Studio Theater Project

Revised January 4, 2007

Following are some items the Theatre Team feels are key considerations as planning for the Studio Theatre project continues. Also, the team feels that the theatre program be designated the sole / primary user of the space, due to the nature of our academic and production schedule.

- A minimum playing area, i.e., space where action of play takes place, of 30'x30'. Would it be helpful to add (even with the next bullet) something abut the total theatre space being @ 60 x 60 (or some other number) just to minimize any misunderstandings? Is 60 x 60 the "right" size to accommodate the number of patrons we expect?
- The ability to comfortably and safely (per current fire code) seat between 125 -175 patrons, depending upon seating / playing space configuration, (see appendix #1)
- A modular, collapsible system of seating units and/or risers, number commensurate with seating arraignment.
- Padded chairs and racks, number commensurate with seating arraignment.
- Storage for above seating/riser / chair system.
- There needs to be easy access to the playing area, for both actors and personnel. A walkway around the area or at minimum around sides is needed. An upper walkway around the theater would provide, 1) a system for creating such access as well as 2) a structure (its railing) on which to hang lighting instruments and 3) a second level performance space. The walkway width of at least four feet should not be included in the total square footage of the theatre space (thereby increasing it to 68 x 68 (or whatever number we come up with...see bullet above!).
- A sound and light lock is necessary to allow concurrent use of studio theatre and Mary Linn Auditorium:
 - There needs to be a regular size (personnel) door from the PAC into the sound & light lock and also from the sound & light lock into the studio theater.
 - A large door (suggested dimensions, 10' wide x 15' high) from the PAC into the sound & light lock and also from the sound & light lock into the studio theater.
 - To maximize space in both theaters, both sets of doors should open INTO the sound & light lock
- A dressing room(s) (with shower facilities and makeup mirrors w/ appropriate lighting) and rest room(s) are needed allow concurrent use of studio theatre and Mary Linn Auditorium.
- A raised control booth, which will accommodate at a minimum 4 technicians, including lighting, sound, project, stage management, etc. equipment.
- A suspended pipe grid (1 $\frac{1}{2}$ ", sch. 40), on 4' centers in both directions. This grid should be approx 17' 20' over deck and have the ability to be mechanically lowered in four independent sections
- A distributed system of lighting circuits, permanently mounted over pipe grid.
 - A permanent show lighting system consisting of:
 - Minimum of 48 2.4kw dimmers
 - Minimum ETC Expression 48/96 control console
 - Minimum 50 lighting fixtures, size and type TBD.
 - Stage and control cable appropriate to system size.
 - Integrated house lighting system.
 - \circ A 6 8 circuit (stage lighting, not convenience) "floor pocket" in center of playing space.
- A permanent work light system controlled independently of above show lighting system.
- A permanent sound system consisting of:
 - Appropriate amount of loud speakers for over stage and seating coverage

- Minimum 8 channel sound control console
- \circ Playback devices, minimum cassette tape/ CD and DVD / VCR.
- Ground isolated power supply
- Microphone and connection cable appropriate to system size
- "Clear-Com" stage communication system consisting of:
 - Base Station
 - 6 belt packs and head sets
 - Microphone cable appropriate to system size
 - Ground isolated power supply
 - Wall jacks on each wall and in control booth
- Network connection jacks (RJ-45), with active network connection, on each wall and in control booth.
- 120 volt, 20 amp convenience outlets, individually circuited, minimum 3 on each wall and 6 in control booth.
- Platforming to cover the 30 x 30 performance space.

