



VICTORIAN ASSOCIATION OF PERFORMING ARTS CENTRES

TECHNICAL SPECIFICATION FOR COMMUNITY PERFORMING ARTS SPACES SEATING FOR 150 TO 200 PEOPLE

Version : 2 (for distribution)

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INTRODUCTION

This is a document detailing the basic physical and technical infrastructure required for a community performing arts space with seating capacity for 150 to 200 people.

Areas for performance, backstage, front-of-house and circulation are detailed with technical information for audio, video, stage lighting and power requirements as a guide for architects, designers and building practitioners.

TECHNICAL INFRASTRUCTURE :

AC POWER FOR STAGE LIGHTING AND AUDIO-VISUAL SYSTEMS

Two Distribution Boards are needed for technical operations of the hall. One 150A 3-phase DB for stage lighting and one 40A 3-phase DB for AV equipment. The safety ground from all GPOs and Isolators should be connected via a star ground configuration.

CONTROL CABLING TO INCLUDE DMX512, CAT5E/6

Control cabling should be provided for the following services :

- Audio : Shielded, twisted 2-pair signal cables for interconnection and microphone patching, Cat5e/6 for audio networking.
- Video : RG59 coax cable, RS422 type data cable for projector remote control, Cat5e/6 for video signal.
- Stage Lighting : 2.5mm twisted three core cable for luminaires, RS422/DMX512 type cable for control, Cat5e/6 for future control.

PATCHING FOR STAGE LIGHTING AND AV SYSTEMS - ON STAGE, BARS AND CONTROL POSITION

- Stage : Recessed stage boxes with audio microphone inputs, monitor outputs, Cat6 patching to be terminated at control position.
- Lighting bars : Luminaire power points to be terminated at dimmer position; DMX512 and Cat5e/6 cabling to be terminated at control position.
- Video : Composite video and RGBHV(VGA) signal cables to be terminated at control position.

LIGHTING (HOUSE AND STAGE), AUDIO AND VIDEO CONTROL POSITION

All audio, video and stage lighting shall be controlled at the control position at front-of-house. The control position shall be located within the audience space, in an open configuration to maximise sightlines and acoustical quality.

LIGHTING BAR POSITIONS AND NUMBERS

There shall be a minimum of three lighting bars with a minimum of 12 power points for luminaires on each bar. To ensure flexibility in catering for all types of events, DMX512 and Cat5e/6 points shall be provided on each bar for control of automated lighting and other equipment. The lighting bars shall be located in the following positions :

Front-of-house : One bar over the audience area, with lighting angles to stage between 45 and 70 degrees.

Stage : Two bars distributed over the stage area for washes, specials and cyclorama.

AUDIO LOUDSPEAKER SYSTEM

The audio system shall be capable of providing smooth even full frequency coverage (+/- 2dB) over the entire audience area. Ideally, the loudspeaker system designed using a computer simulated program by a properly trained audio systems designer/consultant.

VIDEO PROJECTOR POSITIONS

A ceiling mounted video projector shall be used for video and data projection onto the back wall of the stage. The back wall shall be painted matte white to accommodate this function.

AUDIO AND VIDEO PLAYBACK SYSTEMS

There shall be the following playback devices :

2 units of CD players with the following features :

- Shock-Proof Memory (Approximately 10 Seconds)
- Instant Start
- Auto Cue
- Play Mode and Finish Mode

- CD-R/RW Playback Compatibility
- MP3 Playback
- Integrated Rackmounting
- Wired Remote Control

1 unit of DVD player with the following features :

- DVD, DVD+R/RW, CD, CD-R/RW, VCD Playback
- MP3, WMA, DivX Playback
- JPEG Playback, Kodak Photo CD compatible
- High Definition Multimedia Interface (HDMI)
- NTSC / PAL Conversion
- IR remote control
- Optical, Coaxial Digital Output
- Programmable DVD Playback

PHYSICAL INFRASTRUCTURE :

CONTROL POSITION

The control position for audio, video and stage lighting must be within the seated area of the hall, preferably in an open design where sightlines and the acoustical environment are identical to the main hall space. Audio signal points such as stage microphone panels, and other signals such as stage area video and stage lighting control signals, should be terminated in this position.

