



National Kaohsiung
CENTER FOR THE ARTS

WEI WU YING

衛武營 國家藝術文化中心

國家表演藝術中心 National Performing Arts Center

PLAYHOUSE

Technical Information

Table of Contents

0 General Information	1
0-1 National Kaohsiung Center for the Arts (WeiWuYing)	1
0-2 PlayHouse	1
0-3 Traffic Information	2
0-4 Contact Information	2
0-5 Stage door	2
0-6 Auditorium / Seats	3
0-7 Plan	5
0-8 Section	7
1 Stage	8
1-1 Stage	8
1-2 Elevation Platform / Stage Traps	9
1-3 Traps	12
1-4 Tension Grid	12
1-5 Fly	13
1-6 Hoisting	14
1-7 Curtain and Others	15
1-8 Fly Bar List	16
2 Lighting	18
2-1 Lighting instrument	18
2-2 Accessories	19
2-3 Lighting Circuit	21
2-4 Portable Lift	27
2-5 Additional Power Supply	27
2-6 House Light / Working Light / Blackout	27
3 Audio/Video-Systems	28
3-1 Audio Facilities	28
3-2 Control Room	28
3-3 Stage Manager' s Console	28
3-4 Machine Room	28
3-5 Microphone	29
3-6 Communications	29
3-7 Locations of Communications	30
3-8 Stage Cameras and Video Surveillance Systems	30
3-9 Paging Systems	31
3-10 Projector	31
3-11 Projector connections	31
3-12 Subtitle	31
4 Backstage	32
4-1 Dressing Room and Green Room 、 Company office	32
4-2 Orchestra Facilities	32
4-3 Pianos (shared between four theatres)	32
4-4 Loading Dock / Scenery Shipping Path / Loading Flow	33
4-5 Other Facilities	35

Last updated: 2022/1/28

0 General Information

0-1 National Kaohsiung Center for the Arts (WeiWuYing)

CENTER FOR THE ARTS, ARTS FOR THE PEOPLE, National Kaohsiung Center for the Arts will become one of the important theatre complexes of the international art field. It include four performance blocks, the 2,236 seat Opera House, the 1981 seat Concert Hall, the 1210 seat Play House and the 434 seat Recital Hall.

