Stepping out to the movies
Auburn Theater, Circa 1940's

Auburn Avenue Theater Pre-design Study
March 7, 2008

Design Team
Barnett Schorr Architects, Lead
MA Wright LLC, Structural
HCES LLC, Mechanical
TravisFitzMaurice, Electrical
Sparling: Acoustical, Theater, Sound


USED CARS

Overview + Narratives

March 7th 2008

To Daryl Faber:

Our Pre-design Report is divided into the following sections: Overview, followed by an Architectural Narrative, Structural Narrative, Mechanical Narrative, Electrical Narrative, Theater Narrative, Acoustical Narrative and a Sound System Narrative. The narratives are followed by the pre-design budget based on the drawings and narratives. The last section of the report consists of the pre-design drawings

Overview

The City of Auburn recognizing that the Auburn Ave. Theater is in a strategic location to be a part of the revitalization of the downtown core. A thriving venue for performances of music of all kinds, musical theater, dance, dramatic and comedy plays—all could be a magnate to pull a variety of Auburn's population into the downtown. A theater could be particularly influential in supporting a variety of businesses and services that thrive on nighttime activities.

The location is right, the condition of the existing building is wrong for the Auburn Ave. Theater to draw a substantial and loyal audience. Our architectural firm and our team of consultants were engaged to provide a preliminary study to determine if "a silk purse can be make out of a sow's ear".

Purpose of the Study

- Aid the Owner in visualizing the goals she/he has for the project at a very early stage in the design process.
- Begin the programming, of space "needs" and "wants", identifying the options that might change a "want" to a "need" or vice versa.
- Based on the programming develop preliminary plans, elevations and sections that pull together the Owners vision and program of needs.
- The study provides an "early" cost construction budget using current market data that covers materials, labor and estimate General Conditions and Profit and Overhead.
- The study provides a cost/benefit profile as a benchmark, to keep "cost creep" in check.
- The study provides the owner quantitative information on which to base decisions about the arc of the project:
    - Does the proposed design meet or exceed the vision the Owner has for the project?
    - Is the program of needs and the estimated budget in sync?
    - Are the reasons to build the project compelling enough to enlist the public, corporate and political support needed make the effort a success?

The Program for "The Ave", a City of Auburn Community Theater:

- Provide a 300 seat community theater facility to include:

- Renovate the existing 1905 masonry and timber former horse stable, former bus barn, former 1940s movie house, former dinner theater, into a 2008 state-of-the-art center for the performing and film arts.
  - A proscenium framed thrust stage
  - A state-of-the-art theater lighting and sound system flexible enough to stage intimate chamber music program or boisterous Broadway musicals
  - A state-of-the-art curtain and stage rigging system
  - A green room space capable of accommodating a cast of 16
  - A dressing room for women and one for men, each with an adjacent bathroom
  - A generous lobby space with ample glazing to allow the theater patron "to be seen and to see", creating a social atmosphere of "mix and meeting" during intermissions
  - A space that civic groups can rent for gatherings of 30 or 300.
  - A space that local businesses can use for meeting or power-point or multimedia presentations
  - A space that works for a film series or a lecture series
  - A space that can be leased as a community ticket purchasing agency
  - A theater manger's office space
  - *Six bathroom stalls + 3 lavatories + 12 lineal feet of mirror for the Ladies Room*
  - Make a building that has the architectural vitality capable of acting as a magnet in attracting multigenerational audience to the downtown core of Auburn.

Compelling Reasons for this Theater

- The City of Auburn has a history of supporting community sponsored entertainment
- "The Ave" has a history of being the venue for live entertainment in Auburn
- The City needs a revitalized downtown core—"The Ave" can be an important link in a chain of developments that will bring new commercial day and night time business participation and, most importantly, consumers into the area
- The current location of "The Ave" fulfill the mantra of the real estate sector—"location, location, location"
- The growth in job creation for the Seattle Metropolitan area is expected to increase from 1.4 million is 2008 to 1.82 million in 2030. The potential for the communities between Seattle and Tacoma to feed off that growth is substantial. Auburn can capture its share of the growth by providing the amenities that a new generation of households are looking for. An active theater scene is one of those amenities.

Architectural Narrative

Concept:

- Focus on providing a state-of-the-art conventional proscenium style community theater within a building that is over 100 + years old—a historic venue for entertainment for the City of Auburn.
- Aim to seat 300 in comfort with stadium style seating that provides unobstructed sight lines to the stage from any seat in the auditorium.
- Equip the theater with stage, light and sound equipment that will have a "life cycle" of service for the next 20 years.
- Create an ambience that feels comfortable to the patron but has enough snap and sparkle to make one feel like "we are stepping out for the evening"

The Building:

- The exterior north elevation [the alley elevation] wall is to be stripped of the existing skim coat of paint and stucco—a new "scratch and brown" coat of stucco is to be applied to the concrete wall.
- The windows in the north elevation that have been in filled are to be reinstated and enlarged to allow light and visibility to flood into the new public lobby.
- The existing interior is to be gutted to make way for the installation of new infrastructure including HVAC, electrical, plumbing, sprinklers and structural repairs.
- The patron enters the theater from Auburn Avenue [the west elevation] after purchasing a ticket from the ticket kiosk located in the center of a glass entry wall. The kiosk is similar to the ticket booth that existed when the building was a movie theater in the 1940s.
- The glazed entry is a slightly curved concave glass wall with two double doors for access into the lobby which varies in height from 9'-0" to a height of 17'-0"
- The lobby is illuminated with lines of neon accents and sustainable sensitive ambient lighting fixtures.
- Space for a concession facility serving drinks and light food service is located in the lobby
- Restrooms are off the lobby.
- The patron proceeds to the auditorium down a 90 foot corridor with the glazed north wall along one side of the corridor and 90 foot by 10 wall on the other side with an opportunity for a "City of Auburn Art Mural or Photo Montage" installation.
- The lobby, the corridor leading to the auditorium and the aisles that lead to the seating are carpeted. The seats are alternating, fully cushioned 20 inches and 22 inches wide. Rows are 40 inches deep, continental style rows, seating without interruption of a center aisle. Each row is 8 inches above the row in front of it.

- The side walls of the auditorium and the facia of the proscenium have sound baffles that aid in directing the sound throughout the auditorium.

- The stage is depth is 22 feet and can be opened to a width of 50 feet. It can accommodate a 12 piece band on either side of the stage for musical theater presentations

- Above the stage is a light grid and rigging for curtains and stage set material.

- Back of the stage is the greenroom with stations for 16 actors to make-up.

- Adjacent to the each end wall of the greenroom is a small dressing area and bathroom—one each for men and for women.

- Above the greenroom is a mezzanine of 550 square feet for storage.

Please see "Section Drawings" for a visual supplement to the narratives.

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MA LLC

February 26, 2008

Bud Schorr, FAIA
Barnett Schorr Architects
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Bud,

The following summarizes our review of the existing Auburn Theater and comments on structural issues related to the planned modifications per the schematic design.

As background we have reviewed the BCRA evaluation report dated 2/6/07 and the CWA Consultants report dated 7/25/07; we also visited the site with the design team (architect, theater consultant, mechanical and electrical engineers).

Existing Condition

The Auburn Theater is best described as a single story concrete bearing wall structure with masonry infill structure at several of the large openings. It is roughly 60 by 120 feet in plan. The roof is a combination of timber trusses clear spanning to the walls and 2x stick framing supported on internal wood bearing walls. There is a mezzanine like structure between the theater and lobby. The building is believed to have been constructed in 1906 and originally served as a stable. It was later converted to a bus barn and in the 1930s to a theater.

The building is in poor to fair structural condition. There are signs of differential settlement as witnessed by the cracking and displacement in the concrete walls and the unevenness of the roof ridge. The observed repairs of the walls at the northeast corner (tension ties at the corner) may be related to past earthquake damage. Several of the trusses in the theater have been repaired where they bear on the concrete walls. The repairs appear to be the result of long term wood rot in the ends of the trusses. The unevenness of the roof structure may also be a result of wood rot in the trusses.

Planned Modifications

Architectural

The schematic design calls for the following architectural modifications:

1. New lobby layout, opening a portion to the full height of the roof. As this portion of the structure is stick framed on internal bearing walls, any modifications to the bearing walls will require that they be replaced with beams, columns and new footings. The amount of structure impacted at this time is relatively small but it will nonetheless require new framing.

2. New stage and backstage spaces. In this area the roof spans to the exterior walls and the modifications should have no impact on it. The new stage and back of house structure will be independent and supported off the existing slab on grade.
3. New canopy at the entrance. The new canopy will need to meet the full requirements of the building code.
4. New skylight in the lobby. It may be possible to add a skylight in the lobby. The size of the skylight will have an impact on the seismic performance of the roof diaphragm; therefore it will need to be considered as part of a seismic evaluation.

Theater

The modifications planned by the theater consultant do not appear to impact the primary structure. The only concern is that any sound panels added be supported by the existing or new walls. No weight should be added to the roof trusses without first completing a structural analysis to insure the trusses can handle the added load.

Mechanical

The schematic design calls for following modifications.

1. Replacement of the HVAC system. The proposed layout calls for a large package unit be located on the roof structure directly above the dressing room area and behind the stage The roof is incapable of handing the weight of this unit and as such a new independent platform will need to be constructed to support it. This will most likely be steel framed with tube steel columns and concrete footings. The weight of new duct work supported by the timber roof trusses will need to be minimized and carefully reviewed in order to insure the already damaged trusses are capable of supporting the added load.

2. Replacement of the plumbing/sprinkler system. This should have minimal impact on the structure as long no large penetrations are made.

Electrical

The schematic design calls for replacement of the electrical system.. This should have minimal impacts on the structure as long as there are no major penetrations of the primary structure and the heavy items such as transformers are supported on the existing slab on grade.

Structural Concerns

Based on our review we believe the structural performance of the roof under snow loading and the overall performance of the structure in an earthquake needs to be addressed as part of the remodel.

Roof Trusses

Our concern with the roof structure is that it was designed in the early 1900s and as such most likely does not meet the minimum load requirements of the current building code, which is compounded by the fact that it has been damaged (wood rot in trusses) and undergone limited emergency repairs. The roof shows significant signs of distress unevenness in the roof ridge and bowing in the chords. We verified with Chuck Williams, the engineer who designed the emergency repairs, that the repairs only addressed the localized damage at the ends of the trusses and no attempt was made address the global performance of the roof.

Given that this will be a public space the roof trusses should be thoroughly inspected and analyzed to determine their performance under a code roof snow load of 25 psf. It is not inconceivable that the result of such an inspection/analysis would indicate the roof is dangerous and need of replacement. As a minimum, no additional

load should be added to the roof and permanent shoring columns and rot repairs added to the trusses which have not been already repaired.

Seismic Performance

Given the age and style of construction, the expected seismic performance of the theater as it exists today in a significant seismic event is poor. This is pointed out in the BCRA report dated 2/6/07. The main issues are the lack of connection of the roof structure to the walls, and the lack of walls in the transverse direction at the lobby end of the building. While the building has performed adequately in past events (1949 Olympia, 1965 SeaTac, 2001 Nisqually) those events, given their location and depth, did not produce significant ground motion at the site.

The current building code does not require buildings undergoing alterations, modifications and repairs to be seismically upgraded unless a change of occupancy occurs. However, professional due diligence and the fact that this is a public space leads us to recommend that a complete seismic evaluation be completed. The evaluation will determine if there are deficiencies requiring attention. Those deficiencies can be prioritized and strategies for improved performance and decreased risk be developed during the schematic design phase of the project. This approach is consistent with that taken on other similar projects.

Best Regards,

Michael A. Wright, SE
Structural Engineer

2/26/08

EXPIRES 1/5/10

Mechanical Basis of Design

The mechanical scope of work includes providing HVAC (heating, ventilation and air conditioning) and plumbing design including five feet away from the building. The scope of work will also include providing performance specifications for the fire suppression system.

During the design phase, rebate opportunities will be discussed with Puget Sound Energy. These opportunities include selecting efficient HVAC systems, lighting systems and upgrading the roof to exceed the Washington State Energy Code minimum requirements.

Mechanical Systems - General

The existing mechanical systems will be removed from the building in its entirety.

Noise, vibration and seismic control will be provided for the appropriate mechanical systems. Sound attenuation requirements will be installed per the recommendations of the acoustical consultant. Pending an acoustical analysis, the supply ductwork and return air ductwork will be acoustically lined. Sound attenuators will be provided as required.

Ductwork, piping, valves and equipment identification will be provided.

Outside air and supply air ductwork, domestic hot water and cold water, refrigerant piping and condensate drain piping will be insulated. The thermal value of the insulation will be at a minimum in accordance with the Washington State Energy Code. Fiberglass duct liner will be used for thermal insulation.

Testing and balancing of the air and water systems will be accomplished by an agency certified by the National Environmental Balancing Bureau specializing in air and water system balancing. The A/E drawings will state the final design system capacities for reference by the contractor and use by maintenance personnel.

