox Box) shall be provided for the building. The location of the cabinet shall be coordinated with the Timber Mesa Fire & Medical District. It is anticipated that key boxes will be provided at the main building entrance and the fire pump room entrance.
- H. A two-way fire department communication system shall be provided for fire department use in accordance with the International Building Code Section 907.2.12.
- I. All equipment shall be UL listed.

2.2 FIRE ALARM CONTROL PANEL

- A. The main fire alarm control panel will be in the main electrical room as coordinated with the authority having jurisdiction. The fire alarm control panel will be microprocessor-based with fully addressable initiating devices.

2.3 FIRE ALARM ANNUNCIATOR PANEL

- A. A fire alarm annunciator panel with microphone will be provided at the main entrance, within the fire pump room, and other fire department access locations.

2.4 INITIATING DEVICES

- A. Smoke detection will be provided above all fire alarm control equipment, elevator lobbies, elevator machine rooms, elevator shaft and pit.
- B. Duct smoke detection will be provided in all air handling equipment over 2,000 CFM and within 5 feet of all smoke or fire/smoke dampers.
- C. Heat detection will be provided in elevator machine rooms, elevator shafts and any areas that require detection that are not suitable for smoke detectors.
- D. Manual pull stations will be provided at all exits from the building and at all rated stairs for levels above and below the main level of exist discharge.
- E. Extinguishing System Monitoring
 - 1. The fire sprinkler system will be monitored by the fire alarm system for sprinkler system waterflow and supervision of all sprinkler system control valves.
 - 2. Fire Pump will be monitored for running status, phase reversal, and loss of power in accordance with NFPA 20 and NFPA 72.
 - 3. All kitchen hoods will be monitored for extinguishing system activation.

2.5 OCCUPANT NOTIFICATION

- A. The building will be provided with an emergency voice/alarm communication occupant notification system throughout in accordance with NFPA 72.
- B. Audible and visible occupant notification shall be provided throughout all areas of the building in accordance with NFPA 72. Occupant notification will utilize audible (speakers), visible (strobes), and combination audible/visible (speaker/strobes) notification appliances. Appliances will be installed on ceiling unless otherwise noted.
- C. The fire alarm system will utilize high-powered, high-fidelity fire alarm speakers throughout large volume spaces in an effort to meet audibility and intelligibility throughout the building.
- D. The fire alarm system will be provided with connections to shut down all noise cancelling systems, music systems, building audio equipment, and additional public address and a/v systems throughout event areas upon activation of the fire alarm system.
- E. The fire alarm system will be provided with connections to shut down all stage performance lights and audio, as well as connections to turn on working and house lights upon activation of the fire alarm system
- F. Mounting height, locations and specifications of audible and visual notification appliances will be per ADA and NFPA 72.
- G. Provide listed notification appliance wire guard in the loading dock and other areas where appliances are subject to damage.
- H. Provide strobe synchronization per NFPA 72.

2.6 WIRING

- A. All Signaling Line Circuits will be Class A.

- B. All Notification and Initiating Circuits will be Class A.
- C. All wiring will be installed in conduit.

Introduction
Executive Summary

About the Project

The City of Show Low is currently planning to build its new Events Center. The building will include an event space, divisible meeting spaces, offices, concessions, and it will also serve as a venue for live events such as concerts.

The Design Team has been tasked with providing a baseline program that fits the anticipated requirements and is inclusive of spaces below:

- Gym and Event Space
- Training and Warm Up Room
- Referee Room
- Divisible Meeting Rooms
- Offices
- Concessions

About This Program

This Technology Program is organized into several main sections which are described below:

- **Audiovisual** – This section details each audiovisual system type and largely consists of System Datasheets, which detail system features, equipment space layouts, precedent images, a preliminary equipment list, and section for general considerations.
- **Information Technology** – The section covers descriptions of the building’s telecommunications requirements and is primarily based industry best practices. Considerations specific to this project are addressed in this section.
- **Building Security** – The section covers descriptions of the building’s physical and electronics security requirements and is primarily based on industry best practices. Considerations specific to this project are addressed in this section.
- **Acoustics** – Is provided under a separate document.

Owner Feedback and Commentary

This document is a first draft expressing our interpretation of what we gathered from meetings to date, in addition to our experience design similar spaces. Where there are no specific directions provided, we will be guided by our experience, focusing on innovative applications which will enrich and strengthen the on-grounds student experience.

We will rely on feedback and commentary from the design team and user groups to confirm this document and allow us to move on to the next design phase of the project.



Design Principles

Technology systems for all new building projects should adhere to basic principles of prudent planning: flexibility, adaptability, scalability, supportability and so forth. In addition, these more unique principles should guide any future planning and design of the systems:

Enterprise Architecture

Technology solutions should be designed from the perspective of an enterprise-wide architecture with an approach offering scalable centralized management and support.

Ease of Operation

Whenever possible, technology systems should require a minimal amount of training to operate effectively. A “universal” user interface for technology systems control is necessary. This facilitates user training, technical support, and long-term systems evolution.

Adaptability

The facility should enable the systems and spaces to adapt over time in response to changes in technologies. We refer to the short-term changes to the systems and spaces as “flexibility” and the long-term changes to the systems and spaces as “adaptability”

Scalability

The solutions must meet the long-term needs of the event center. Since technology integration is integral to modern day best business practices, the long-term needs of both the staff and the event center’s patrons will be increasingly reliant on scalable solutions

Full Infrastructure

The project should strive to identify and plan for technology systems that meet the full functionality wishes of the users. If a full audiovisual system installation is not feasible it is recommended that the infrastructure to support the full program be included during construction

Owner Considerations

Technology Support Staff

The scope and scale of the technologies implemented in the new facility are expected to be a departure from any existing city standards and services. To meet the needs of the patrons and staff, we recommend evaluating what might be required for a technology support environment, including:

- Technology staffing structure
- Service Level Agreements (SLA) for support from outside vendors
- Support staff skill sets
- Staff availability/capacity
- Support expectations (i.e., mission-critical vs. basic support)
- Other program specific factors

Through this review, the city will be able to determine appropriate staffing needs and support contracts that may need to be implemented as this project comes online.



Equipment Plans

The equipment plans located in the Audiovisual section of this document communicate design intent only to assist in establishing an understanding of the equipment locations each space. Where architectural plans are not available for a space, equipment plans are based on a representation of that room type. Not all spaces or systems have equipment plans associated with them. The equipment locations will change over time as the design progresses.

Refer to the following legend when reviewing the equipment

 Audio Conference Device	 Credenza	 Lectern	 WIFI
 Bluetooth	 Display Cart w/55" Display	 Low Profile Credenza	
 Cable Cubby	 Equipment Rack	 Projection System	
 Camera on Articulating Arm	 Equipment Rack	 Room Scheduler	
 Camera	 Flat Panel Display	 Screen Control	
 Ceiling Camera	 Floor Box	 Soundbar	
 Ceiling Mic	 I/O Plate	 Surface-Mount Mic	
 Ceiling Speaker	 Intercom Station	 Surface-Mount Speaker	
 Computer	 IR Emitter	 Telecom Rack	
 Control Panel	 Keyboard and Mouse	 Wireless Screen Sharing	

Infrastructure for Low Voltage or Audiovisual Technologies

The design of the technology systems within the facility will be divided between the categories of “Base Building” and “FF&E”. Base Building design is typically associated with those items that are provided by the General Contractor or its subcontractors. This includes the infrastructure or junction boxes and pathways required for the low-voltage/audiovisual systems as well as the Structured Cabling and Security Systems.

The FF&E design is associated with the audiovisual systems. We group this with “Fixtures, Furniture, and Equipment” because this equipment is not part of the building itself. All audiovisual system equipment will be provided by a specialty AV Contractor who may be a sub-contractor to the General Contractor or as Contractor direct to the City of Show Low.

Base Building Elements

- Junction boxes, wall boxes, specialty flat panel display boxes, specialty projector plenum boxes and specialty floor boxes.
- Pathways to include cable trays, ladder trays, and conduit. Pathways will be needed between audiovisual device locations, in-room audiovisual rack locations and centralized audiovisual equipment rack locations.
 - Conduit size shall vary depending on the application and cable quantity
 - Conduit material shall be rigid or EMT steel (not flexible) PVC, or aluminum.
 - Free-air cables in accessible ceiling shall be placed in J-hooks secured to the hard deck ceiling and never resting on the ceiling tiles.
 - Free-air cables are not permitted in open-ceiling conditions and shall be placed in point-point conduit.
 - Surface mounted raceway that contains High-Voltage cabling must be separated from low-voltage cabling with an integral metal divider.
- In-wall blocking for equipment mounting.
- Structural supports for projection screens, projectors, flat panel displays, cameras, speakers, etc.
- Projection screens, both cases and screens.
- Electrical Circuits and Outlets for Technology
 - All circuits powering low voltage equipment shall be dedicated strictly to technology devices.
 - Circuits powering low voltage equipment shall not share circuits powering motorized equipment, lighting system dimmers, or any other inductive electrical loads.
 - Information Technology and Security Systems should be on emergency power and a building-wide UPS is recommended for these systems.
 - Room specific audiovisual devices will not be on the building UPS or emergency power; however, centralized audiovisual equipment should be.
- All structured cabling ports necessary for the audiovisual systems and security systems will be included within the structured cabling documents.
 - Specialty AV cabling (speaker cable, video cable, etc) will be provided by the AV Contractor during equipment installation.
- See the Information Technology section of this program document for more information regarding Telecommunications room size, finish, electrical and cooling requirements.

FF&E – Audiovisual Systems

- Displays
- Source devices
- Video camera
- Loudspeakers and microphones
- Control Processors
- Specialty furniture
- Audiovisual specific cabling
- Specialty mounting hardware for audiovisual equipment

FF&E – IT Electronics

- Network Switches
- Wireless Access Points
- Servers
- Gateways / Firewalls / Routers
- Telephones
- Computers
- Printers/Copiers

* Please note that the FF&E IT Electronics Design is by owner and will not be included in our cost estimates or design. However, these should be closely coordinated with the building design.

System Features

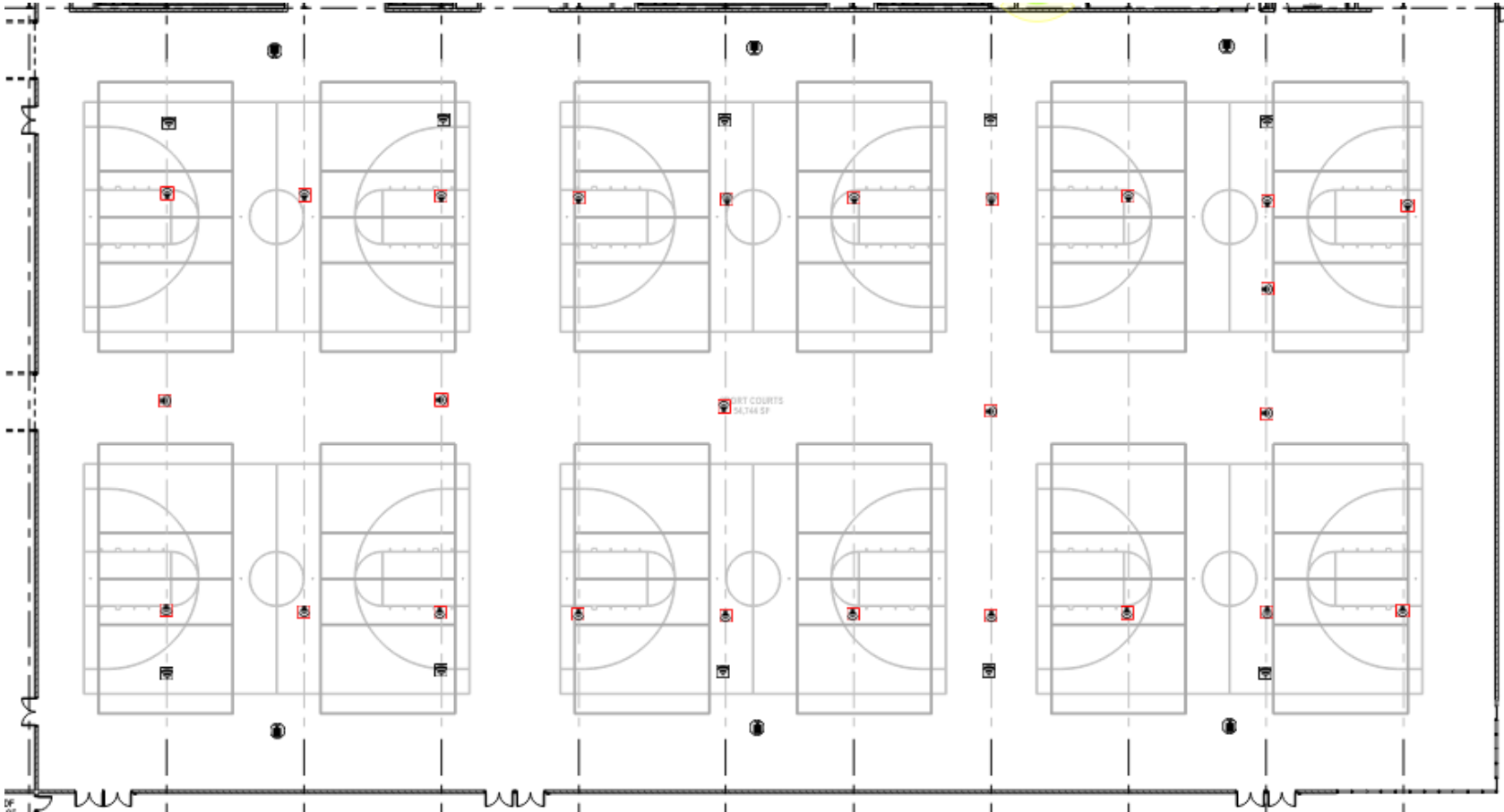
A zoned distributed audio system for sports tournaments, including wireless microphones, programmed announcements, and background music. The system shall be capable of audio levels for typical non-music events. ADA compliant hearing assist will be provided.

The audio zoning will allow the system to be reconfigured via presets depending on the event configuration.

Streaming cameras will be place appropriately to capture all activities that take place on the courts.

Sport Court audio system will include a zone dedicated specifically for the running track.

Space Layout



System Features

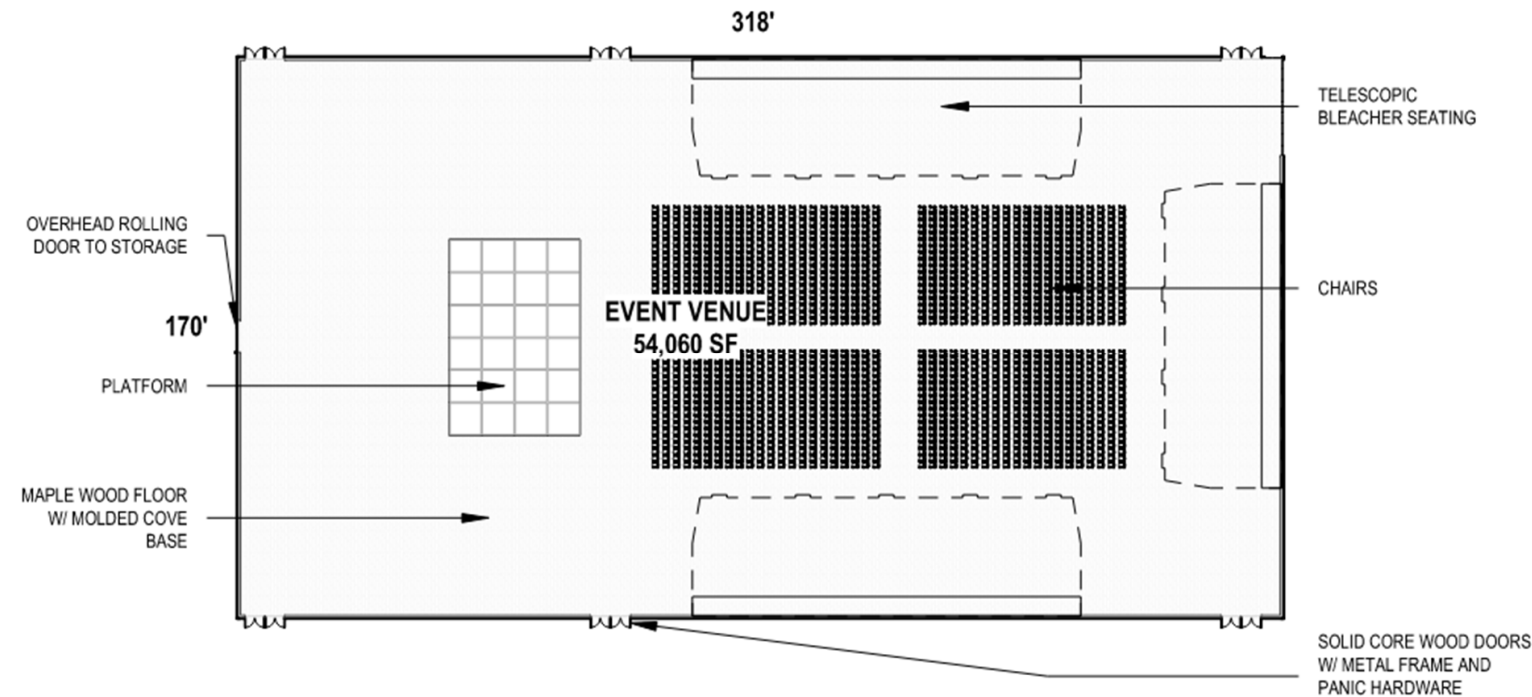
Preliminary Equipment List

Lecture Hall or Auditorium - Template / Qty: 1

Item / Description	Qty
Display Systems:	
15k Lumens Projection System w/ Fixed-Frame Screen	3
Annotation Monitor at Presenter Station/Lectern	2
55" Confidence Monitor	2
Audiovisual Sources:	
Wireless Screen Sharing Device	1
Local Dual Output Computer with Wireless Keyboard/Mouse	1
HDMI Laptop Input in Lectern/Presenter Station	1
Sound Reinforcement System:	
Ceiling Loudspeaker w/ Audio Amplifier Allowance	32
Wireless Microphone System	4
Assistive Listening System	1
Capture, Streaming and Conferencing:	
HD Pan-Tilted-Zoom Camera	3
USB Web Conferencing/Capture Computer Interface	1
Camera Auto Tracking Appliance	1
Push-to-Talk Audience Microphone w/ Audio Expander Allowance	85
Audiovisual Furniture:	
Full-Height free standing Equipment Rack	1
Mobile (tethered) Height-Adjustable Lectern/Presenter Station	1
Audiovisual Control and Processing:	
IP-Based AV Processing/Control Equipment: Audio DSP, Network Switch, Controller	1
Control System Touch Panel	1
Aux Audio/Video Input/Output	2
Building Wide Systems	
Interactive Room Scheduling Touch Panel	2

Considerations

Space Layout



Precedent Images



Prepared by: NV5 Technology & Acoustics

ARCHITEKTON

4LINE
STUDIO

HAYDON

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System Features

Speakers that distribute audio from the main Sport Court audio system to a dedicated zone specifically for the track.