THE FOLLOWING ITEMS ARE ONLY TO BE CONSIDERED ONCE THE PREVIOUS ITEMS ON THIS LIST ARE TAKEN CARE OF:

- 1. **Makeup Lab** / **Dressing Rooms** This configuration is made up of one common room in the center for makeup application. The lighting and counter space and ventilation will be appropriate for a room of this type. Need enough work space for twenty-five students. There then will need to be two rooms, preferable on opposite ends of the makeup room, to serve as dressing rooms, one for women and one for men. A center makeup table should be castered in order to be able to be moved out of the way. End dressing rooms should be large enough for two people to dress simultaneously, have storage/hanging racks, full length mirrors, stool, and shower facilities.
- 2. Performance Lab A room for all performance related classes which should include (at minimum):
 - i. At least one wall fully mirrored and include a dance bar
 - ii. All walls with "pullable" black drapery
 - iii. One wall with white board
 - iv. Light grid with small, 12 channel dimmer pack and control board
 - v. Permanent teacher station, including LCD Projector, Document camera and sound system.
 - vi. "Sprung" wooden floor with "Marley" type surface
- 3. Design Lab A room for all technical theatre classes which should include (at minimum):
 - i. Cork board on three walls, White board on fourth
 - ii. Well lit
 - iii. Light grid with small, 12 channel dimmer pack and control board
 - iv. Permanent teacher station, including LCD Projector, Document camera and sound system.
 - v. Drafting / craft tables
 - vi. 8-10 computer stations (with computers)
 - vii. Sink(s) for cleaning art supplies
 - viii. Hard, cleanable floor



- The corrugated sub floor under the light booth (which will be platform / chair storage) has many screws sticking out. Can all of those be ground off as students will be crawling under there to pull out stored items.
- We were pretty clear about there being a minimum of 10' clear space at all of the doors. It looks like in the backstage areas between the big studio theatre doors and the big roll up fire door AND big door into the PAC there are pipes and other items hanging lower than the doors. This would be disadvantageous!
- Will we have to worry about the HVAC ducts that are hung directly beneath the mezzanine walkways rattling?
- Now that the ducts have been moved closer to the outside edge of the mezzanine, there is a concern that the curtains will get caught on the duct seams. Perhaps something smooth to cover them with?
- If I remember correctly, there are wired network jacks (for internet) distributed throughout the space. Will the new studio have it's own dedicated network switch (again...for internet, not lighting control)? Or will it run to the switch in Mary Linn. One of my good friends is one of the campus network administrators and he was concerned about this.
- Will the space have wireless network?
- Pass on to Harvest Productions that the four monitors for the light board and work stations need to have a "DVI" input (NOT VGA!) and have a minimum resolution of 1280 x 1024. These are numbers from ETC.
- Will the multi-cable (that runs from the ceiling to the lighting trusses) be long enough to reach each corner to the trusses *without* stretching? There are 25' multi's on the specs but I am not sure what these are used for!

May 29, 2007

The following pages are a description of the lighting and rigging systems that will be specified in the theatrical equipment sections. The brands and lines of equipment listed are not necessarily the actual equipment that will be installed, rather they are an indication of function and physical attributes of the equipment that will be specified.

A. LIGHTING CONTROL:

1. The lighting control network will be an ACN based ethernet network utilizing Cat-5 or higher cabling. Communication with legacy DMX devices will be done through DMX-ethernet nodes (Dnodes) and Gateway devices.

The network will allow the lighting console or other ACN devices to be plugged in at several locations; stage level, tech room, and mezzanine level. Four (4) wall mount Dnodes with two DMX output terminals will be placed on stage level and Four (4) will be place on the mezzanine level. One (1) portable gateway with two DMX-Input terminals and two DMX-output terminals will be provided with the system to allow non ACN consoles to be brought into the space when desired. Four (4) portable Dnodes with two DMX output terminals will be provided to allow remote location of Dnodes.