Commissioning is a process that verifies that the system components (e.g. fans, coils, temperature sensors, etc.) are properly installed and that individual systems (e.g. air distribution, system, direct digital system, etc.) are properly started-up, operate correctly per the design, and to verify that spaces are comfortable and have proper air quality. Commissioning will be directed by a commissioning authority (CA) hired by the City of Auburn to meet the Washington State Energy Code commissioning requirements. At a minimum, systems such as the HVAC system including the air handling unit, split system air conditioning unit and exhaust fans will be commissioned.

Heating, Ventilating and Air Conditioning Systems

Heating, air conditioning and ventilation system to the building besides the ticket sales, office and public toilet rooms will be conditioned by a 40-ton roof top gas fired DX cooling variable air volume unit. Multiple fan powered variable air volume terminal units will provide thermal control to dedicated zones.

The ticket sales, office and public toilet rooms will be conditioned by a 3-ton split system heat pump. The outdoor condensing unit will be located on the roof.

Three roof mounted exhaust fans will serve the public toilet rooms, the control room, the concession, the laundry room, the janitor's closet, the men's dressing room, the women's dressing room, the green room and the private toilet room.

A Direct Digital Control (DDC) System will provide automatic controls to the roof top air handling unit, the variable air volume terminal units, the split system air conditioning units, the exhaust fans and the domestic hot water system. The DDC system will also monitor zone control via room thermostats.

Filters located at the indoor variable air volume terminal units and at the indoor split system heat pump will provide air filtration per ASHRAE 52.1.

Refrigerant 410A will be specified for all HVAC equipment requiring refrigerant.

Plumbing System

The plumbing design will include the following:

- Connection to the new sanitary sewer and storm sewer at 5 feet outside the building. 4" sanitary line and two- 4" storm sewer line. Exact location will be coordinated with the civil engineer.
- Connection to the new water service and fire water service at 5 feet outside the building. 2-1/2" cold water line and 4" fire line. Exact location will be coordinated with the civil engineer.
- Connection to the new gas service at 5 feet outside the building. Pipe size to be determined by gas load during the design phase. Exact location will be coordinated with the civil engineer.
- A reduced pressure backflow preventer serving the domestic water system will be located in the basement.
- Plumbing piping connections including domestic hot water, domestic cold water, drain and vent will be provided at all plumbing fixtures.
- Gas-fired, commercial grade domestic water heater will be utilized to provide domestic hot water throughout the building
- Hot water re-circulation will be provided for the domestic hot water system to assure hot water at all fixtures
- Gas service will be provided to the gas fired water heater and gas fire roof top air handling unit.
- Specify low water consumption plumbing fixtures.
- A dual level electric water cooled drinking fountain will be located in the lobby.
- Floor drains will be provided in toilet rooms, in the janitor's closets and in the mechanical room.
- Freeze proof hose bibbs will be provided around the perimeter of the building.
- In the laundry/utility room plumbing connections will be provided to the clothes washer.
- In the concession, in addition to plumbing connections to the kitchen sink including an Insta-Hot, domestic hot water, drain and vent will be provided to the under counter dishwasher and cold water connections for the icemaker in the refrigerator and the coffee maker will be provided.

Fire Protection System

A new automatic, wet pipe type sprinkler system will be provided to protect the entire building.

The double check backflow preventer serving the sprinkler system will be located in the building.

The fire department connection, water bell and water gong will be located on the northwest corner of the building at the Auburn Avenue side and a wall post indicator valve will be located on the northwest corner of the building at the alley side.

Design Conditions

The mechanical systems will be designed to the following conditions:

Environmental Conditions

DESIGN TEMPERATURES	HEATING	COOLING
Outdoor Conditions	21 deg F/15 mph wind	84 deg F dry bulb/67 deg F wet bulb
General Conditions	70 deg F dry bulb	75 def F dry bulb
Mechanical Spaces	55 deg F dry bulb	Ventilate to 93 deg F dry bulb
Electrical Spaces	55 deg F dry bulb	Ventilate to 93 deg F dry bulb

Applicable Codes and References

The design will comply with all applicable codes and ordinances and design guidelines, including the latest version of the following:

- 2006 International Building Code with City of Auburn Amendments
- 2006 International Mechanical Code with City of Auburn Amendments
- 2006 Uniform Plumbing Code with State-Wide Amendments
- 2006 International Fire Code with City of Auburn Amendments
- 2006 Washington State Energy Code
- 2006 Washington State Ventilation and Indoor Air Quality Code
- Washington State Department of Health Cross Connection Control Requirements
- ASHRAE Design Guides
- SMACNA Design Guides

Glossary of Terms

- ASHRAE – American Society of Heating, Refrigerating and Air-Conditioning Engineers
- SMACNA – Sheet Metal and Air Conditioning Contractors' National Association

16.1 Power Systems Analysis

A. Primary Service:

1. Existing service is overhead to the building. It includes multiple meters and panels. Equipment is in marginal condition due to age.

2. A new underground service will be delivered to the building. The service will be 208Y/120V, 3 phase, 4 wire. Anticipated size is 1000 amps.

3. Service will be routed underground to the building via a flush in grade transformer vault.

4. Power service requirements will be coordinated with the utility.

B. Power Distribution:

1. Main Service Switchboard
   a. Service will terminate in a main service switchboard located in the basement of the building. Switchboard will be 1000 Amp, 208Y/120V, 3 phase, 4 wire with a copper bus. Main circuit breaker will be provided. Switchboard distribution will feed large distribution loads. All circuit breakers will be coordinated.
   b. Main service switchboard will be equipped with digital metering of volts, amps, kilowatt hours, kilovar hours, and kilowatt demand.

2. Panels
   a. Panels will be copper bus, bolt on circuit breaker type.
   b. Feeders will be copper wire, THWN.

3. Dimmer Boards
   a. Dimmer boards will be as specified by Theater Lighting Consultant.
   b. Dimmer boards will be fed from Main Service Switchboard.

4. Manufacturer of all equipment will be Square D, Cutler Hammer, Siemens, or GE

C. Branch Power

1. Surge Protection
   a. Surge protection will be provided at the service entrance and on all branch panels serving sensitive equipment.
2. General
   a. Branch power will be provided as required to all receptacles. Receptacles will be located for general use and as required for any specific equipment.
   b. Branch power will be provided as required for light fixtures and switches.
   c. Branch power, disconnect switches and starters will be provided as required for mechanical units.
   d. Branch power will be copper wiring with THHN/THWN insulation routed in EMT. Conduit sizes and wire sizes as required for items served.

16.2 Emergency Power System

A. General

1. There are no plans for an emergency generator.
2. Batteries will be used for emergency egress requirements.

16.3 Lighting Analysis

A. General

1. Lighting will be new in all areas.
2. Fixtures will typically have compact fluorescent lamps or T8 fluorescent lamps and electronic ballasts. Other lamps or sources will be provided as particular conditions dictate.
3. All requirements of Washington State Energy Code will be met.

B. Fixture Types

1. Stage and Seating areas lighting will be per Theater Lighting Consultant.

2. Fixtures will be selected per coordination with ceiling types and functionality of rooms.

3. Architectural fixtures will be selected for public areas.

4. Specification grade fixtures will be selected for back of house areas.

5. Exterior Lighting

   a. Marquee soffit will have an array of screw in type compact fluorescent fixtures.
   b. Marquee will be by Owner.
   c. Ground mounted fixtures will mark path to ticket sales booth.
   d. Fixtures will be used to wash the brick facade above the marquee.
   e. Along the north exterior functional wall fixtures will be used for required illumination in service areas.

C. Lighting Controls:

1. Switches will be provided in back of house areas. Occupancy sensors will be provided in offices as per Energy Code Requirements. Automatic shutdown of public area lighting will be provide per a timeclock schedule.

2. Theater area lighting to be controlled by Dimmer systems per design of Theater Lighting Consultant.

16.4 Communications Systems Analysis

A. Services

1. Existing telephone service to the building is to an area being renovated. A new service will be brought into building. Demarc location is to be determined. It will either be in the basement or the attic.

2. Telephone service requirements will be coordinated with the utility.

B. Cabling Infrastructure:

1. A complete telephone and data cabling system will be provided throughout the facility. Cables will terminate at an MDF rack in the attic. System will be installed in accordance with TIA-568 standards and in general will include Category 6 cable run to all workstation and printer locations and terminated on Category 6

outlets and patch panels. The system will be designed to support minimum 1 GB/s distribution.

C. Equipment

1. All telephone equipment, telephones, routers, network switches, computers, network cards, and network software are by the owner.

16.5 Sound Systems

A. General

1. Rough in will be provided for Theater sound system. Rough in will consist of raceways and boxes as required. Design of sound system is by others.

16.6 Fire Alarm System Analysis

A. Building Requirements

1. An addressable fire alarm system will be provided per requirements of International Fire Code and local Fire Marshal.

2. Smoke detectors will be provided as required. Devices will be addressable.

3. Annunciation will be provided throughout with horn/strobes and strobes. Strobes will be located as required by ADA.

4. System will monitor sprinkler system

16.7 Security/Access Control System

A. General

1. The existing Lenel/Regency security and access control campus system will be extended to the new building.

B. Detection System

1. The system will include motion sensors at access points and door switches on all exterior doors.

2. Detection devices will be tied into the access control system.

C. Access Control System

1. The Lenel card key access system will be installed at selected exterior doors into the facility. The card will open the door and disable the security system.

D. CCTV System

1. Surveillance cameras will be provided in work bays and corridors.

16.8 A/V System Analysis

A. Building Requirements

B. A/V

1. Conduit pathway, cabling and connectors will be provided to overhead projector location and teacher's podium to support AV equipment in the auditorium. Cabling and connectors installed will be based on the AV equipment the Owner decides to use.

Memorandum

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SPARLING

To: **Bud Schorr**, Bud Schorr Architects

From: Steven Goegebuer, AV Systems Consultant

Date: February 25, 2008

Subject: Auburn Avenue Theater
AV Systems Predesign Narrative & Costs

General

The following discusses recommended sound and video systems along with their probable costs for a remodeled Auburn Avenue Theater.

Discussion

Modest-sized venues such as the Auburn Avenue Theater can offer the surrounding community a centralized location that can host a variety of different types of community and business events. Key to the theater's flexibility and its ability to attract users and audiences is designing the facility's audio and video systems infrastructure so that a variety of different needs can be met according to the type of event.

Common expectations for the level of AV systems performance for this type of facility have increased in recent years. Many consumers now own or have access to home theater installations employing high quality widescreen video displays supported by multichannel cinema-type sound systems complete with subwoofers. Sound and video systems in the Auburn Avenue Theater must now compete with home theater systems by providing an experience to the public that is at least equal to if not better than what they may be experiencing in their own homes.

Anticipated Uses

Different types of events may require different capabilities and levels of performance from the audio and video systems. Expected events may include:

- Lectures or small group discussions (1-4 persons): As a minimum, such events require monaural sound reinforcement at low to moderate sound levels. An automated "automatic" mixer may be employed that usually requires no mixer operator after initial microphone setup and talker level adjustments are made. These types of events may also require video and audio connections for a user-furnished laptop computer along with the use of an integrated video projection system with screen for PowerPoint™ or similar video presentations.
- Theatrical Presentations (Plays/musicals): These require a sound reinforcement system capable of achieving reasonably high sound levels. Best is a sound system providing multiple independent loudspeaker channels. This

will allow for proper reproduction of stereo music sources as well as the placement of sound effects on or around the stage or within the audience space. A multichannel audio mixing console will allow creative control of individual microphones and other sound sources. A production intercommunication system is needed to allow production personnel to communicate lighting, sound, and other cues to those in the production group. A backstage areas paging and monitoring system allows production personnel to continuously monitor events on stage through local ceiling loudspeakers with volume controls in such locations as dressing rooms, green rooms, production offices, sound/video control booths, ticket booth, etc. A separate lobby paging system allows program audio and announcements to be distributed to patrons in the lobby before a show, during intermissions, and even after a show as patrons are departing.

- Live Musical Performances (Recitals, bands, small orchestras, musical ensembles, etc.): Live musical events require a multichannel sound reinforcement system capable of operating continuously at medium to high sound levels. Subwoofers are normally required to provide for the reproduction of very low frequency bass content in the music. Such events may also require the use of portable floor monitor loudspeakers on or around the stage to allow performers to better hear themselves over the instruments and other performers. A multichannel audio mixer allows control of individual microphones to control acoustical feedback, and it also controls portable (stage) monitor loudspeaker channel assignments and levels for the performers on stage.
- Electronic Cinema Presentations: This includes the display of wide screen motion pictures from standard DVD or high definition DVD sources. Required are a large viewing screen, a fixed, widescreen video projector with suitable image fidelity and light output for electronic cinema use, a multichannel left-center-right sound system with subwoofers and surround sound capabilities, and a high definition DVD video player. The cinema video projector could also be used for standard business video presentations.

Costs

The following paragraphs describe probable costs for installed sound and video systems including all parts and labor. Costs listed are installing AV subcontractor bid prices, so no contract tier (electrical or general contractor) markups have been included. Associated electrical raceway, standard electrical backboxes, installation of AV subcontractor-supplied AV cable, and associated ac power and devices are also not included in the stated costs. Listed video system costs assume concurrent installation of the sound reinforcement system; video system costs without installation of the sound system will be higher than as shown below.

