



**CARLSON FAMILY STAGE
TECHNICAL & PRODUCTION SPECS**

Last Updated August 24, 2018

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CARLSON FAMILY STAGE AT NORTHROP

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CONTACTS

NORTHROP

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TICKET OFFICE

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Director of U of M Tickets
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SURDYKS CAFE

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surdykscatering.com/northrop

UNIVERSITY CONTACTS

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**Parking and Transportation
Services Phone**

612-626-7275
ump.edu/pts
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SEATING

Carlson Family Stage at Northrop can seat a maximum total of 2,692 people.

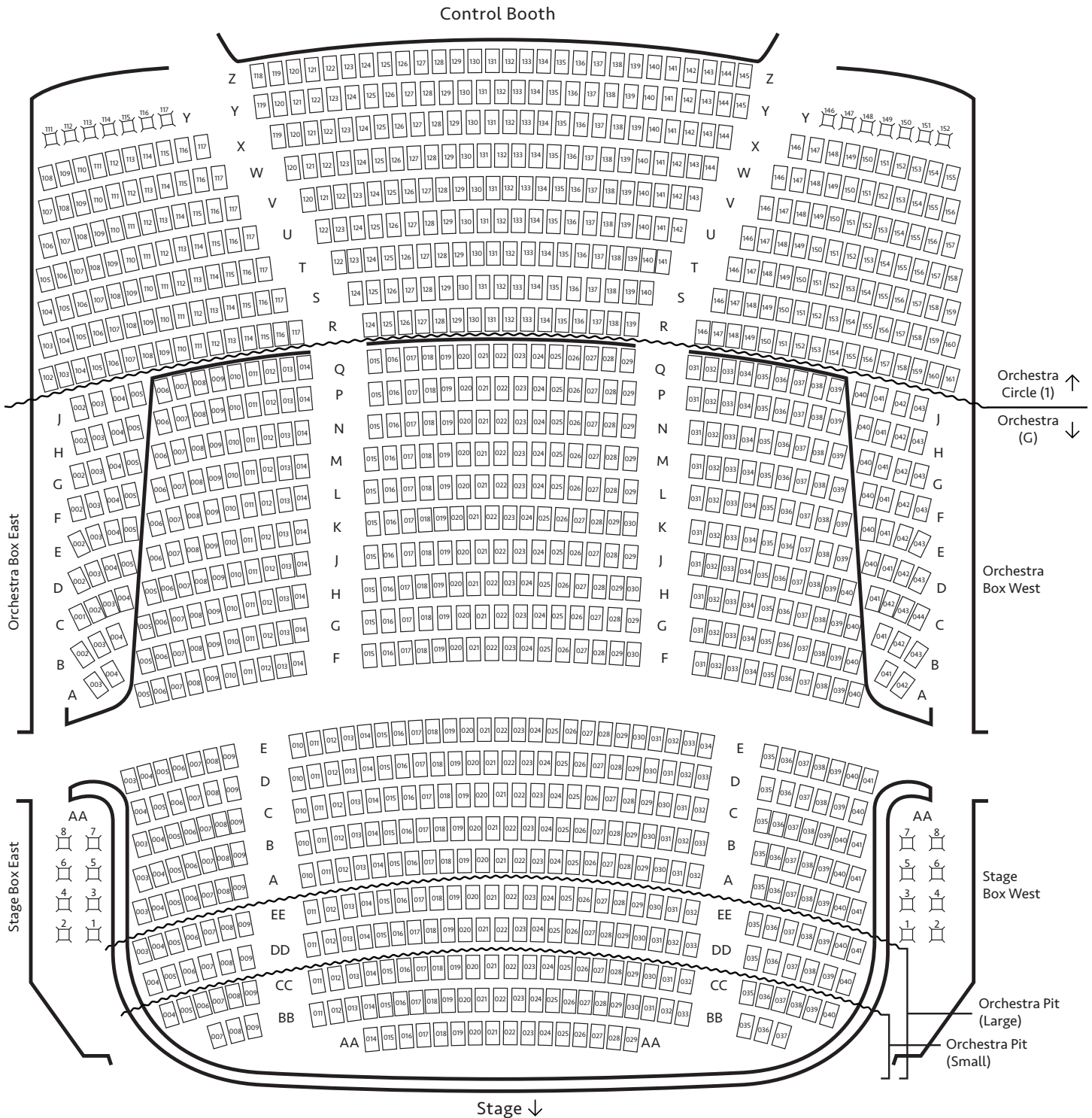
Orchestra (G)	744 fixed (11 wheelchair) +16 loose	760 seats
Orchestra Circle (1)	400 fixed (0 wheelchair) + 14 loose	414 seats
Presidents Circle (2)	357 fixed (0 possible wheelchair) + 46 loose	403 seats
Scholars Circle (3)	433 fixed (2 possible wheelchair) + 46 loose	479 seats
Gallery Circle (4)	622 fixed (2 possible wheelchair) + 28 loose	650 seats

The following features would require seats to be removed from the Orchestra Level:

Orchestra Pit (Large/Full)	Accommodates up to 70 musicians	150 seats
Orchestra Pit (Small)	Accommodates up to 36 musicians	79 seats
Mixing/Sound Position		30-40 seats

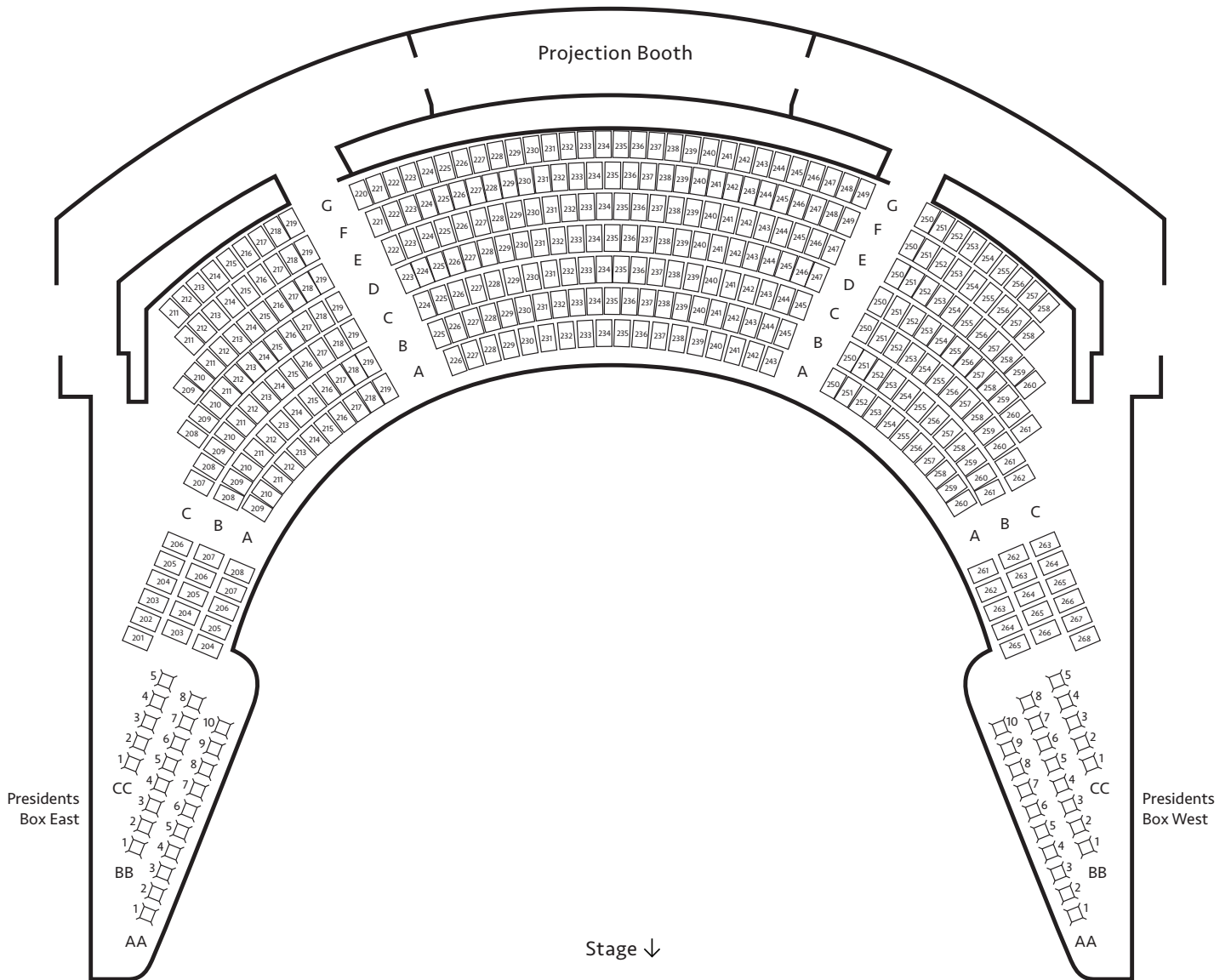
ORCHESTRA (G) & ORCHESTRA CIRCLE (1)

(Larger sizes available upon request)



Seats 004 and 040 of row CC have limited leg room.
 Rows A and DD may have limited leg room depending on the configuration of the pit for a performance.