BASIC ACOUSTICAL CRITERIA AND TREATMENT

Acoustical treatment is important to control reverberation, sound reflections and other acoustical anomalies. Basically, it is suggested that the following areas be treated :

- Back wall - to be treated with absorbent material, typically 100mm thick rockwool batts at 32Kg/pcm density.
- Side walls and ceiling - to have diffusive profiling or relief in order to break up sound reflections.
- Stage ceiling to be absorptive, typically 50mm thick rockwool batts at 32Kg/pcm density

In general, the reverberation time(RT60) of the hall, at mid frequencies, fully occupied should be from 1.1 to 1.3 seconds. Plant noise should be no greater than NC/NR30 in the hall. Attention to proper noise isolation techniques, especially for roof mounted plant equipment is crucial in meeting the proposed noise criteria.

STAGE CURTAIN AND BASIC MASKING

The front stage curtain shall consist of a front stage curtain, track and associated valance. The fabric shall be manufactured from cotton velour, weighing 500 grams per metre and

be installed with 75% fullness.

The upstage traveller curtain shall consist of a black traveller curtain, track and ceiling border. The fabric shall be manufactured from cotton velour, weighing 500 grams per metre and be installed with 60% fullness.

All fabric shall be flameproofed by vat immersion process or shall be woven from inherently flame resistant fibers, and shall comply with Australian Standard 1530 Pt 2 & 3.

STAGE PERFORMANCE AREA

The minimum stage area shall be 8 Metres Wide by 5 Metres Deep. The minimum stage height shall be 5 Metres. The stage floor construction shall consist of hardwood tongue & groove flooring on timber joists. The hardwood floor shall be covered with a layer of 5mm tempered masonite and painted matte black as a sacrificial layer.

WING SPACES

A minimum 3M wide wing space should be allocated on both side of stage areas. This is to facilitate entry of performers and movement of props on and off stage. A minimum 1M rear crossover space is also preferable to aid in the performer's access to either side of stage.

BACKSTAGE ACCESS - LOADING DOORS, SIDE STAGE ACCESS

There should be backstage access for loading sets and props directly on stage via a loading dock. It is preferred that adequate parking and maneuvering space for a 40 ft container be provided in the compound. Covered side stage access for actors, preferably connected to change rooms is important.

Dressing rooms, toilets and shower facilities should be considered for the backstage area.

ATTACHED DOCUMENTS

The following documents are attached with this document :

- Typical design drawing to be used as a guide.
- Typical Bill of Quantity and Estimated Costs

These attached documents are to be used with this document as a *general guide* for the technical design of a community performing arts space.