Proposed Sound Reinforcement System

Under this design, the sound reinforcement system will include discreet left, center, and right (LCR) loudspeakers or loudspeaker groups mounted above the front of the stage. These loudspeakers will allow full-range playback of both live and prerecorded monaural and stereo speech and music sound sources at high sound levels of up to 95

dBA continuously to the audience. The design includes subwoofers, and it also includes fixed surround sound loudspeakers at both sides and behind the audience for proper cinema presentations. Also supplied to support the loudspeakers are all of the associated electronic components necessary to operate them such as automatic and manual audio mixers, audio signal processors, power amplifiers and equipment rack(s). The audio signal processors permit adjustments to be made to the audio signals to provide for smooth audio frequency response from the system loudspeakers as well as to provide protection against inadvertent or purposeful overdriving of the sound system loudspeakers.

Included in addition to the main sound reinforcement system will be ancillary audio subsystems and components such as a production intercommunications system, lobby and backstage areas paging/monitoring sound systems, portable stage area floor monitor loudspeakers, sound control booth mixer monitor loudspeakers (for the mixer operator), and a built-in hearing assist system with pocket receivers and earsets. (The hearing assist system is required by the Americans with Disabilities Act and associated State of Washington standards.) Miscellaneous sound system items such as wired and wireless microphones, portable (stage) monitor loudspeakers, production intercom headset and beltpacks, cords, stands, etc., are included. Probable cost for the overall sound system is not expected to exceed $120,000, installed.

Proposed Video Projection System (Basic & Upgrade Versions)

A basic video projection system intended for computer video presentations would begin at a cost of roughly $25,000. Most of this cost is for a suitable video projector with ceiling mount, and a suitable motorized projection screen. The basic system would also include at least one computer interface at the stage to allow connection of a user-furnished laptop computer. Also included would be a DVD player and a simple remote control system for the video projector to allow user selection of individual video sources as well as provide for general projector operation.

An upgraded video projection system would provide all of the features of the basic video projection system plus a higher-quality widescreen image that is better suited for the display of high definition broadcast video and motion picture film sources via standard DVD player or via a high definition Blu-Ray™ video disc player. Audio signals output from the video disc player would be heard through the sound reinforcement system as provided by the video program source. The probable cost for an upgraded video projection system as described would be approximately $55,000 (an increase of $30,000 over the basic video projection system). Costs can be significantly more if even higher grades of video projectors (for a more "film-like" image) are contemplated.

Memorandum

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SPARLING

To: Bud Schorr - Bud Schorr Architects

From: Tara Damschen

Date: February 27, 2008

Subject: Auburn Avenue Theatre
Acoustical Pre-Design Narrative

This pre-design narrative addresses preliminary acoustical considerations for the Auburn Avenue Theatre Renovation project. Appropriate acoustic environments, created by combining elements of architectural acoustical and the control of mechanical noise, add to the overall experience of a patron.

ARCHITECTURAL ACOUSTICS

Architectural acoustics involves both the creation of appropriate acoustic environments (interior acoustics) and the control of sound between spaces (acoustical separation).

Interior Acoustics

Interior acoustics is the creation of desirable acoustical environments within rooms. It relates to the shape, volume and interior surfaces of the room.

Interior acoustics of spaces will be described in terms of "lively", "moderate", or "dampened". A lively acoustical environment adds to the acoustic energy created by an activity within the space. These spaces have little amounts of acoustical absorption. Distant parts of an acoustically lively space are connected by the interior acoustic energy.

A moderate acoustical environment neither promotes nor reduces the acoustic energy created by an activity. These spaces have a moderate amount of acoustical absorption. Distant parts of an acoustically moderate space are neither separated nor connected to the rest of the space by the interior acoustic energy.

A dampened acoustical environment reduces the acoustic energy created by an activity. Dampened spaces have a large amount of acoustical absorption. Since the acoustic energy of a distant activity is reduced, the distant portions of a dampened space can seem further removed. However, in moderate size spaces, the effect is not substantial.

The intent of the acoustical design of the theatre is to create a listening space where natural sound from the stage is clearly heard with intensity, spaciousness, and balance, throughout the seating area. It is our understanding that the Auburn Avenue Theatre will host a wide variety of presentations such as lecture, drama, musical theater, and musical events. Some of the aspects that control the acoustics of the space are as follows:

- Room Volume
- Ceiling Shape
- Wall Shapes and Reflector Locations
- Reverberation Time (Amount of reflection, diffusion and absorption)
- Background noise levels created outside of the auditorium, and the HVAC system serving the space.

Room Volume

The room volume controls both reflected sound (its direction and strength) and reverberant sound. The planned room volume of the Auburn Avenue Theatre is approximately 48,960 ft^3 and has a capacity of 290 seats. This creates a ratio of approximately 169 ft^3 /seat. This ratio is low for music performances that are not amplified, such as small string ensembles, but is ideal for speech. Additional volume is not possible for this project due to the limitation of the existing building.

Ceiling Shape

There will not be much modification to the existing ceiling shape. The wood trusses and angled roof are to remain during the renovation. In order to enhance the intimacy between the stage and the audience we recommend including overhead reflectors in the theatre's design. Typically they begin at the proscenium opening and extend into the audience area. Due to the location of the trusses this concept may not be feasible. We will continue to explore this option with the design team as the project progresses.

Wall Shapes and Reflector Locations

The current renovation design includes two parallel sidewalls in the theatre. In order to avoid a flutter echo between these parallel walls and to enhance the lateral reflections, we recommend that diffusive wall panels be included. Currently our design is to use hard sheetrock panels with various depths and angles to diffuse and direct these lateral reflections. We will continue to evaluate and develop the sidewall panel design as the project progresses. These panels can be constructed of 5/8" GWB on either wood or metal studs. Budget $50/sq.ft. for these diffusive panels.

In order to avoid a direct reflection from the rear wall back to the stage, absorption is recommended both above and below the control room window. These panels can be 1" thick fabric wrapped acoustical wall panels. Budget $10/ sq.ft. for these absorptive acoustical wall panels.

Reverberation Time

Reverberation time is the on-going persistence of sound in a room after the sound source has stopped or changed in pitch and loudness. Spaces optimized for speech

has significantly different reverberation times then ones optimized exclusively for music. The expected reverberation time for the theatre is 1.2 seconds, which will provide a low to moderate room response.

Acoustic Separation
Acoustic separation is the reduction of sound between spaces within the building. Most often, these spaces are adjacent to one another, but acoustic separation would also include the reduction of exterior noise.

Audibility of intruding sound depends on the amount of acoustic separation produced by the architecture separating two adjacent spaces. It is also directly related to the amount of background sound present in the room receiving the intruding sound. People in rooms with higher background sound levels, typically produced by the HVAC system, are less able to hear intruding sounds. Conversely, people in rooms that are quieter can hear intruding sounds more easily.

In order to provide the necessary amount of acoustic separation between the lobby and the theatre, as well as the theatre and the exterior alleyway, it is recommended that acoustical doors be installed. Acoustical Doors are ordered as a complete assembly from the manufacturer. Included in the package are the door, frame, perimeter sound seals, and door bottom. The doors should be acoustically rated to STC 50 if metal, and STC 46 if wood. Single acoustical doors cost approximately $3000 a piece; double acoustical doors cost approximately $6000 a piece. The following list specifies the recommended acoustical door locations.

- Lobby Corridor to Theatre (double doors)
- Theatre Loading Doors to Exterior Alley (double doors)
- Exterior Alley Exit Door (single door)

MECHANICAL NOISE AND VIBRATION CONTROL

The acoustical design goal for mechanical systems is the achievement of a level of background noise that is unobtrusive in quality (frequency content) and low enough in level (Amplitude) that it does not interfere with the function of the space being served. To be unobtrusive, the background noise should exhibit the following characteristics:

- A balanced distribution of sound energy over a broad frequency range to create a sound that is bland in character.
- No audible tonal characteristics such as a whine, hum, or rumble.
- No noticeable time-varying levels from system induced aerodynamic instability or air turbulence.

Background Noise Levels
Background noise levels in the theatre are critically important. The noise from exterior noises and from the HVAC system must be very quiet to ensure speech is heard with maximum clarity. If background noise levels are too high, they will ruin the effort and

expense of the architecture of the theatre. HVAC system noise levels will be designed to meet these quiet criteria.

We use the NC (Noise Criteria) family of noise level curves in our design work to ensure that the mechanical system meets the acoustical design goals. The recommended noise criteria shown in Table 1 are intended to provide the appropriate level of quiet, while still providing the necessary masking noise in rooms with adjacent noise sources.

Table 1: Recommended Noise Criteria

Area	Criteria
Auditorium	NC 20
Dressing Rooms	NC 35
Lobby Areas/ Restrooms	NC 40

Mechanical Noise Types

Mechanical system noise received in occupied spaces is a combination of fan generated noise and airflow generated noise. Fan noise is generated by the fan itself and is transmitted to occupied spaces via three mechanisms or paths:

- *Ductborne noise*, which is created by fans, transmits down attached ductwork and radiates out of the ductwork walls or grilles into occupied areas.
- *Airborne noise*, which is created by mechanical equipment, travels in the air surrounding the equipment and transmits through surrounding walls or floors and into occupied areas.
- *Structureborne noise*, which is created by the vibration of equipment, travels as vibration into the walls, ceilings, or floors of surrounding occupied areas and then radiates as noise from those surfaces.

Although fans are the major source of noise in mechanical systems, other system elements contribute to the overall noise perceived by occupants. Aerodynamic noise is generated at duct elements, such as elbows, transitions, branches, sound silencers, dampers, and grilles. The level and character of aerodynamic noise generated at duct elements depends on the airflow velocity, geometry of the element, and proximity between elements. Aerodynamic noise increases as the airflow velocity in the duct system increases. Care should be taken in sizing, selecting, and locating duct elements so that aerodynamic noise is minimized. The section entitled "Minimizing Turbulence in Ductwork" presents guidelines for minimizing aerodynamic noise in ductwork.

Air Handling Equipment and Fan Types

Some types of fans are quieter than others at a given operating condition. For centrifugal fans, the preferred type of fan is a plug fan equipped with airfoil blades. Plug fans generate lower noise levels at low frequencies, have a plenum effect (due to the air handling unit cabinet) that reduces noise levels on the discharge side of the fan, and are the least susceptible to creation of excess noise from turbulent discharge conditions. The second most desirable centrifugal fan is a scroll fan with backward

inclined airfoil blades. Third, and least favorite, is the centrifugal fan with forward curved blades, which tends to generate higher noise levels at low frequencies and is very sensitive to anything but ideal discharge conditions. If forward curved fans are used, the discharge duct should extend straight from the cabinet for a length of five duct diameters to avoid excess low frequency turbulence noise.

Allocation of Space for Duct Silencer
Duct silencers are prefabricated sections of ductwork with internal baffles that are usually filled with fiberglass. Silencers range in length between 3 and 10 feet. Space for silencers or plenums is advisable in the early mechanical system design. Typical duct silencers would be five feet in length and should be planned for the intake and discharge side of each air handling unit. Ductwork prior to and following each silencer should be straight and equal to two duct diameters in length. This requirement will be refined as the design progresses and more information on the mechanical system becomes available.

Locating silencers too close to fans and duct fittings will cause excess turbulence that leads to higher pressure drop across the silencer and higher self-noise levels. To perform at or near the ratings given in the manufacturers' catalogs, silencers should be installed in accordance with the following guidelines:

- When installed downstream of a centrifugal fan, allow for a straight duct between the silencer and the fan. Baffles in the silencer should perpendicular to the fan's shaft.
- When installed upstream or downstream of a mitered elbow without turning vanes, allow for a straight duct between the silencer and the elbow equivalent to approximately 24". Baffles in the silencer should be parallel to the elbow cheeks.
- When transitions are needed before and/or after silencers, the transition angle should not exceed 30 degrees when entering the silencers and 15 degrees when exiting.

Fiberglass Duct Liner
Fiberglass liner is beneficial in reducing airborne noise that travel through ductwork. Plan on internally lining the following ductwork with 1" thick duct liner:

- The first 20-feet from the supply and return openings of each air-handling unit
- Minimum 10-feet downstream of each air terminal box
- All of the ductwork that serves the Theatre

These guidelines will be refined as the project progresses.

Other Acoustical Duct Elements
- Round ductwork is desirable for medium or high-pressure ductwork. Round sheet metal ducts resist low frequency breakout noise that can be problematic near mechanical equipment rooms.

- Flat oval ductwork with aspect ratios of not more than 2.5:1 is a compromise between rectangular and round ductwork.
- Rectangular ductwork should be avoided on high and medium pressure ducts.
- Allow 1 to 2 feet of straight ductwork between volume dampers and any duct element (such as junction, elbow, etc).
- A minimum of 4-feet of flex duct should be used prior to supply diffusers.