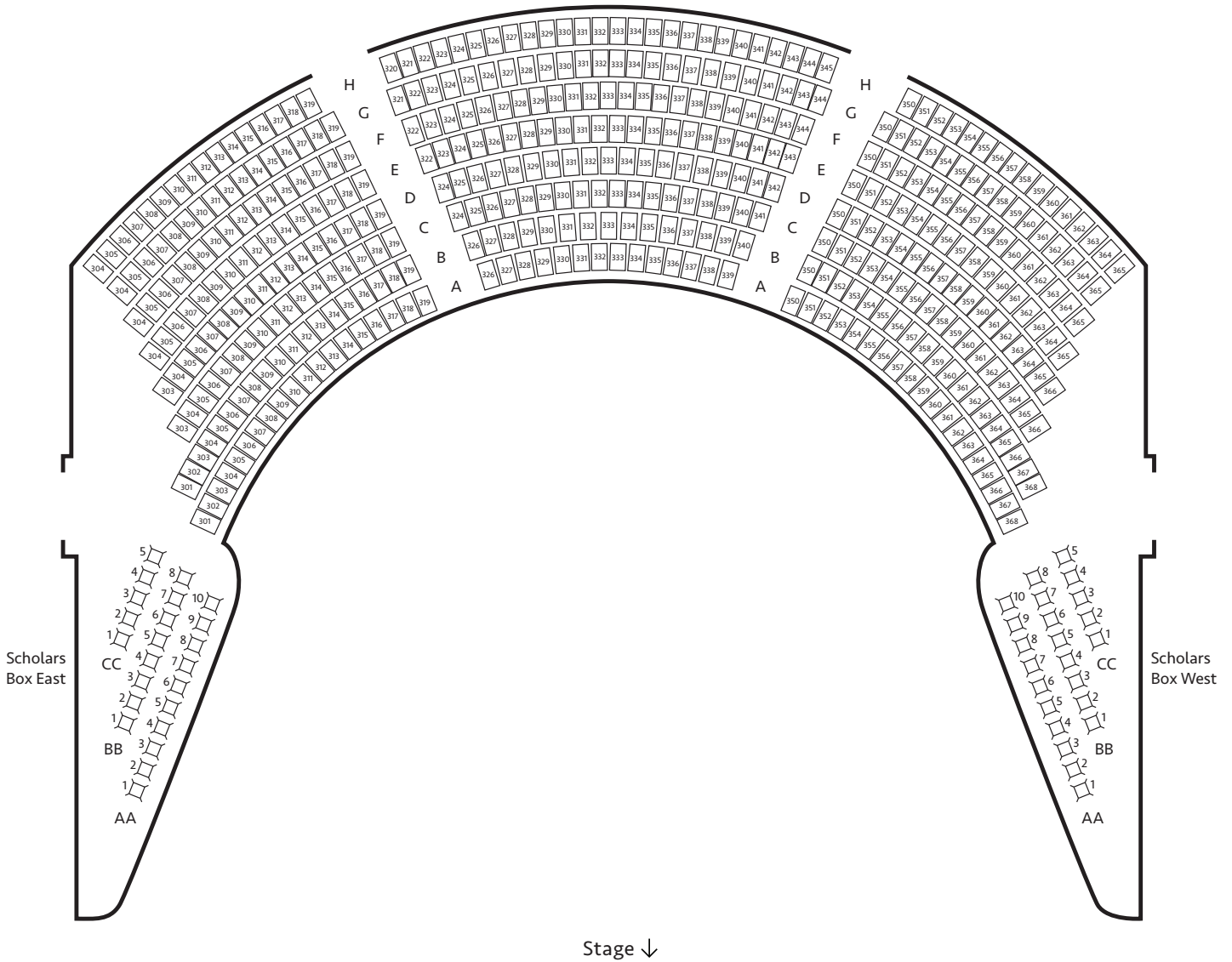
PRESIDENTS CIRCLE (2)



☐ = Loose chair



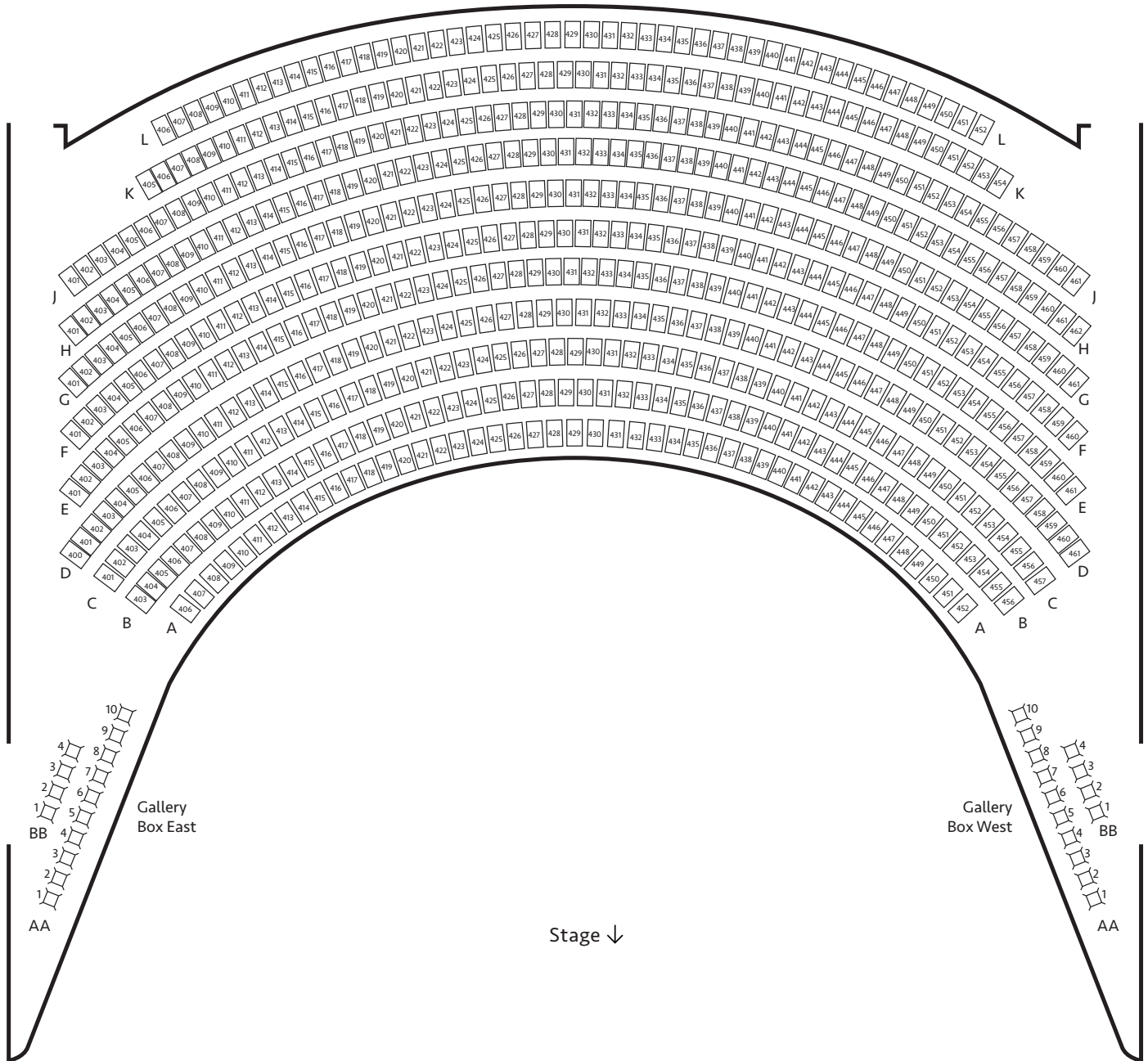
SCHOLARS CIRCLE (3)



□ = Loose chair



GALLERY CIRCLE (4)