- a. One (1) portable video node with Two (2) monitors will be included as an add alternate.
- 2. The lighting console will be the ETC Congo Jr. with the Master Fader wing and 2-monitor option. There will be Two (2) 17" flat panel LCD monitors, keyboard, mouse, radio remote focus unit, and Two (2) Littlelite gooseneck worklights will be included. The console will have 1024 output addresses.
 - a. A PC compatible laptop loaded with ETC Network Configuration Editor, Congo Client and Congo Offline Software can be included as an alternate. We normally do not include this computer. Typically the institution can purchase a suitable computer at a better price than the Theatrical Contractor. The software is available free via download from etcconnect.com and can be loaded on any Windows compatible computer.
- 3. The Architectural lighting control system will be ETC's Unison control system. The system will be comprised of a number of pushbutton preset stations and a portable LCD controller. The system processor will be house in the equipment rack used by the lighting control network. The system will include Two (2) five-button stations on the stage level, One (1) single button station in the tech booth, Two (2) single button stations on the mezzanine level, and One (1) portable LCD controller with Six (6) plug in locations.

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B. DIMMING, SWITCHING AND DISTRIBUTION:

- 1. One (1) ETC Sensor + dimmer rack will be provided with ninety dimming circuits for stage and house dimming and six relay circuits for fluorescent utility lighting. The dimmer rack will be fed by a 400 amp 3-phase 120/208VAC feed. Additionally there will be a 400 amp 3-phase 120/208 company switch located in the backstage area.
- 2. The dimming will be distributed through 6-circuit multi cable drops. Each drop will be a female 6-circuit VSC connector with five dimming circuits and one constant circuit on a 6' 12/14 SO multi cable pigtail. The system will incorporate Eighteen (18) drop outlets on the ceiling and Nine (9) on the mezzanine level. The outlets on the mezzanine level will have a 3' pigtail.
 - a. Nine (9) flush mount outlets on the underside of the mezzanine will be included as an add alternate.
- Eighteen (18) clamp mount plugging boxes will be included in the system. The drop boxes are a 6-circuit plugging box with a 6-circuit male VSC connector on a 6' 12/14 SO pigtail, five female "Stage Pin" outlets on 18" pigtails and one flush mount 20 amp "Edison" outlet. Eighteen (18) 25' 12/18 SJO Multi-circuit extension cables and 250' of 12/3 SJO extension cable in various lengths will be included.
 - a. Nine additional Plugging boxes, 500' of 12/3 SJO, Two (2) lighting trees, and Two (2) Source Four Iris kits will be included in the system as an add alternate

C. THEATRICAL LIGHTING FIXTURES:

- 1. Approximately Sixty-five (65) ETC Source Four Ellipsoidals, and PARS will be provided. Ellipsoidals will be provided in various focal lengths between 14° and 90° degrees. Sixteen (16) ETC Dimmer Doublers will be provided with Thirty-two (32) twist lock connectors and Thirtytwo (32) HPL550/77x lamps to convert fixtures between standard dimming and doubled dimming. All lighting fixtures will be provided with an aluminum half coupler clamp, color frame, template holder (where applicable), safety cable, and HPL575/x lamp. Fifty (50) PVC Cclips will be provided to allow existing fixtures to be used on the trussing without risking damage to the new trussing.
 - a. Nine (9) 1-circuit Altman MR-16 Zip Strips
 - b. 30% replacement lamps (HPL575/115x HPL550/77x and MR16) will be included as an add alternate.

D. RIGGING AND CURTAINS:

1. Six (6) black masking curtains will be provided on a walk-along track that circles the room at the edge of the mezzanine. The curtains will be constructed of 20oz synthetic velour in 50% fullness and will be approximately 10' tall by 20' wide panels. The track will be slightly lower than the ductwork underneath the mezzanine, but will maintain the 10' minimum clearance under the

mezzanine. This provides masking for roughly 2/3 of the wrap-around at one time. Four (4) 5' wide masking curtains will be provided with tie lines to be tied under the mezzanine where additional masking is needed. One (1) 20 bushel rolling hamper will be included for storage of the curtains.