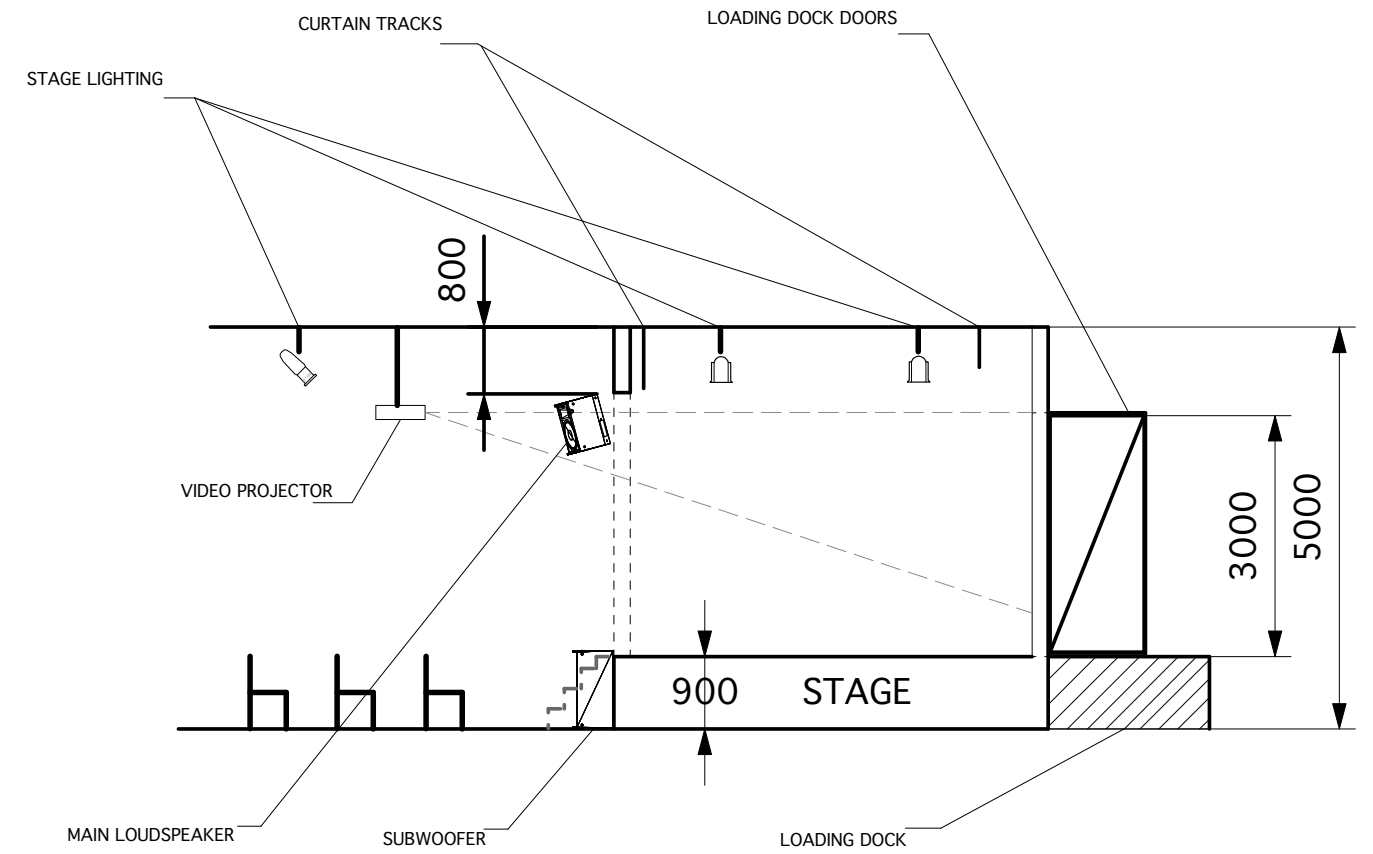