Preliminary Equipment List

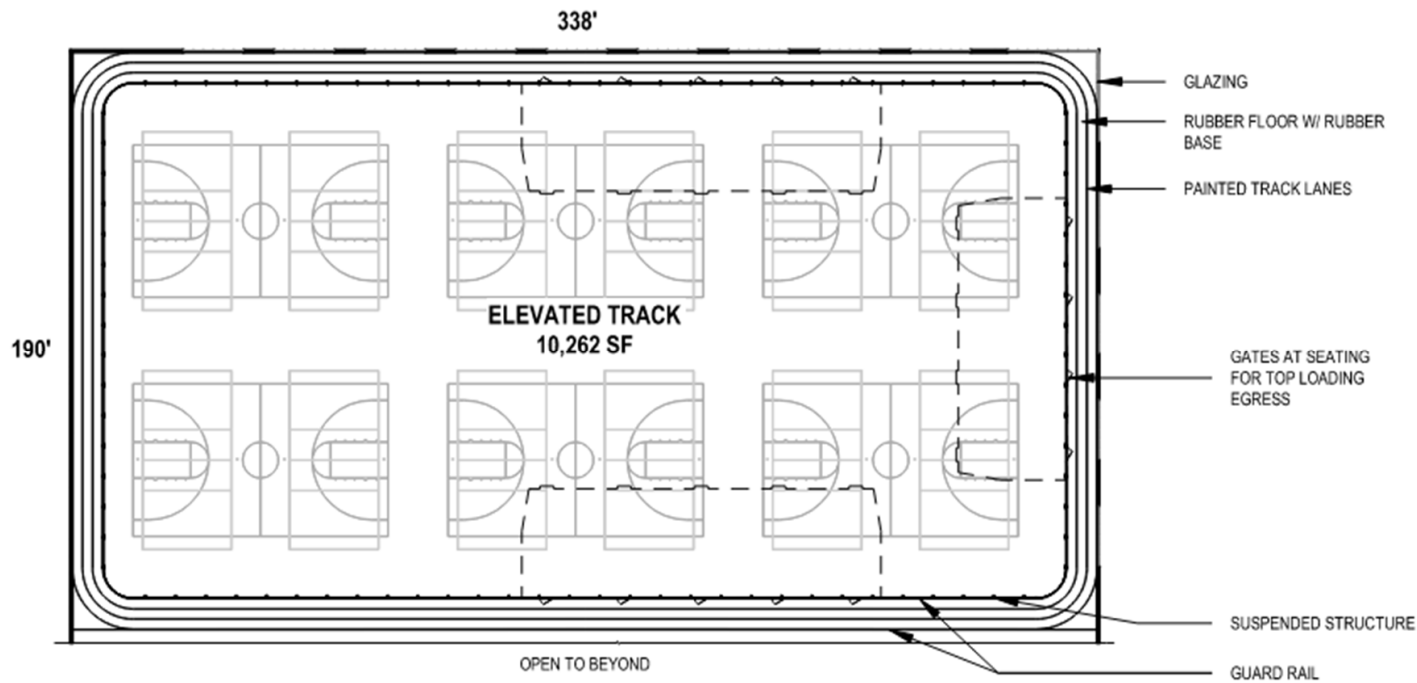
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55" Confidence Monitor	2
Audiovisual Sources:	
Wireless Screen Sharing Device	1
Local Dual Output Computer with Wireless Keyboard/Mouse	1
HDMI Laptop Input in Lectern/Presenter Station	1
Sound Reinforcement System:	
Ceiling Loudspeaker w/ Audio Amplifier Allowance	32
Wireless Microphone System	4
Assistive Listening System	1
Capture, Streaming and Conferencing:	
HD Pan-Tilted-Zoom Camera	3
USB Web Conferencing/Capture Computer Interface	1
Camera Auto Tracking Appliance	1
Push-to-Talk Audience Microphone w/ Audio Expander Allowance	85
Audiovisual Furniture:	
Full-Height free standing Equipment Rack	1
Mobile (tethered) Height-Adjustable Lectern/Presenter Station	1
Audiovisual Control and Processing:	
IP-Based AV Processing/Control Equipment: Audio DSP, Network Switch, Controller	1
Control System Touch Panel	1
Aux Audio/Video Input/Output	2
Building Wide Systems	
Interactive Room Scheduling Touch Panel	2

Considerations

It would be beneficial for this system to have its own master volume control so its volume level can be adjusted or muted separately from the Sport Court PA system.

Space Layout



Precedent Images



System Features

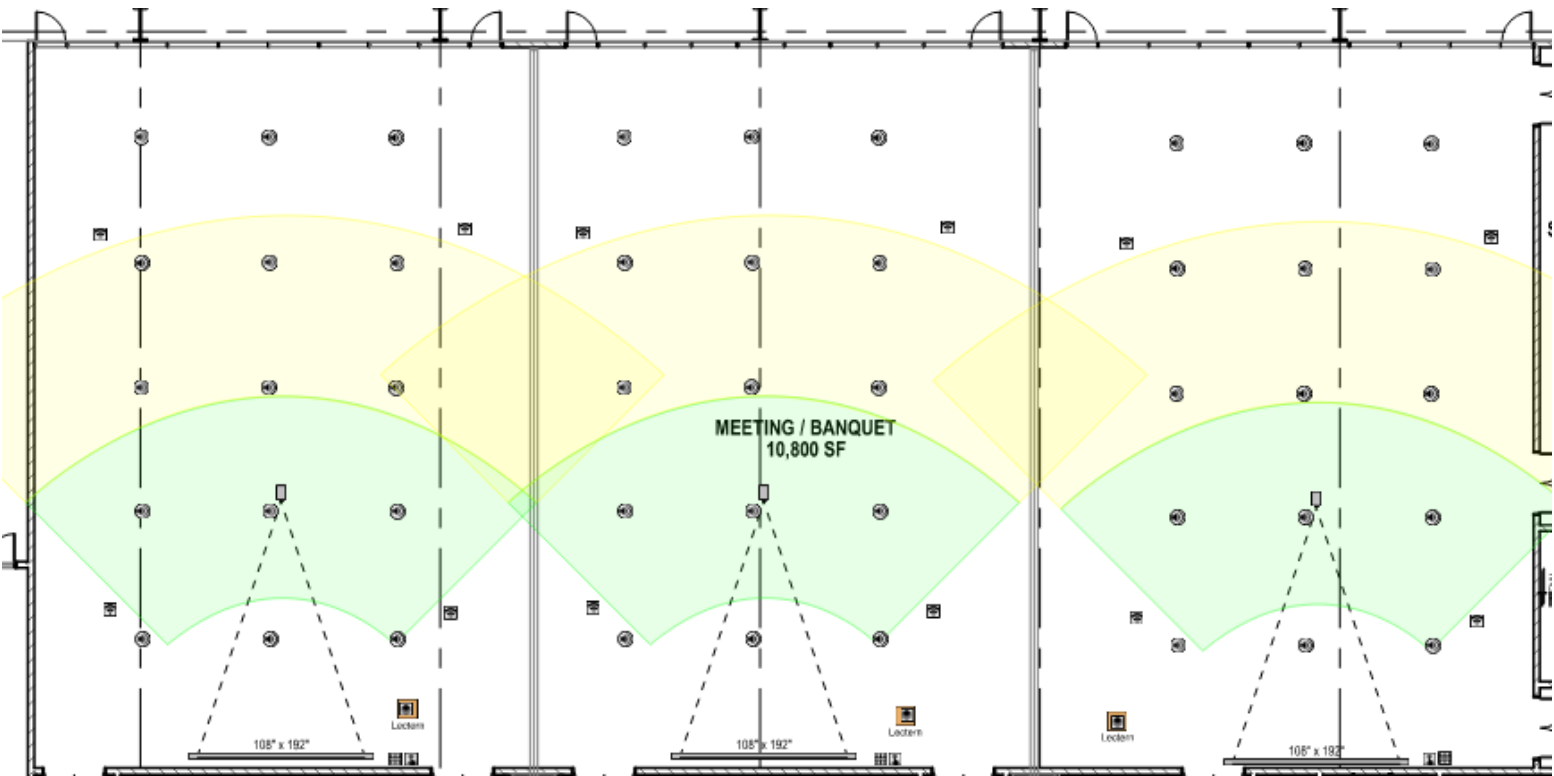
A divisible meeting space that includes lecterns with an enclosed AV equipment rack on the bottom and HDMI connections on the top to distribute signal to the projectors.

The meeting room will be able to divide into 3 smaller rooms and when divided, each space will include its own dedicated projector, screen, and audio zone. All speakers will be ceiling mounted.

Multiple wireless microphones will be provided for speech reinforcement

ADA compliant hearing assist will be provided

Space Layout



Precedent Images



Preliminary Equipment List

Item / Description	Qty
Display Systems:	
7k Lumens Projection System w/ Motorized Screen	3
Annotation Monitor at Presenter Station/Lectern	3
Audiovisual Sources:	
Wireless Screen Sharing Device	3
Local Computer with Wireless Keyboard/Mouse	3
HDMI Laptop Input in Lectern/Presenter Station	3
Sound Reinforcement System:	
Wireless Microphone System	3
Assistive Listening System	3
Conference Room Ceiling Speakers	45
Audiovisual Furniture:	
Full-Height free standing Equipment Rack	1
Audiovisual Control and Processing:	
IP-Based AV Processing/Control Equipment: Audio DSP, Network Switch, Controller	1
Control System Touch Panel	3
Building Wide Systems	
Interactive Room Scheduling Touch Panel	3

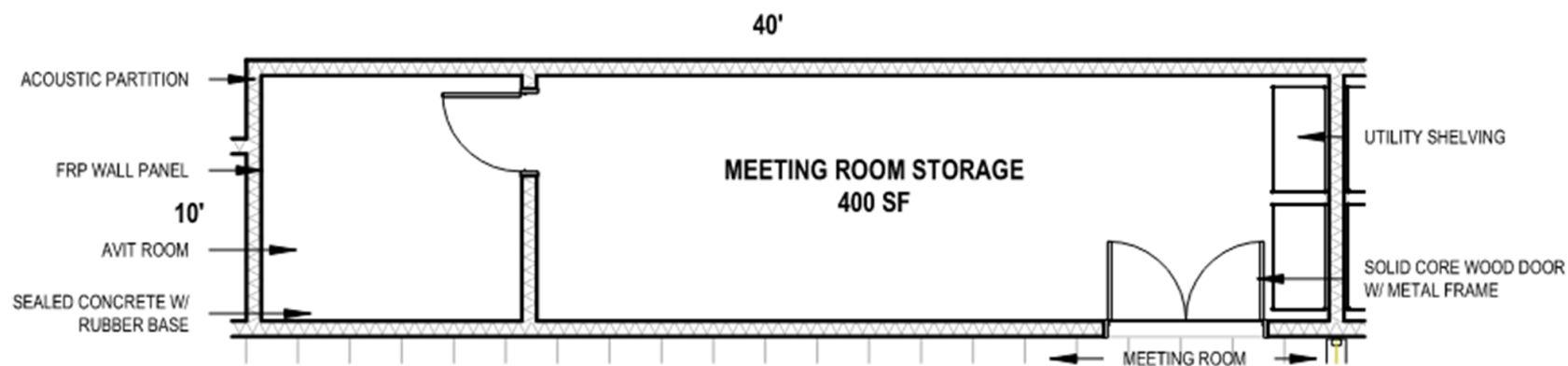
Considerations

- Control Panel type and location (lectern vs wall mounted).
- Automated control of room configuration via the airwalls.

System Features

This space will need to serve as an IDF and house an AV/IT rack.

Space Layout



Precedent Images



Preliminary Equipment List

Small Group Room - Template / Qty: 1

Item / Description	Qty
Display Systems:	
Flat Panel Display	1
Audiovisual Sources:	
Wireless Screen Sharing Device	1
Local Computer with Wireless Keyboard/Mouse	1
Passive HDMI Wall Plate	1
Capture, Streaming and Conferencing:	
4k USB Auto-framing Web Camera w/ Built in Microphone	1
Audiovisual Control and Processing:	
Button Panel Control System	1
Building Wide Systems	
Interactive Room Scheduling Touch Panel	1

Considerations

It would be beneficial for this area to have dedicated climate control.

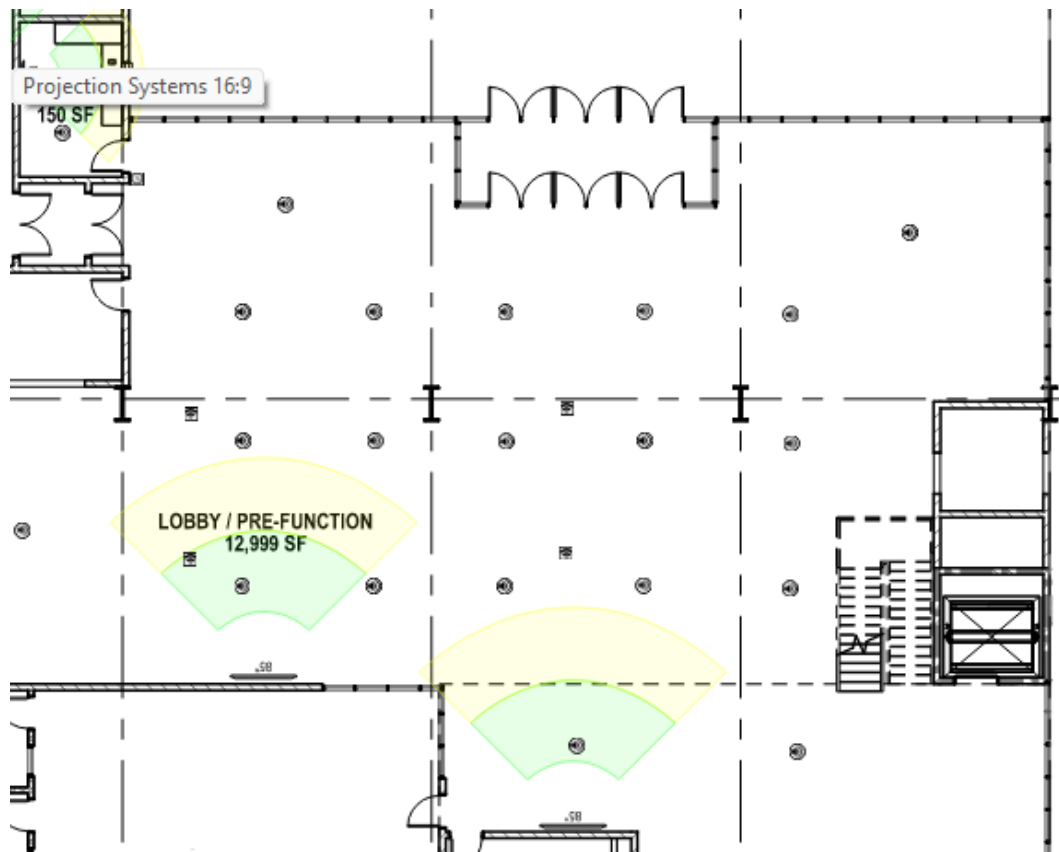
System Features

The lobby will be equipped with ceiling speakers that can receive a dedicated audio feed from the main audio system or from local background music.

It will also feature display monitors for signage and event marketing.

Ticketing booth will have display and intercom microphones

Space Layout



Precedent Images



Preliminary Equipment List

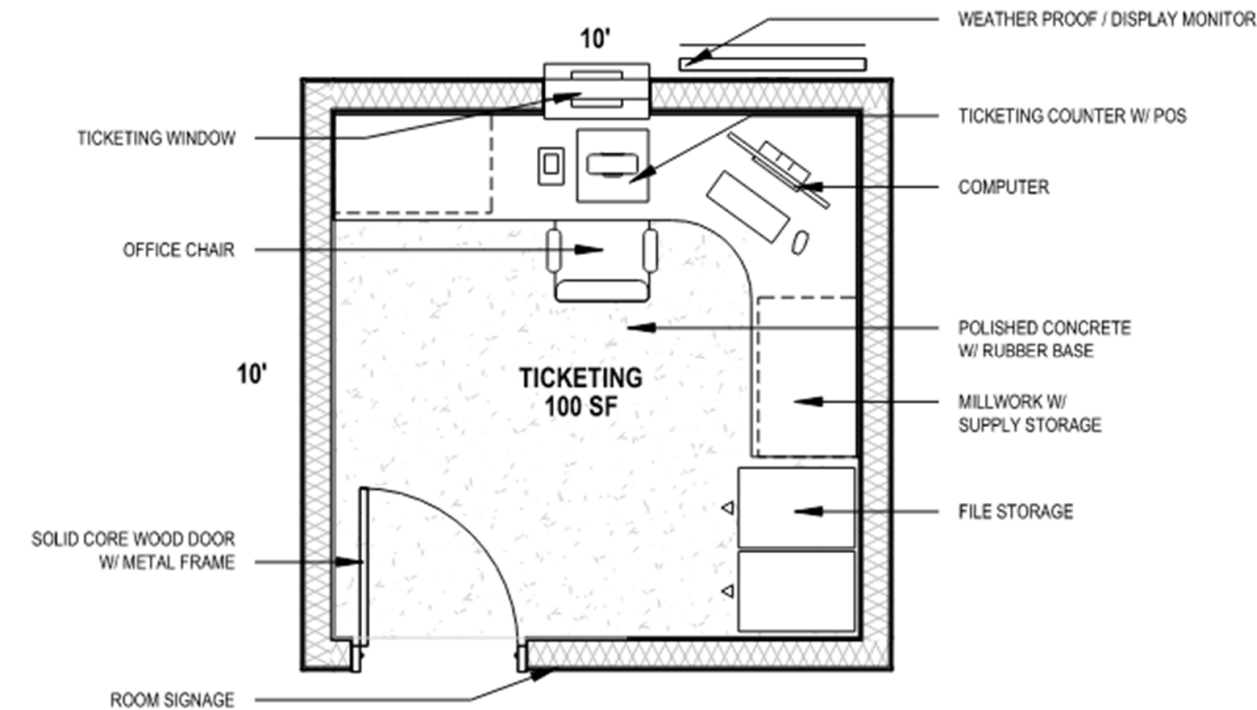
Item / Description	Qty
Display Systems:	
85" Flat Panel Display	2
46" Flat Panel Display	1
Audiovisual Sources:	
Portable Encoder/Decoder Transport	1
Sound Reinforcement System:	
Conference Room Ceiling Speakers	20
Audiovisual Control and Processing:	
Small Traditional AV Processing/Control Equipment	1
Control System Touch Panel	1

Considerations

- This system is planned to get an audio feed from the main audio system in the Sport Court area and due to this, it would be beneficial if there is a dedicated volume controller to allow for the system to be easily adjusted locally
- The display monitors should be commercial grade and rated for 24/7 use.
- The display monitors will need a video source (such as a small form factor PC or signage player)
- Consideration for content of the displays should be defined early in the project prior to building completion