- Three(3) additional masking curtains to provide 100% wrap-around masking and One (1) a. additional hamper will be included as an add alternate.
- 2. Three (3) 11' x 27' truss rectangles will be provided. Each rectangle will be constructed from Eight (8) lengths of Tomcat 12x18 light duty box truss and Four (4) Tomcat 12x18x18 corner blocks. All sections of truss to be bolted using grade 8 bolts. Twelve (12) 3' round slings, Twelve (12) 1000# beam clamps, and Twenty-four (24) 5/8" shackles will be included in the system to allow for dead hanging or temporary motor points.
- 3. Each rectangle will be supported with Six (6) CM Prostar 500# motors using truss points and beam clamps. The motors will be controlled with a Skjonberg 20 way motor controller. This arrangement will allow for a uniformly distributed load on the trussing of 20# per foot. An additional Two (2) motors will be provided in the system for temporary rigging or alternate configurations. This allows for a total of twenty motors.
 - Four (4) additional motors and a larged controller will be included as an add alternate. a.

E. **SEATING RISERS:**

- 1. Forty (40) Secoa Stage 100 4x8 platforms will be provided with legs in various lengths and necessary bracing, clamps and guardrails to create designed seating layouts.
- 2. Three (3) Disassembling "Pushbar" style carts will be provided for storage of the risers, Two (2) standard flat carts will be provided for storage of the guardrails. One (1) rolling bin will be provided for the legs and bracing.
 - Twenty-one (21) 15°, Eighteen (18) 30° wedge sections, additional guardrails, legs and a. bracing will be included as an add alternate.

E. **BUDGET:**

		Base	Alternate
Ligh	ting Control:		
1.	ACN Control network including nodes and Gateways a. Alternate TH1	10,350	
	Video Node and monitors		2,500
2.	Lighting Control Console	18,000	·
3.	Unison Architectural Controls	10,000	
	Total	38,350	2,500
	Ligh 1. 2. 3.	 Lighting Control: 1. ACN Control network including nodes and Gateways a. Alternate TH1 Video Node and monitors 2. Lighting Control Console 3. Unison Architectural Controls Total	Lighting Control: 1. ACN Control network including nodes and Gateways 10,350 a. Alternate TH1 Video Node and monitors 2. Lighting Control Console 18,000 3. Unison Architectural Controls 10,000

Β. Dimming and Switching:

		Grand Total			326,017
	Total of Base System Total of Alternates		e System ternates	273,417	52,600
		Platforms Guardrails and Bracing	Total	29,550	20,600 20,600
		a. Alternate TH8		1,700	
	2	Storage Carts and Bins		1,700	
E.	Seating Risers:				
			Total	97,642	13,900
		Additional Motors and Control			11,500
	3.	a Alternate TH7		39,00/	
	2.	Truss Chain Motors and Control		28,275	
		Additional Curtains		2 0 2 -7	2,400
		a. Alternate TH6			
D.	1. Curtains and Track		9,700		
Л	Diaa	ing and Curtains:			
		Replacement lamps	Total	28,375	5,800
		b. Alternate 1H5 Replacement lamps			1 000
		Zip Strips			4,800
		a. Alternate TH4			
C.	1.	Fixtures		28,375	
C	Thea	trical Lighting Fixtures.			
			Total	79,500	9,800
		Plugging Boxes and Accessories			5,300
		b. Alternate TH3			
	3.	Plugging Boxes and Accessories		19,000	4,500
		a. Alternate 1H2 Distribution			4 500
	2.	Distribution		20,500	
	1.	Dimmer Rack with modules and company s	witch	40,000	

Theatre Equipment Alternate Priority list As of 5-31-07

Items 1-3 are far and away the most important alternates.

- 1. Twenty-one (21) 15°, Eighteen (18) 30°wedge sections, additional guardrails, legs and bracing.
- 2. Nine (9) 1-circuit Altman MR-16 Zip Strips. We like the 1-circuit units
- 3. Nine additional Plugging boxes, 500' of 12/3 SJO, Two (2) lighting trees, and Two (2) Source Four Iris kits will be included in the system. We would like to change this alternate to 8-10 extra 25' sections of mult. Cable.
- 4. Four (4) additional motors and a larged controller.
- 5. 30% replacement lamps (HPL575/115x HPL550/77x and MR16).
- 6. One (1) portable video node with Two (2) monitors.
- 7. Nine (9) flush mount outlets on the underside of the mezzanine.
- 8. Three(3) additional masking curtains to provide 100% wrap-around masking and One (1) additional hamper.
- 9. A PC compatible laptop loaded with ETC Network Configuration Editor, Congo Client and Congo Offline Software can be included as an alternate. We normally do not include this computer. Typically the institution can purchase a suitable computer at a better price than the Theatrical Contractor. The software is available free via download from etcconnect.com and can be loaded on any Windows compatible computer.