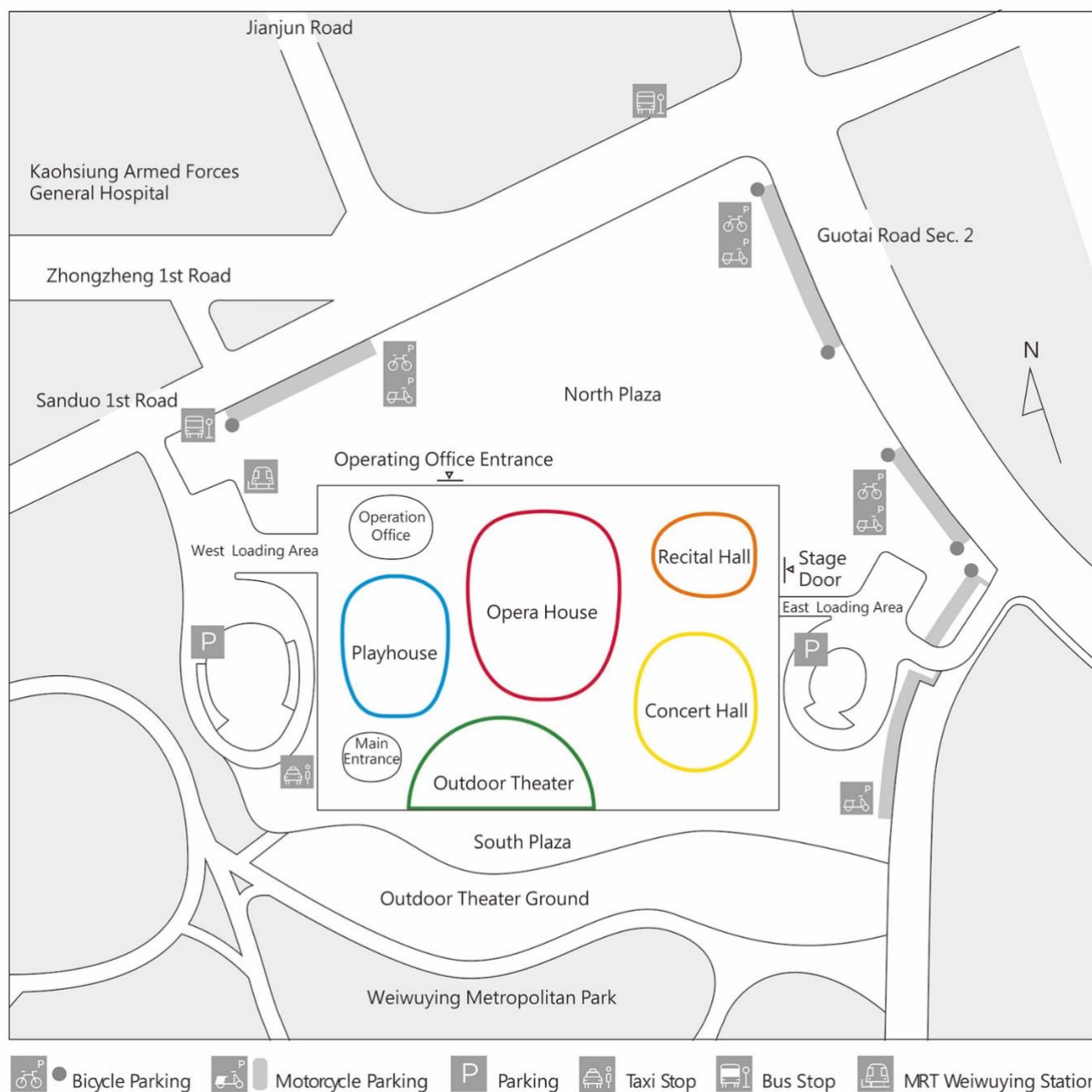


0-2 PlayHouse

The Playhouse is a space mainly used for various drama and dance performances. The stage can be configured into proscenium or thrust stage. The thrust stage design shortens the distance between the audience and performers, so that the audience can perceive the emotions of the performers at close proximity.



0-3 Traffic Information



0-4 Contact Information

National Kaohsiung Center for the Arts (Weiwuying)

No.1, Sanduo 1st Rd., Fengshan Dist.,
Kaohsiung City 83075, Taiwan

+886 7-262-6666

service@npac-weiwuying.org

0-5 Stage door

Ground floor access is from the north and east side of building. Enter from Operating office entrance on Sanduo 1st Road or Stage Door on Guotai Road.

Basement Level 1 access is from Sanduo 1st Road entrance for Opera House and Playhouse, Guotai Road entrance for Concert Hall and Recital Hall.

Working pass will be required for entry.

0-6 Auditorium / Seats

2021/05/13

Seating Capacity : 1209 seats

House Seats : 876 seats (1F/167 seats 、2F/502 seats 、3F/207 seats)

Wheelchairs Seats : 13 seats

Companion Seats : 13 seats

Orchestra Pit Seats : 164 seats

Elevation Platform No.1 (Row 1, NO.1~23 、Row 2, NO.1~24) : 47 seats

Elevation Platform No.2 (Row 3, NO.1~23) : 23 seats

Elevation Platform No.3 (Row 4, NO.1~22) : 22 seats

Elevation Platform No.4 (Row 5, NO.1~21) : 21 seats

Elevation Platform No.5 (Row 6, NO.1~18) : 18 seats

Elevation Platform No.6 (Row 7, NO.1~17) : 17 seats

Elevation Platform No.7 (Row 8, NO.1~16) : 16 seats

Chinese Orchestra Pit Seats (Side Auditorium Platform) : 48 seats

SAP(Row 9, NO.22~40 、Row 10, NO.24~44 、Row 11, NO.26~48 、Row 12, NO.28~56) : 48 seats

Control Area Seats : 16 seats

Reserved Seats for Tech Table : 4 seats

Reserved Seats for FOH : 7 seats

Obstructed View Seats : 16 seats (Non-ticketing)

Proscenium Stage Obstructed View Seats : 172 seats

Partial View Seats : 52 seats (Tickets can be sold, and "Partial View" must be marked)