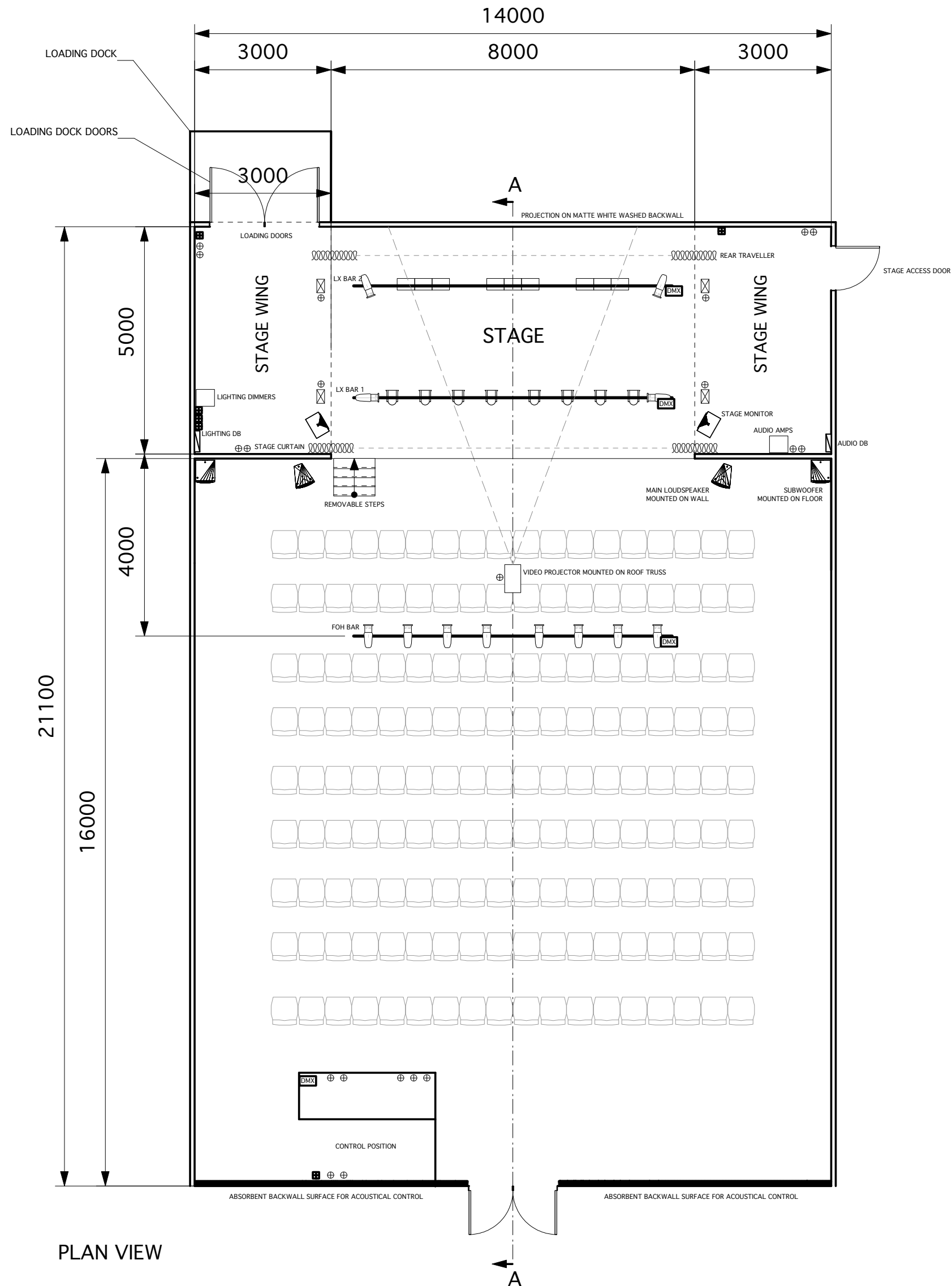
DISCLAIMER