Hello Todd,

The theatre team thanks you for the opportunity to provide feedback on the suggested sound system for the studio theatre. For the most part, this is a very usable and flexible system but there are some suggestions that we'd like to make (these are not in any particular order):

- We would like to recommend a different alternative for a mixing console, more specifically if there is a more cost effective digital Yamaha console. This is a PERFECT opportunity to introduce our students to the world of digital mixing, but on a smaller scale. This is certainly something they will run into when they begin there professional careers!
- We would like to have two CD players to facilitate the inevitable mixing between two discs.
- We think that we can probably move the Marantz CF recorder to the "options" section. We do not usually record only the audio from a production but usually do create videos of our productions, which we currently own equipment to do this with.
- We probably do not need the extra Sennheiser wired mics, but we WOULD still like to keep the other audio accessories from that same section!
- Under "Systerm Outputs", we would not necessarily use this function. What would possibly be more useful is return jacks for monitor speakers in an NL4 "Speakon" configuration.
- We DO in fact need the full "Clear-com" system noted in the options system. Good communication is paramount to a great theatrical performance. The location of intercom receptacles are sufficient...it could be useful to have a receptacle on all four walls of the catwalk. We would also like to request one headset for each belt-pack.
 - After further discussion, we would like to consider a wireless clearcom system with eight headset/belt pack setups.
- We are not sure if this is the correct forum, but we would like to request wireless internet access for the space. We also see the benefit to adding wired Ethernet ports to strategic locations in the lobby, onstage, mezzanine and backstage.
- We would like to have video / audio programming for the lobby as "Add Alternates"
- Would it be possible to add lighting / sound controls hookups on the mezzanine level?
- We like the idea of having audio in the lobby but see more usefulness in having "program" speakers (much like in the control booth), in the classroom/dressing rooms, backstage and one speaker at the top of the staircase on the storage side of the mezzanine level. These are locations where performers will stage...this will give them important cuing information.
 - We are curious as to how this system might operate. Generally "God" systems have one omni-directional mic mounted in a manner which will cover the entire playing space. This signal is then fed to a program amp/mixer (separate from the main console), which can deliver signal to any or all program speakers.

• We are not sure if there is an ADA requirement for a hearing assist system? This is a better question for Dave Duvall.

Thanks again for the opportunity to make suggestions and we welcome further dialog at any time!

Northwest Missouri State University Theater Team

Thanks for the opportunity to respond to this listing of theatrical equipment. Responses will match the section and line number from the document.

Lighting Control

3. Would it be possible to have a architectural lighting control box in the tech booth that can allow the SM to lockout the other panels. For instance that during the show nobody would be able to, either on purpose or accidentally to trip the lighting. Also what will be controlled from these boxes...work lights? House lights?

Lighting Dimming and Distribution

3. Will the 18 drop box outlets be distributed evenly throughout the ceiling or will they all emanate from a center hub? Regarding the add alternate for 3a, we would rather have extra multi-cable extensions than some of the other items.

Theatrical Lighting Fixtures

1 a. Are the zip strips included in the bid or are they an add alternate? Nice! if they are included in the base bid!

Rigging and Curtains

1. Can we please specify that the curtains don't go all the way to the floor...we're thinking about $\frac{1}{2}$ " clearance or if there is an industry standard we can go with that. Curtains seem to get messier quicker if they are dragging on the ground all of the time.