☐ = Loose chair

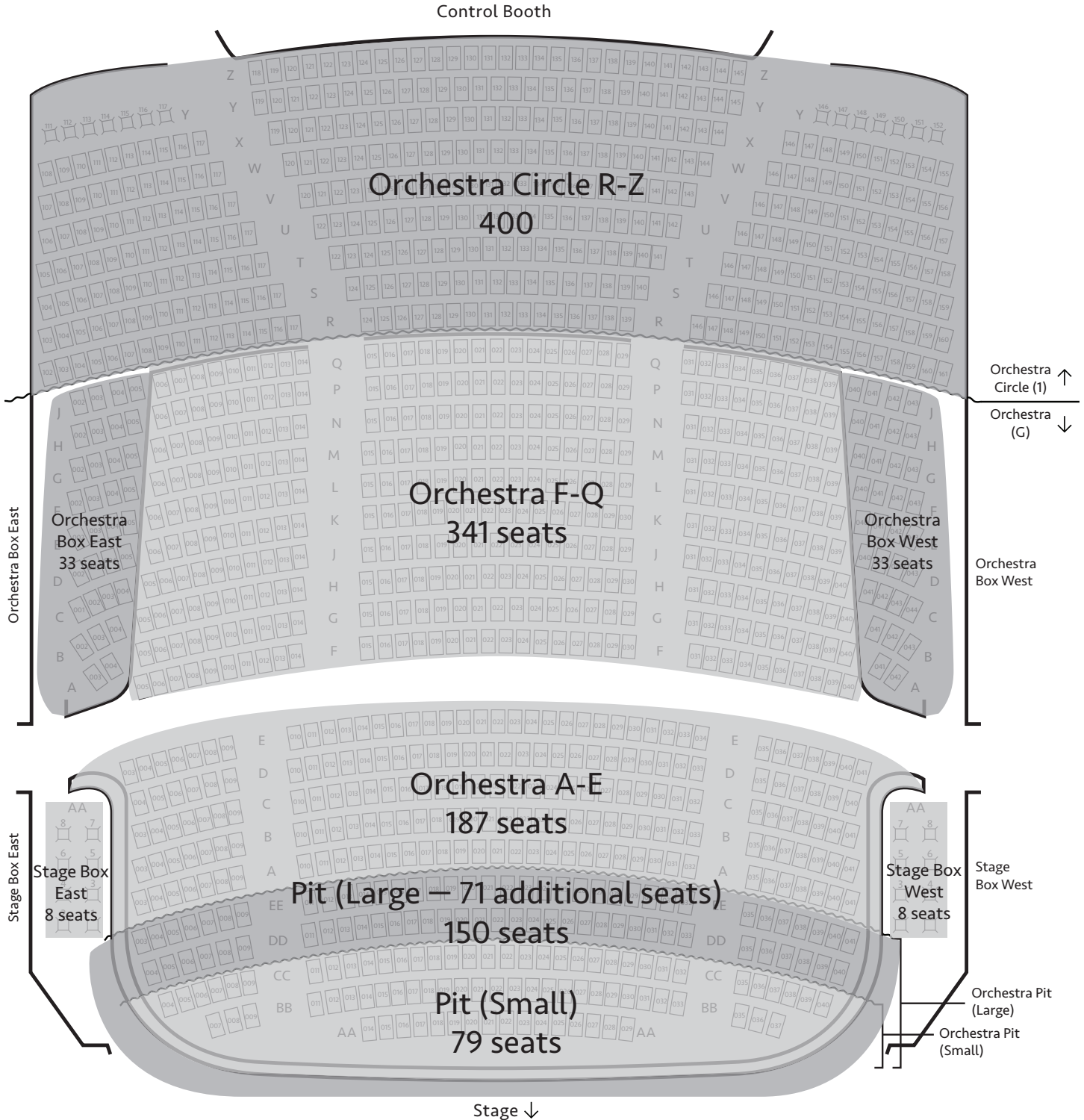


Row L of Gallery Circle is best for patrons 5 foot 6 inches or taller for the best possible viewing experience. Seat bottoms in Row L are thicker to maintain sightlines.

ORCHESTRA (G) & ORCHESTRA CIRCLE (1)

(Larger sizes available upon request)

Total Capacity: 1,160 seats

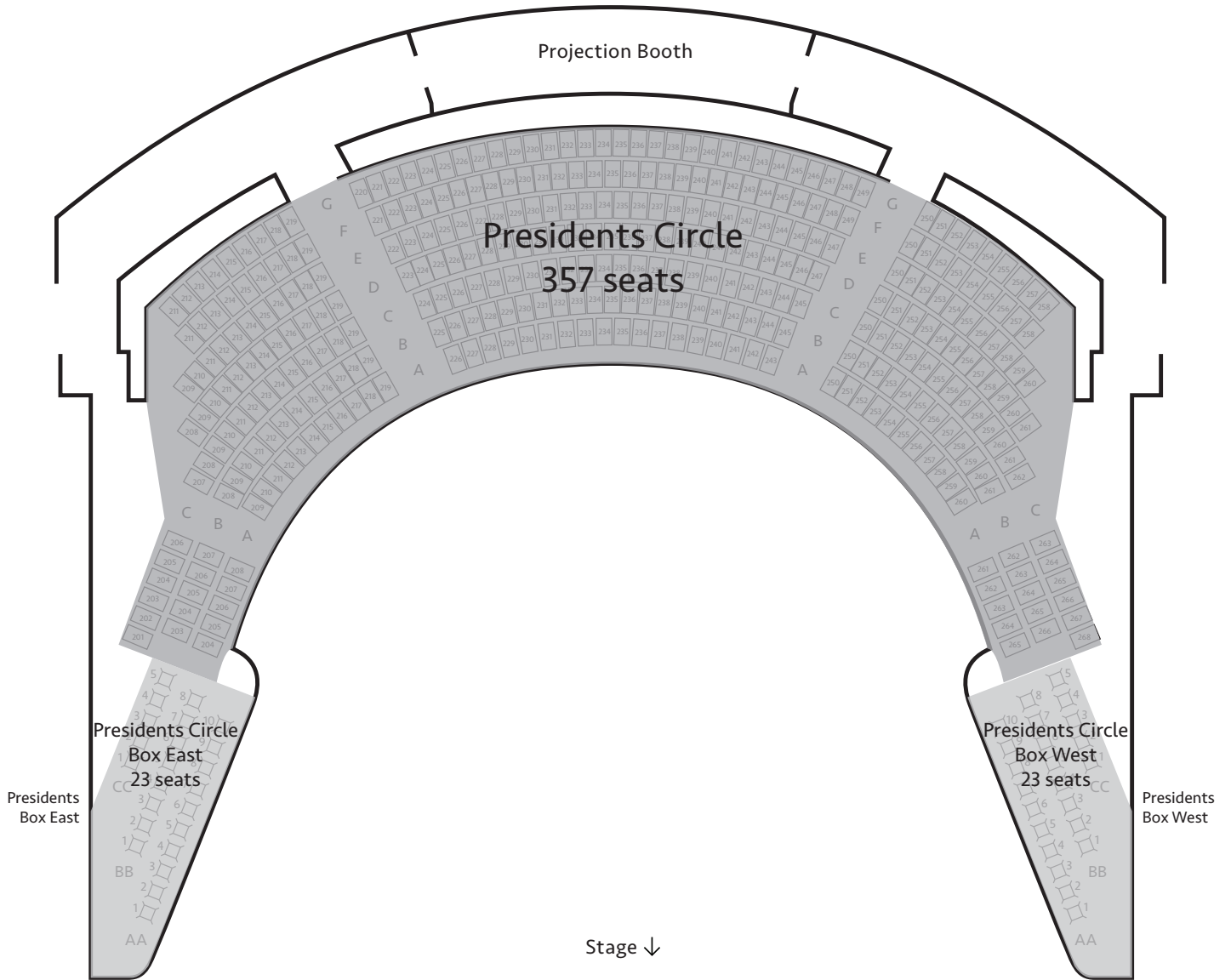


□ = Loose chair



PRESIDENTS CIRCLE (2)

Total Capacity: 403 seats

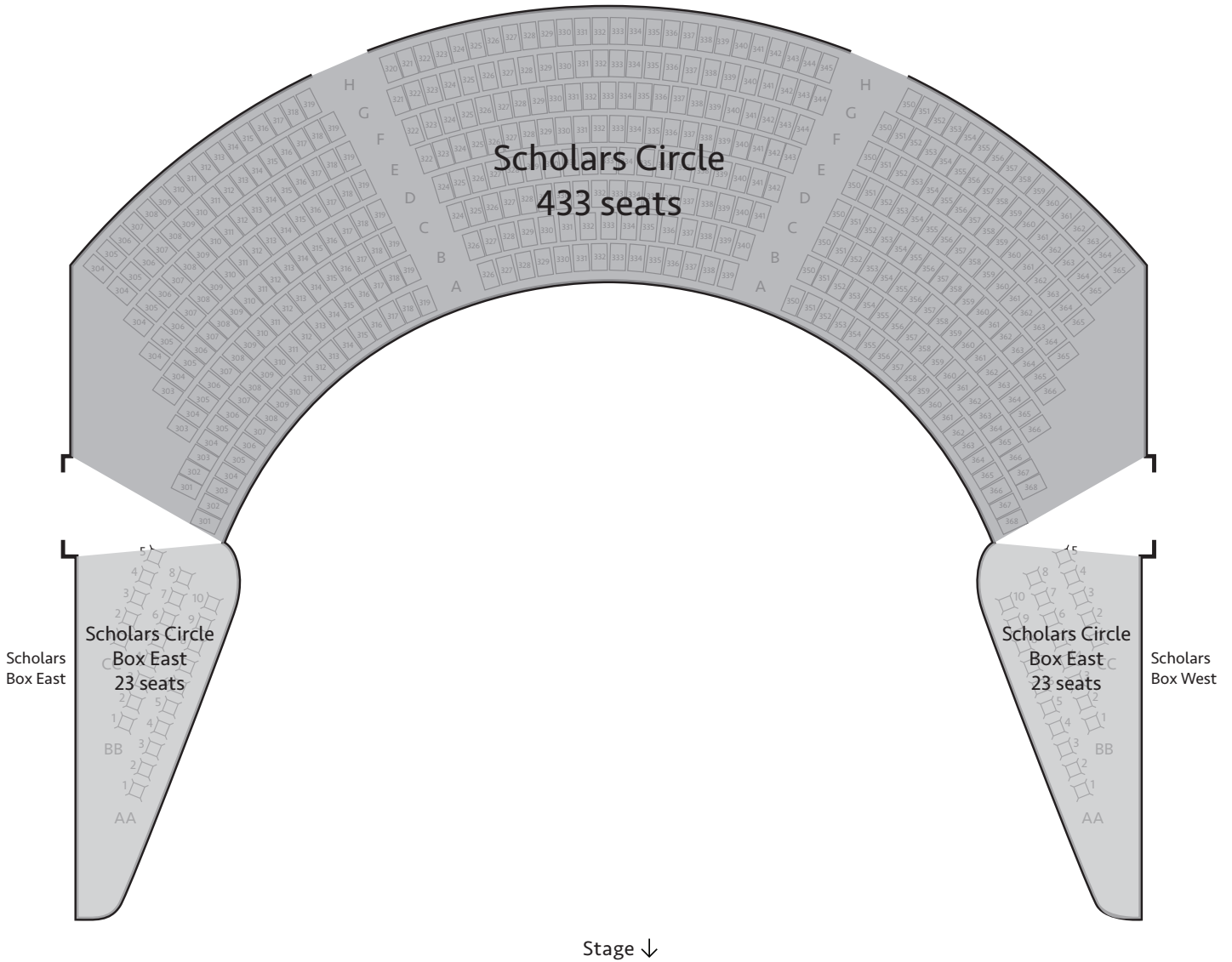


□ = Loose chair



SCHOLARS CIRCLE (3)