System Features

Space Layout



Precedent Images



Preliminary Equipment List

Small Group Room - Template / Qty: 1

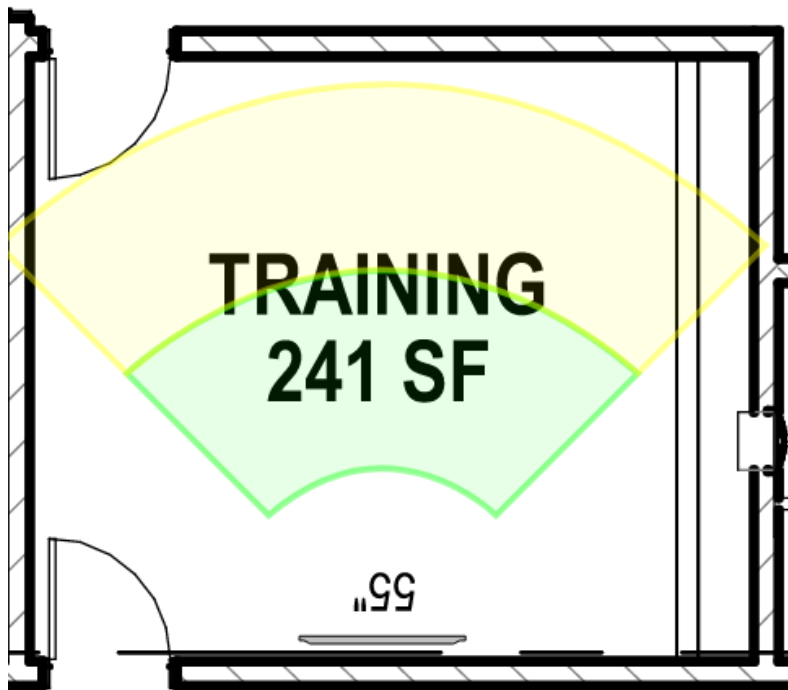
Item / Description	Qty
Display Systems:	
Flat Panel Display	1
Audiovisual Sources:	
Wireless Screen Sharing Device	1
Local Computer with Wireless Keyboard/Mouse	1
Passive HDMI Wall Plate	1
Capture, Streaming and Conferencing:	
4k USB Auto-framing Web Camera w/ Built in Microphone	1
Audiovisual Control and Processing:	
Button Panel Control System	1
Building Wide Systems	
Interactive Room Scheduling Touch Panel	1

Considerations

System Features

Training/ Warmup will include a display monitor

Space Layout



Precedent Images



Preliminary Equipment List

Item / Description	Qty
Display Systems:	
55" Flat Panel Display	1
Audiovisual Sources:	
Local Computer with Wireless Keyboard/Mouse	1
Passive HDMI Wall Plate	1
Audiovisual Control and Processing:	
Button Panel Control System	1

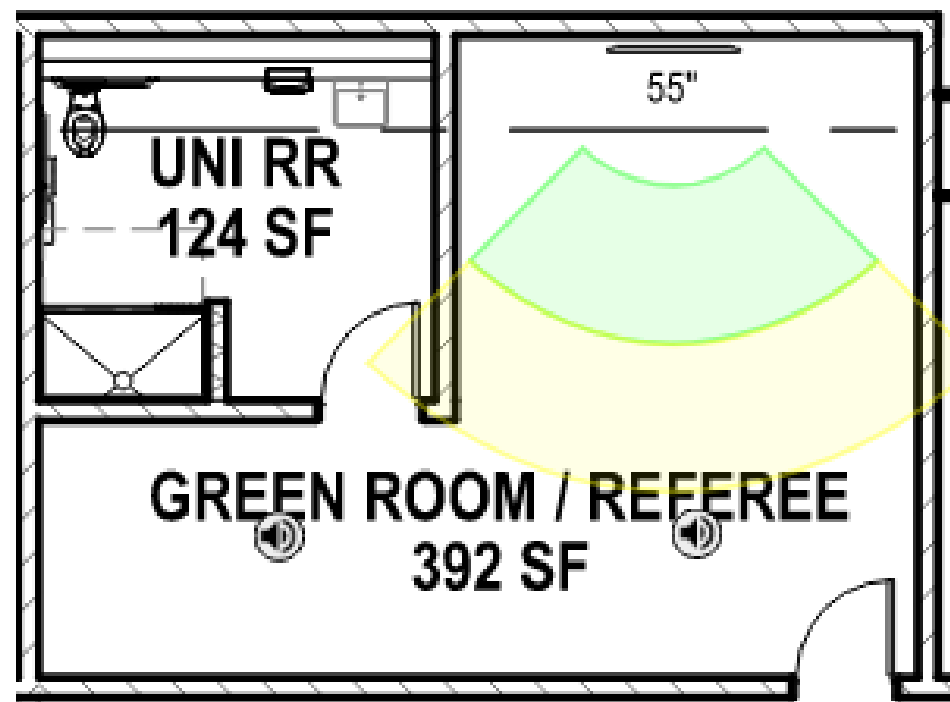
Considerations:

- Simple control or TV remote control
- Source for video (content)
- Audio feed from main event space

System Features

- Local Display Monitor
- Ceiling speakers fed from main event space

Space Layout



Precedent Images



Preliminary Equipment List

Item / Description	Qty
Display Systems:	
55" Flat Panel Display	1
Audiovisual Sources:	
Local Computer with Wireless Keyboard/Mouse	1
Passive HDMI Wall Plate	1
Sound Reinforcement System:	
Conference Room Ceiling Speakers	2
Audiovisual Control and Processing:	
Button Panel Control System	1

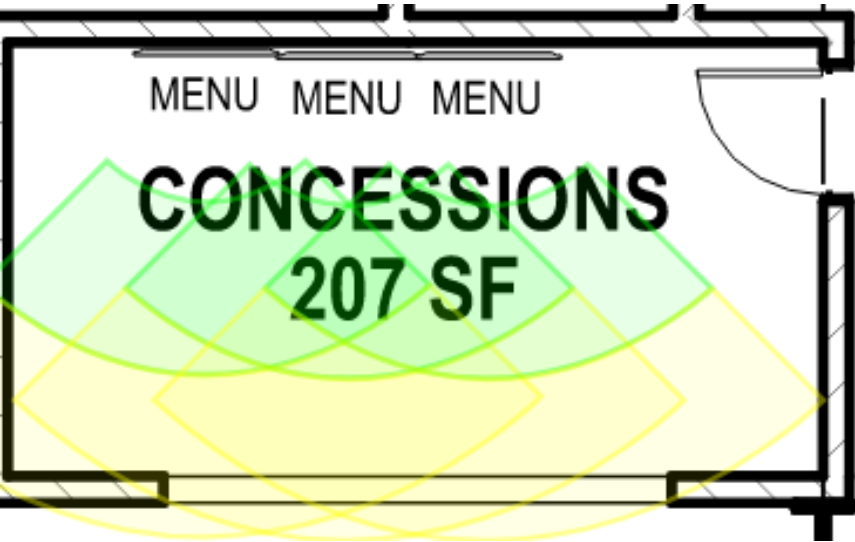
Considerations:

- Simple control or TV remote control
- Source for video (content)
- Audio feed from main event space

System Features:

Concessions will have multiple display monitors for use as menu boards

Space Layout



Precedent Images



Preliminary Equipment List

Item / Description	Qty
Display Systems:	
55" Flat Panel Display	3
Audiovisual Sources:	
Local Computer with Wireless Keyboard/Mouse	1
Portable Encoder/Decoder Transport	3

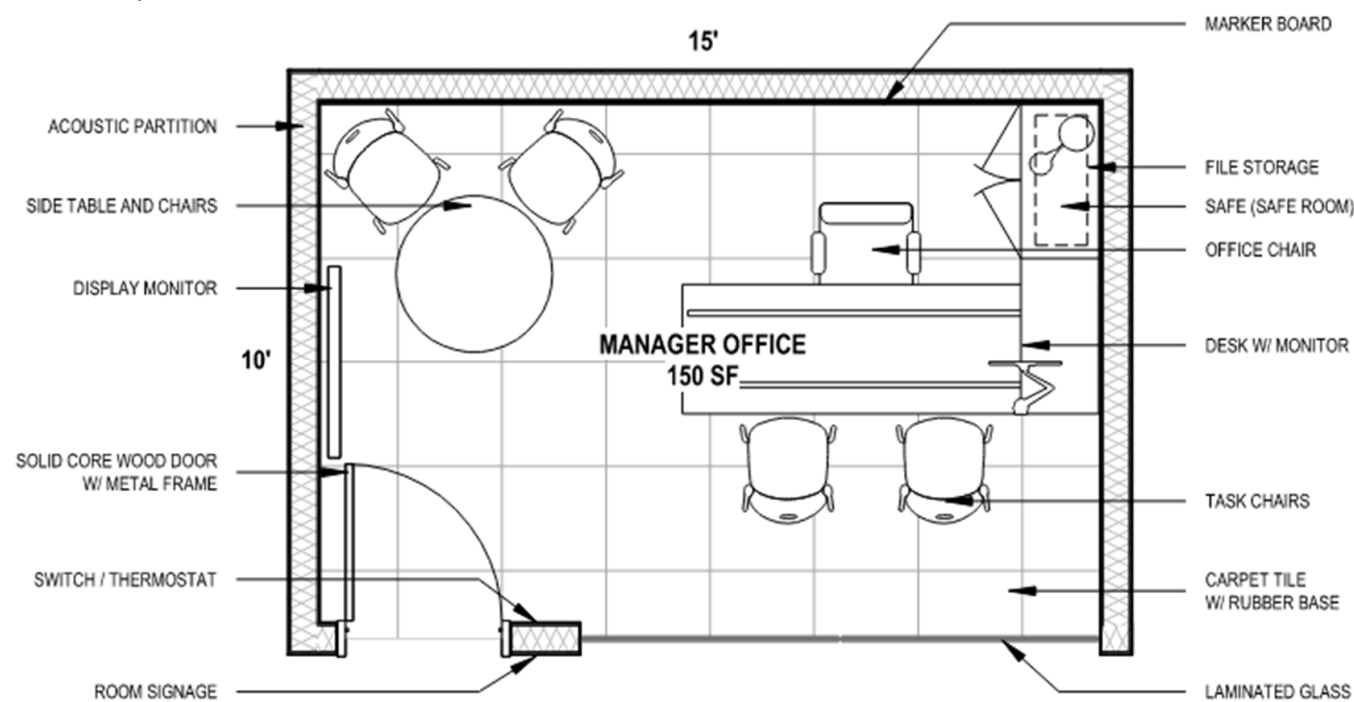
Considerations:

- The display monitors should be commercial grade and rated for 24/7 use.
- Content creation and maintenance

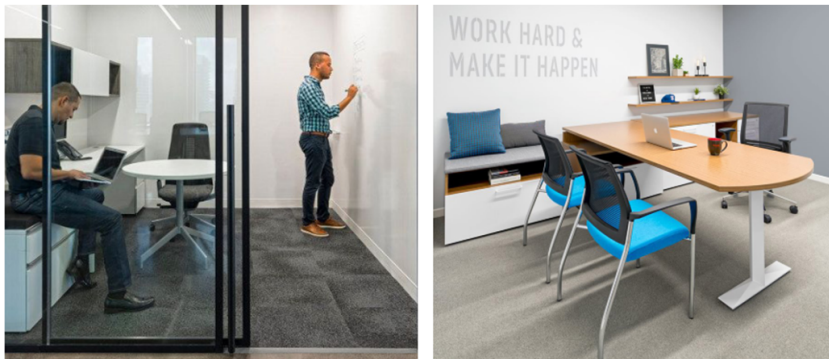
System Features;

Display monitor to be used as extended desktop and/or video feed from event space

Space Layout



Precedent Images



Preliminary Equipment List

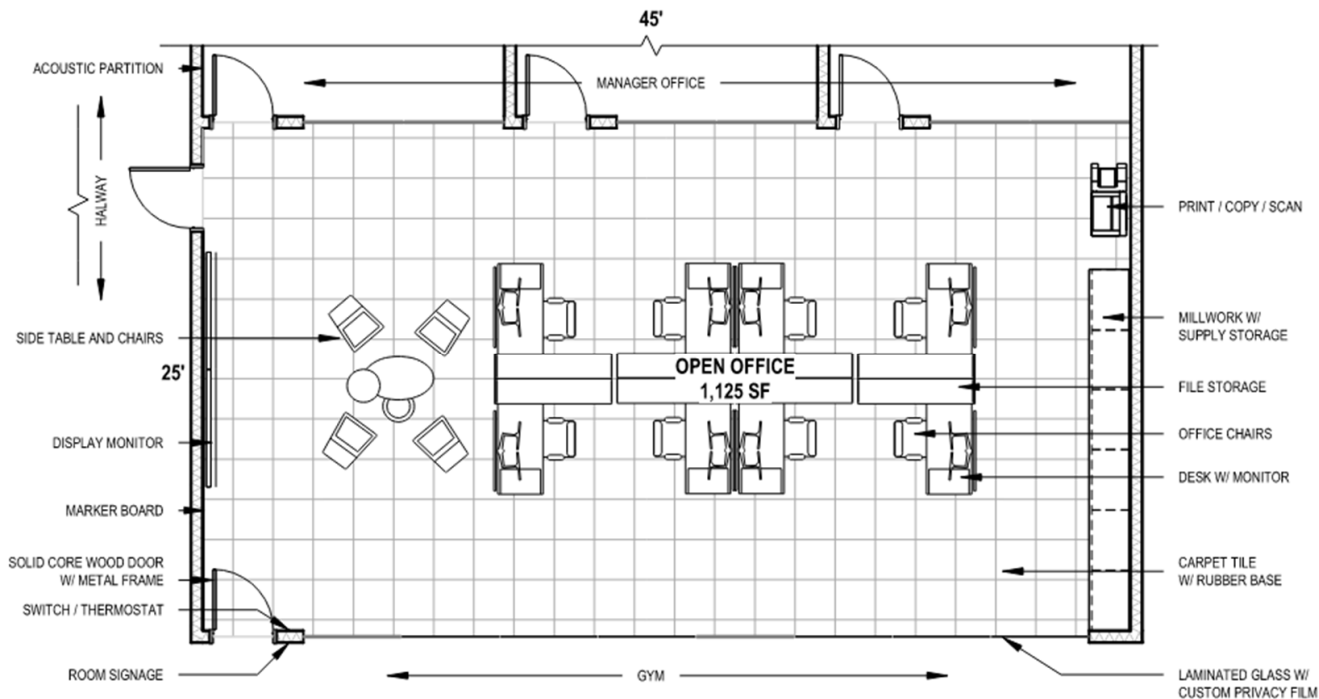
Item / Description	Qty
Display Systems:	
55" Flat Panel Display	1
Audiovisual Sources:	
Local Computer with Wireless Keyboard/Mouse	1
Passive HDMI Wall Plate	1

Considerations:

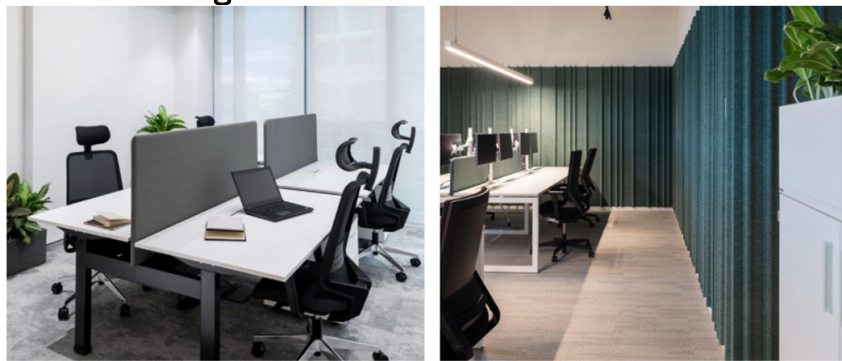
- A sound bar w/ video camera located below the display could provide for Teams or Zoom type meeting

System Features

Space Layout



Precedent Images



Preliminary Equipment List

Small Group Room - Template / Qty: 1

Item / Description	Qty
Display Systems:	
Flat Panel Display	1
Audiovisual Sources:	
Wireless Screen Sharing Device	1
Local Computer with Wireless Keyboard/Mouse	1
Passive HDMI Wall Plate	1
Capture, Streaming and Conferencing:	
4k USB Auto-framing Web Camera w/ Built in Microphone	1
Audiovisual Control and Processing:	
Button Panel Control System	1
Building Wide Systems	
Interactive Room Scheduling Touch Panel	1

Considerations

Introduction

Information Technology systems and infrastructure are the backbone for all digital communication in the building, consisting of the following (which are defined throughout this section):

- Outside Plant
- Telecommunication Rooms
- Structure Cabling
- Wireless Networks
- Network Electronics
- Distributed Antenna Systems

Outside Plant (OSP)

The Telecommunication technologies in the building connect to outside services (such as the city network, internet service providers, etc.) via the OSP. The OSP consists of duct banks, pathways, and cables connecting external services to a service entry point within the facility, which should be located on the lower level.

Note, OSP design is not included in NV5's scope of work at this time.

Telecommunication Rooms

Dedicated Equipment Rooms (ER) and Telecommunication Rooms (TR) are required to house equipment racks, network switches, optical fiber terminations, copper cabling patch panels, and other related equipment. TRs provide for manageable and sustainable distribution of low voltage communications signals within a building and are designed to be flexible and scalable. All TRs will follow best practices and are based on ANSI/TIA and BICSI standards.

The following requirements apply to each TR:

Location

- Locate TRs so that the total length of the horizontal cabling does not exceed 250 feet.
- The TR shall not be shared for other purposes including, but not limited to, custodial, access pathways, electrical, mechanical, storage, etc.
- Other utilities should not be routed through the TR unless serving the room itself. Examples include HVAC duct, electrical conduits, sprinkler system piping, drainpipes, clean outs, steam pipes, and chilled water pipes.
- The TR shall not house any electrical equipment, i.e., transformers, breaker panels, etc., due to the potential for electromagnetic interference. The ER shall be in a location where the potential for EMI is minimal.
- The TR shall not be adjacent to an electrical room or room containing a transformer or motors.
- The TR shall not be located beneath or adjacent to wet locations or spaces with water piping such as roof drains, pump rooms, restrooms, janitorial sinks, etc.

- Locate the TRs so that access is directly from an open, unassignable space, such as a corridor. Accessing the TR through another space restricts access to the TR itself and impedes usage of the room.

Equipment/Pathways

- Space for 2 to 4 floor mounted equipment racks equipped with both vertical and horizontal wire management with adequate floor space and growth potential of 1 additional rack
- Overhead tray system for flexible management of cabling within TRs.
- Pathways entering/existing the TR for horizontal cabling.
- Pathways will be sized to accommodate 20 feet of service loop on each cable.

Entry

- Personnel entry should be through a locked door at least 36 inches wide by 80 inches high.
- The door should open outward unless building codes prohibit it, and the threshold should include a sealed door bottom sweep.
- Door hardware should afford a 180 degree swing so the door can stack against the outer wall.
- The door shall be secured either by electronic keycard system or standard key lock.

Lighting

- Locate light fixtures a minimum of 8 ft. 6 in. above the finished floor.
- Provide a light intensity level of 70-foot candles minimum as measured at 3.3 feet from the finished floor.
- Provide lighting at both the front and rear of the racks.
- Locate above the working space rather above the racks. This illuminates the equipment without casting shadows or interfering with overhead cable pathways.