Supply and Return Air Grilles
The acoustical rating of the selected diffusers and grilles should be rated at 5 points less than the NC rating of the room that they serve. The exception to this is for spaces with a background noise criteria less than NC 25. For spaces with such a low background noise criteria, the diffusers and grilles should be selected with an acoustical rating equal to the NC rating of the room that they serve.

Minimizing Turbulence in Ductworks
Reaching a goal of NC 20 within the Theatre will require careful attention to turbulence levels within the ductwork. To help achieve this, the following guidelines are suggested for rooms with noise criteria of NC 20.

- Maintain a distance of not less than three duct diameters between duct elements. For example, if a branch duct splits from a main trunk, a distance of three duct diameters is desired between the point of the split and the next duct element (i.e., elbow, branch, transition, damper, etc.). The purpose of this is to minimize the chance for turbulence building on turbulence. Noise levels increase dramatically when duct elements are placed close to one another, because the turbulence from the previous duct element flows into the next duct element, and creates unusually turbulent conditions.
- The three-duct-diameter spacing is often difficult to do in the final portion of the ductwork, when volume dampers are typically installed near diffusers. Therefore, we recommend using large enough ductwork within the auditorium to simulate a plenum. With this type of duct design, each diffuser along each "oversized" duct trunk will have a nearly equal pressure drop, thereby eliminating the need for volume dampers.
- Limit the number of volume dampers to as few as required to balance the system. If possible eliminate volume dampers by over sizing ductwork to minimize the static pressure loss due to the ductwork, compared to the static pressure loss produced by the supply diffuser.
- Volume dampers, if needed, should be located at least 6 feet away from grilles and diffusers.

Recommended Duct Velocities
Use the lowest possible air velocities consistent with air change requirements. Table 2 shows our recommended duct velocities (in feet per minute) for supply air ducts (SD) and return air ducts (RD) based on the noise criteria of the room served by the duct.

Table 2: Recommended Duct Velocities (in Feet per Minute)

Duct	NC-20	
	SD	RD
@ Outlet Device	300	350
Outlet device to first branch	350	425
First branch to second branch	425	500
Second branch to third branch	550	650
Third branch to fourth branch	800	800
Fourth branch to fifth branch	1000	1000

Equipment Vibration Isolation

- Mechanical equipment in the building should be isolated on springs.
- Flex connectors should be used at all duct connections to the mechanical equipment and the mechanical equipment casings.
- All-Neoprene flex connectors should be used at all pipe connections to air handling units and pumps.
- All duct connection to terminal boxes should be via flex connector.
- All transformers and substations should be isolated on neoprene pads.

We will evaluate the equipment vibration isolation as the project progress and more information regarding the equipment becomes available.

Auburn Avenue Theatre Pre-Design Narrative
Candela, Robert Smulling Theater consultant

Stage Rigging System

The stage rigging system for the stage area will consist of 14 line sets that will be dead hung from the structure above. Two line sets will be dedicated as stage electrics. For budgeting purposes, each stage electric set will be motorized to raise and lower for easier load-ins. All other line sets will contain masking draperies, such as the Main House Curtain and Valance, mid-stage traveler, teasers, tormentors, rear stage traveler and cyclorama. There will be two dead hung pipe battens which will be strategically located in the front of house for stage lighting.

Stage Lighting System

The stage lighting system will contain two dimmer racks; one rack to consist of 96 - 2.4kW dimmers for stage lighting circuits and the other rack to consist of 24 - 2.4kW dimmers dedicated for house and lecture lighting. The stage dimmer rack will be controlled by a computerized stage lighting control console that is appropriate for this type of venue. House and lecture lighting control stations will be located in the Stage Manager's Panel, Control Booth and near the main entry into the auditorium. The Stage Manager's Panel will be located on the stage right proscenium wall and will contain house, lecture, worklight and non-dim controls.

Stage Lighting Instruments and Accessories

Budgeted for this project will be a compliment of stage lighting fixtures consisting of variable focus ellipsoidals, fixed focus ellipsoidals, 6" fresnels, border lights, one follow spotlight and cyclorama lights. All stage light fixtures will include color frames, c-clamp, safety cable and pattern holder. Accessories to include an assortment of stage rated extension cords, two-fers, adaptors, gobo patterns, color media, light booms with bases and rolling storage bins.

Auditorium Seating

The auditorium seating budgeted for this project will be fully upholstered with average grade nylon fabric, wooden armrest, wood chair back and steel seat pan. Final finishes such as armrests, fabric color, wood finish and aisle end standards will be selected during the contract document phase. Eight chairs are designated as portable seats to allow for easy removal which also serves as four dedicated handicap spaces as required per code. Integrated in alternating seat aisle end standards will be aisle lights for egress lighting.

Budget Estimate + Backups

Auburn Avenue Theater

Pre-design budget - 2/19/2008

Architectural		Quanity	Unit	Unit Cost	Total	Notes
	General Conditions (5%)				$91,633	*
	Demolition		LS		$112,000	
	Exterior					
	Stucco Skim Coat Concrete	2,400	SF	$8.00	$19,200	Scratch & brown coat w/expansion joints. (Master Stucco - Contact: Horacio, 425.681.6631)
	Stucco Soffit	330			$0	TBD based on interfacing with Sign Tech Soffit
	Roof patching		LS		$1,200	Allownace
	Marquee					By Owner
	Ticket Booth		LS		$7,500	Tile, Neon, glazing, metal stud, green board
	Windows/Storefront		LS		$25,000	6 windows on nortth wall; storefront including two pairs of doors, ticket window; Dbl. glaze, Low E [Lund Glass]
	Poster Cases	2	EA	$1,100.00	$2,200	includes lighting
	Interior					
	Paint	15,000	SF	$1.93	$29,000	Prime + 2 coats
	Walls GWB 5/8"	17,154	SF	$2.10	$36,023	4370 sf @10'ht - 4914 sf @ 7'-9" ht. - 2443 sf @ main corridor - 1195 sf @ auditorium & stage - 894 sf @ mezz. - 479 sf @ main lobby wall (concession) = 14,295 sf (add'l 20% for err'/waste in final number) [North Pacific Drywall - 253.874.1400]
	Ceiling GWB 5/8"	2,780	SF	$4.50	$12,510	
	Metal Stud Ceiling	2,750	SF	$4.00	$11,000	
	Metal Wall Studs 20ga.	708	LF	$27.00	$19,116	Average 10"-0"
	Flooring					
	Carpet	279	SY	$43.00	$11,997	Commercial loop, nylon
	Carpet & Marmoleum base	559	LF	$2.55	$1,425	
	Tile floor	385	SF	$17.25	$6,640	12"x12", porcelain
	Tile wall	555	SF	$12.72	$7,060	5"x5" tile, based on 5'-0" tile ht.
	Tile base	111	LF	$10.27	$1,140	
	Marmoleum	662	SF	$6.65	$4,402	
	Stage	1362	SF	$50.00	$68,100	Dance floor finish
	Acoustic Panels					
	Overhead panels	338	SF	$30.00	$10,140	20 ga. studs w/5/8" GWB
	Side panels	283	SF	$24.35	$6,890	20 ga. studs w/5/8" GWB
	Rear panels	350	SF	$10.00	$3,500	
	Sound Batt insulation					
	Doors					
	Interior (swing)	10	EA	$890.00	$8,900	Frame, Hardware, Install
	Interior (pocket)	1	EA	$950.00	$950	Frame, Hardware, Install
	Interior (acoustical)	1	EA	$3,000.00	$3,000	Frame, Hardware, Install
	Exterior (acoustical)	2	LS		$9,000	Frame, Hardware, Install
	Concession security screen	1	EA		$3,500	12'-0"w x 4'-0"h, wall mount, coil door
	Casework					
	Concession		LS		$0	BY OWNER
	Green room	26	LF	$120.00	$3,120	
	Accessories					
	ADA/Sanitary items		LS		$1,668	Includes toilet paper, sanitary napkin, seat cover and soap dispensers, mirrors and grab bars.
	Restroom partitions		LS		$7,375	Flr. to Clg. mount - 7 stalls and 2 screens.
	TOTAL				**$433,557**	

Structural		Quanity	Unit	Unit Cost	Total	Notes
	Storefront Remodel	530	SF	$25.00	$13,250	
	Lobby Remodel	2215	SF	$41.87	$92,742	
	Seating Platform	2137	SF	$35.00	$74,795	
	Mech Platforms	1200	SF	$85.00	$102,000	Steel frame & deck
	TOTAL				**$282,787**	
Mechanical		Quanity	Unit	Unit Cost	Total	Notes
	Plumbing				$71,500	
	HVAC				$219,863	
	Fire Protection				$29,535	
	Testing and Balancing				$8,250	
	Commissioning Support				$5,500	
	TOTAL				**$334,648**	
Electrical		Quanity	Unit	Unit Cost	Total	Notes
	Mobilization, coordination				$7,500	
	Service				$37,000	
	Distribution				$27,950	
	Stage Lighting				$61,500	
	Lighting Allowance				$32,400	
	Exterior lighting				$30,000	
	Devices				$6,000	
	Basic materials				$24,000	
	Equipment connections				$10,000	
	Telephone cabling system				$1,600	
	Data cabling system				$4,600	
	Fire alarm system				$8,000	
	Sound system rough-in				$10,000	
	Project closeout				$3,750	
	Exterior Neon	175	LF		$19,660	Border neon including 10" Script *"The Ave" [M3]*
	Interior Neon	125	LF			Included in Ext. Neon Number. Also includes Neon Script *"Welcome to the Ave"*
	TOTAL				**$283,960**	
Theater		Quanity	Unit	Unit Cost	Total	Notes
	Auditorium seating	299	EA	$300.00	$89,700	Irwin Davies Type 6 seat
	Stage lighting distribution equipment		LS		$90,000	
	Lighting instruments and accessories		LS		$63,000	
	Pipe Batten		LS		$90,000	
	Rigging acessories, draperies and spares		LS		$20,000	
	TOTAL				**$352,700**	
Sound		Quanity	Unit	Unit Cost	Total	Notes
	Sound system				$120,000	**Basic system; enhansed system with surround sound add $30,000**
	Video Projection system				$25,000	Basic system; enhansed system with surround sound add $30,000
	TOTAL				**$145,000**	
	SUBTOTAL				**$1,832,652**	
	Contractor O&P (15%)				**$274,898**	*
	GRAND TOTAL				**$2,199,183**	

Note:

1. Cost estimates do not include permit fees, contingency, sales tax, escalation and hazardous materials remediation.
2. Estimate does not include utility charges for services to building.
3. Does not include new marquee work.
4.Varies *
5. Cost per SF $279
6. Cost related to theater $120/SF
7.Cost related to building $159/SF

FULL SERVICE DEMOLITION

35131 SE Center Street
Snoqualmie, WA 98065

(425) 881-0623
FAX (425) 881-5935

Barnett Schoor Architects
Bud Schorr

FAX: 206-722-1580

02-18-08

Auburn Avenue theater
DEMOLITION BUDGET

Addendum:

BASE BID: $ 112,000.00

Substantial strip and gut of the entire interior of the Auburn Avenue Theater.

Interior:
- All interior partitions, first & second floors as shown on sheets 1 &2. Assumes the inside of exterior walls are furred.
- All floor systems: 2nd floor above lobby, stage & area behind, changing rooms, balcony, seating platforms. Assumes a concrete topping slab on raised wood floor structure in the area of the changing rooms.
- Existing (assumed wood) stairs to the basement; cut & remove opening for new stairs to basement.
- All ceilings above the lobby, second floor, control booth, changing rooms.
- Floorcoverings throughout lobby , theater & seating areas, second floor.
- Casework, plumbing fixtures, kitchen equipment.
- Mechanical, Electrical, Plumbing throughout. Assumes there is not MEP equipment in the basement.
- Cut & remove concrete slab for two 15ft trenches for future restroom plumbing.

Exterior:
- Remove CMU in-fills at North exterior wall indicated by window openings on sheet 3 (new construction floor plan). Assumes the opening between gridlines 6 & 7 is actually two openings as implied on sheet 1.
- Sawcut and remove concrete to provide an enlarged exit (gridline 1.3, and a loading dock opening (grid 1.7). Includes "finished corners" for these openings (no overcuts).
- Sawcut and remove concrete to enlarge the openings between grids 6 & 7. Remove the panel between the two existing openings, and lower the opening to slab level for the full 12ft width. This temporarily enlarged opening will be used for equipment ingress, and debris loadout.
- Remove the first floor storefront across the West elevation of the building. Includes: Remove the wood façade across the front. Assumes there is a concrete wall from A to B and from D to E. Sawcut this wall away from the North and South corners, and from the West elevation wall above. Does NOT include shoring of the West wall to remain at the second floor level.