Total Capacity: 479 seats

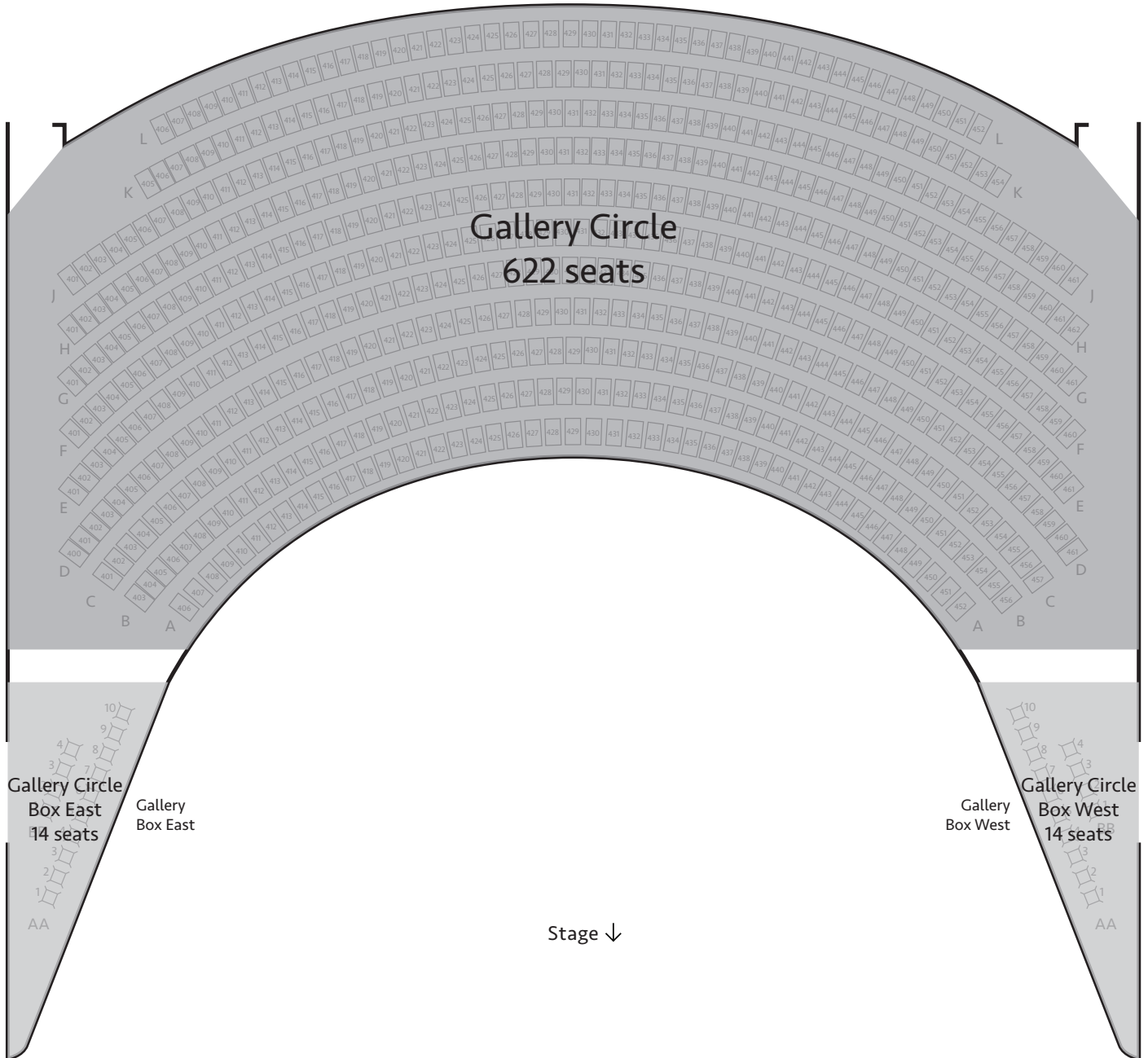


□ = Loose chair



GALLERY CIRCLE (4)

Total Capacity: 650 seats



□ = Loose chair



STAGE SPECIFICATIONS

STAGE & PROSCENIUM

Stage Depth (Plaster line to back wall)	39'6"	12.0 m
Additional Upstage Deadhang Space	17'3"	5.3 m
Stage Width (Loading door to locking rail)	97'	29.6 m
Proscenium Width	60'	18.3 m
Proscenium Height (Maximum)	43'5"	13.2 m
Proscenium Height (Minimum)	33'5"	10.2 m

ORCHESTRA PIT

(Small)

Length	68'	20.7 m
Width on Center	16'2"	4.9 m
Width at Ends	10'11"	3.3 m
Pit Floor to Stage	7'9"	2.4 m
Square Footage	971'	296.0 m

ORCHESTRA PIT

(Large)

Length	72'3"	22.0 m
Width on Center	22'8"	6.9 m
Width at Ends	17'8"	5.4 m
Pit Floor to Stage	7'9"	2.4 m
Square Footage	1,430'	435.9 m

LOADING DOCK

Truck Access	2 bays with levelers & seals at stage level (Nominal 40' travel distance to stage door, 90' to center of stage)
Stage Loading Door	10' (3.0 m) Width 20' (6.1 m) Height

BACKSTAGE SPECIFICATIONS

DANCE FLOOR

(for Stage and Rehearsal Room)

Harlequin Liberty Latchloc Sprung Floor System

Harlequin Reversible Marley Floor

PODIUMS

Large

41" h, 56" w, 24.5" d (104 cm h, 142 cm w, 62 cm d)

Small

45" h, 26.5" w, 21" d (114 cm h, 67 cm w, 53 cm d)

Mace

27" h, 42" w, 18" d (69 cm h, 107 cm w, 46 cm d)