HVAC

- Provide heating, ventilation and air conditioning that will maintain continuous and dedicated environmental control 24 hours per day, 365 days per year.
- Room set point should be 70 to 75 degrees with 30% to 55% relative humidity to protect equipment and minimize static electricity.
- Maintain a positive air pressure to reduce dust infiltrating the room.

Finishes/Construction

- All walls should be finished, i.e., sheetrock/painted, and lined with 3/4 inch thick, A/C Grade plywood backboard, 8 feet high by 4 feet wide (plywood locations will be shown on the Technology Drawings).
- The floor should be finished with VCT or sealed concrete.
- Ceiling should be open to deck above.
- Seal any coatings or materials which may become friable to minimize dust.
- Provide over-head clearances of at least 9 feet (i.e., HVAC duct work, sprinkler heads, etc.).
- The rated distributed floor loading shall be greater than 250 lb/ft².
- The rated concentrated floor loading shall be greater than 1,000 lb/ft².

Electrical

- Provide two dedicated 208 VAC 30-amp (L6-30R) receptacles at each rack; one receptacle should be on normal (street) power and one on building emergency power. Provide at least one dedicated 120 VAC 20-amp (non-switchable) quad receptacle on each wall.
- Feed power receptacles located in the TR dedicated panels located within the TR.
- If a building-wide UPS is not planned, a local UPS should be installed within the equipment rack and sized to provide adequate runtime for emergency situations.
- Provide an independent telecommunications grounding system.
- The TR will have a bus bar tied to the grounding system to facilitate bonding of the telco equipment to the building ground and to provide an equipotential reference for all communications equipment.



Image: Telecommunications Closet

Pathways

The importance of a well-designed pathway system is often overlooked. It is an essential part of the building's infrastructure. The one constant of structured cabling is change. Unlike other utilities within the building, data networking needs are constantly growing and evolving. Typically, several changes are made to a building's structured cabling system each year. A well-designed pathway system is an investment in productivity. The faster and less expensive each change can be made, the lower the direct cost to the institution. Less disruption to users of the spaces allows them to maintain productivity. Lowering the cost of changes makes it easier to right-size the building's infrastructure and optimize capital investment.

Structured Cabling

The structured cabling system connects all network-enabled devices to the building's networking infrastructure, which has four primary components Vertical Cabling, Horizontal Cabling, Outlets, and Patch Panels.

Vertical Cable/Pathways

The multiple TRs in the building all connect back to a main telecommunication room (MTR) via fiber and copper cabling. Fiber optic cabling terminates in rack-mounted housings to provide flexible patching of strands and to provide redundancy. Copper cabling terminates either at the racks via patch panels or wall-mounted 110 type blocks with ties to the rack-mounted patch panels.

The following are the expected Vertical Cabling requirements for this project:

- 24-strands of single mode (SM) fiber capable of supporting 40 Gbps or 100 Gbps
- 100-pair copper cable

Horizontal Cable/Pathways

Category cable will be utilized for all horizontal cabling. All areas of the building follow similar design standards regarding the number of cables per workspace as established by the Owner's IT department and industry codes, standards, best practices, etc. Outlet configuration will vary depending on the locations. As the design progresses, the overall horizontal cabling plan will be documented for installation.

The following are the specific Horizontal Cabling requirements for this project:

- Utilize CAT6 cabling at a minimum including all cabling, patch panels, patch cables, termination modules, and wiring blocks.
- Utilize CAT6A cabling for all wireless access points.
- Terminate on rack-mounted patch panels regardless of the application using the cable, e.g., email, phone call, fax, or video.
- Utilize the same cable regardless of the device using the cable, e.g., computer, telephone, or surveillance camera.
- Installed length should be kept to a maximum of 250 feet to accommodate proper cable length including vertical changes and cable slack.

Outlet Configurations

Preliminary definitions for the recommended work area outlet configurations are as follows:

- The "Single" Outlet consists of one (1) Category 6 cable. This outlet type is typically used for specialty applications and is characterized by different mounting heights and locations.
- The "Dual" Outlet consists of two (2) Category 6 cables on a single-gang faceplate.
- The "Triple" Outlet consists of three (3) Category 6 cables on a single-gang faceplate.
- The "Quad" Outlet consists of four (4) Category 6 cables on a single-gang faceplate.
- The "High Density" Outlet consists of six (6) or more Category 6 cables on a single-gang or dual-gang faceplate.
- A "Furniture Feed" consists of one (1) 4" square wall box to provide a pathway from the wall to the furniture system's raceway.
- "Specialty" Outlet variants will be adapted as needed for unique uses and locations not covered by the above-listed configurations.
- Wireless Access Points (WAP) cabling will be provided with a "Dual" outlet; one cable for console port connection and the other for the network uplink.

Patch Cable Assemblies

Effective patch "flow" is an integral part of the Structured Cabling System design to be planned according to the specific rack and wire management layouts.

- Patch cable assemblies will be provided and warranted as a part of the Structured Cabling System based upon a quantity twice that of the installed and available horizontal cabling channels plus an additional 5% to provide for varying needs at both cable ends.
- Patch cables will be color-coded (TBD)
- Patch cables will be provided as part of the base building build-out.
- Patch cable installation will be performed by (TBD)



Image: Telecommunications Cabling installed in conduit sleeves and cable tray

Wireless Network

The building-wide wireless network will be designed to augment and, in many cases, supplant the traditional wired network. Access points will be located to provide building-wide wireless coverage. The wireless infrastructure design will be based on the latest IEEE-802.11 standard (802.11be Wi-Fi 7) and can adapt to and support future standards.

Power over Ethernet (PoE) technology will be used to simplify installation and increase system flexibility by centrally locating all power requirements for wireless access points. This methodology greatly increases the availability of network bandwidth by adding the capability of connecting to the network via multiple frequencies and channels. The goal of the wireless system design is to allow for wireless coverage for the entire facility, including adjacent exterior areas, utilizing high density and dynamic load balancing wireless network standards.

Note: a Wireless Heat Map design will be performed by the Owner or their IT Vender and provided to NV5. If a heat map is not provided NV5 will layout wireless data drops based on best coverage practice.



Network Electronics

The data network system provides transport and communications for a multitude of applications. Ideally, there should be a single, common data network system for all applications as opposed to individual data network systems that are single application based. A common data network allows for cost savings of equipment and supporting infrastructure (space, power, cooling, etc.) while also providing better utilization of network equipment. By using network protocols such as virtual local area networks (VLANs), applications such as voice can share a common network switch with applications such as email or video surveillance yet still ensure proper quality of service (QoS).

The structured cabling systems described in the previous section make up the passive components of the data network systems. The active data network electronics will be procured and configured by the City IT department.

Access Control System

An Access Control system will provide card access at certain non-public entry and exit points of the building or departmental perimeters or at any other area or space deemed a priority by the City of Show Low team. It is likely that the only traditional keys given to staff would be for their individual offices and any storage rooms that are under their control.

Door hardware configurations require close coordination the Architect to ensure proper operation for normal and alarmed conditions. The door hardware schedule should include not only standard door hardware devices such as locksets and closers, but also detail electronic security devices and components to create a more comprehensive schedule. Pathways in and around the door frames also require close coordination to ensure accessibility for wiring and installing electronic components.

The typical security door configuration will include a reader, interface to the electric locks, door position switches, and request to exit components. Emergency exit doors will employ door position switches and sounders (door open alarms). Delayed egress exit devices will be used on some of these doors. The typical cabling configuration will consist of a common pull box located above the door on the secure side of the door as well as pathways for the interconnection of the various door control and signaling components.

The system will be configured so that that time-of-day features may be utilized. Some doors may be unlocked by the system during regular business hours or for special events while others will always require a card for access. Doors may go into an alarm state when opened immediately, such as in an emergency exit, or when a perimeter door is held open for an extended period.

In general, the access control system will seal off the building perimeter and restrict access to certain spaces at certain times. There may be a need to control access to elevators and stairwells based on occupants' roles and work schedules. Additional features of the system include holiday schedules, visitor credentialing, access groups, and database segmentation to name a few.

The access control system and the video surveillance system will be integrated, allowing for timestamp management of video records tied to entry and exit events by the user. In addition, emergency call stations around the perimeter and at building entry locations will integrate with these systems to allow alarm and visual event recording. The access control system may incorporate an intrusion detection sub-system with glass break sensors, motion detectors, and door contacts to detect and report unauthorized after-hours entry in certain parts of the building. Since some areas in the facility may operate 24 hours a day or late into the night, the scope of intrusion detection systems including staff that will monitor alarms is yet to be determined.

The card access system used for this building will conform to the current standards on campus and will be connected to the campus LAN.

Video Surveillance System

A system of fully integrated security cameras will monitor the public-use areas of the building. The camera type is standardized on IP-based units. Fixed cameras will be used to monitor most areas. Additionally, pan/tilt/zoom (PTZ) cameras may be used to provide a more detailed view of an ongoing incident.

These cameras will use motion sensing software to activate recording only when certain conditions are met such as human movement. Analytic software is also available to trigger alarms and people counting. Camera housings will be primarily domes with other housings provided based on environment, architectural goals, or space limitations.



Image: Card Reader with RFID Badge

Emergency Phones

The use of "Blue Light" emergency telephones is planned inside and outside the facility. The configuration is such that the instrument is wall mounted at indoor locations and pedestal mounted at outdoor locations, the latter possibly containing an integrated camera. The units typically have one red button which automatically calls the local security services, or the Public Service Answering Point (PSAP) based on campus procedures. Elevator telephones can be programmed to automatically call these same locations for help.

We recommend that any mechanical, electrical, pump and valve rooms contain a wall phone in the event of an industrial accident. Workers in these areas are often alone and cell service is often limited in those areas of the building.

Intrusion Detection

Devices such as glass break detectors, duress alarms, a.k.a.,panic buttons, tamper switches, and motion sensors may be employed in certain situations. These devices notify the security of an intrusion into a space, based on criteria established by the overall system logic. This system may be stand alone or integrated into the Access Control System.

Physical Security

The physical security of the inhabitants and assets at this new building requires special consideration relative to the following key design issues:

The facility is expected to remain open for extended hours, in select areas with minimal staff present after hours.

- Staff will have easy access to the building.
- The building should maintain a welcoming feeling.
- The building is designed for frequent public access.
- The facility has multiple entrance and exit points.
- Financial transactions, both hard currency and electronic, occur in several locations throughout the facility.
- The security requirements also need to be balanced with the aim of providing an aesthetically pleasing and comfortable environment.

High Level Overview

Security and access control systems are managed by XXX with monitoring and response from XXX Police Services. Close coordination with these entities is required to complete our portion of the design work.

In general, building security systems are intended to control or monitor pedestrian flow throughout the building based on certain flexible criteria. Themes such as individual pass card holder permissions and time of day access control are key to the design. Access cards will be city standard.

Surveillance devices in the form of remotely monitored cameras augment the access control system by linking door events with video footage. To complete the design, devices such as door and window position sensors provide the monitoring service a snapshot of the building's perimeter at any given time.



Image: Code Blue Phone

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Image: Video Surveillance Camera



SHOW LOW EVENT CENTER

SD ACOUSTIC NARRATIVE

PRESENTED TO:
CHRIS FORD
PRINCIPAL
4LINE STUDIO
4343 N SCOTTSDALE ROAD
SCOTTSDALE AZ, 85251

November 18th, 2025

1 INTRODUCTION

4Line Studio is currently designing a new Event Center in Show Low, Arizona. The new facility will feature a variety of spaces including Sport Courts, Meeting Rooms, Offices, Concessions Facilities, Lobbies and Support Spaces. The Sport Courts are also intended for use as an event space for music, speaking engagements and other similar activities.

This range of spaces presents a varied set of acoustical goals throughout the building. Some spaces will require specialty acoustical treatments, enhanced sound isolation and quiet mechanical systems, while other spaces will require simple, but equally important acoustical treatments.

2 ABOUT THIS PROGRAM

This acoustical report is based upon the active BIM model dated at November 12th 2025, and room data sheets dated October 17th 2025. This report is intended to form the basis of the acoustic design for the project by setting performance targets for spaces and design elements, informed by the spaces' use and context within the building. General in-principle solutions for the important acoustical attributes of the building are provided.

In many cases, alternate solutions may be explored to satisfy the project's acoustical goals. The recommendations in this report should be viewed as a starting point to the development of acoustical solutions that satisfy the project's functional, aesthetic, and budgetary goals. It is our intention that these recommendations will be incorporated into the architectural and mechanical drawing packages and specifications. The implementation of this report's recommendations will be verified through drawing reviews in subsequent design phases.

3 ACOUSTICAL STANDARDS

The recommendations presented in this report are consistent with the criteria and design standards listed below.

3.1 2023 ASHRAE APPLICATIONS HANDBOOK

Chapter 49 "Noise and Vibration Control" from the 2023 ASHRAE Applications Handbook is the industry standard for mechanical, electrical, and plumbing noise control related to building HVAC systems. Mechanical system treatments and design guidelines presented in this report are primarily based upon this document. Wherever possible, the mechanical system design should follow this standard, which is the current version of the document.

3.2 SHOW LOW ZONING ORDINANCE 19.25.190 – PERFORMANCE STANDARDS

Show Low Zoning Ordinance requires that the facility does not exceed the following noise limits when measured outdoors at the boundary of the surrounding properties:

Receiving Land Use Category	Noise level, dB L _{Aeq}	
	10:00 p.m. to 7:00 a.m.	7:00 a.m. to 10:00 p.m.
Residential	62	70
Commercial	65	72
Industrial	70	85

4 SOUND ISOLATION

A primary goal is to provide appropriate separation between noise-generating and noise-sensitive spaces. Careful layout of the building can create necessary distance between loud and quiet areas. Buffer spaces like storage rooms and vestibules can also be effective at reducing sound transmission.

Noise Sensitive Spaces	Noise Generating Spaces	Buffer/Neutral Spaces
Offices Meeting Rooms Referee Rooms	Sport Courts Lobbies Concessions Areas and Kitchens Restrooms MEP/Fire Riser Rooms	Corridors Storage

As currently designed, the layout of the site does not present any obviously incongruous adjacencies. Care will need to be taken to ensure that the mechanical rooms offer sufficient sound isolation to corridors, and adjacent enclosed spaces. Restrooms, kitchens and concessions areas will require double-stud assemblies with 1" clear gaps between wall leaves wherever they abut enclosed spaces.

4.1 DOORS

High quality adjustable perimeter gasketing and drop seals should be anticipated for all doors into noise-sensitive or noise-generating spaces. Example products include *Zero International Models 770, 870, and 369*. We recommend these are planned for the banquet/meeting room doors, the open office/corridor door, the private office doors and the referees room doors.

In order to achieve the environmental noise ordinances, it may be necessary to also include upgraded doors/seals for the external Sport Courts doors.

Finally, a large door exists between the Sport Courts and Storage room/BOH area. Depending on the degree of isolation required during event usage, a large acoustically rated door (e.g. Elephant Doors) may be required.

4.2 INTERIOR GLAZING

Storefront style glazing and side-lites are used in this building adjacent private office doors. This type of system typically exhibits poor sound isolation. We recommend that 5/8" thick laminated glazing be used in these instances. Generally, 5/8" laminated glazing tends to present the best balance of sound isolation and financial feasibility. This glazing will perform slightly lower than the solid partition in which it sits, however this lower performance is generally considered an acceptable compromise to preserve visual connection between spaces.

If high levels of confidentiality are required, special acoustic double-glazed units will be required for these locations, or they should be replaced with solid partitions.

4.3 INTERIOR PARTITIONS

Various interior partitions will be needed to generate an appropriate level of sound isolation throughout the building. **All partitions should run full-height to the deck**, with their perimeters sealed airtight with a non-hardening sealant.

The assemblies described below will achieve the STC values noted in the room data sheets. Many alternatives to those below are possible, and we will provide updated wall assemblies suited to the specific construction preferences of the project as the design progresses.

STC Rating	Example Construction
STC 45 – Option 1	(2) Layer of 5/8" thick Type-X Gypsum board 3-5/8" thick 20-gauge stud, 16" O.C. 3-1/2" thick unfaced Batt Insulation

STC Rating	Example Construction
	(2) Layer of 5/8" thick Type-X Gypsum board
STC 45 – Option 2	(1) Layer of 5/8" thick Type-X Gypsum board 3-5/8" thick 20-gauge EQ stud, 16" O.C. 3-1/2" thick unfaced Batt Insulation (1) Layer of 5/8" thick Type-X Gypsum board
STC 45 – Option 3	(1) Layer of 5/8" thick SoundBreak XP Wall Board 3-5/8" thick 20-gauge stud, 16" O.C. 3-1/2" thick unfaced Batt Insulation (1) Layer of 5/8" thick SoundBreak XP Wall Board
STC 50 – Option 1	(1) Layer of 5/8" thick Type-X Gypsum board - Staggered 3-5/8" thick 20-gauge stud, 16" O.C., in 6" track (2) 3-1/2" thick unfaced Batt Insulation (one in each stud cavity) (1) Layer of 5/8" thick Type-X Gypsum board
STC 50 – Option 2	(1) Layer of 5/8" thick Type-X Gypsum board 3-5/8" thick 20-gauge EQ stud, 24" O.C. 3-1/2" thick unfaced Batt Insulation (2) Layer of 5/8" thick Type-X Gypsum board
STC 50 – Option 3	(2) Layer of 5/8" thick Type-X Gypsum board 6" thick 20-gauge stud, 16" O.C. 6" thick unfaced Batt Insulation (2) Layer of 5/8" thick Type-X Gypsum board
STC 55 – Option 1	(1) Layer of 5/8" thick Type-X Gypsum board - Furring channel, 24" O.C. - Isolation Clips, 48" O.C. 3-5/8" thick 20-gauge stud, 16" O.C. 3-1/2" thick unfaced Batt Insulation (1) Layer of 5/8" thick Type-X Gypsum board
STC 55 – Option 2	(2) Layer of 5/8" thick Type-X Gypsum board - Staggered 3-5/8" thick 20-gauge stud, 16" O.C., 5.5" plate (2) 3-1/2" thick unfaced Batt Insulation (one in each stud cavity) (2) Layer of 5/8" thick Type-X Gypsum board
STC 60 – Option 1 <i>Restroom, kitchen, concession areas to enclosed spaces</i>	(1) Layer of 5/8" thick Type-X Gypsum board 3-5/8" thick 20-gauge stud, 16" O.C. 3-1/2" thick unfaced Batt Insulation 1" unobstructed airspace 3-5/8" thick 20-gauge stud, 16" O.C. 3-1/2" thick unfaced Batt Insulation (1) Layer of 5/8" thick Type-X Gypsum board

STC Rating	Example Construction
STC 60 – Option 2	8" thick CMU 1" unobstructed airspace 2-1/2" thick 20-gauge stud, 16" O.C. 3-1/2" thick unfaced Batt Insulation (1) Layer of 5/8" thick Type-X Gypsum board

4.4 OPERABLE PARTITIONS

Operable partitions are planned to subdivide the banquet/meeting rooms.