Is the curtain track a continuous track? Meaning, can be just keep pulling the curtains around in a circle or will there be one point in the track where there is a stop?

We like the "gridlet" / motor / control setup? Where will the motor controls be located?

Seating Risers

2a. If the budget allows, we'd really like to move the wedge risers into the base bid!

Do the theater chairs fall into this category?

I will give this more thought over the next couple of days, but these are my initial thoughts!

Thanks again,

Pat Immel for the Theatre Team

These are issues that the Theatre Team considers important regarding the new plans for the studio theater:

- Cut handicapped bathroom on NW end of addition, this will:
 - Spread out / enlarge / open changing area
 - Push existing changing room bathroom to existing wall
- Make up island needs to have double sided table with collapsible supports so they can fold flat and the island be able to be pushed against the wall or out of the room.
 - Power outlet(s) in middle of floor to plug island into
- Exterior door on NE end of addition (possibly under stairs). It would be nice to have a door on that wall so that if there is an event on stage where access would be limited from the PAC and we wouldn't want traffic through the lobby, it would be a easy way to get into the backstage area. There is a single door on the NE corner of the theatre but use of that door might be disruptive to anything concurrently happening in the studio.
- Swap Janitor / Electrical closets to hopefully minimize sound issues.
- Move tech room to south end (short) of studio theatre. This gives an overall better view to rest of space.
 - Extend storage space at south end to *at least* makeup for space lost in move of tech room.
 - Move double doors to storage room further down wall (10 foot clearance).
- Move light lock enclosure and door(s) south (where tech room was). This would serve a double purpose of light locking theatre as well as light locking tech room. This would also move the main audience entrance (where it's located now) away from the main backstage work entrance doors.
- Instead of a static box office, have a floating ticket "kiosk" area. If possible not square or rectangular, but oval :
- If possible we would like to have no doors with latching devices of any kind on the west wall (interior) of studio space.
- Cut NW door close to lobby entrance to PAC...unless this is needed for something.
- Maintain a single exit door where (or close to where) the old light lock was.
- We liked the idea of a "catering area". Could we put a sink and counter space where old light lock was, possibly putting it inside of a closet?
- Looking at the budget figures, we feel that the Rigging grid would be more accurately represented in construction costs of building. Everything other than this in the "Owner Provided Furnishings..." could be brought in at later times where a lighting grid is an actual structural part of the building.
- The placement of the storage room in the mechanical mezzanine looks like it will sufficiently eliminate noise from HVAC equipment when door to actors mezzanine is opened.

STUDIO THEATRE TOUR NOTES

If you could do something different, what would you do?

<u>COMMON TO ALL:</u> *Sole Use/Theatre Only (UNO/Carson/Weber is shared w/ TV) *Closer/Attached Dressing Room locations/Actor foyer away from audience view *More Entrances – Especially 4 Corners *Storage for Seating

Carson/Weber: >Increase audience entrance (only 1 possibility) >Flooring that is durable & screwable

UNO: #Entrance not attractive or specific to audience (actors also) #Wider Seats

Seating and Riser system:

Carson/Weber: >200-250 >3x8 Versalite Platforms – 48 seating/24 stage risers

UNO:

#125-200 (plus balcony areas)
#Pod seating systems/ 6 feet deep & stadium style (28 per section) {TOO SMALL}

Space in General? Walls? Booth? Etc...

COMMON TO ALL:

*All had acoustic panels/treatments

*All had set booth with windows that open

*All had restrooms (but some in odd places and small)

*All had lighting grid and lighting circuits on run-strips

Carson/Weber:

>Linoleum floor/not screwable

>Reversable hard/soft acoustic wall panels

>Multiple entrance to control booth

Electrics/Grid/Dimmers:

COMMON TO ALL:

*Minimum 96 dimmers (house lights separate from work lights)

*Multiple DMX connections throughout

*Walking wire grid or grid that lowers

*Dimmers located in basement or separate location

Weber: >9 Section Grid – very cool.