All demolition includes:

- Load and haul materials from site
- Associated saw cutting & water control
- Mobilizations (1)
- Broom clean finish
- *Price guaranteed for 60 days*

ASSUMPTIONS and CLARIFICATIONS:

- Client to provide a Good Faith Asbestos Survey prior to beginning demolition
- Consistent with the intent and requirements of various local, state and federal regulations, the owner is and remains the named generator of regulated (i.e. hazardous) wastes associated with materials to be removed, transported and disposed of. The owner is also responsible for the identification of such materials

FULL SERVICE DEMOLITION

35131 SE Center Street
Snoqualmie, WA 98065

NUPRECON

(425) 881-0623
FAX (425) 881-5935

- All live water lines, including fire sprinklers, shall be deactivated and drained by others in our work area
- All electrical elements shall be made safe in our work area by others prior to beginning demolition.
- Construction utilities (power, water, etc.) are available within 100' of work areas
- We assume salvage value for all items included in our scope of work
- Concrete slab is assumed to be 5" average thickness
- Payment terms are net 30 days with no retention to be withheld
- This proposal is based on a mutually agreeable progress schedule
- This budget based on: sheets 1-6 provided via e-mail. Phone conversation with Kevin on 2-18-08

EXCLUDES:

- **Anything related to hazardous materials** which includes but is not limited to asbestos, airborne silica, PCB's, freon, hydraulic oil, lead, air monitoring, dangerous or hazardous waste evaluation, characterization, or disposal, regulatory notices and hazardous materials surveys.

  Environmental Waste Resources, EWR, is Nuprecon's hazardous material abatement division. Upon request, EWR will prepare project specific scope and bid quotations for the abatement, handling, transportation and disposal of such materials; however, such services are specifically excluded from this bid.
- Roughening of surfaces, sanding, patching and grinding
- Mastic removal or floor prep. Flooring removal includes one pass with the terminator. Some residual adhesives may remain. Nuprecon is not responsible for removal of those residual adhesives.
- Cut and cap, locate, make-safe, or de-energize site utilities
- Core drilling or doweling
- Radiography
- Trenching, except as described above
- Dewatering and Erosion Control
- Protection (i.e., dust, **weather, pedestrian, perimeter fencing,** fall protection at leading edges left by our work, existing items to remain, etc.)
- Engineering for Demolition; Engineering of Shoring or Bracing of existing to remain.
- Shoring or bracing of existing elements to remain
- Salvage items for reuse, relocation, or return salvage to owner
- Sitework, excavation, grading and compaction
- Site security
- Layouts
- WSST
- All permits.

Please do not hesitate to call if there are any questions.

John Holt - Estimating
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Please visit us at our website *www.nuprecon.com*

PROPRIETARY AND CONFIDENTIAL
NUPRECON LP

PROJECT BUDGETARY COST ESTIMATE			**Pre-Design Mechanical Cost Estimate**			
Date:	14-Feb-05					
Project:	Auburn Theatre					
Project No.:	2007-015.00					
MECHANICAL COSTS FOR PRE-DESIGN						
The following list is an itemization of the mechanical costs:						
Project Gross Floor Area:				8,950 sf		
DESCRIPTION	Quantity	Units	Material	Installation	Material/Install	Total Costs
PLUMBING						
Plumbing Fixtures	16	ea			$3,000.00	$48,000
Floor Drains	2	ea			$1,000.00	$2,000
Roof Drains	10	ea			$1,000.00	$10,000
Misc. Plumbing - Gas, BFP	1	ls			$5,000.00	$5,000
	Subtotal:					$65,000
HVAC						
40 Ton AHU	1	ea	$39,000.00	$20,000.00	$59,000.00	$59,000
Fan Power VAV Units	10	ea			$5,000.00	$50,000
Ductwork	6000	lb			$5.00	$30,000
Duct Insulation	3500	sf			$2.00	$7,000
Diffusers/Grilles	50	ea			$150.00	$7,500
3 Ton Split System Heat Pump	1	ea			$5,000.00	$5,000
Exhaust Fans	2000	cfm			$2.00	$4,000
Combination Fire/Smoke	6	ea			$2,500.00	$15,000
Controls	8,950	sf			$2.50	$22,375
	Subtotal:					$199,875
FIRE PROTECTION						
Fire Protection	8,950	sf			$3.00	$26,850
	Subtotal:					$26,850
TESTING AND BALANCING						
Testing and Balancing	1	ls			$7,500.00	$7,500
	Subtotal:					$7,500
COMMISSIONING SUPPORT						
Commissioning Support	1	ls			$5,000.00	$5,000
	Subtotal:					$5,000
		Mechanical Subtotal:				$304,225
Mechanical Contractor Mark-Up:		10 %				$30,423
	TOTAL:					$334,648

$/sf Cost: $37.39

Note: Mechanical cost estimate does not include permit fees, design contingency, sales taxes overhead and profit, escalation and hazardous materials remediation.

AUBURN AVE THEATER 15-Feb-08

PreDesign Phase

PROBABLE ELECTRICAL DIVISION 16 CONSTRUCTION COST

ITEM	QTY	UNIT	UNIT $	TOTAL $
DIVISION 16				
MOBILIZATION, COORDINATION	1	LS	$7,500.00	$7,500
SERVICE				
TRANSFORMER VAULT	1	EA	$5,000.00	$5,000
PRIMARY FEEDER	50	LF	$40.00	$2,000
SECONDARY FEEDER	100	LF	$250.00	$25,000
TELEPHONE SERVICE	100	LF	$25.00	$2,500
MISCELLANEOUS	1	LS	$2,500.00	$2,500
SUBTOTAL SERVICE				$37,000
DISTRIBUTION				
MAIN SERVICE SWITCHBOARD	1	EA	$15,000.00	$15,000
208 VOLT PANEL ALLOWANCE	3	EA	$1,500.00	$4,500
SURGE PROTECTORS	3	EA	$900.00	$2,700
PANEL FEEDER ALLOWANCE	3	EA	$1,750.00	$5,250
MISCELLANEOUS	1	LS	$500.00	$500
SUBTOTAL DISTRIBUTION				$27,950
STAGE LIGHTING				
SDB SERVICE - 600A	115	LF	$180.00	$20,700
HDB SERVICE - 80A	115	LF	$20.00	$2,300
20A BRANCH CIRCUITS	134	EA	$250.00	$33,500
MISCELLANEOUS	1	LS	$5,000.00	$5,000
SUBTOTAL STAGE LIGHTING				$61,500
LIGHTING ALLOWANCE				
FIXTURES	4,000	SF	$7.50	$30,000
LIGHTING CONTROLS	4,000	SF	$0.60	$2,400
SUBTOTAL LIGHTING				$32,400
EXTERIOR LIGHTING	1	LS	$30,000.00	$30,000
DEVICES	4,000	SF	$1.50	$6,000
BASIC MATERIALS	4,000	SF	$6.00	$24,000
EQUIPMENT CONNECTIONS	4,000	SF	$2.50	$10,000
TELEPHONE CABLING SYSTEM	4,000	SF	$0.40	$1,600
DATA CABLING SYSTEM	4,000	SF	$1.15	$4,600
FIRE ALARM SYSTEM	1	LS	$8,000.00	$8,000
SOUND SYSTEM ROUGH IN	1	LS	$10,000.00	$10,000
PROJECT CLOSEOUT	1	LS	$3,750.00	$3,750
TOTAL COSTS				**$264,300**