Generally, the upper limit of performance that can be provided by an operable partition is STC 50-55. In order to achieve these levels of isolation, partitions generally need to be mechanically operated and overhead type, e.g. Skyfold Classic NR.

At STC 50-55, occupants can expect that amplified speech in the adjacent division will be audible, but it should not distract from amplified speech programming within their division of the room. If listened for, an occasional word of speech transmitted through the partition will be intelligible, but complete sentences should be incomprehensible. Applause in one division may cause a momentary distraction in the other. Sound isolation would likely cause a problem if one division were having a party or reception with amplified music while the other side was having a quiet lecture or meeting.

If this does not meet the owner's expectations for sound isolation, there are alternative systems that are laboratory rated up to STC 60, however an STC-50 rating is approaching the practical upper limit of sound isolation for most manufacturers' standard partition systems. Specifying a higher level of sound isolation would significantly increase the cost and reduce the number of manufacturers who can provide the partition system.

For all operable partitions:

- Note that special head and perimeter conditions will be provided by the supplier which will account for the structural requirements of the wall and preserve the STC performance of the wall
- Hard floors are required beneath operable walls to allow a firm acoustical seal to occur. In spaces where carpet is desired, this may require a section of hard flooring
- Consideration must be given to the finish of the panels – acoustically absorptive finishes are preferred.
- A bulkhead equaling the STC rating of the operable partition should extend to the structure above, to prevent sound from flanking from one side of the divided room, to the other.

4.5 EXTERNAL WALLS AND ROOF/CEILING CONSTRUCTION

Currently, Pro-Liner Banded Liner Systems are planned to be used for the external walls and roof/ceiling in the building.

These surfaces offer acoustic absorption performance up for NRC 0.70 and STC 39-42.

See Section 6 for a discussion on the noise-reduction properties of this material as a building envelope.

5 ACOUSTIC FINISHES

Acoustical finish treatments are an important consideration and must be suitably selected to:

- Enhance clear speech communication in the banquet/meeting rooms
- Reduce reverberant noise build-up in the corridors, lobbies and Sport Courts
- Provide suitable sound quality for events in the Sport Courts.

Noise Reduction Coefficient (NRC) ratings are single number indicators of a material's acoustical performance. These ratings have been provided as selection criteria for various acoustical finishes. We have provided in-principle basis of design surfaces that achieve the various NRCs required, however a many alternative surfaces which provide a range of aesthetics are possible.

Any alternate surfaces should be selected with the same NRC as we have specified.

5.1 CEILING FINISHES

Sound-absorbing ceilings are recommended for all occupied spaces. The most common and effective surface is Acoustic Ceiling Tile, which can be selected in a range of NRCs and provides the added benefit of controlling radiated or breakout noise from MEP items which are housed above, and can be provided as a cleanable surface. Other options such as decorative timber slats, suspended acoustical clouds or blades or cellulose spray finishes are also available, however care must be taken to ensure that MEP noise and footfall noise from above is suitably addressed.

Generally, we recommend:

- ≥ NRC 0.75 for most spaces including private offices, prefunction/lobby spaces, concessions spaces, kitchens and vestibules.
- ≥ NRC 0.85 for the open office and banquet/meeting rooms.
- While not mandatory, adding an absorptive finish such as ductliner or K-13 spray to the ceilings in MEP rooms will help reduce noise build-up.

5.2 WALL FINISHES

Acoustically absorptive wall finishes are recommended for the banquet/meeting rooms.

The most common acoustically absorptive wall finishes are fabric-wrapped panels, stretch-fabric walls systems, or thick felt panels. However, a range of alternative aesthetics are also available.

Absorptive wall finishes function most efficiently when located between 3-7' AFF, however, in certain large rooms it is necessary to distribute the panels at a range of heights.

Generally, we recommend:

- NRC 1.00 wall panels on two non-opposing walls in meeting and breakout spaces. Alternately, treatment can be evenly distributed amongst all four walls.
- Special arrangements and NRC performances will be required for the Sport Courts in order to provide suitable room acoustic performance for events. We have provided an in-principle set of recommendations for the space in the room data sheets in Section 8

6 ENVIRONMENTAL NOISE EMISSIONS

We have prepared a 3-dimensional noise model of the proposed building, the surrounding topography and receiver locations in order to predict the noise break-out from the building under worst-case conditions to determine whether any upgrades to the acoustic envelope are required to adhere to the Show Low Zoning Ordinance Noise Limits.

Note that this noise model is preliminary in nature and therefore at this early stage of design, the results should be considered indicative and for the purpose of cost-planning only.

The following database noise levels for an amplified rock music performance occurring within the building have been utilized.

Description	Octave band center frequency, Hz							
	63	125	250	500	1000	2000	4000	8000
Amplified rock music performance, spatial L _p , dB L _{eq}	110	111	113	110	112	109	103	96

The following table summarizes the key building material properties used in the model.

Building Element	Description
External walls	Pro-Liner Banded Liner System STC 39
Roof/ceiling	Pro-Liner Banded Liner System STC 42

Building Element	Description
External doors	Hollow core doors, no seals STC 19
External glazing	5/8" laminated glass STC 35-40

Based on the indicative inputs summarized above, the noise emissions from the building are predicted to not exceed the noise ordinances at the surrounding residential and commercial receiver for both the daytime and nighttime.

During the forthcoming phases of the project we will continue to update and refine the noise model based on the detailed building plans.

7 BUILDING SYSTEM NOISE & VIBRATION CONTROL

Noise from building mechanical, electrical, and plumbing systems can be highly distracting and detrimental to educational and collaboration spaces. Design measures should be incorporated to provide appropriate noise levels in all occupied areas of the building.

Building system noise and vibration control treatments presented in this report are primarily based on Chapter 49 ‘Sound and Vibration Control’ from the 2023 ASHRAE Applications Handbook. Wherever possible, the mechanical system design should comply with this standard.

7.1 BACKGROUND NOISE LEVELS

The following background noise targets have been identified for each space type. During the initial phases of the design, NC targets were put forth by the architecture team which we previously recommended could be relaxed. In certain instances our relaxed recommended criteria have been adopted in the latest architectural room data sheets and in some instances these have not been adopted. The following criteria align with the latest that have been put forth by the architecture team.

This table uses the NC (Noise Criteria) rating system, a single-number value representing the sound level in the room. The lower design target should be used when selecting terminal units, terminals, and other system components based on manufacturer catalog ratings. The higher value specifies the intended performance of the total system installed and operating under actual field conditions, which is typically much louder than the levels quoted by the equipment manufacturer.

Space Type	Equipment Selection NC Rating	Maximum Field NC Rating
Community Meeting Rooms, Ticket Office, Training/Warmup Room, Manager’s Office	25	30
Sport Courts/Event Venue, Open Office,	25-30	30-35
Referee Room, Concessions, Kitchen	30	35
Lobbies, Corridors	30-35	35-40
Restrooms	35	40

7.2 DUCT LAYOUTS AND NOISE CONTROLS

The simplest and most cost-effective way to reduce background noise levels is to locate noisy equipment outside of noise-sensitive rooms, and to locate noisy RTUs or AHUs as far as possible from any noise sensitive space. Terminal units and

duct mains should not be located above any room noted with maximum field ratings of NC 30 or below. These items should be placed in adjacent corridors, with individual fit-out branches to serve each noise sensitive room.

Provisions should be made for the following general noise controls:

- RTUs/AHUs: sound attenuators/silencers in supply and return ductwork, located as close to the units as possible
- Ductwork: 2” internal lining for any ductwork within MEP rooms, specific additional lengths of 1” internal lining based on the detailed acoustic analysis
- Terminal units: locate outside of noise-sensitive spaces and above enclosed ceilings. Certain units may require acoustic wrap or gypsum bulk-heads. Anticipate internal lining, several elbows, acoustical flex-duct downstream where units serve noise sensitive spaces (NC-30). Certain units may require dedicated sound attenuators/silencers.

Penetrations through acoustical walls can significantly reduce their performance. As such, layouts should be routed to minimize the number of penetrations through demising walls.

7.3 VIBRATION CONTROL

Rotating equipment can generate problematic levels of vibration. All equipment should be mounted on vibration-isolating bases and hangers selected according to the ASHRAE Applications Handbook. This is expected to include spring isolators, structural steel bases, and neoprene pads. Certain units may require inertia bases.

7.4 DESIGN COORDINATION

NV5 will work together with the project’s mechanical engineer to analyze the system noise levels and provide recommendations for optimization. This will require a detailed set of HVAC drawings, as well as octave band sound power data for all noise-generating equipment. Ideally, the mechanical engineer should provide this info as soon as possible so that noise control measures can be incorporated from the beginning of the design process.

The bulleted list below details the information that will be needed for a full acoustic review.

- 100% DD or 50% CD mechanical drawing package (PDF), including:
- Floor plans showing final duct sizes and layouts, airflow volumes, and tags for all mechanical devices, including VAV boxes and diffusers
- Complete equipment schedules indicating basis of design products and the following information:
 - Flow (CFM) and Noise (NC) ratings for diffusers and grilles
 - Flow (CFM), power (HP), and operating speed (RPM) for powered air handling equipment, including fans, air handlers, cooling towers, etc.
 - Power (HP) and operating speed (RPM) for pumps
- Mechanical details including duct lining, flexible duct work, final duct run-outs, penetration details, transfer air duct configurations, and equipment mountings
- Division 23 (2004 CSI) specification, including specifications for previously recommended noise control devices and vibration isolators
- Final octave-band sound power data for all powered mechanical equipment.
 - Inlet and discharge noise levels for air handling equipment, including VAV boxes, fan coil units, exhaust fans, and air handlers
 - Case radiated noise levels for air handling equipment, pumps, chillers, boilers, cooling towers, air compressors, and emergency generators
 - Combustion inlet and exhaust noise levels for emergency generators.



8 ROOM DATASHEET

Space Type	Sound Isolation	Room Acoustics	Building System Noise												
Sport Courts / Event Venue	Partitions: a) to BOH: STC 50-55 b) to Prefunction: STC 50. Doors: solid-core doors or fiber-filled metal with perimeter seals and acoustic drop-seals.	Two approaches are available for the Event Venue space. The first approach would be to augment the existing acoustic absorption of the exposed ProLiner system with additional acoustic panels to provide a smooth, balanced reverberation spectrum. This approach would require a significant surface area of acoustic wall and ceiling panels to balance reverberation of the space. The second approach would be to rely on the existing absorption of the ProLiner panels for the ceiling, and augment this with wall panels only. This approach will treat discrete reflections but would result in higher overall reverberation times in the upper frequency bands, potentially compromising sound quality and speech intelligibility. This compromise would require the voice lift or music amplification systems used in the space to compensate for the room acoustic, for example by including additional speakers dispersed throughout the space so that additional direct sound can be introduced to listeners. As coordination of the design occurs, we can develop 3-dimensional models of the space's room acoustic performance to assist with decision making. Ceiling (approach 1): Approximately 40,000 sqft of suspended absorptive panels with approximately NRC 0.70, with absorption performance comparable to the following coefficients: <table><tr><th>125</th><th>250</th><th>500</th><th>1k</th><th>2k</th><th>4k</th></tr><tr><td>0.35</td><td>0.55</td><td>0.60</td><td>0.77</td><td>0.95</td><td>1.00</td></tr></table>	125	250	500	1k	2k	4k	0.35	0.55	0.60	0.77	0.95	1.00	Equipment selection target NC: 25-30 Sound attenuators: For main AHU units. Terminal units: locate outside of the space if possible. If not possible, these may require acoustic wrap. Provide at least two 90 ° elbows and at least 4" of flexible ductwork between the terminal unit and air outlet devices.
	125	250	500	1k	2k	4k									
0.35	0.55	0.60	0.77	0.95	1.00										

Space Type	Sound Isolation	Room Acoustics	Building System Noise												
		The BOD surface should be MBI Lapendary Panels, model 4000P-1010-S. The remaining surface area should remain as the exposed ProLiner system. Ceiling (approach 2): No additional acoustic treatment to ceiling. Walls (both approaches): Approximately 20,000 sqft of acoustic wall panels with approximately NRC 0.90, with absorption performance comparable to the following coefficients: <table><tr><th>125</th><th>250</th><th>500</th><th>1k</th><th>2k</th><th>4k</th></tr><tr><td>0.15</td><td>0.55</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td></tr></table> The BOD surface should be 1-1/8" thick Kinetics Hardside High Abuse panels. These surfaces should be evenly distributed throughout the space at various heights. Floor: Hard surface flooring.	125	250	500	1k	2k	4k	0.15	0.55	1.00	1.00	1.00	1.00	
125	250	500	1k	2k	4k										
0.15	0.55	1.00	1.00	1.00	1.00										

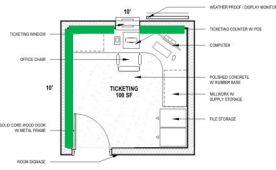


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Space Type	Sound Isolation	Room Acoustics	Building System Noise
Community Meeting Rooms	Partitions: STC 50 Doors: solid-core doors or fiber-filled metal with perimeter seals and acoustic drop-seals. Operable partition: STC 50-55. See Section 4.4.	Ceiling: ACT providing $\geq$ NRC 0.85 e.g. Armstrong Calla. Walls: Acoustic wall panels providing NRC 1.00 e.g. 2" thick Kinetics Hardside. As these spaces will offer functionality as formal presentation style arrangement, the acoustic wall panels should be applied for the entire run of side walls, starting at 3' AFF and stopping 2-4' below the finished ceiling. The fascia of the operable walls in this space <i>must</i> be acoustically absorptive. Finally, having the large spans of glazing at the non-presenter end of the space is likely to introduce flutter echoes. Provide acoustically rated shades (e.g. Mechoshade Acoustiveil, Gerriets Acoustic Blinds, or Vescom Acoustic Sheers), and provide a band of acoustic absorption above 7' AFF at the presenter end of the space. See markup below. Floor: Carpet	Equipment selection target NC: 25 Sound attenuators: For main AHU units. Terminal units: It is essential that terminal units are not housed above these spaces. If it is unavoidable, ensure that these are housed behind ACT and provisions are made for acoustic wrap such as the Hushcore Premium system. An opportunity to house the terminal units above the attached storage spaces exists in the current floor plan – we strongly recommend that terminal units are put there. Provide at least two 90° internally lined elbows, 15' of internally lined ductwork and at least 4" of flexible ductwork between the terminal unit and air outlet devices.

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Space Type	Sound Isolation	Room Acoustics	Building System Noise
	Add acoustic wall panels above 7' AFF Operable wall must be acoustically absorptive Provide acoustically absorptive shades STORAGE PATIO NRC 1.00 acoustic wall panels starting and 3' AFF and finishing 2-3' shy of ceiling		

Space Type	Sound Isolation	Room Acoustics	Building System Noise
Ticket Office	Partitions: a) to lobby: STC 45 b) to enclosed occupied space: STC 50. Doors: solid-core doors or fiber-filled metal with perimeter seals and acoustic drop-seals.	Ceiling: ACT providing $\geq$ NRC 0.85 e.g. Armstrong Calla. Walls: Acoustic wall panel providing NRC 1.00 on the window-facing and side wall of the room. Floor: Carpet is recommended – concrete is currently planned. 	Equipment selection target NC: 25 Sound attenuators: For main AHU units. Terminal units: It is essential that terminal units are not housed above this space. If it is unavoidable, ensure that these are housed behind ACT and provisions are made for acoustic wrap such as the Hushcore Premium system. Provide at least two 90° internally lined elbows, 15' of internally lined ductwork and at least 4" of flexible ductwork between the terminal unit and air outlet devices.
Training/Warmup Room	Partitions: <i>STC 40 as is currently planned will not provide suitable acoustic privacy for sensitive conversations or treatment to occur. We strongly recommend:</i> a) solid partitions with no doors: STC 50 b) partitions with doors: STC 45. Doors: solid-core doors or fiber-filled metal with perimeter seals and acoustic drop-seals.	Ceiling: ACT providing $\geq$ NRC 0.85 e.g. Armstrong Calla. If a cleanable ACT is required, Armstrong Optima/Calla HealthZone. Walls: No specific requirement. Floor: Epoxy floor as currently shown is acceptable.	Equipment selection target NC: 25 Sound attenuators: For main AHU units. Terminal units: It is essential that terminal units are not housed above this space. If it is unavoidable, ensure that these are housed behind ACT and provisions are made for acoustic wrap such as the Hushcore Premium system. Provide at least two 90° internally lined elbows, 15' of internally lined ductwork and at least 4" of flexible ductwork between the terminal unit and air outlet devices. Penetrations: bring ductwork into the space via the wall with the door so as not to compromise the surrounding solid partitions. Seal appropriately.

Space Type	Sound Isolation	Room Acoustics	Building System Noise
Open Office	Partitions: a) solid partitions with no doors: STC 50 b) partitions with doors: STC 45 c) storefront partitions 5/8" laminated glass providing STC 36-40 (see section 4.2). Doors: solid-core doors or fiber-filled metal with perimeter seals and acoustic drop-seals.	Ceiling: ACT providing $\geq$ NRC 0.85 e.g. Armstrong Calla. Floors: Carpet.	Equipment selection target NC: 25-30 Sound attenuators: For main AHU units. Terminal units: locate outside of the space if possible. If not possible, these may require acoustic wrap. Provide at least two 90° elbows and at least 4" of flexible ductwork between the terminal unit and air outlet devices.
Private Offices/Manager's Office	Partitions: a) solid partitions with no doors: STC 50 b) storefront partitions 5/8" laminated glass providing STC 36-40 (see section 4.2). Doors: solid-core doors or fiber-filled metal with perimeter seals and acoustic drop-seals.	Ceiling: ACT providing $\geq$ NRC 0.85 e.g. Armstrong Calla. Floors: Carpet.	Equipment selection target NC: 25 Sound attenuators: For main AHU units. Terminal units: It is essential that terminal units are not housed above this space. If it is unavoidable, ensure that these are housed behind ACT and provisions are made for acoustic wrap such as the Hushcore Premium system. Provide at least two 90° internally lined elbows, 15' of internally lined ductwork and at least 4" of flexible ductwork between the terminal unit and air outlet devices. Serve each office via its own dedicated branch. Penetrations: bring ductwork into the space via the wall with the door so as not to compromise the surrounding solid partitions. Seal appropriately. Do not run ductwork between the offices.

Space Type	Sound Isolation	Room Acoustics	Building System Noise
Concessions Areas, Kitchens	Partitions: a) to enclosed occupied space: separate stud assembly, minimum STC 50-55. b) to non-sensitive area: STC 45. Doors: solid-core doors or fiber-filled metal with perimeter seals and acoustic drop-seals.	Ceiling: Cleanable ACT providing NRC 0.75-0.85 e.g. Armstrong Optima Healthzone.	Equipment selection target NC: 25-30 Sound attenuators: For main AHU units. Terminal units: locate outside of the space if possible. If not possible, these may require acoustic wrap. Provide at least two 90° elbows and at least 4" of flexible ductwork between the terminal unit and air outlet devices
Lobbies/Corridors	<i>STCs to be determined based on the adjacent usage.</i>	Ceiling: ACT or decorative acoustic ceiling providing ≥ NRC 0.75. Specific calculation of surface area extents and any wall panels to occur during detailed design.	Equipment selection target NC: 30-35 Sound attenuators: For main AHU units. Terminal units: generally it is safe to locate terminal units above lobbies and corridors where enclosed ceilings exist. If non-enclosed ceilings are utilized, terminal units will need to be housed in bulk-heads or be acoustically wrapped.
Restrooms	Partitions: a) partitions with plumbing items: separate stud construction. Plumbing must be fixed to the side of the wall which it served. No rigid connection can occur between wall leaves. b) partitions to corridors: STC 45. c) partitions to enclosed occupied spaces: STC 50.	<i>No specific room acoustic surfaces required.</i>	Equipment selection target NC: 30-35 Sound attenuators: For main AHU units. Terminal units: generally it is safe to locate terminal units above restrooms.