PIANOS

Essex Upright 1

Steinway Grand
Model D 1

LAUNDRY

Washers 2

Dryers 2

Garment Racks 12

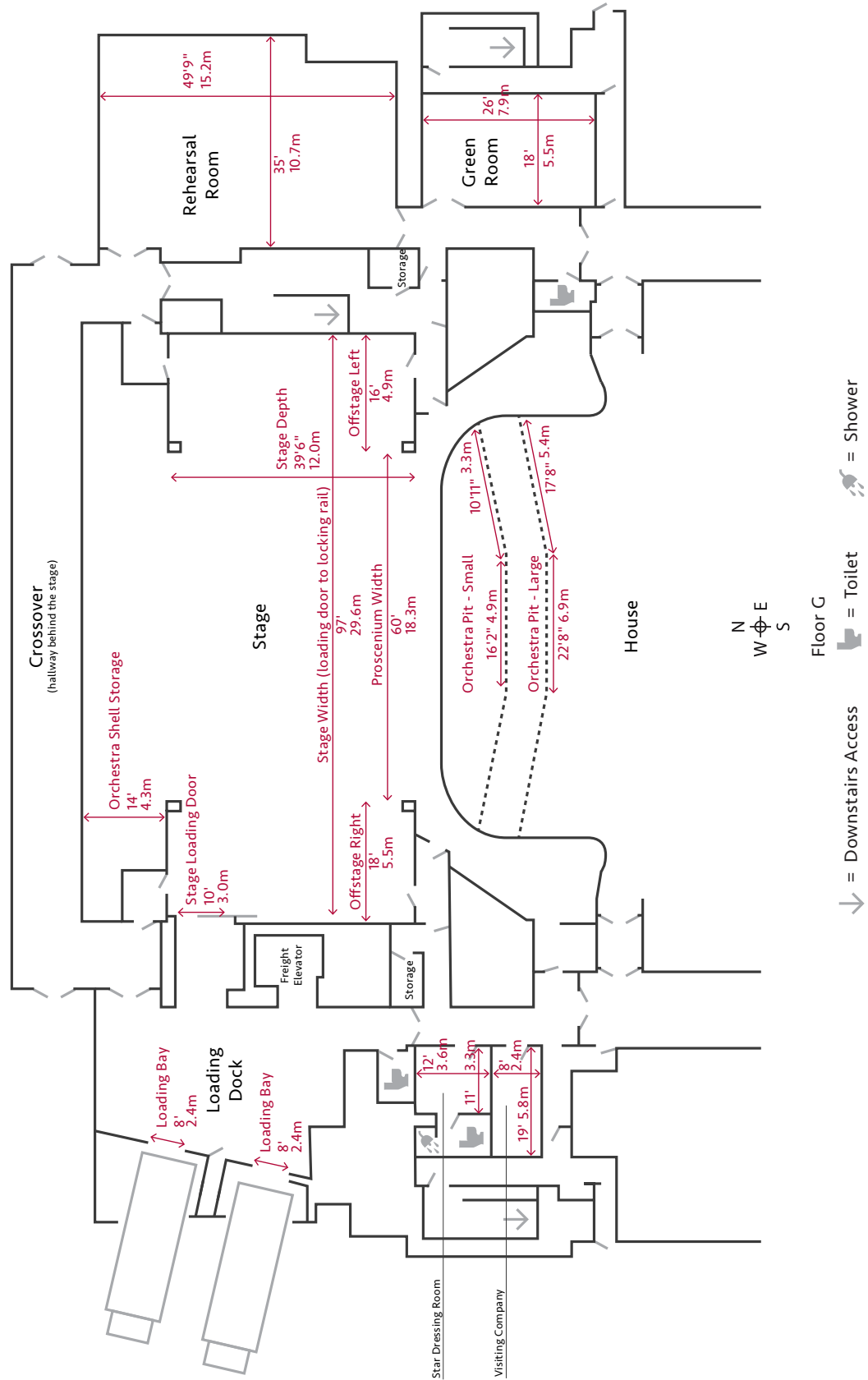
Steamers 2

Irons 4

Ironing Boards 4

NORTHROP BACKSTAGE

GROUND LEVEL



BACKSTAGE ARTIST FACILITIES

GROUND LEVEL

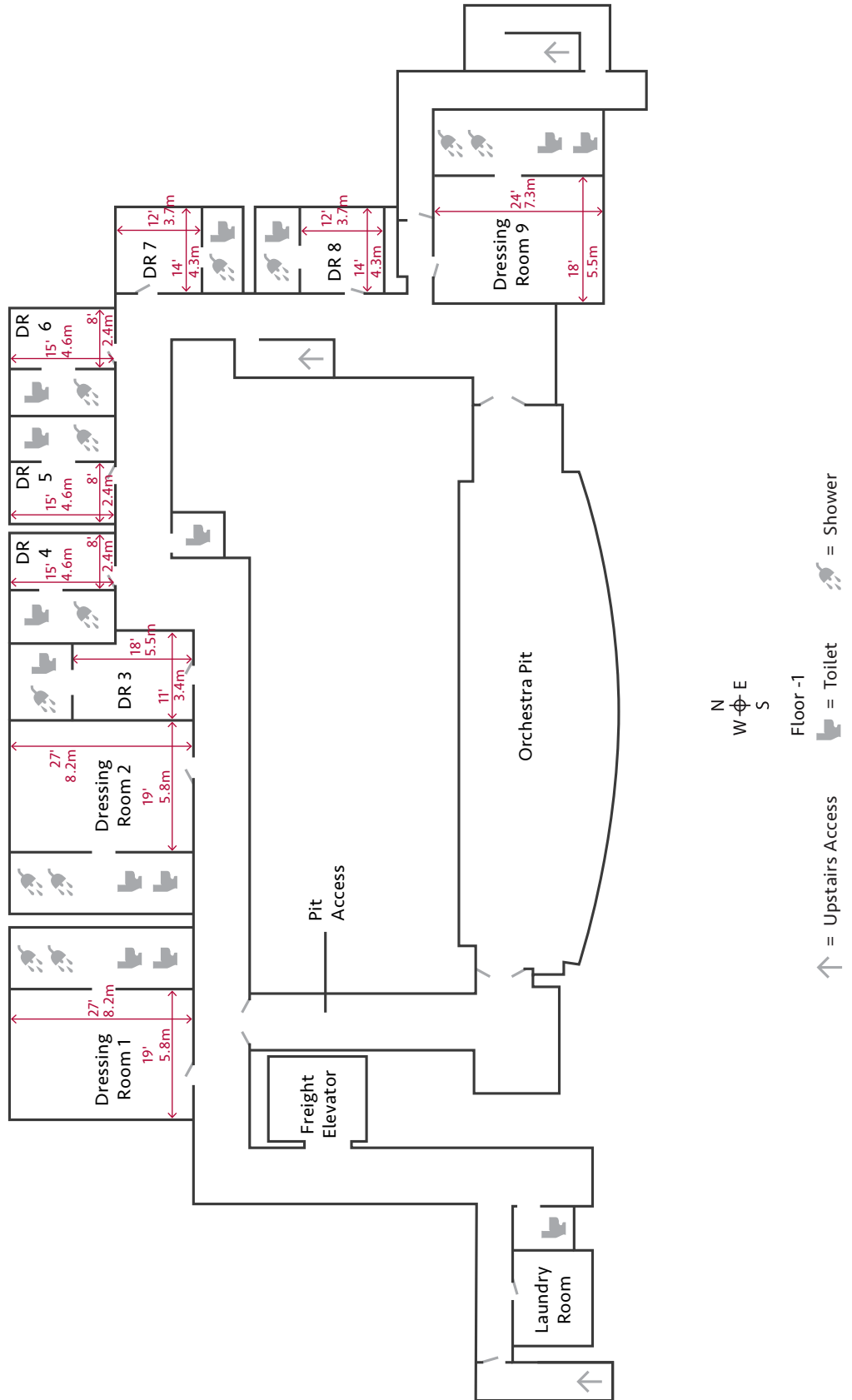
	Dimensions			
Rehearsal Room	49'9" x 35'	15.2 m x 10.7 m		
Green Room	26' x 18'	7.9 m x 5.5 m		
			Makeup Stations	Showers
Star Dressing Room	12' x 11'	3.7 m x 3.4 m	1	1

LOWER LEVEL

Dressing Rooms

1	27' x 19'	8.2 m x 5.8 m	18	2
2	27' x 19'	8.2 m x 5.8 m	19	2
3	18' x 11'	5.5 m x 3.4 m	1	1
4	15' x 8'	4.6 m x 2.4 m	4	1
5	15' x 8'	4.6 m x 2.4 m	4	1
6	15' x 8'	4.6 m x 2.4 m	4	1
7	14' x 12'	4.3 m x 3.7 m	2	1
8	14' x 12'	4.3 m x 3.7 m	2	1
9	24' x 18'	7.3 m x 5.5 m	18	2