ESTIMATE PROVISIONS

ESTIMATE IS IN 2008 DOLLARS AND CONTAINS NO GENERAL CONTRACTOR MARKUP NOR CONTINGENCY

ESTIMATE DOES NOT INCLUDE UTILITY CHARGES FOR SERVICES TO BUILDING

Photos + Drawings

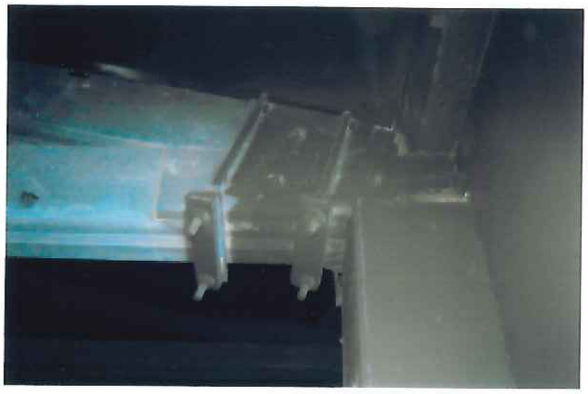
Photos of Existing Facility

View from the NW

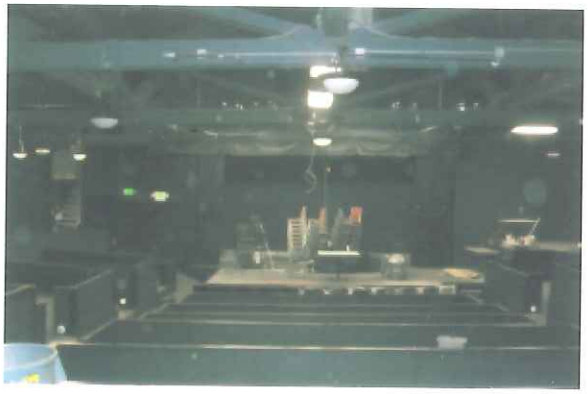
Alley View from the NW

Alley parking to the left--waste to the right

View from the stage to control room



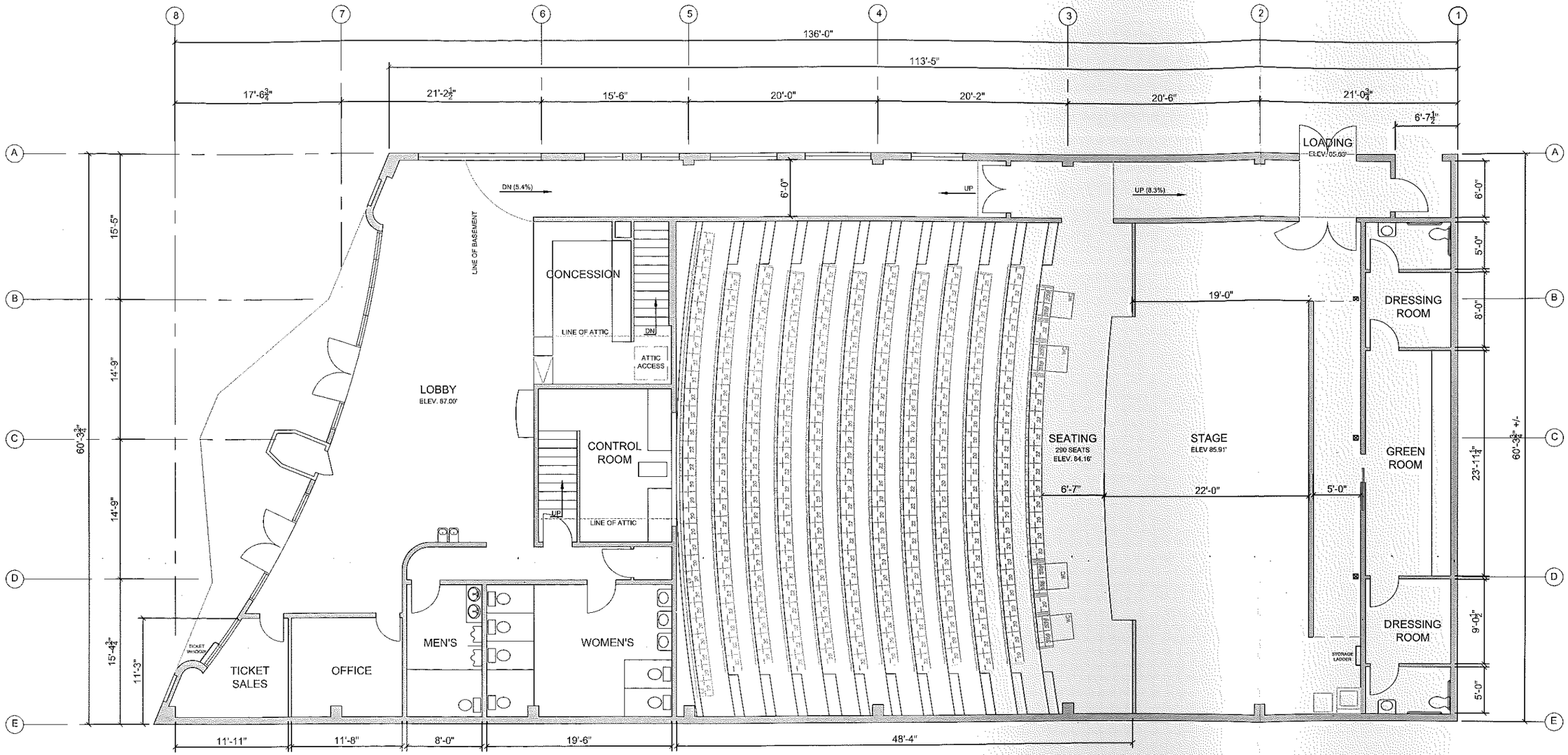
Emergency repair to truss



View from back of auditorium to stage

Reinforced truss with column

Typical electrical condition

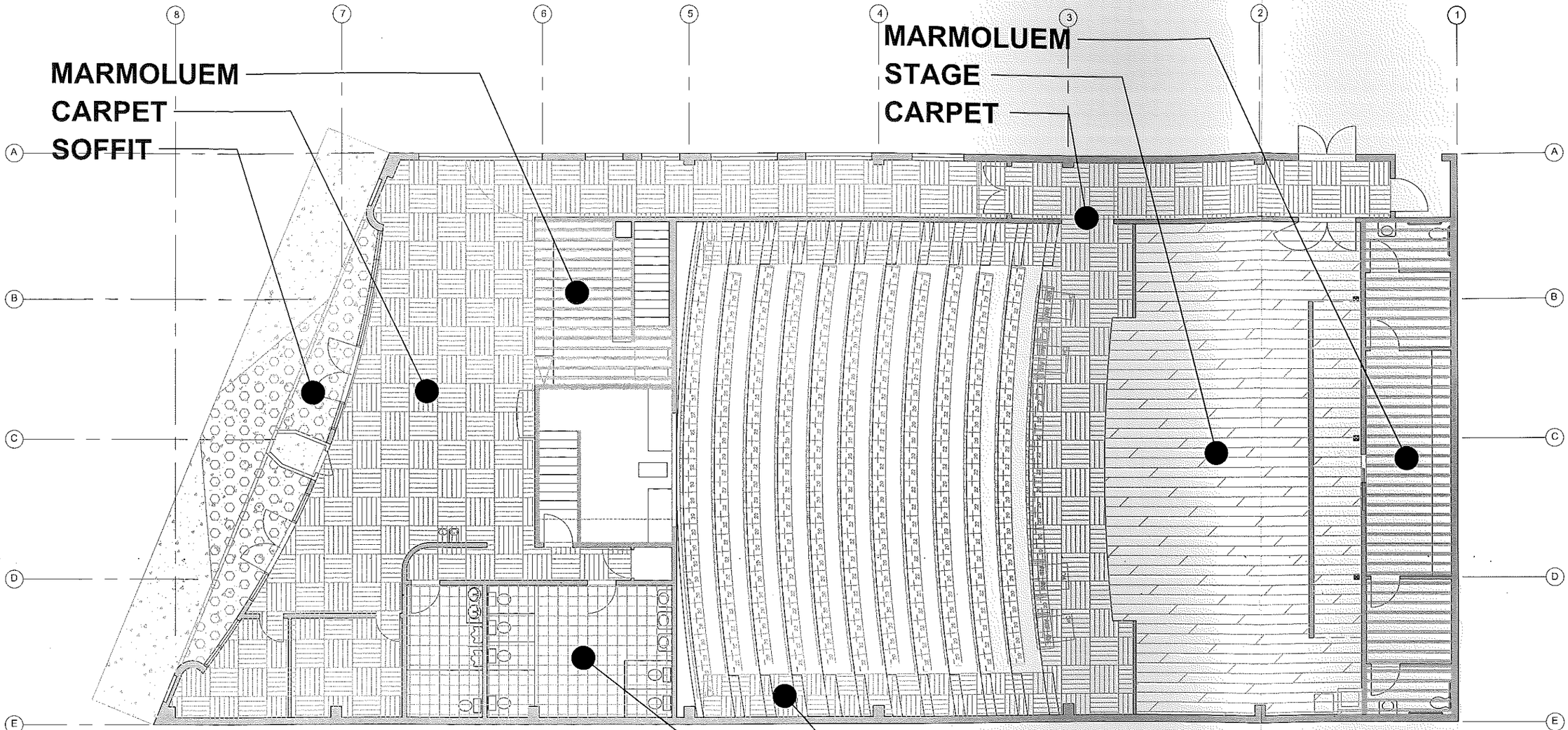


MAIN FLOOR PLAN

Auburn Avenue Theater

PRE-DESIGN 3-7-2008

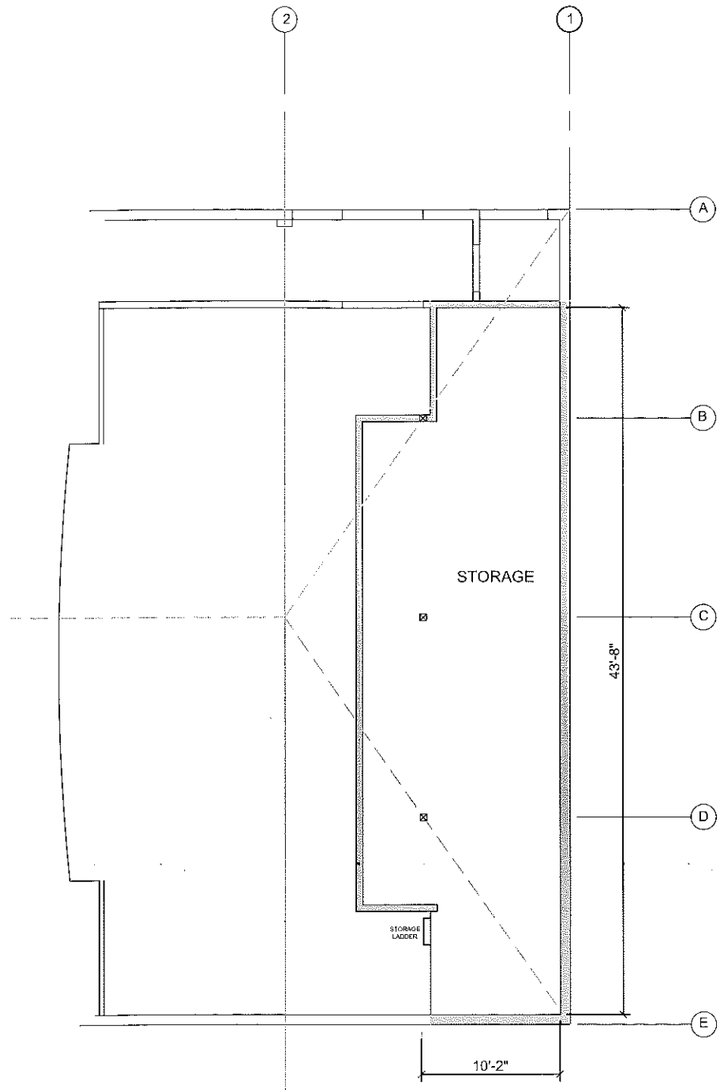
BARNETT SCHORR ARCHITECT



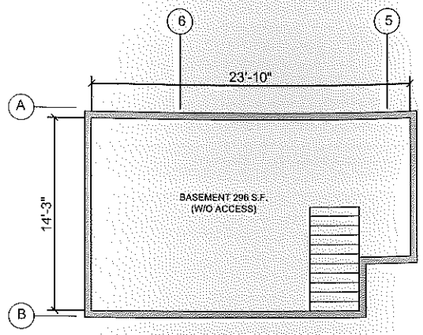
MAIN FLOOR PLAN - FLOOR FINISH LOCATIONS

Auburn Avenue Theater
PRE-DESIGN 3-7-2008

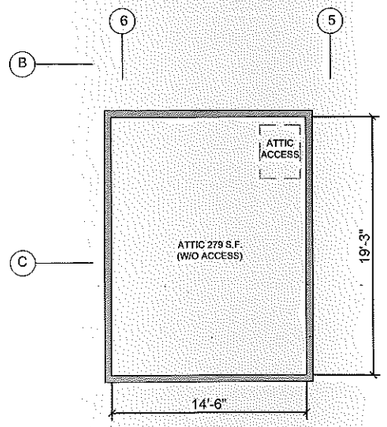
BARNETT SCHORR ARCHITECT



MEZZANINE PLAN



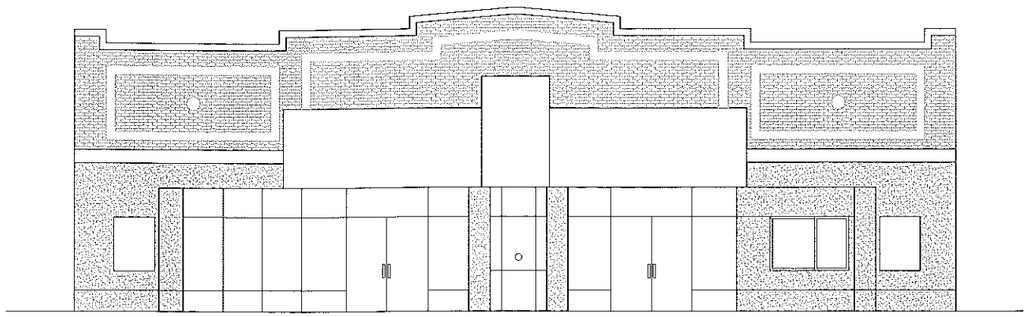
BASEMENT PLAN



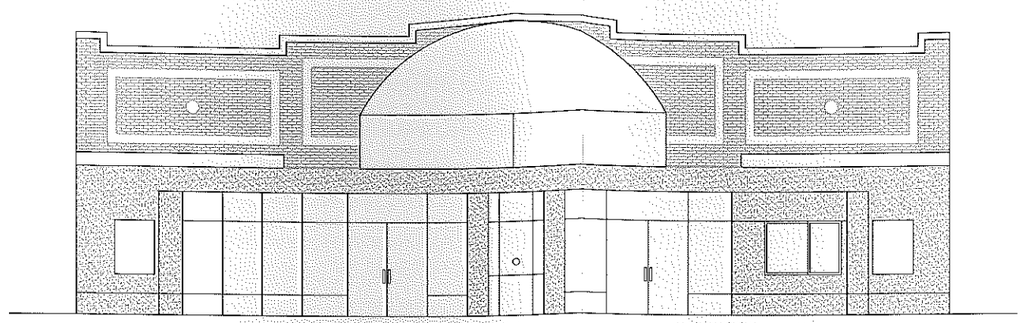
ATTIC PLAN

Auburn Avenue Theater
PRE-DESIGN 3-7-2008

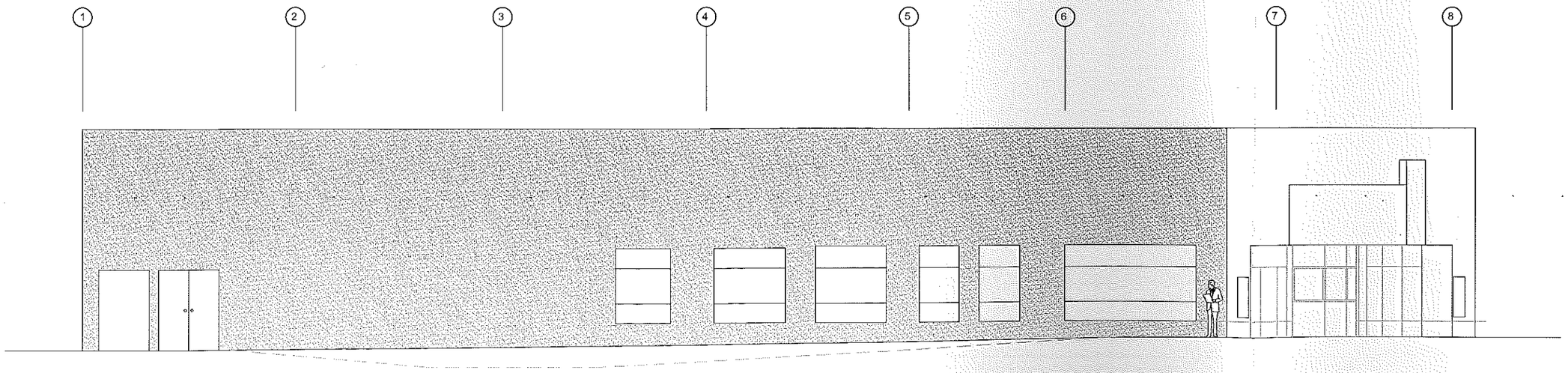
BARNETT SCHORR ARCHITECT



WEST ELEVATION - EXISTING MARQUEE
SCALE: 3/32" = 1'-0"



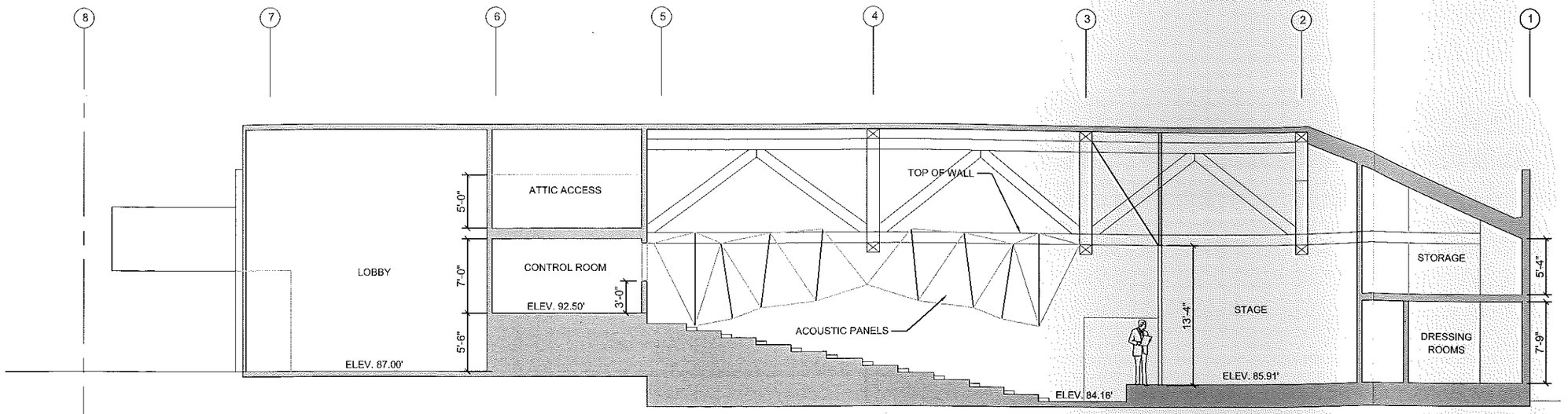
WEST ELEVATION - SIGNTECH MARQUEE
SCALE: 3/32" = 1'-0"