Space Type	Sound Isolation	Room Acoustics	Building System Noise
MEP/IT/Fire Riser Rooms	Partitions: STC 50-55 depending on specific equipment selections. Separate stud constructions will be required for walls where certain equipment is mounted e.g. transformers. Doors: solid-core doors or fiber-filled metal with perimeter seals and acoustic drop-seals. Vision panes not recommended.	Ceiling: ≥ NRC 0.75 ceiling surface such as an ACT, 1" thick International Cellulose K-13 spray, or Ductliner.	Penetrations: do not penetrate the acoustic walls surrounding these spaces where they articulate directly to noise sensitive spaces.



Memo

To	Chris Ford, 4 Line Studio		
Copy			
From	Jim Nesel, TP	Date	November 17, 2025
Project	Show Low Sports and Event Center	File	25245
Subject	Event Narrative	Pages	3

Events

Concerts, assemblies and events in the Sports and Event Center are anticipated to be infrequent. Events will utilize outside lighting , sound, staging, rigging equipment brought in either by the production or a preferred vendor.

Floor

The event center floor is anticipated as a resilient or “sprung” sports floor, similar to what would be in a gymnasium and ideal for court sports like basketball and volleyball. This floor assembly will need additional “stop blocks” that limit the overall deflection to 1/8” to allow for the heavier loads associated with other types of events. By limiting the deflection under heavy loads the floor assembly will be able to handle the loads from events and other activities as well as the loads of the retractable seating system without compromising the desired resilience for sports. A cover system may be considered to protect the sports floor surface when other events are happening.

Seating

For events there will be portable folding chairs available to be set up on the flat floor. These will need to store compactly on carts that allow them to be quickly deployed and ganged together when they are set up on the flat floor. The retractable seating would also be used for events.



Back of House Support

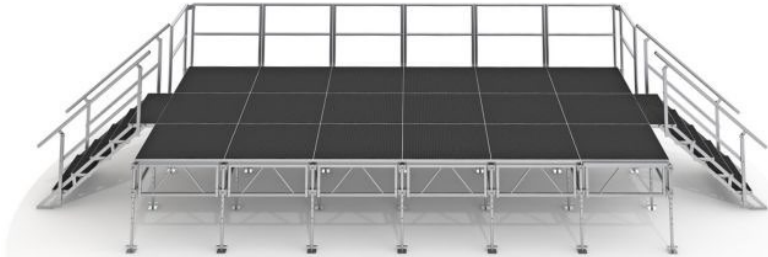
The locker rooms and the official’s room can be utilized as dressing rooms or assembly space for performers.



There is a loading door with parking available for trucks and buses for performers. There is no loading dock, so trucks with lift gates or forklifts will be required. There is a 100A 208v 3phase company switch for truck and bus power available at the load in door.

Staging

Staging would be portable platforms (4x8, 3x6) legged and locked together to form a stage of any size in any location on the flat floor brought in by an outside company. Stage height is recommended at 4’-0” - 5’-0” to allow a seated or standing sightline from the flat floor. Step units and a ramp(for ADA compliance) also would need to be considered for events requiring it.



Rigging

All rigging in the venue will need to be ground supported. Truss would require towers or crank up lifts. The roof trusses/steel supports are not designed to take any additional load beyond what they are designed for roof loads. This provides flexibility and eliminates the additional complications and liability around overhead rigging and calculation of loads placed on the roof structure. Floor loading can be up to 150PSF or higher. Point loads will be limited to the criteria from the sports floor top layer.

Event Lighting

Event lighting would be ground supported (see rigging section above). Building power is provided via two Company Switches, both 400A 208v 3 phase with industry standard camlock connectors. Cable passes provide a cable route to the outside should a generator be required for additional power. Power distros, cabling, fixtures, control is all by the production or an outside rental company.





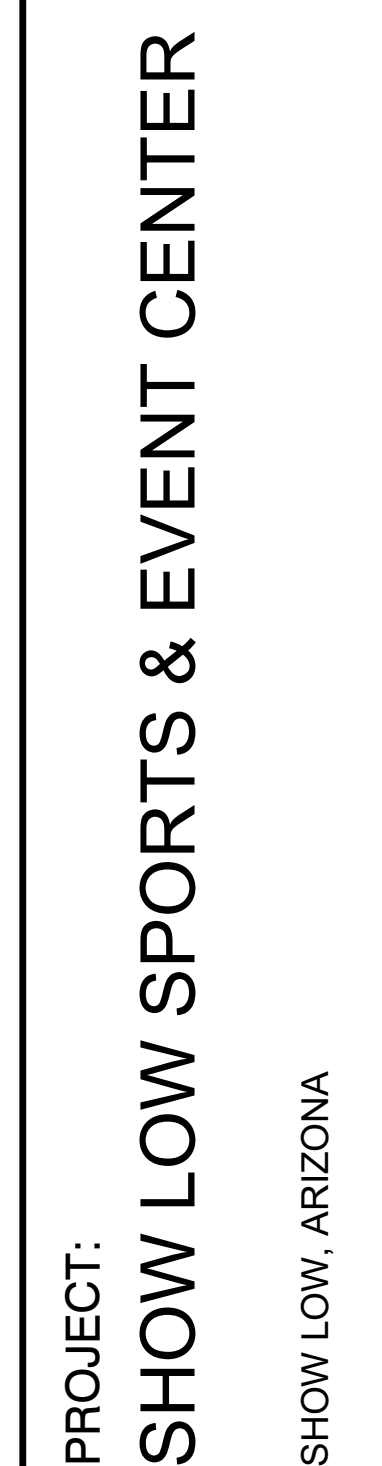
Event Audio Video

Event audio and video would be ground supported (see rigging section above). Building power is provided via one isolated ground Company Switch, 400A 208v 3 phase and one 200A 208v 3phase for video both with industry standard camlock connectors Cable passes provide a cable route to the outside should a generator be required for additional power. Power distros, cabling, fixtures, control is all by the production or an outside rental company.



25245- 20225-11-17- narrative for events TP.docx

FOOD SERVICE PLANS



FIELD VERIFICATION
Contractor shall verify all figured dimensions and conditions at the job site and notify Landmark Kitchen Design, LLC Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.

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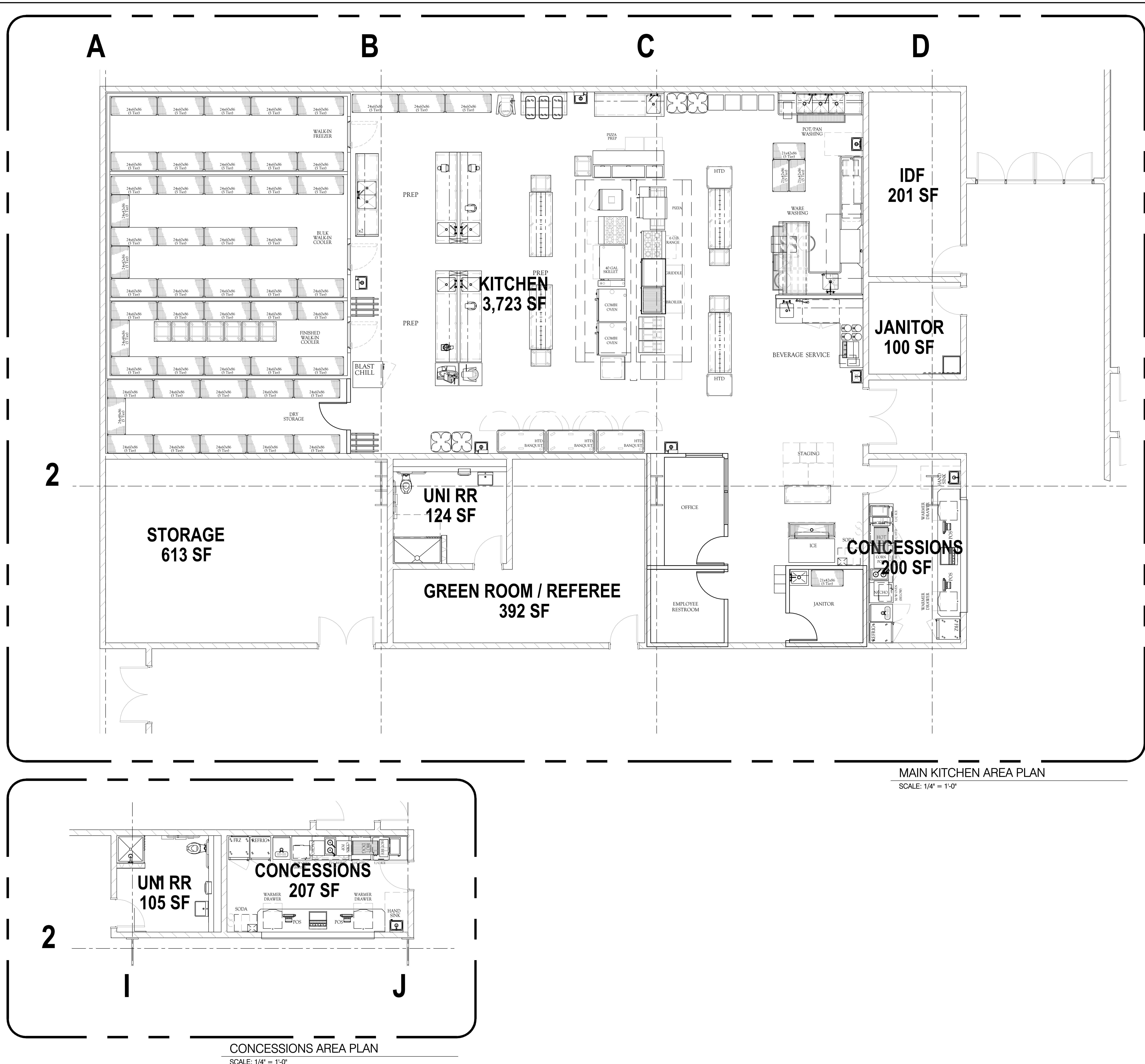
REVISIONS	
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2	Revised
3	Revised
4	Revised
5	Revised
6	Revised
7	Revised
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10	Revised
11	Revised
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100	Revised

Drawing Title
FOODSERVICE
EQUIPMENT
FLOOR PLAN

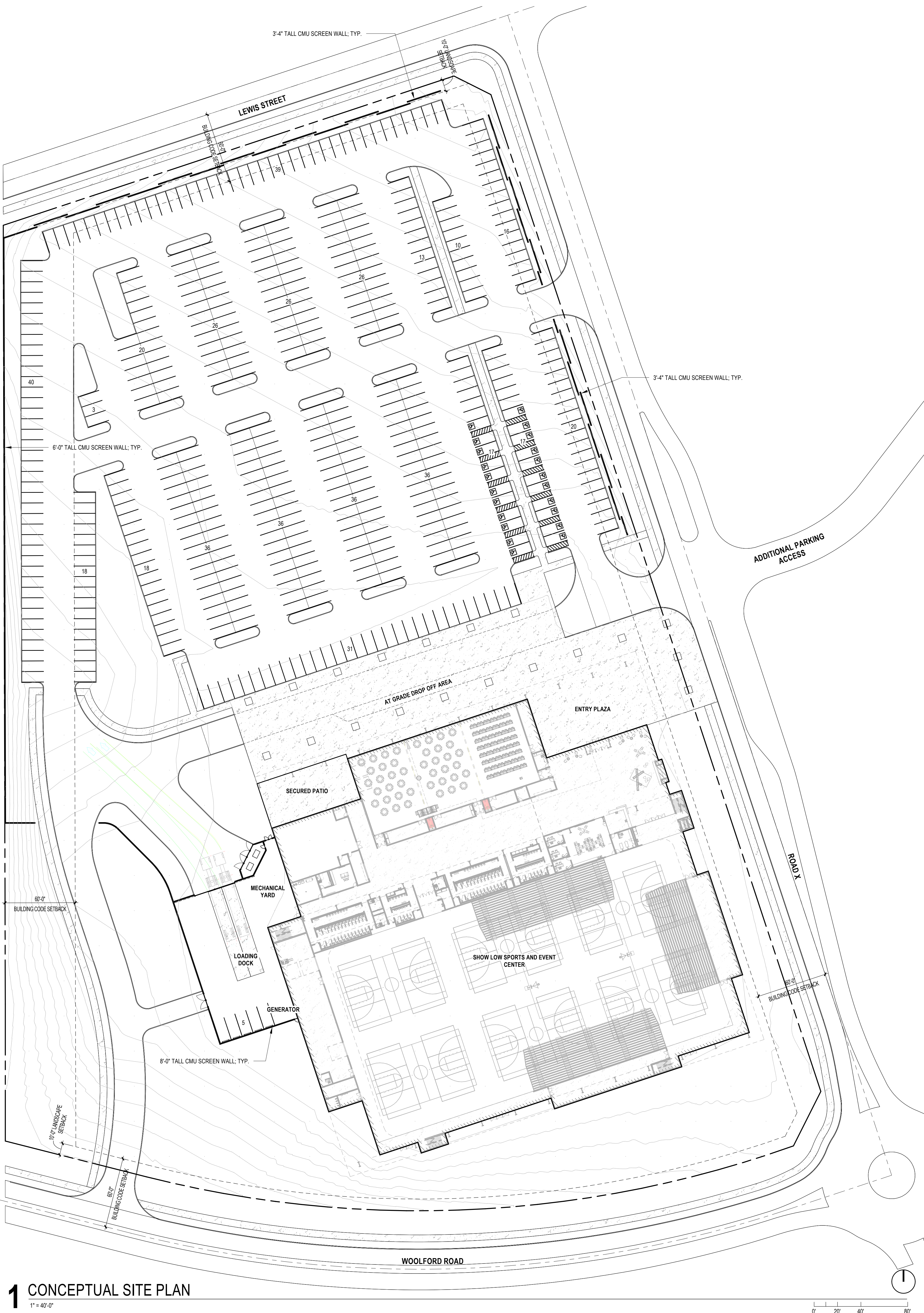
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Scale	Date 10/31/25
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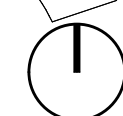
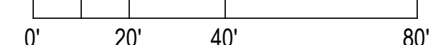
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ARCHITECTURAL SITE PLAN