NORTHROP BACKSTAGE LOWER LEVEL

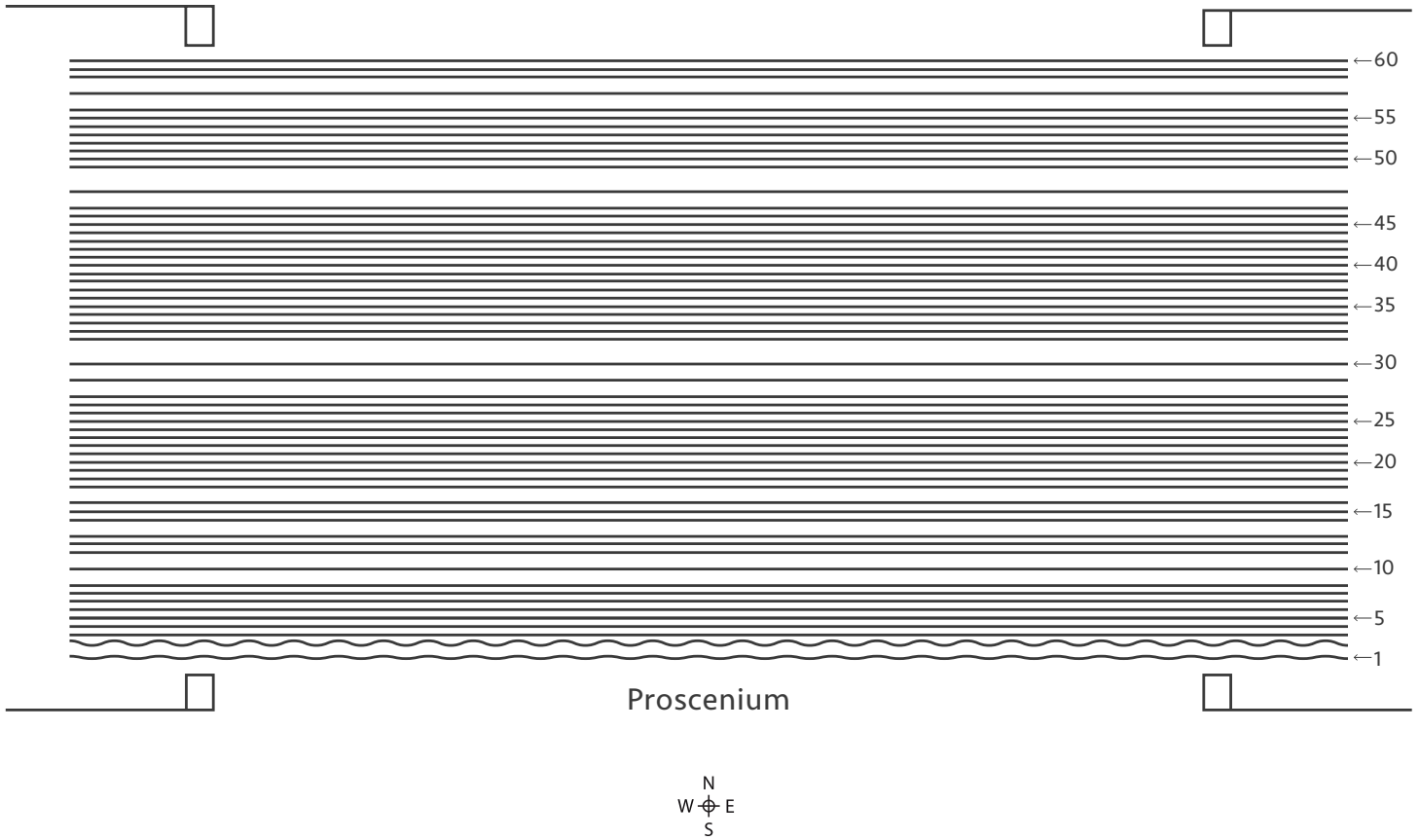


LINESET SCHEDULE

	40'	12.19 m	Back Wall	26	17'4"	5.28 m	
60	38'10"	11.83 m		25	16'10"	5.13 m	
59	38'4"	11.68 m		24	16'4"	4.97 m	
58	37'10"	11.63 m		23	15'10"	4.82 m	
57	36'10"	11.22 m		22	15'4"	4.67 m	
56	35'10"	10.92 m		21	14'10"	4.52 m	
55	35'4"	10.76 m		20	14'4"	4.36 m	
54	34'10"	10.61 m		19	13'10"	4.21 m	
53	34'4"	10.46 m		18	13'4"	4.06 m	
52	33'10"	10.31 m		17	12'10"	3.91 m	
51	33'4"	10.16 m		16	11'10"	3.60 m	
50	32'10"	10.00 m		15	11'4"	3.45 m	
49	32'4"	9.85 m		14	10'10"	3.30 m	
48	30'10"	9.39 m	Orch. Ceiling N/A	13	9'10"	2.99 m	
47	29'10"	9.09 m		12	9'4"	2.84 m	
46	29'4"	8.94 m		11	8'10"	2.69 m	
45	28'10"	8.78 m		10	7'10"	2.38 m	Orch. Ceiling N/A
44	28'4"	8.63 m		9	6'10"	2.08 m	
43	27'10"	8.48 m		8	6'4"	1.93 m	
42	27'4"	8.33 m		7	5'10"	1.77 m	
41	26'10"	8.17 m		6	5'4"	1.63 m	
40	26'4"	8.02 m		5	4'10"	1.47 m	
39	25'10"	7.87 m		4	4'4"	1.32 m	
38	25'4"	7.72 m		3	3'10"	1.16 m	1st G.P. Lineset (limited use)
37	24'10"	7.56 m		2	3'4"	1.01 m	Main Curtain
36	24'4"	7.41 m	Mid Stage Traveler N/A	1	2'4"	0.71 m	Teaser
35	23'10"	7.26 m					Fire Curtain
34	23'4"	7.11 m		0	0'	0 m	Plaster Line
33	22'10"	6.95 m					
32	22'4"	6.80 m					
31	21'10"	6.65 m					
30	20'4"	6.19 m					
29	19'4"	5.89 m	Orch. Ceiling N/A				
28	18'4"	5.58 m					
27	17'10"	5.43 m					

Proscenium Opening	60' (18.3 m)
High Trim	68'7" (20.9 m)
Arbor Cap	2,380 lbs (1,079 kg)
Pipe Length	78' (23.7 m)

LINESET SCHEDULE



SOFT GOODS

	QUANTITY	WIDTH x HEIGHT	
House Curtain (Maroon)	1 pair	40' x 33'2"	12.2 m x 10.1 m
Valance (Maroon)	1	78' x 26'2"	23.8 m x 8.0 m
Legs	5 pairs	20' x 30'	6.1 m x 9.1 m
Borders	6	78' x 12'	23.8 m x 3.7 m
Scrim (Black & White)	2	78' x 25'	23.8 m x 7.6 m
Mid-Stage Traveler	1 pair	78' x 24'5"	23.8 m x 7.4 m
Side Tabs (Stage Right)	4	12' x 20'	3.7 m x 6.1 m
Side Tabs (Stage Left)	4	12' x 30'	3.7 m x 9.1 m
Plastic Cyc	1	78' x 25'	23.8 m x 7.6 m
Fabric Cyc	1	78' x 25'	23.8 m x 7.6 m
Full Blackout	1	78' x 30'	23.8 m x 9.1 m
Split Blackout	1	78' x 30'	23.8 m x 9.1 m

RIGGING

Battens	58 (Ladder battens)	
Batten Length	78'	23.77m
In Trim	3'10"	1.016m
Out Trim	68'7"	20.90m
Batten Locations	75 (17 obstructed/not installed)	
Clearance between Battens	6"	0.1524m
Lineset Live Capacity	2,070 lbs	938.9362 kg
Grid Height (From Stage)	71'	21.6408m

Rear stage allows for dead hang rigging from 6 rigging beams 10' on center. Rear stage rigging height is 32'.

PROSCENIUM ARCH

There are 25 rigging points, each 38.5 inches apart.

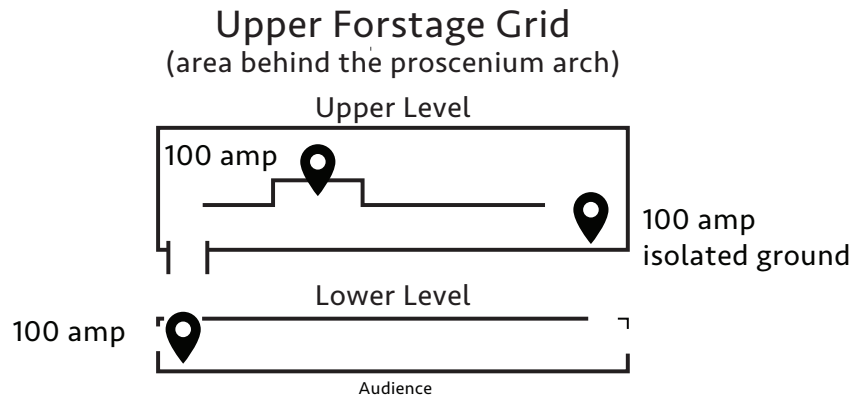
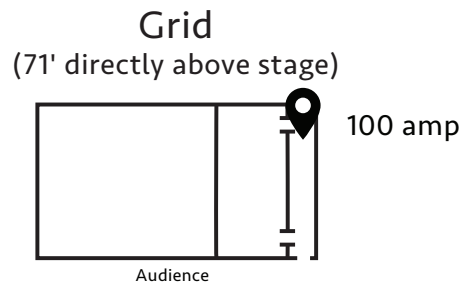
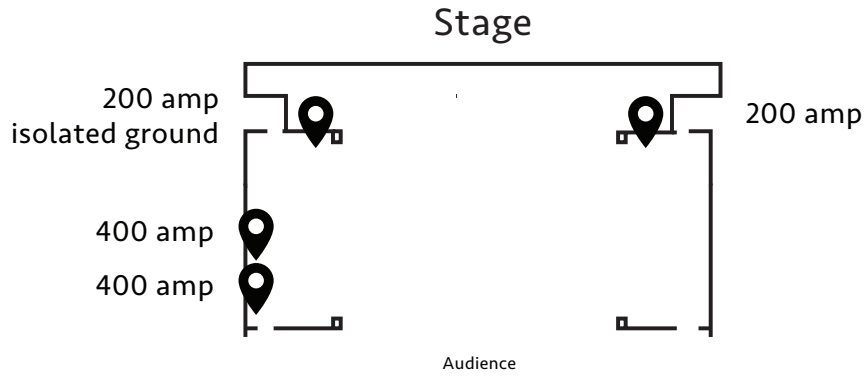


Photo by Patrick O'Leary

DISCONNECTS

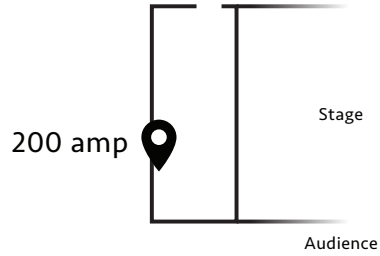
Upstage Left (isolated ground)	200 amp 208 volt 3 phase
Upstage Right	200 amp 208 volt 3 phase
Downstage Right	400 amp 208 volt 3 phase
Downstage Right	400 amp 208 volt 3 phase
Stage Left Gallery	200 amp 208 volt 3 phase
Rehearsal Room	200 amp 208 volt 3 phase
Loading Dock (shore power)	200 amp 208 volt 3 phase
Loading Dock (shore power isolated ground)	100 amp 208 volt 3 phase
Upper Forestage Grid (isolated ground)	100 amp 208 volt 3 phase
Upper Forestage Grid	100 amp 208 volt 3 phase
Grid	100 amp 208 volt 3 phase

DISCONNECT LOCATIONS

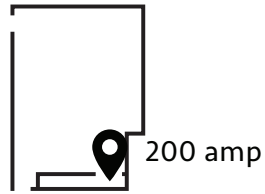


DISCONNECT LOCATIONS

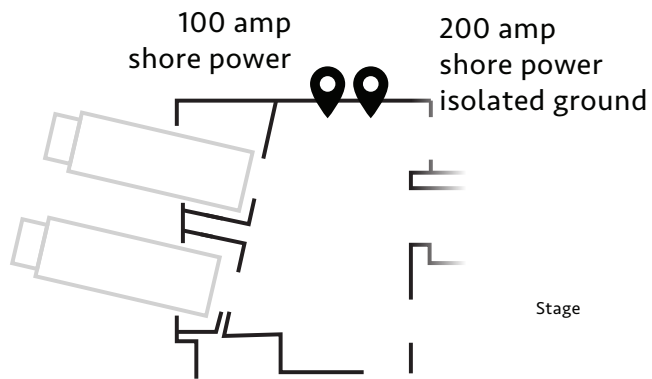
Stage Right Gallery
(above stage right)



Rehearsal Room



Loading Dock



LIGHTING

CONSOLE

ETC Eos Ti – 4000 Channel
Capable of Mid-House Tech Table

CONTROL/DMX

ETC Net3
12 – Two Port Gateways (DMX in or out)
In-House Power on Universes 1 and 2

DIMMERS

(ETC Sensor)

Type	Quantity
2.4k Performance	506
6.0k Performance	16
120v Non-Dim	48
208v Non-Dim	48