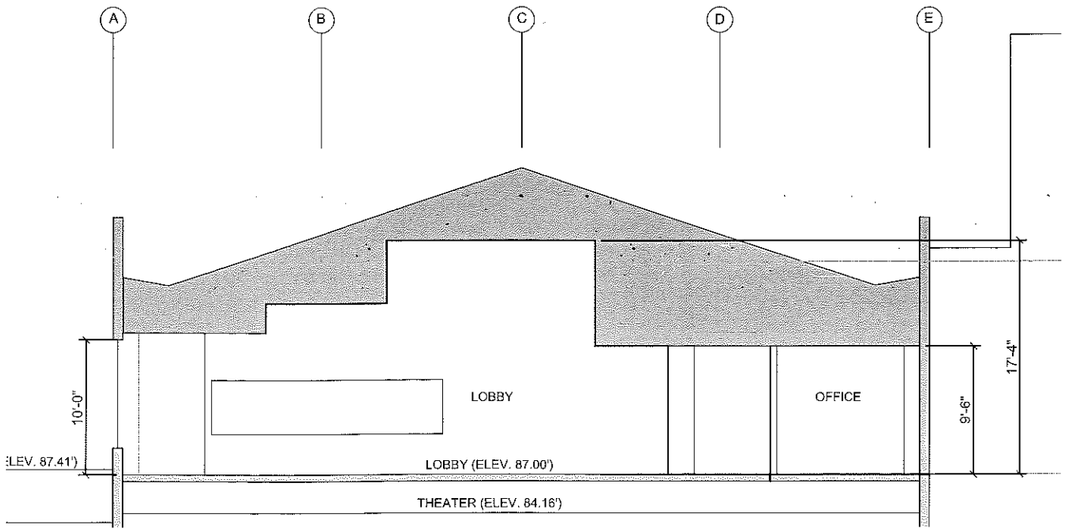
NORTH ELEVATION

Auburn Avenue Theater
PRE-DESIGN 3-7-2008

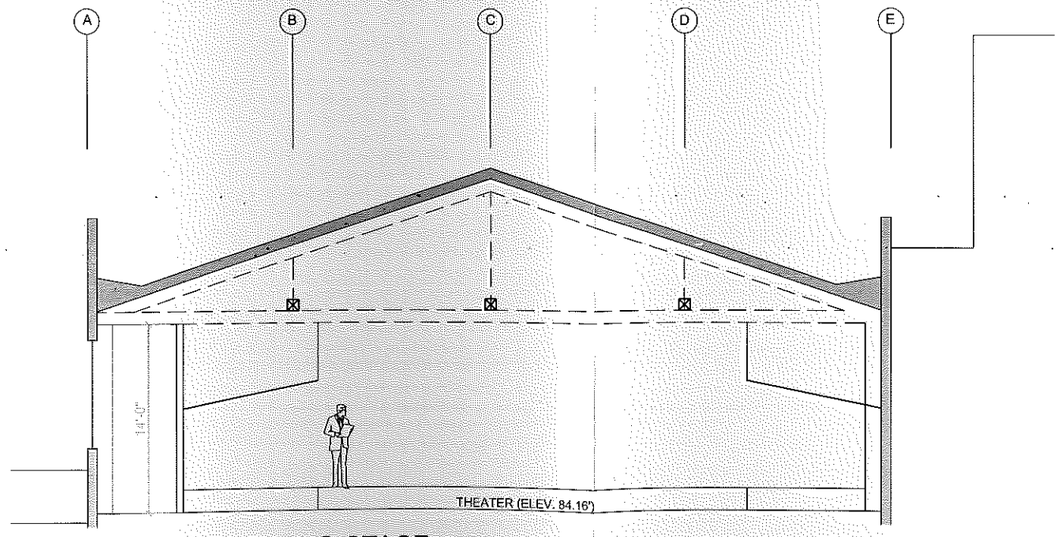
BARNETT SCHORR ARCHITECT



LONGITUDINAL SECTION



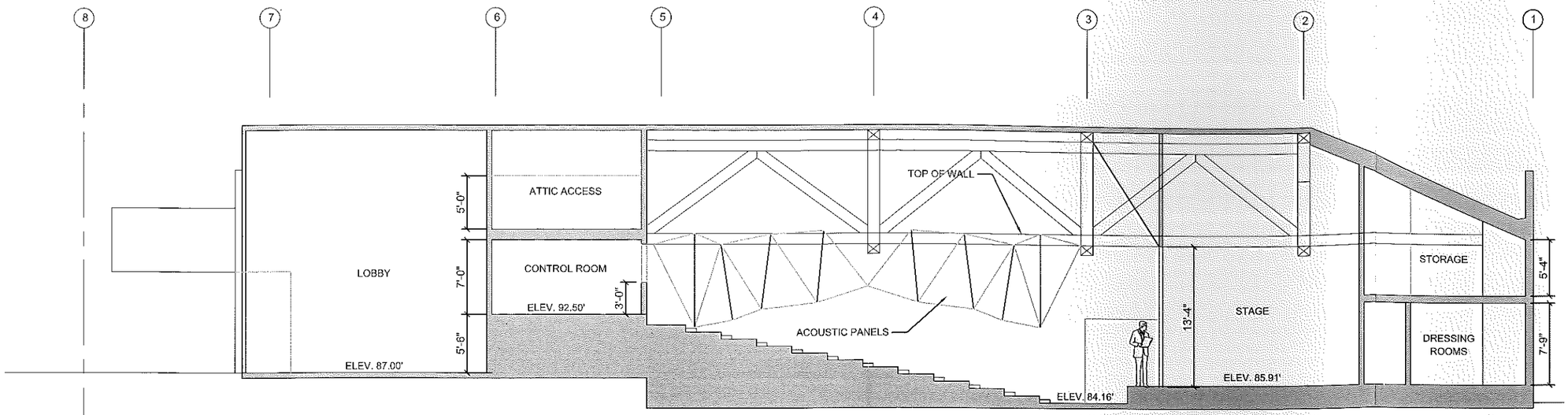
TRANSVERSE SECTION @ LOBBY



TRANSVERSE SECTION @ STAGE

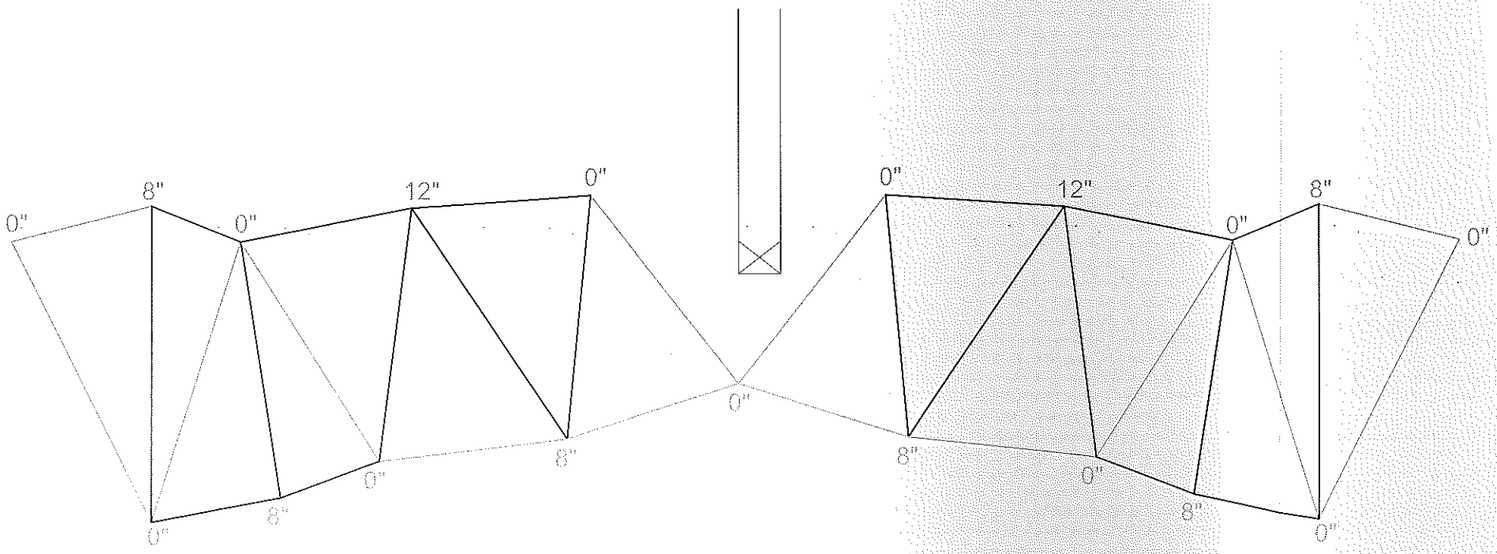
Auburn Avenue Theater
PRE-DESIGN 3-7-2008

BARNETT SCHORR ARCHITECT



LONGITUDINAL SECTION W/ACOUSTIC PANELS

SCALE: 3/32" = 1'-0"



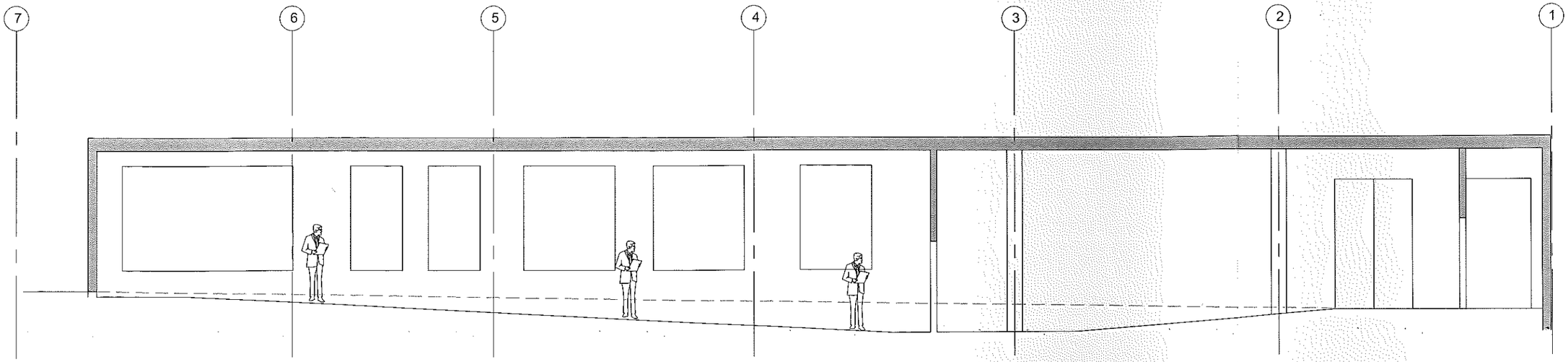
ACOUSTIC PANELS W/ELEV POINTS

SCALE: 1/4" = 1'-0"