1 CONCEPTUAL SITE PLAN
1" = 40'-0"



SHOW LOW SPORTS
AND EVENT CENTER

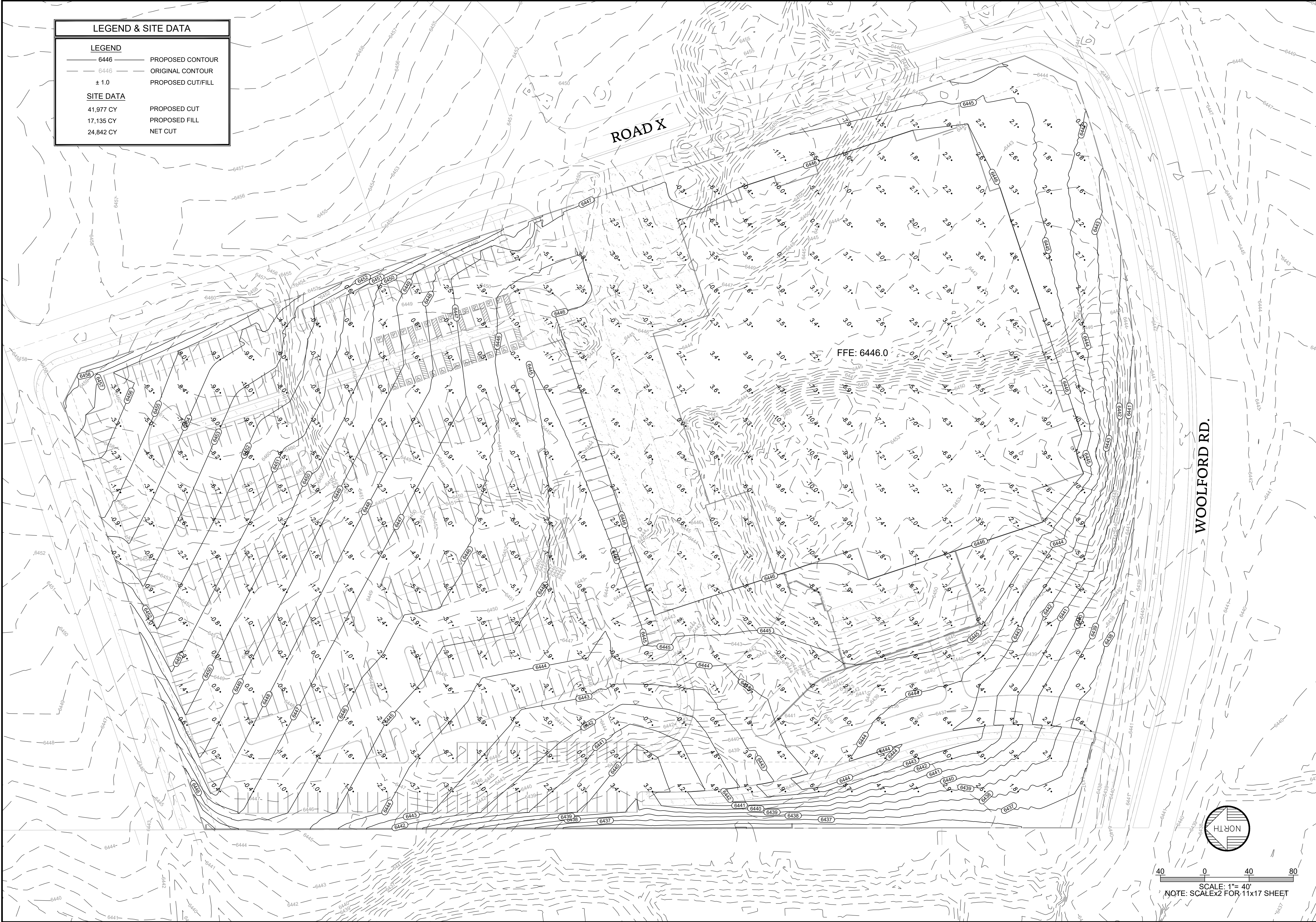
CITY OF SHOW LOW
WOOLFORD ROAD SHOW LOW, ARIZONA

DELTA REVISIONS		
#	DESCRIPTION	DATE

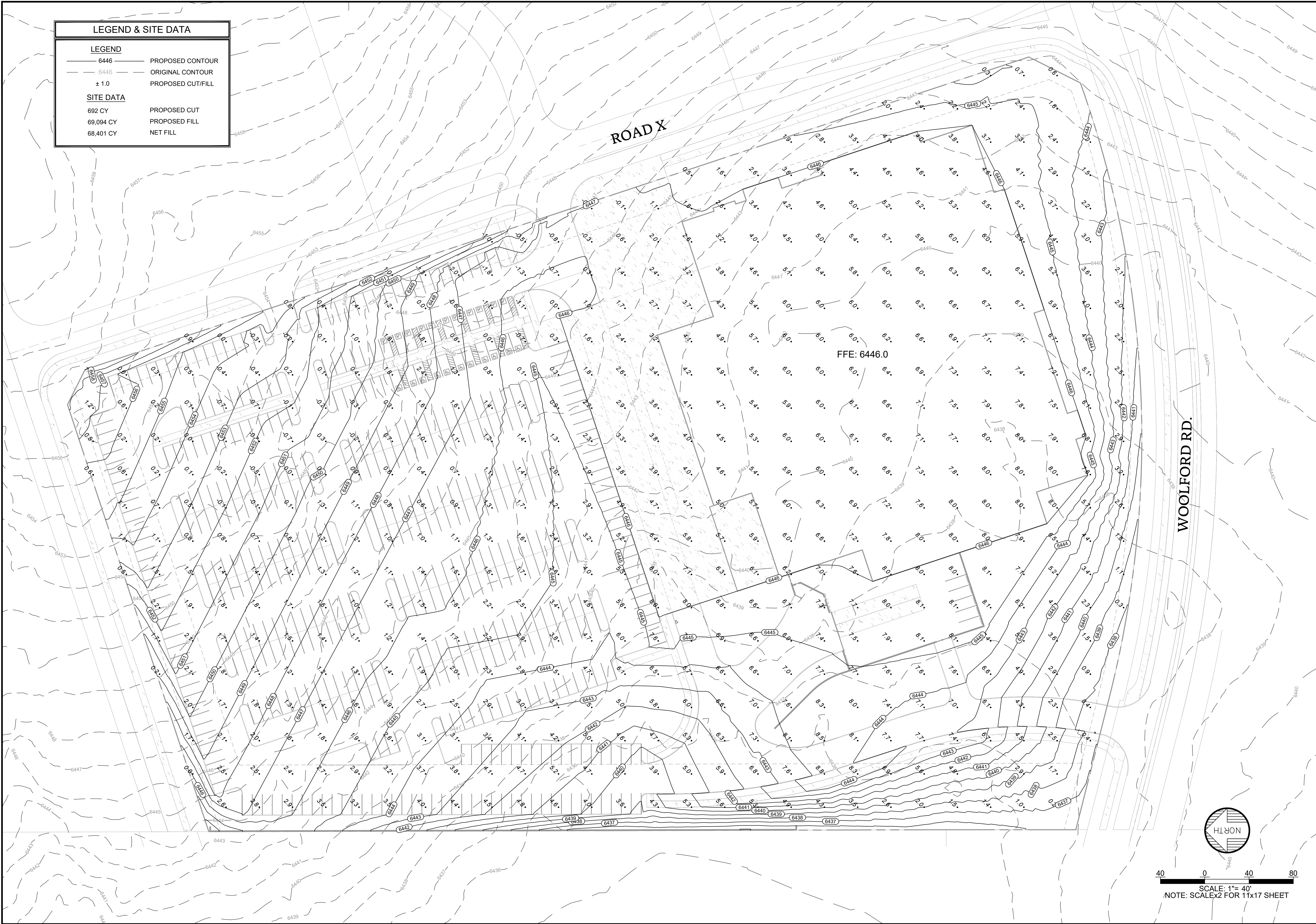
NOT FOR
CONSTRUCTION

PROJECT # 12345
ISSUE DATE 10/01/2024
ISSUE NAME STATUS
PLOT DATE 11/19/2025 1:28:32 PM

A011
CONCEPTUAL SITE PLAN



IRONSIDE		ENGINEERING & DEVELOPMENT		P.O. BOX 1358		SHOW LOW, AZ. 85902		(928) 532 - 0880	
SHOW LOW EVENT CENTER		PRELIMINARY GRADING EXHIBIT		CURRENT VS PROPOSED		EXH1		1 OF 2	
CLIENT: ARCHITECTON		DESIGNER: WPK		REVIEWER: ZWB		PROJECT #: 36703		DATE: 11/17/25	
NO.		DESCRIPTION		DATE		REVISIONS			



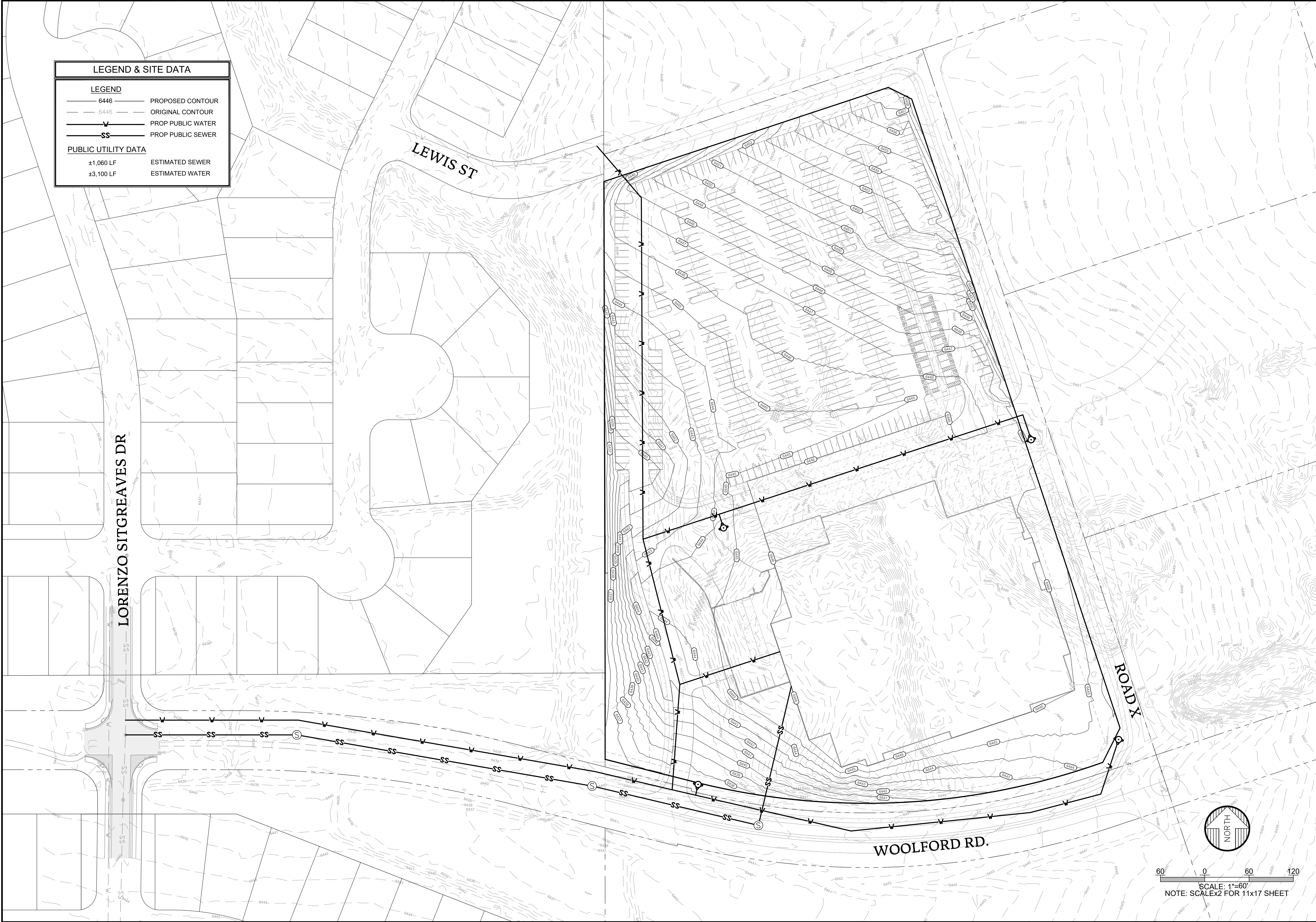
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DESIGNER: WPK							
REVIEWER: ZWB							
PROJECT #: 36703							
DATE: 11/17/25							
SHEET		REVISIONS					
EXH2							
2 OF 2							

IRONSIDE
ENGINEERING & DEVELOPMENT
P.O. BOX 1358
SHOW LOW, AZ. 85902
(928) 532 - 0880

EXHIBIT

SHOW LOW EVENT CENTER
PRELIMINARY GRADING EXHIBIT

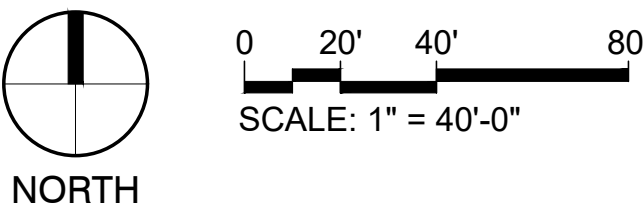
ORIGINAL (PRE-FILL) VS PROPOSED



CLIENT: ARCHITEKTON		DESIGNER: WPK		REVIEWER: ZWB		PROJECT #: 36703		DATE: 11/18/25	
SHEET		EXH1		1		OF		1	
SHOW LOW EVENT CENTER		SHOW LOW, ARIZONA		PRELIM PUBLIC WATER & SEWER ROUTING		EXHIBIT		IRON SIDE	
ENGINEERING & DEVELOPMENT		P.O. BOX 1358		SHOW LOW, AZ. 85902		(928) 532 - 0880		REVISIONS	
NO.		DESCRIPTION		DATE					

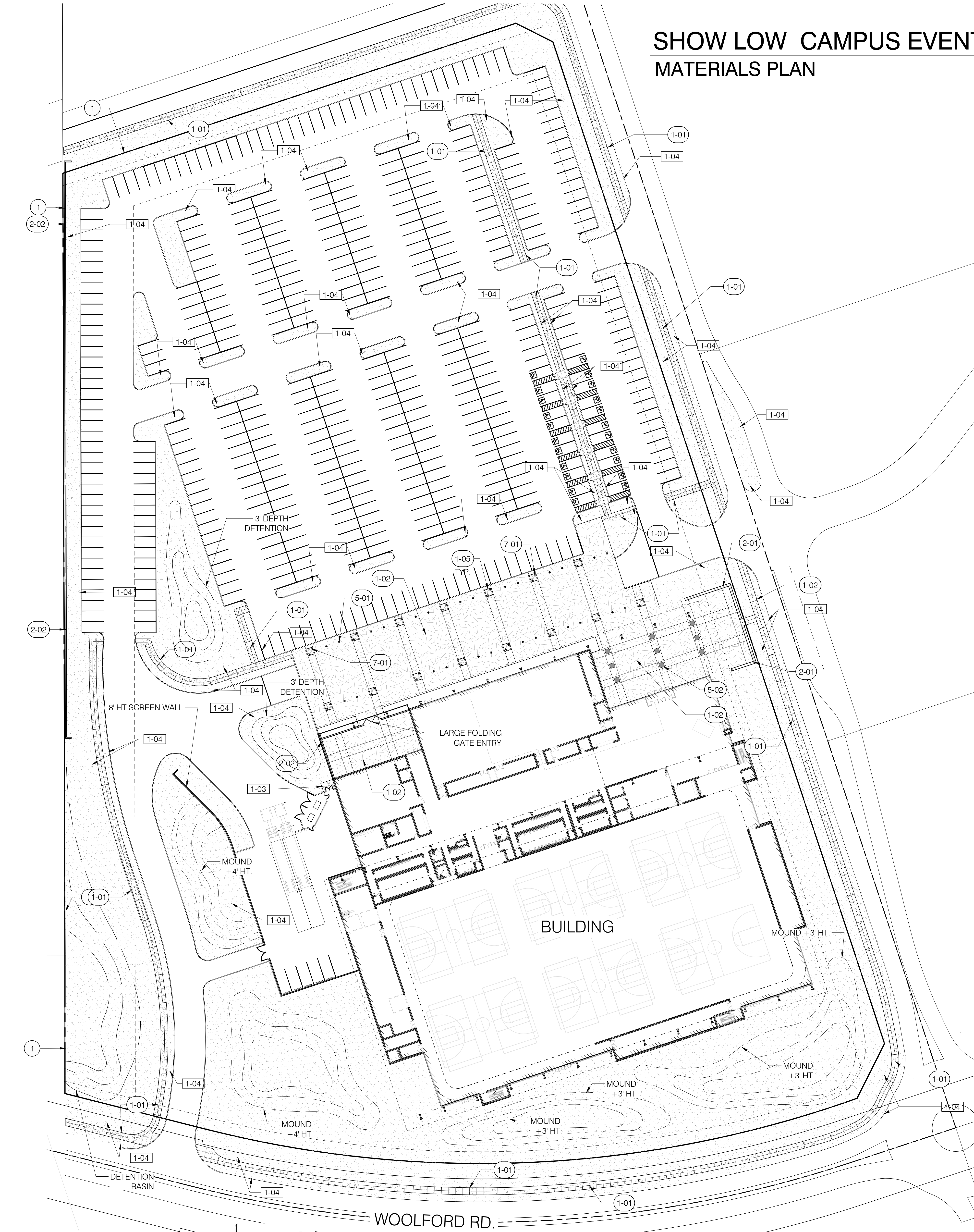
LANDSCAPE EXHIBITS

SHOW LOW CAMPUS EVENT CENTER - SCHEMATIC DESIGN
MATERIALS PLAN

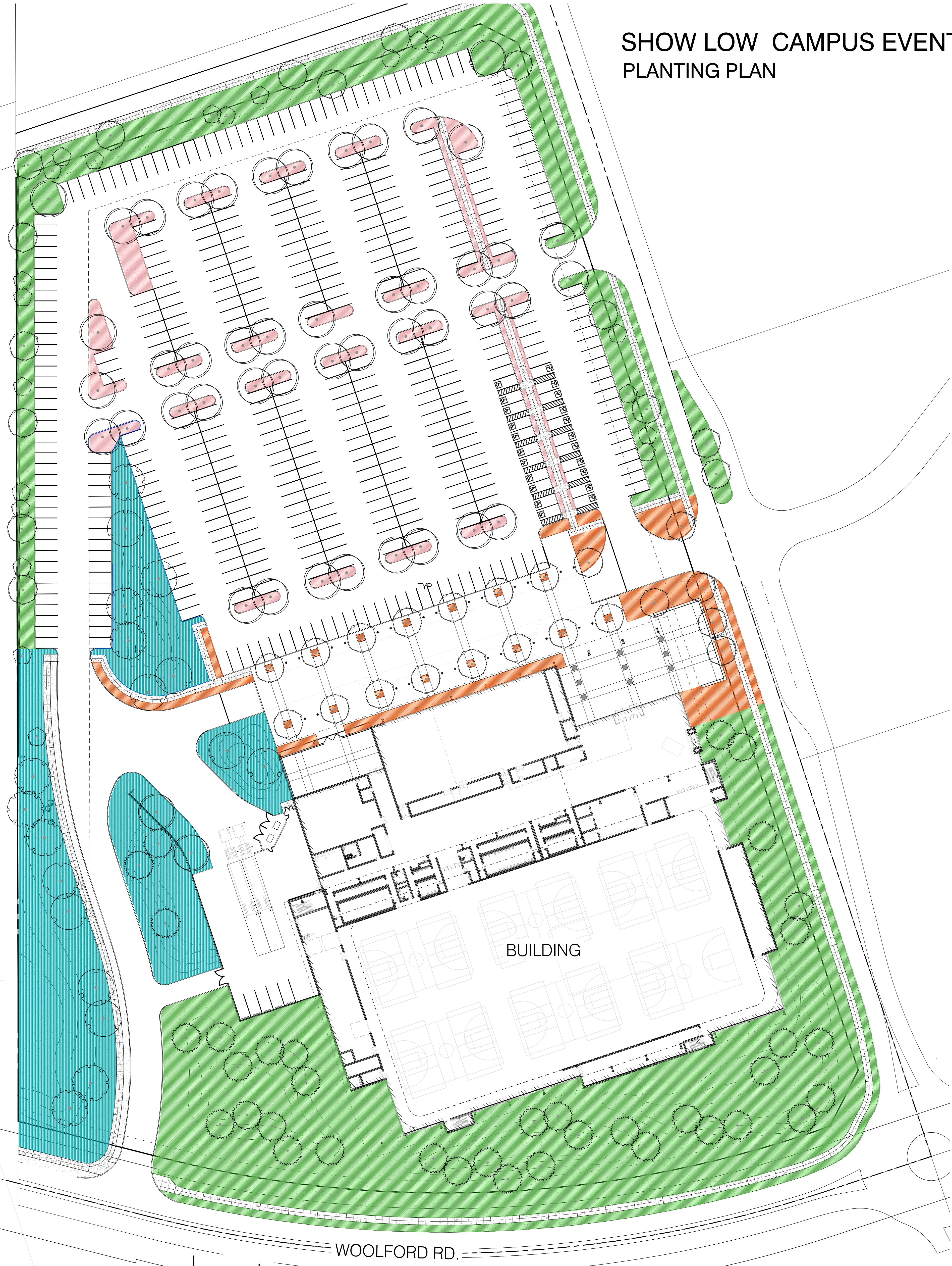
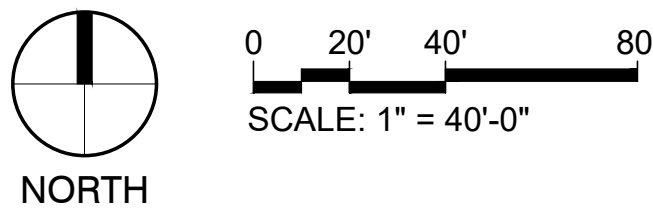


REFERENCE NOTES SCHEDULE

SYMBOL	CODE	DESCRIPTION	QTY					
	1	BOUNDARY LINE						
SYMBOL	CODE	DESCRIPTION	QTY	MANUFACTURER	MODEL	FINISH	COLOR	THICKNESS
1 - PAVING & SURFACING								
	1-01	NATURAL GRAY CONCRETE SIDEWALK	18,799 SF			BROOM FINISH	GRAY	
	1-02	ACCENT PAVING	32,472 SF					
	1-03	CONCRETE PAVING	91 SF			BROOM	GRAY	
	1-04	DECOMPOSED GRANITE ROCK	184,971 SF	BRIMHALL ROCK	3/4" MINUS		TABLE MESA BROWN	2" DEPTH
	1-05	3"-5" ROCK	540 SF	BRIMHALL ROCK	RIP RAP		TABLE MESA	
SYMBOL	CODE	DESCRIPTION	QTY	MANUFACTURER	MODEL	FINISH	COLOR	HEIGHT
2 - WALLS & FENCES								
	2-01	24" HT. CONCRETE SEATWALL	124 LF		CONCRETE	SMOOTH		
	2-02	6" HT WALL	599 LF		CMU WALL			
	2-03	8" HT. WALL	277 LF					
SYMBOL	CODE	DESCRIPTION	QTY	MANUFACTURER	MODEL	FINISH	COLOR	SIZE
5 - FURNISHINGS								
	5-01	BOLLARD WITH LIGHTING	26	LANDSCAPE FORMS	OUTLINE DW102	POWDER COATED	ONYX	4' HT
	5-02	P.I.P. CONCRETE BENCH	9			SMOOTH	GRAY	48" X 48" X 24" HT.
7 - ELECTRICAL								
	7-01	TREE UPLIGHT	30	FX LUMINAIRE	CORA CN-73		BLACK	