It is important to note that the design proposals outlined above are suggestions for a typical performance arts space for an audience of 150-200 . Specialist consultants should be engaged early in the process to ensure that the technical needs are addressed and incorporated into the scope of works and budget.

- End of Document -

VAPAC TECHNICAL MANAGER'S NETWORK
 BILL OF QUANTITY AND ESTIMATED COSTS
 TYPICAL COMMUNITY HALL DESIGN
 DATE : JUNE 30, 2009

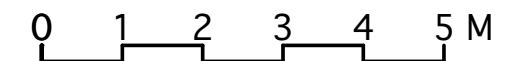
ITEM :	QUANTITY :	UNIT PRICE (ESTIMATED) :	TOTAL PRICE :	REMARKS :
AUDIO EQUIPMENT				
MIXING CONSOLE	1	\$ 3,500.00	\$ 3,500.00	16-CHANNEL, 6 AUX SEND
MAIN LOUDSPEAKER	2	\$ 3,000.00	\$ 6,000.00	3-WAY, 15" BOX WITH 90X50 DISPERSION
SUBWOOFER	2	\$ 2,700.00	\$ 5,400.00	DUAL 18" DIRECT RADIATOR SUBS
POWER AMPLIFIER	2	\$ 1,800.00	\$ 3,600.00	C/W INTEGRATED DSP
GRAPHIC EQUALISER (STEREO)	2	\$ 600.00	\$ 1,200.00	
CD PLAYER	2	\$ 900.00	\$ 1,800.00	AUTOCUE, START/STOP FUNCTION
DIRECT INJECTION BOX	4	\$ 350.00	\$ 1,400.00	ACTIVE UNIT
MICROPHONES				
WIRELESS HANDHELD SYSTEM	2	\$ 1,000.00	\$ 2,000.00	
DYNAMIC VOCAL MIC	2	\$ 200.00	\$ 400.00	
DYNAMIC INSTRUMENT MIC	4	\$ 200.00	\$ 400.00	
CONDENSER MIC	2	\$ 350.00	\$ 700.00	
MIC STAND STRAIGHT	4	\$ 200.00	\$ 800.00	
MIC STAND BOOM	6	\$ 250.00	\$ 1,500.00	
AUDIO EQUIPMENT RACK	1	\$ 600.00	\$ 600.00	
VIDEO EQUIPMENT				
VIDEO PROJECTOR	1	\$ 4,000.00	\$ 4,000.00	MINIMUM 4000 LUMENS
DVD PLAYER	1	\$ 250.00	\$ 250.00	
STAGE LIGHTING				
LIGHTING CONSOLE	1	\$ 2,800.00	\$ 2,800.00	24-CHANNEL, PRESET & MEMORY PLAYBACK
LIGHTING DIMMER	2	\$ 2,500.00	\$ 5,000.00	12-CHANNEL WALL MOUNTED
PROFILE ZOOMSPOT LUMINAIRE	12	\$ 1,000.00	\$ 12,000.00	C/W GEL HOLDER, SAFETY CABLE
FRESNEL LUMINAIRE	8	\$ 800.00	\$ 6,400.00	C/W BARNDOR, GEL HOLDER, SAFETY CABLE
CYCLORAMA FLOOD 3-CELL	3	\$ 800.00	\$ 2,400.00	C/W GEL HOLDER, SAFETY CABLE
INTERCOM SYSTEM	1 LOT	\$ 1,500.00	\$ 1,500.00	HEADSET AND PACK FOR FOH AND STAGE
STAGE CURTAINS	1	\$ 4,000.00	\$ 4,000.00	
REAR TRAVELLER	1	\$ 3,000.00	\$ 3,000.00	
BORDERS	2	\$ 1,000.00	\$ 1,000.00	
AUDIO CABLING	1 LOT		N/A	
STAGE LIGHTING CABLING	1 LOT		N/A	
VIDEO CABLING	1 LOT		N/A	
AUDIO INSTALLATION	1 LOT		N/A	
STAGE LIGHTING INSTALLATION	1 LOT		N/A	
VIDEO SYSTEM INSTALLATION	1 LOT		N/A	
				ESTIMATED EQUIPMENT COSTS
GRAND TOTAL :			\$ 71,650.00	BEFORE INSTALLATION



SECTION A-A

LEGEND

- RECESSED STAGE BOX - 6 XLRf, 1 XLRm, 1 SPEAKON, 2 RJ45
- AV GPO (AUDIO DB)
- 40A 3-PHASE ISOLATORS (STAGE LIGHTING DB)
- DMX512 POINT



THIS DRAWING IS TO BE USED IN CONJUNCTION WITH THE VAPAC COMMUNITY HALL DESIGN GUIDELINES

TECHNICAL MANAGER'S NETWORK
 TYPICAL COMMUNITY HALL DESIGN (150 SEATS)
 DATE : JUNE 30, 2009 REVISION : -