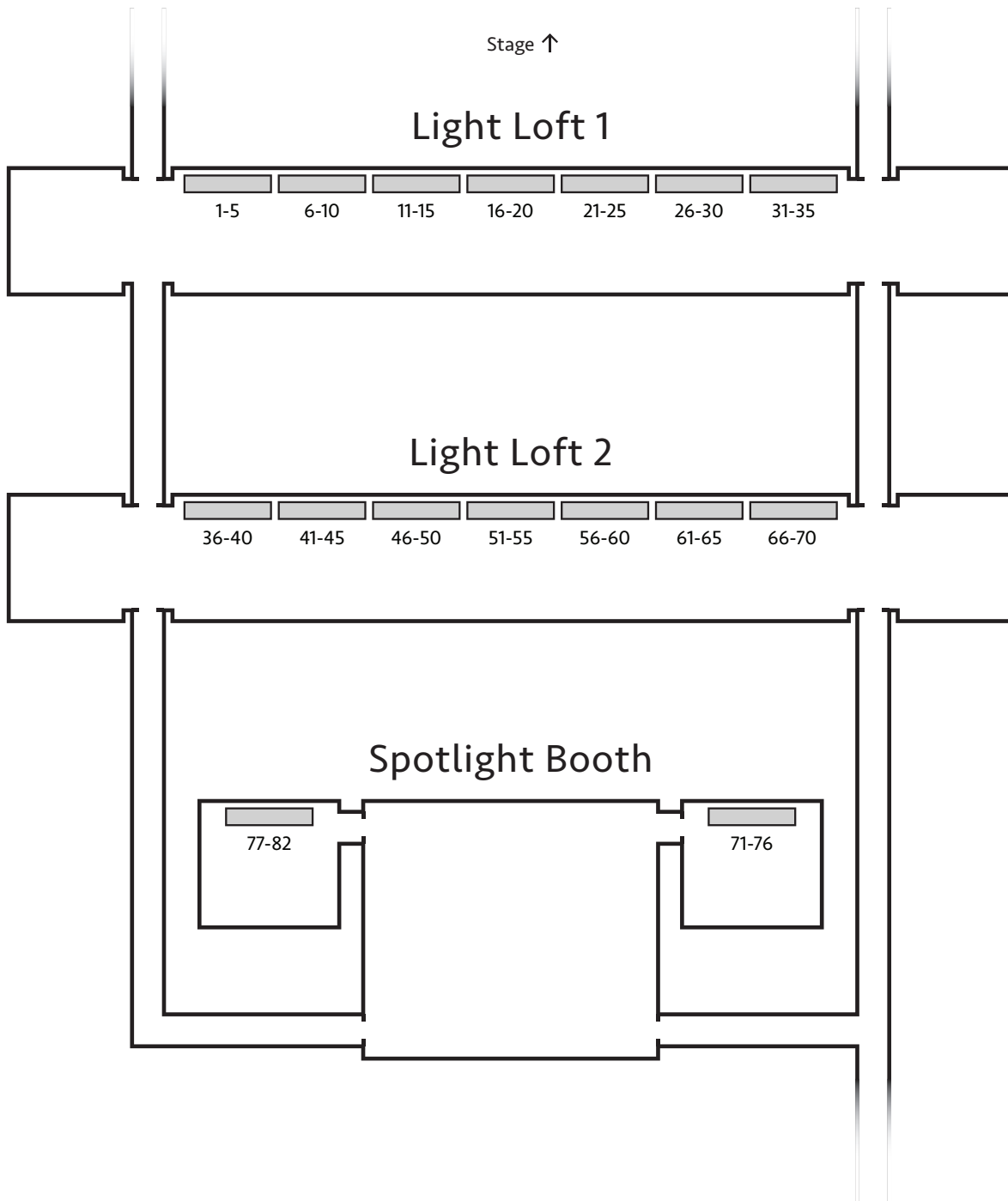
LIGHTING INVENTORY

TYPE	QUANTITY
Source Four 5° 750 Watt	36
Source Four 10° 750 Watt	34
Source Four 14° 750 Watt	6
Source Four 19° 750 Watt	84
Source Four 26° 750 Watt	72
Source Four 36° 750 Watt	60
Source Four 50° 750 Watt	24
Source Four PAR 575 Watt	8
Birdies	12
Cyc Lights, 3 cell (Aurora, 1000 watts per cell)	12
Ground Row, 3 cell (Aurora, 1000 watts per cell)	12
8" Selecon Fresnel 2KW	42
PAR 64 1k	60
Followspots (3K Lycian)	4

Some additional Source Four barrels available upon request.

STAGE PIN CONNECTIONS

82 circuits available



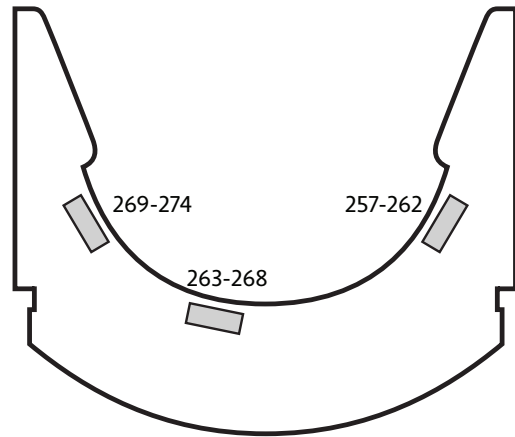
Floor 5 (Ceiling of the House)



STAGE PIN CONNECTIONS

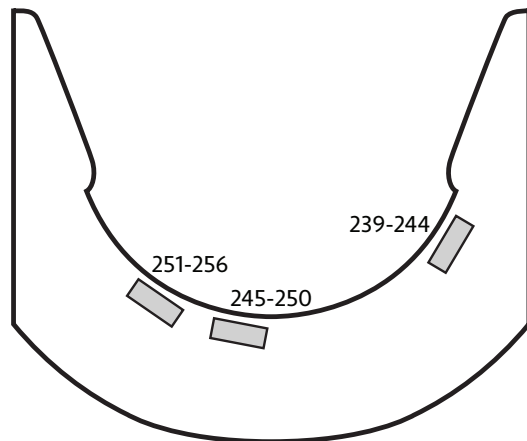
PRESIDENTS CIRCLE (2)

18 circuits available



SCHOLARS CIRCLE (3)

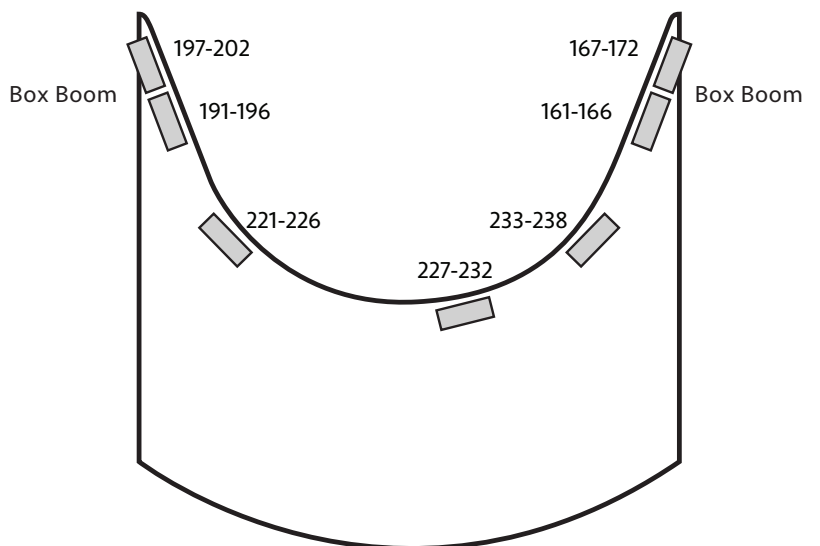
18 circuits available



GALLERY CIRCLE (4)