SHOW LOW CAMPUS EVENT CENTER - SCHEMATIC DESIGN
PLANTING PLAN



PLANTING SCHEDULE

PLAZA ENTRY		
SYMBOL	BOTANICAL / COMMON NAME	SIZE
TREES		
	FRAXINUS VELUTINA 'ARIZONA' ARIZONA VELVET ASH	24" BOX
SHRUBS		
	PEROVSKIA ATRIPLICIFOLIA 'LONGIN' LONGIN RUSSIAN SAGE	5 GAL
	ROSMARINUS OFFICINALIS ROSEMARY	5 GAL
	FESTUCA GLAUCA BLUE FESCUE	5 GAL
	HESPERALOE PARVIFLORA MSWNPRED SANDIA GLOW	5 GAL
	OENOTHERA CAESPITOSA TUFTED EVENING PRIMROSE	5 GAL
	VERBENA RIGIDA SANDPAPER VERBENA	5 GAL
RIPARIAN AREA PLANTING		
SYMBOL	BOTANICAL / COMMON NAME	SIZE
TREES		
	PLATANUS WRIGHTII ARIZONA SYCAMORE	24" BOX
	POPULUS DELTOIDES 'SIOUXLAND' EASTERN COTTONWOOD SIOUXLAND	24" BOX
SHRUBS		
	HESPERALOE PARVIFLORA MSWNPRED SANDIA GLOW	5 GAL
	BOUTELOUA ARISTIDOIDES NEEDLE GRAMA GRASS	5 GAL
LOW WATER-USE PLANTING		
SYMBOL	BOTANICAL / COMMON NAME	SIZE
TREES		
	JUNIPERUS ARIZONICA ARIZONA JUNIPER	24" BOX
	PINUS PONDEROSA PONDEROSA PINE	24" BOX
SHRUBS		
	BUDDLEJA MARRUBIIFOLIA WOOLY BUTTERFLY BUSH	5 GAL
	ERICAMERIA NAUSEOSA RUBBER RABBITBRUSH	5 GAL
	FALLUGIA PARADOXA APACHE PLUME	5 GAL
	JUNIPERUS SQUAMATA 'BLUE STAR' BLUE STAR JUNIPER	5 GAL
	YUCCA BACCATA BANANA YUCCA	5 GAL
	MELAMPodium LEUCANTHUM BLACKFOOT DAISY	5 GAL
PARKING LOT PLANTING		
SYMBOL	BOTANICAL / COMMON NAME	SIZE
TREES		
	GLEDTISIA TRIACANTHOS INERMIS 'SUNBURST' SUNBURST® HONEY LOCUST	24" BOX
SHRUBS		
	JUNIPERUS SQUAMATA 'BLUE STAR' BLUE STAR JUNIPER	5 GAL
	PEROVSKIA ATRIPLICIFOLIA 'LONGIN' LONGIN RUSSIAN SAGE	5 GAL
	ROSMARINUS OFFICINALIS ROSEMARY	5 GAL
	MELAMPodium LEUCANTHUM BLACKFOOT DAISY	5 GAL
	HESPERALOE PARVIFLORA MSWNPRED SANDIA GLOW	5 GAL



ARIZONA ASH
(SHADE TREE)



COTTONWOOD
(RIPARIAN AREA)



SYCAMORE
(RIPARIAN AREA)



PONDEROSA PINE
(LOW WATER USE)



JUNIPER
(LOW WATER USE)



HONEYLOCUST
(SHADE TREE)



SUBJECT PROPERTY



Show Low Sports and Event Center Program Estimate Cost Breakdown		 HAYDON
		Current Total
	Design and Preconstruction	\$ 4,663,850
	General Conditions	\$ 2,475,000
	Staking	\$ 40,000
	Testing	\$ 55,000
	Earthwork & Paving	\$ 2,808,749
	Utilities	\$ 451,435
	Site Concrete	\$ 1,034,233
	Misc Site Construction	\$ 351,004
	Landscaping	\$ 463,703
	Termite Pretreatment	\$ 5,531
	Building Concrete	\$ 2,628,352
	Masonry	\$ 1,373,908
	Structura/Misc Steel	\$ 363,750
	Rough Carpentry	\$ 18,627
	Cabinetry	\$ 101,350
	Insulation	\$ 40,095
	Roofing	\$ 111,875
	Roofing Specialties	\$ 3,500
	Caulking	\$ 20,000
	Doors & Hardware	\$ 326,750
	Windows & Glazing	\$ 1,130,310
	Drywall & Stud Framing	\$ 1,311,809
	Acoustic	\$ 801,778
	Floor & Wall Covering	\$ 2,031,189
	Final Clean	\$ 37,253
	Painting	\$ 446,067
	Specialties	\$ 336,225
	Equipment	\$ 1,463,256
	Bleacher Seating	\$ 999,530
	Pre-Engineered Metal Building	\$ 8,975,076
	Elevator	\$ 110,000
	Plumbing	\$ 1,200,700
	Fire Protection	\$ 555,664
	HVAC	\$ 3,176,956
	Electrical	\$ 4,354,761
	Contingency	\$ 3,541,383
	Builders Risk	\$ 223,351
	Liability Insurance	\$ 446,703
	Overhead & Profit	\$ 3,350,272
	Bond/SDI	\$ 949,244
	Sales Tax	\$ 3,059,636
	FF&E (assumed to be carried by Owner)	\$ 600,000
	TOTAL PROGRAM BUDGET	\$ 56,437,875

Notes and Inclusions:

- 1 Design and Construction Administration costs including added cost for expanded program.
- 2 Work is limited to onsite and building work only per the program document.
- 3 Soils report for current site is not available. Earthwork and paving is based on provisions of the soils report for the original site.
- 4 Excess soils from current site will be stockpiled on the site directly east of this site.
- 5 Foundations budgets are based on shallow bearing spread footings per the soils report for the original site.
- 6 Site walls are assumed to be textured precast panels similar to products produced by Hatch Industries
- 7 The event center and open ceiling area ceilings are exposed to the skim covered building insulation.
- 8 Basketball backboards are assumed to be automatic drop down type.
- 9 Volleyball standards are ground mounted.
- 10 \$600k FFE allowance is assumed to be procured by Owner outside of the DB contract. This does not include a cost for event (loose) seating. We assume these will be rented for large events.
- 11 Includes fire pump and backup generator as indicated in program document.
- 12 Includes 6 basic digital score boards for Event Center.
- 13 Includes data cabling, WAPS, basic security and CCTV as outlined in the program.
- 14 Includes AV budget of \$300k for 70a sound system, TV's and AV as indicated in the program.

Exclusions:

- 1 All governmental and utility provider plan check, permit, impact, site development, service, tap and meter fees of any type.
- 2 Offsite work of any type (grading, roadways, utilities etc)
- 3 Performed metal ceiling in the Event Center.
- 4 Magnetometers. Assume these will be rented on an as needed basis.
- 5 Servers or computing and communications system equipment .
- 6 Large displays / digital score boards.

**City of Show Low
STAFF SUMMARY REPORT**

AGENDA TITLE: Discussion and Consideration of Improvements of Huning House located at 100 North 11th Street (Shane Hemesath)

RECOMMENDATION

Council's pleasure

BACKGROUND

On October 1, 2025, during the City Council retreat, staff reviewed options for the development of the downtown parcels near the City Library along 11th Street. The Downtown Parking Lot project has been completed, and further improvements are being considered in that area. Landscaping with grass, pavers, and concrete are preliminary suggestions to create a downtown plaza area to be enjoyed by our citizens. A public restroom as well as a large ramada structure for gatherings is also planned. The existing structure on the property has aged and will need to be removed or relocated to be preserved due to the requirements in the City's floodplain management code. Staff investigated options for the removal or relocation. If the City Council would like the structure removed, staff will include the demolition of the building with the restroom project expected to be bid this spring. A conceptual layout of what future improvements could look like has been provided.

Staff also reached out to A-Arid State House Movers and Enterprises Inc. to investigate relocating the structure to a new location and to a proper height required by the floodplain requirements. A proposal to lift the building and place it on a new two-foot high stem wall closer to the southern boundary of the property was provided. The cost to lift and relocate the structure and provide a new higher stem wall is approximately \$77,000. That cost only includes relocating the structure. In order to get the structure in a condition to rent or utilize, the following additional improvements would need to be completed: asbestos removal, new plumbing, new electrical, and complete internal and external remodeling. To identify the costs for the remodeling improvements, staff will need direction from the City Council on the future use of the building (restaurant, offices, ext).

Staff is seeking direction to move forward with the disposal of the existing structure or scope of improvements and budget to consider for remodeling.

ATTACHMENTS

1. Show Low HS. Move
2. Open Area Design_Exhibit 1
3. Open Area Design_Exhibit 2

FISCAL IMPACT

N/A

A-Arid State House Movers and Enterprises Inc.

21151 West HWY. 85, Buckeye AZ. 85326

Phone: 623-764-4352

www.aridstateenterprises.com

ROC 274281

Email: roy@wemoveitaz.com

BID PROPOSAL

November 12, 2025

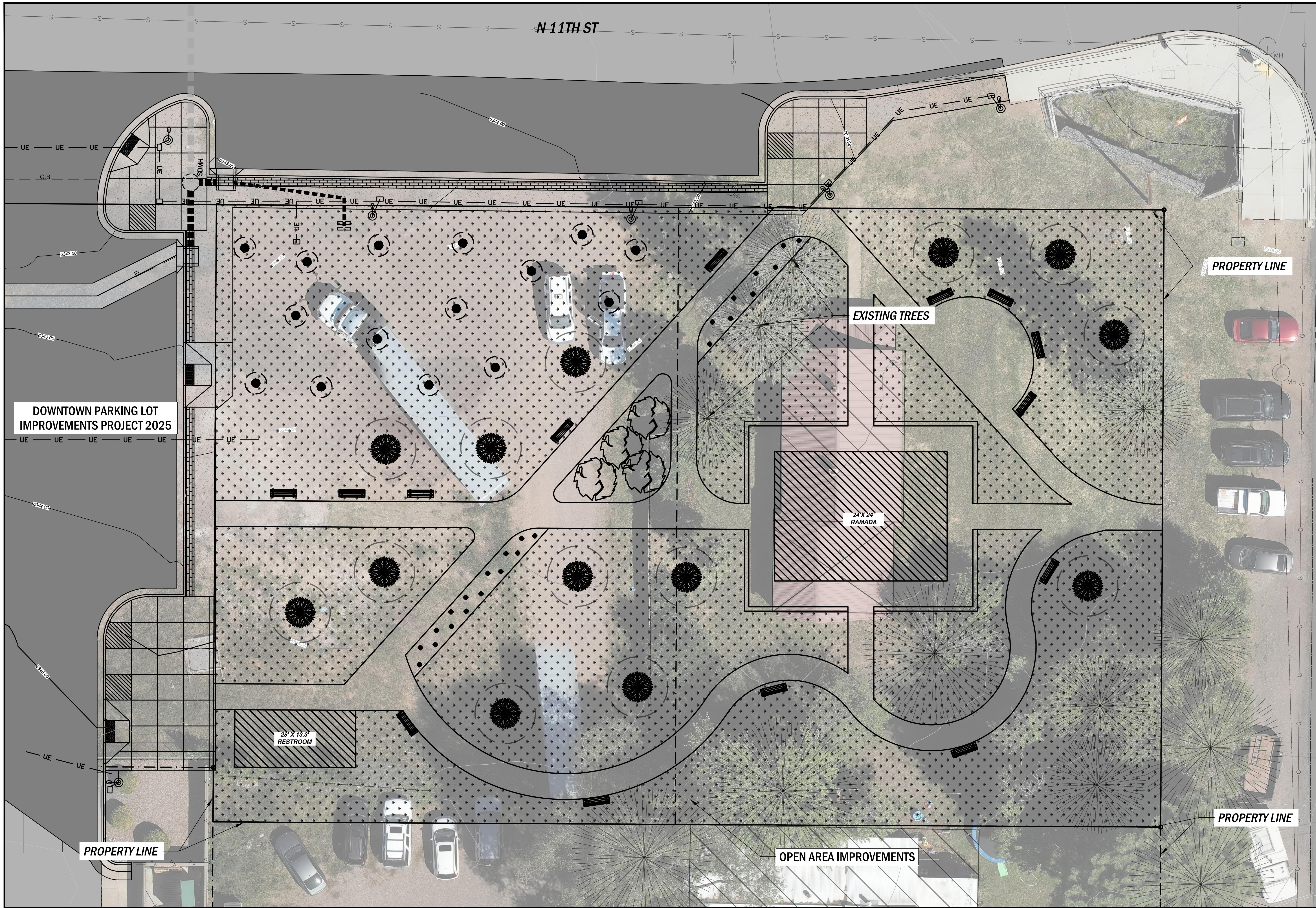
Attention : City of Show Low
C/O : Rick Austin
Public Works Opération Manager

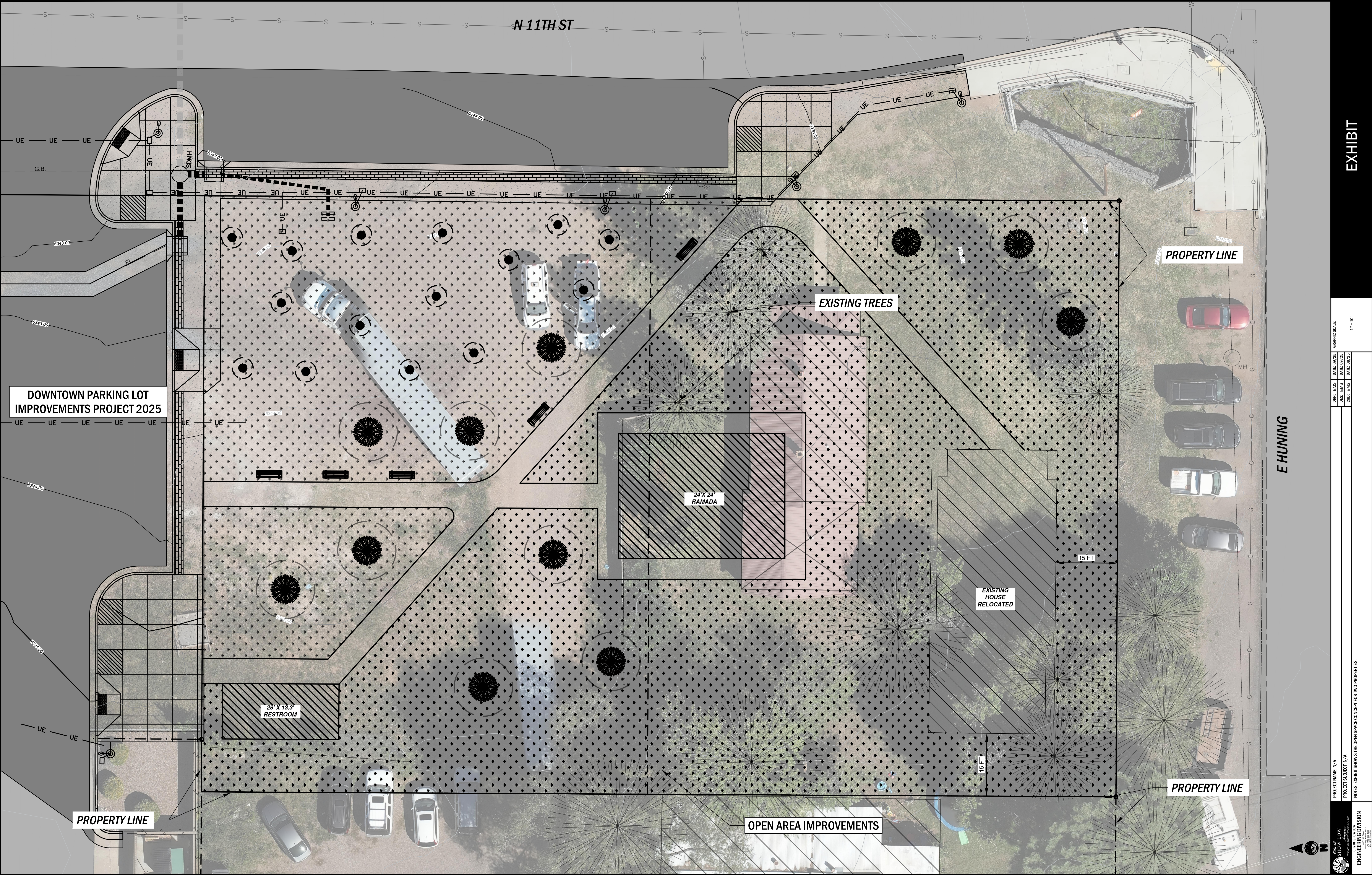
This proposal is for relocating a wood frame historical house located near Town Hall in Show Low AZ. We had an onsite meeting to discuss the structural integrity and some logistics of the job. Limited inspection views found the structure to be sound for relocation with possibly some floor joist renovation. It was understood the desired location to be in a different position on the same property where it would be set on a new foundation and stem at a higher grade than it currently sets. We have obtained a bid from a local contractor for the foundation and stem work and are including that with our bid to relocate the house to the new position and set, for your budget needs. This proposal does not include any repairs to the building that may become apparent when the floor structure is exposed for inspection. This is a preliminary proposal and can be modified should there be a need.

Cost for Mover Scope of loading, relocating, and setting:	\$30,000.00
Sub-contractors bid for footing & stem - includes materials:	\$47,000.00
You cost for the relocation and new foundation:	\$77,000.00

Thank You for Considering our services!

Questions – Contact Roy Dean – 623-764-4352





DOWNTOWN PARKING LOT
IMPROVEMENTS PROJECT 2025

N 11TH ST

PROPERTY LINE

EXISTING TREES

24' X 24'
RAMADA

EXISTING
HOUSE
RELOCATED

15 FT

15 FT

PROPERTY LINE

OPEN AREA IMPROVEMENTS

PROPERTY LINE

E HUNING

EXHIBIT

DATE	DESCRIPTION	DATE	DESCRIPTION
09/08/25	DATE	09/08/25	DATE
09/08/25	DATE	09/08/25	DATE
09/08/25	DATE	09/08/25	DATE

PROJECT NAME: N/A
PROJECT SUBJECT: N/A
NOTES: EXHIBIT SHOWS THE OPEN SPACE CONCEPT FOR TWO PROPERTIES.

SHOW LOW
ENGINEERING DIVISION
1000 S. 10TH AVENUE, SUITE 100
DENVER, CO 80202
TEL: 303.733.1000
WWW.SHOWLOW.COM