Auburn Avenue Theater

PRE-DESIGN 3-7-2008

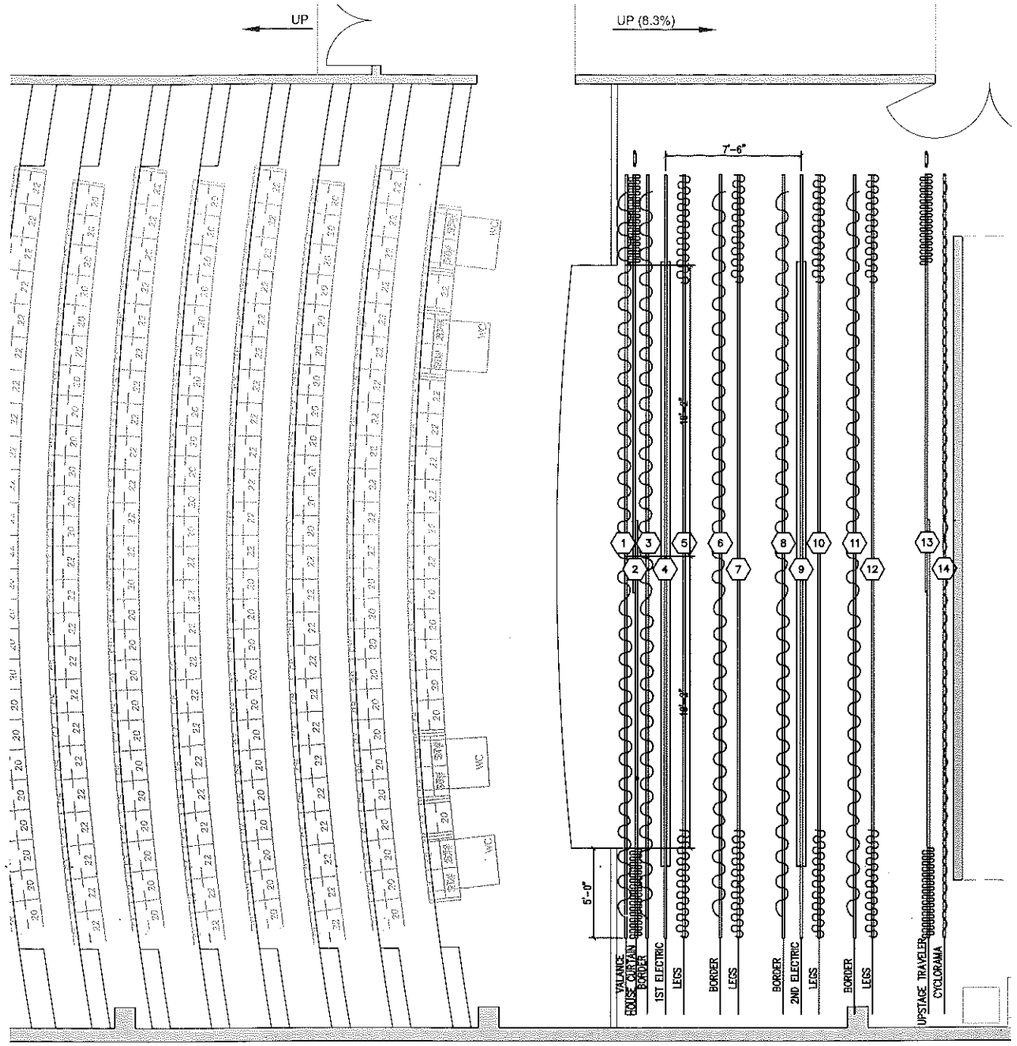
BARNETT SCHORR ARCHITECT



INTERIOR ELEVATION OF CORRIDOR TO AUDITORIUM

Auburn Avenue Theater
PRE-DESIGN 3-7-2008

BARNETT SCHORR ARCHITECT



PARTIAL MAIN FLOOR PLAN - CURTAIN LAYOUT

STAGE RIGGING & DRAPERY SCHEDULE

ITEM NO.	ITEM	BID BASE	BID ALT	TRACKS	P.B.	REMARKS
1	PIPE BATTEN W/ VALANCE	✓			40'-6"	CURTAIN: 40'-6"W.x4'-0"H., 50% FULL, 1-1/2" P.B.
2	PIPE BATTEN W/ HOUSE CURTAIN	✓		2 @ 21'	41'-6"	CURTAINS: PAIR 21'-0"W.x18'-0"H., 50% FULL
3	PIPE BATTEN W/ BORDER	✓			40'-6"	CURTAIN: 40'-6"W.x6'-0"H., 25% FULL
4	PIPE BATTEN W/ PIVOT PIPE & LEGS	✓			40'-6"	CURTAIN: PAIR 6'-0"W.x18'-0"H., 25% FULL
5	PIPE BATTEN W/ BORDER	✓			40'-6"	CURTAIN: 40'-6"W.x6'-0"H., 25% FULL
6	PIPE BATTEN W/ PIVOT PIPE & LEGS	✓			40'-6"	CURTAIN: PAIR 6'-0"W.x18'-0"H., 25% FULL
7	PIPE BATTEN W/ BORDER	✓			40'-6"	CURTAIN: 40'-6"W.x6'-0"H., 25% FULL
8	PIPE BATTEN W/ PIVOT PIPE & LEGS	✓			40'-6"	CURTAIN: PAIR 6'-0"W.x18'-0"H., 25% FULL
9	PIPE BATTEN W/ UPSTAGE TRAVELER	✓		2 @ 21'	41'-6"	CURTAINS: PAIR 21'-0"W.x18'-0"H., 50% FULL
10	PIPE BATTEN W/ CYCLORAMA	✓			40'-6"	CURTAIN: 40'-6"W.x20'-0"H., 0% FULL

RIGGING NOTES AND ABBREVIATIONS

A. ALL DRAPERY 0% FULL UNLESS NOTED OTHERWISE
B. ALL DRAPERY FIRE RETARDANT TREATED.
C. CONTRACTOR TO VERIFY ALL CURTAIN HEIGHTS AND WIDTHS PRIOR TO FABRICATION.

ALUM	ALUMINUM	NTS	NOT TO SCALE
CONT	CONTINUOUS	O.C.	ON CENTER
D	DEPTH OR DEEP	P.B.	PIPE BATTEN
F.B.	FLAT BAR (STEEL)	PL	PLATE
H	HEIGHT OR HIGH	S.W.L.	SAFE WORKING LOAD
M.B.	MACHINE BOLT	T.S.	TUBE STEEL
N.I.C.	NOT IN CONTRACT	W	WIDTH OR WIDE
		ø	DIAMETER

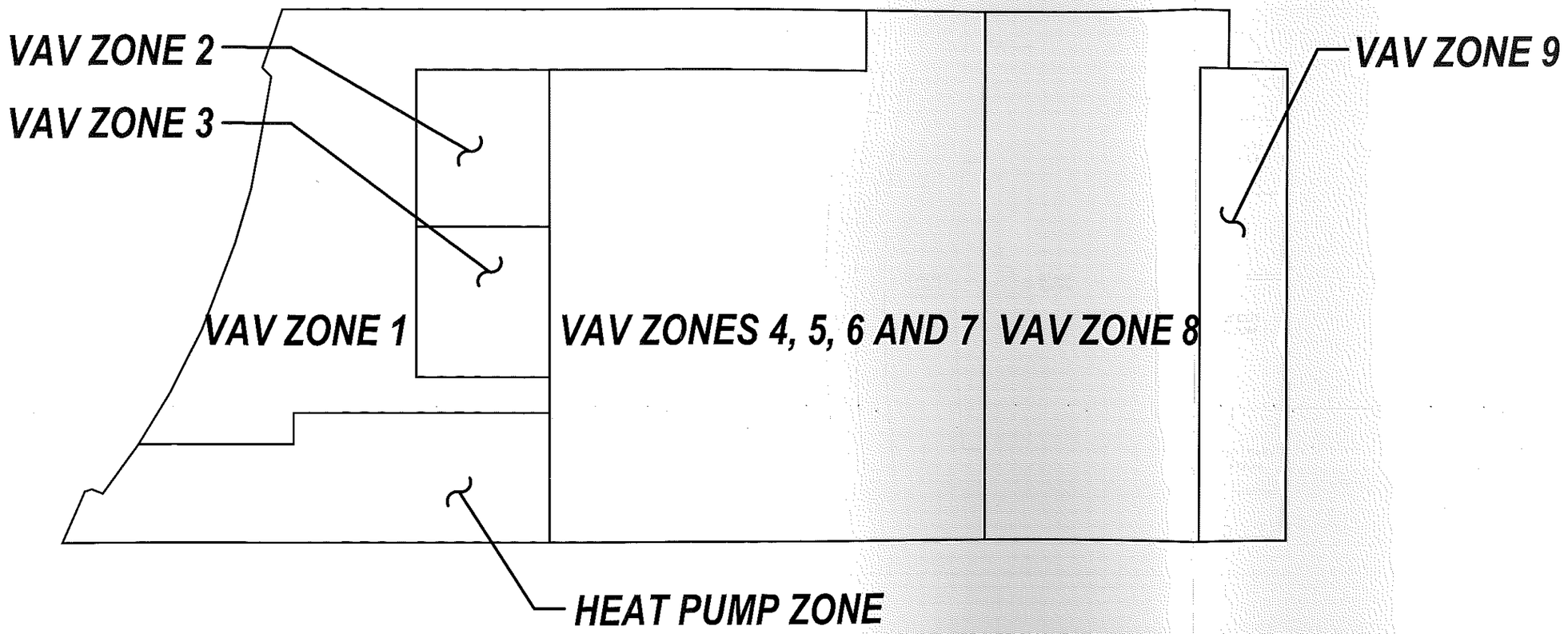
LEGEND

- PICKPOINT FOR PIPE BATTEN AND TRAVELER TRACKS.
- (X) RIGGING ITEM, SEE SCHEDULE ON THIS DRAWING.
- PIPE BATTEN CYCLORAMA
- PIPE BATTEN TRAVELER TRACK AND HOUSE CURTAIN
- PIPE BATTEN WITH PIVOT POINT, AND PIPE BATTEN WITH LEG
- PIPE BATTEN WITH TYPE BORDER OR VALANCE CURTAIN
- 8" LOFT BLOCK

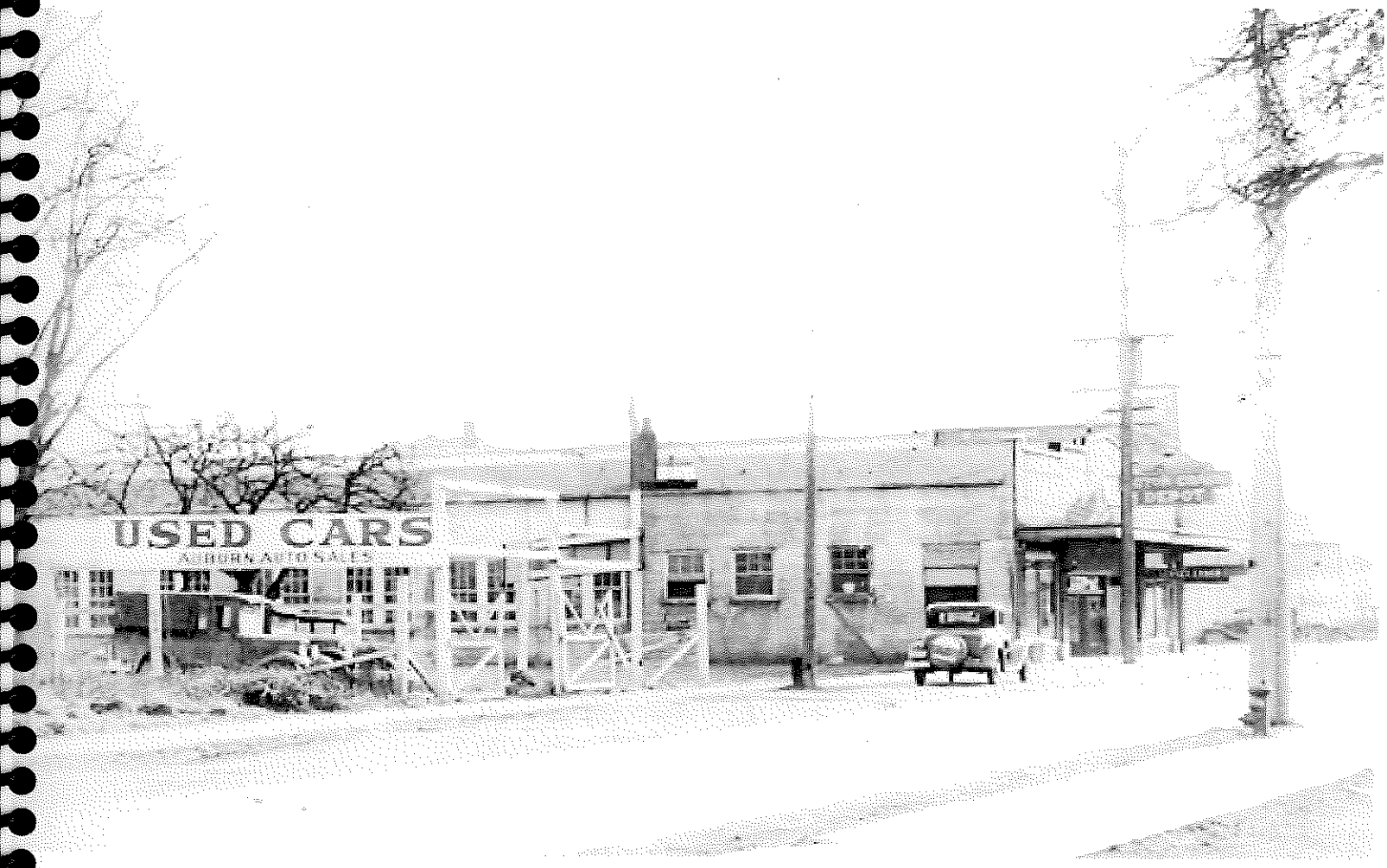
Auburn Avenue Theater
PRE-DESIGN 3-7-2008

BARNETT SCHORR ARCHITECT

VAV ZONES SERVED BY 40 TON UNIT
HEAT PUMP ZONE SERVED BY 3 TON UNIT



MAIN FLOOR PLAN
SCALE: 3/32" = 1'-0"


USED CARS