18 circuits available

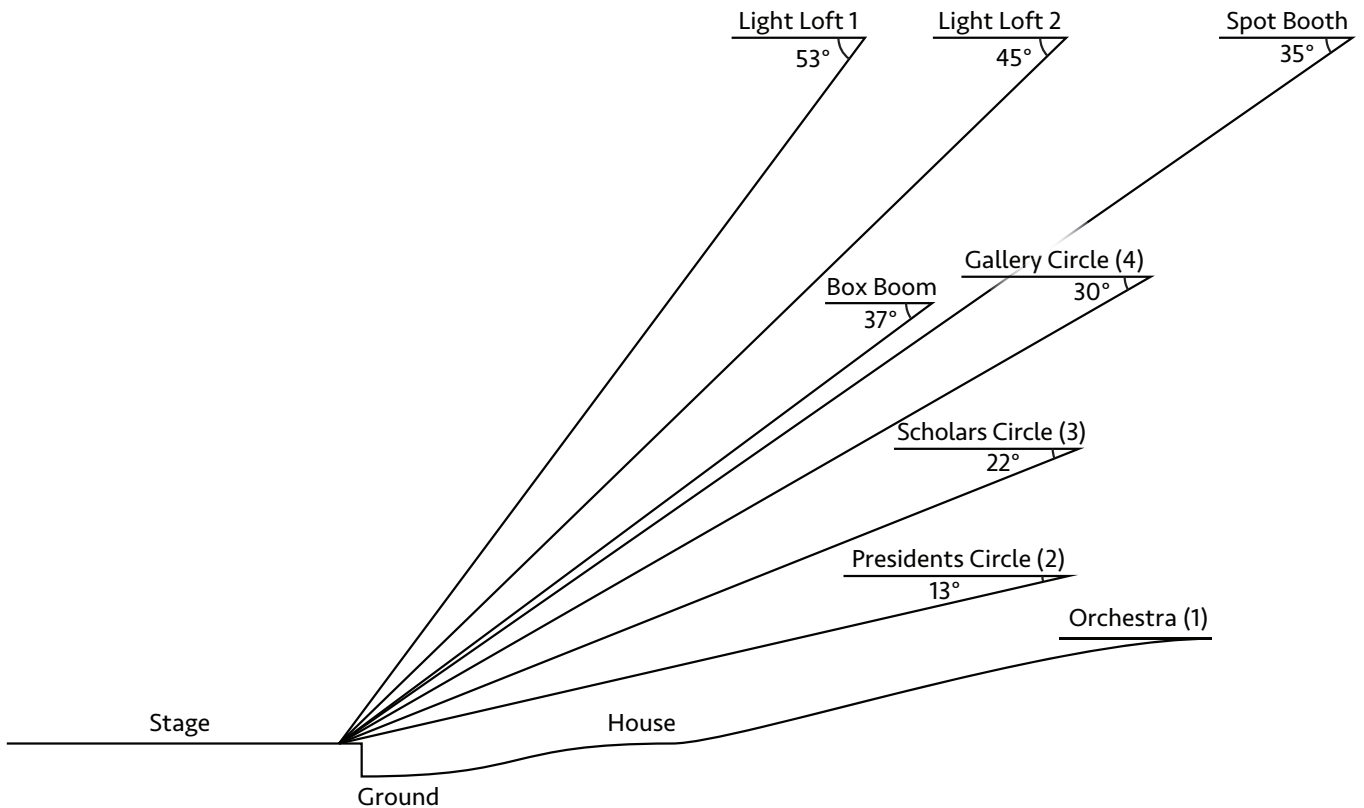
12 circuits per Box Boom



LIGHTING ANGLES & DISTANCE TO STAGE

DISTANCE TO STAGE

Light Loft 1	98'	29.9 m
Light Loft 2	113'	34.4 m
Spot Booth	138'	42.0 m
Box Boom	82'	25.0 m
Gallery Circle (4)	104'	31.7 m
Scholars Circle (3)	89'	27.1 m
Presidents Circle (2)	84'	25.6 m



SOUND

FRONT OF HOUSE SOUND CONSOLE

Digico SD9 48x24

LOUDSPEAKER SYSTEM

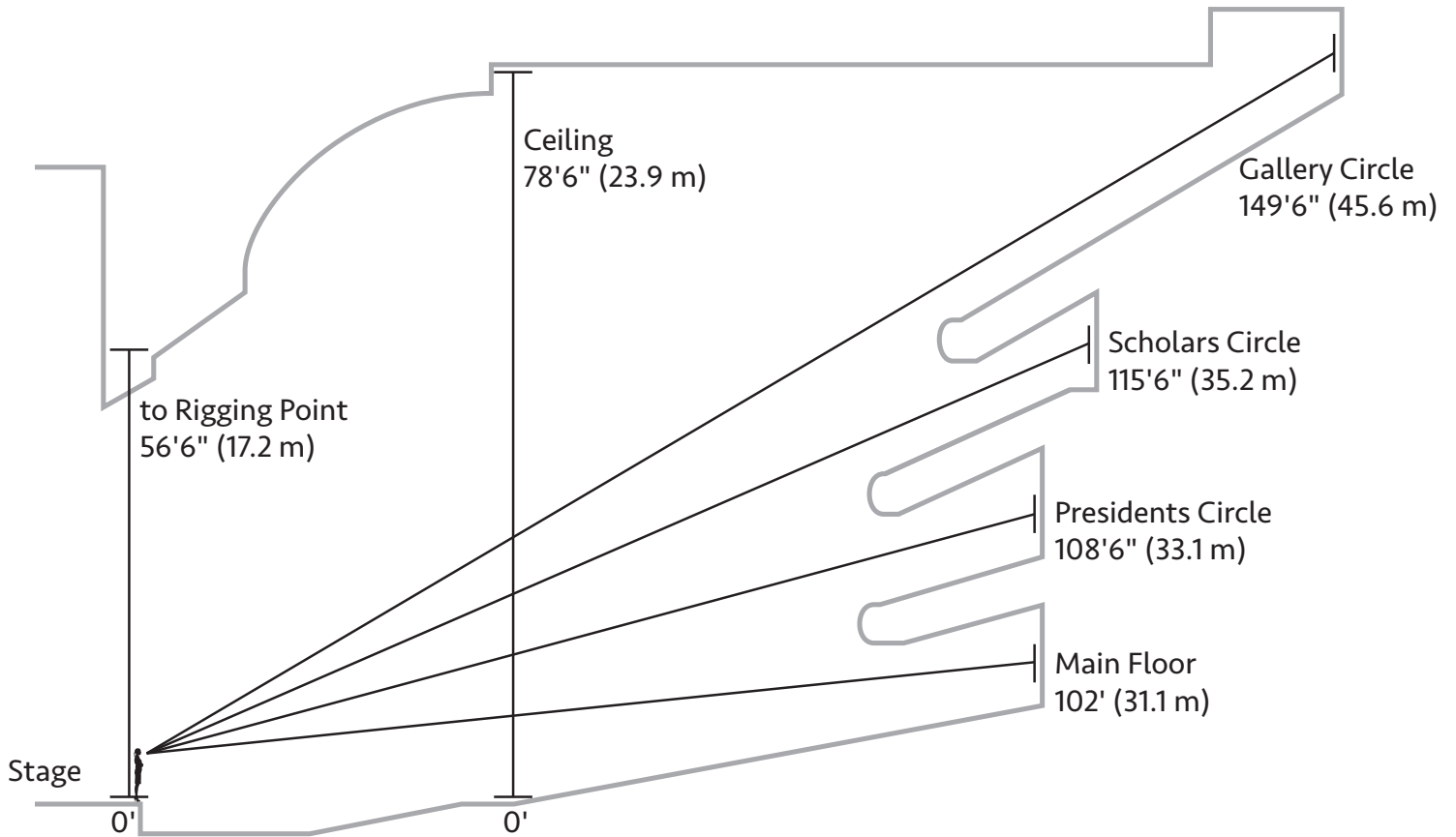
Type	Quantity
JBL Vertec 4888	18 (9 down per side)
JBL Vertec 4880 Subs	8 (4 per side, on ground)
JBL Vertec 4886 (main center array)	10
JBL Vertec 4886 (balconies L/R/C)	15
Meyer UPQ-2P (front and side fill)	6
Renkus Heinz TRX 61 (main floor front fill)	7
Meyer UP Junior (under balcony speakers)	2

AMPLIFIERS, PROCESSING, CONTROL

Type	Quantity
Crown IT 12000HD	9
Crown IT 9000HD	11
Crown CTS 1200	4
BSS London BLU Processing	
Clear Com System	

SOUND

THROW DISTANCES



VIDEO

PROJECTION

Barco HDX-W20 Flex 20,000 Lumen WUXGA DLP Projector
Barco TLD+(4.17-6.95: 1 WVXGA)(4.5-7.5: 1 SXGA+) Zoom Lens
The Screen Works 12' x 21.25' Truss Frame Front Project Screen

CONTROL

Barco PDS-902 3G Presentation Switcher/Scaler

CAMERA, RECORDER, SIGNAL ROUTING

Sony BRCH700 HD 3CCDs P/T/Z Camera (FOH Position)
Sony RMBR300 Remote Control Unit
Sound Devices PIX270i Production Video/Audio Recorder
Magenta Multiview VGA Transmitter/Receiver x2
Extron HDMI Extender x1

HOUSE FEATURES

STAGE & PROSCENIUM

Stage Depth 39'6" 12.0 m
(plaster line to back wall)

Upstage Extension Depth 17'3" 5.3 m

HOUSE MIX POSITION

Depth 9'6" 2.9 m

Width 18'10" 5.7 m

Distance to Proscenium 68' 20.7 m

**Cable Pass
(Limited Access)** 2 stage left,
1 stage right,
2 control booth

FOLLOW SPOT BOOTH

Depth 11' 3.3 m

Width 25' (7.6 m) window,
35' (10.7 m) room

Height 8'11" 2.7 m

Throw Distance 140' 42.7 m

Follow Spots 4

CONTROL BOOTH

Depth 9'7" 2.9 m

Width 37' 11.2 m

Height 9' 2.7 m

Throw Distance 105' 32.0 m

PROJECTION BOOTH

Depth 6'10" 2.1 m

Width 31' 9.4 m

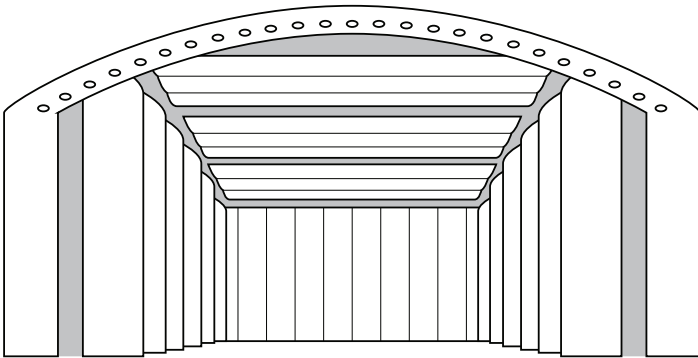
Height 9'3" 2.8 m

Throw Distance 110' 33.5 m

ORCHESTRA SHELL

Tower Count	10
Tower Depth	5' 1.5 m
Tower Width (open)	12'4" 3.8 m
Tower Width (closed)	6'8" 2.0 m
Tower Height	25'9" to 43'6" (7.8 m x 13.3 m)
Storage	Upstage Left & Upstage Right
Orchestra Ceiling Count	3
Orchestra Ceiling Depth	10'10" 3.3 m
Orchestra Ceiling Length	41'6" to 58'1" (12.6 m x 17.7 m)

Large



Small