Reserved Seats

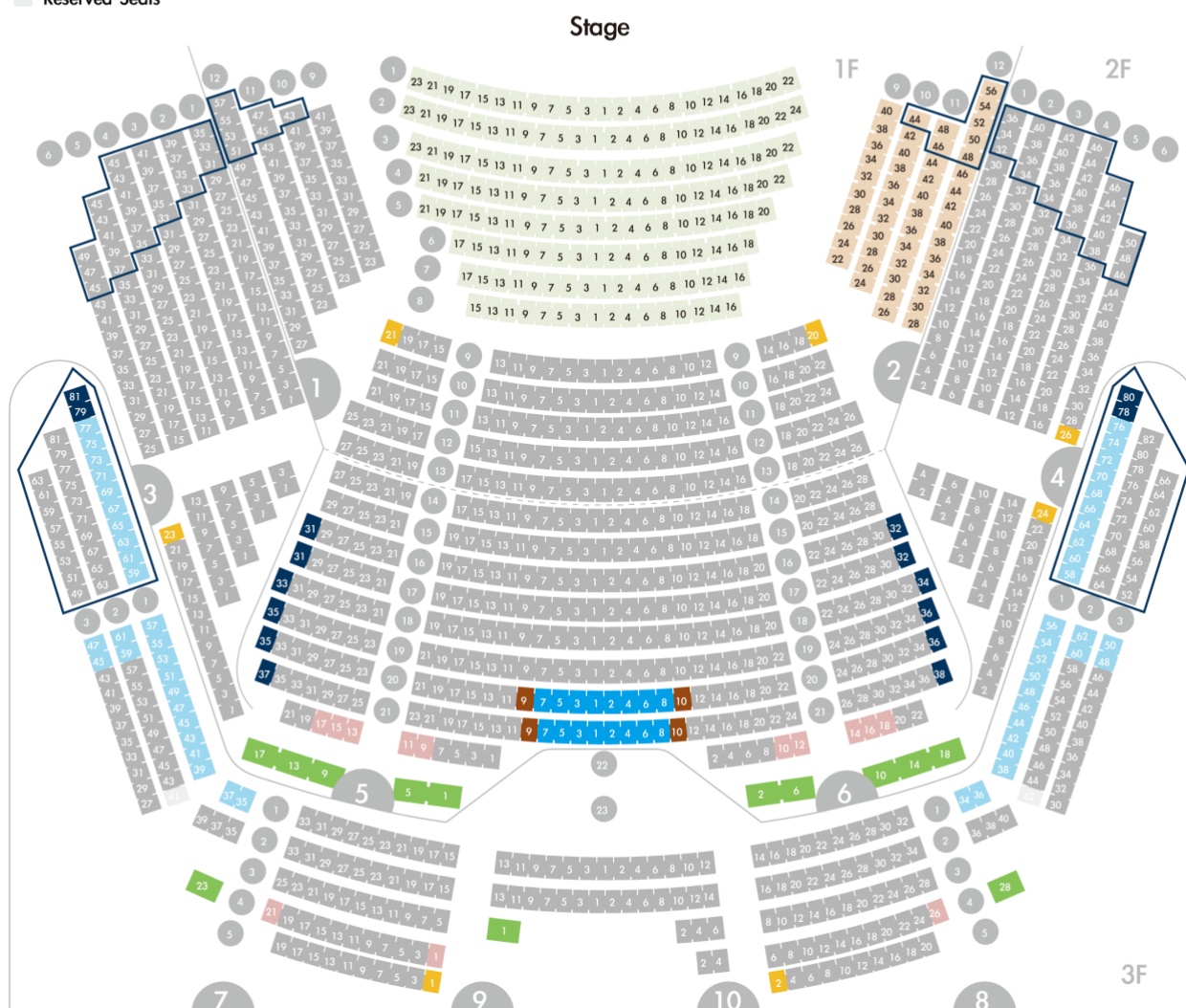


Figure 0.1- Seats plan

Set Up Equipment Recommended Seat

Set Up Equipment Seat	Reserved Seat	Notes
2nd Floor 14 row Seat 27	1st Floor 13 row Seat 25 、 27 2nd Floor 14 row Seat 23 、 25 2nd Floor 15 row Seat 27 、 29	For Photo Shooting & Video Shooting
2nd Floor 14 row Seat 28	1st Floor 13 row Seat 24 、 26 2nd Floor 14 row Seat 24 、 26 2nd Floor 15 row Seat 26 、 28	For Photo Shooting & Video Shooting
2nd Floor 20 row Seat 1	2nd Floor 19 row Seat 1 、 2 2nd Floor 20 row Seat 2 、 3 2nd Floor 21 row Seat 1 、 2 、 3	For Photo Shooting & Video Shooting
Set Up Control Area	Reserved Seat	Notes
2nd Floor 20 row Seat 1~8 2nd Floor 21 row Seat 1~8	2nd Floor 20 row Seat 9 、 10 2nd Floor 21 row Seat 9 、 10	

0-7 Plan

戲劇院一樓化妝室位置圖

Playhouse 1F Dressing Room Map

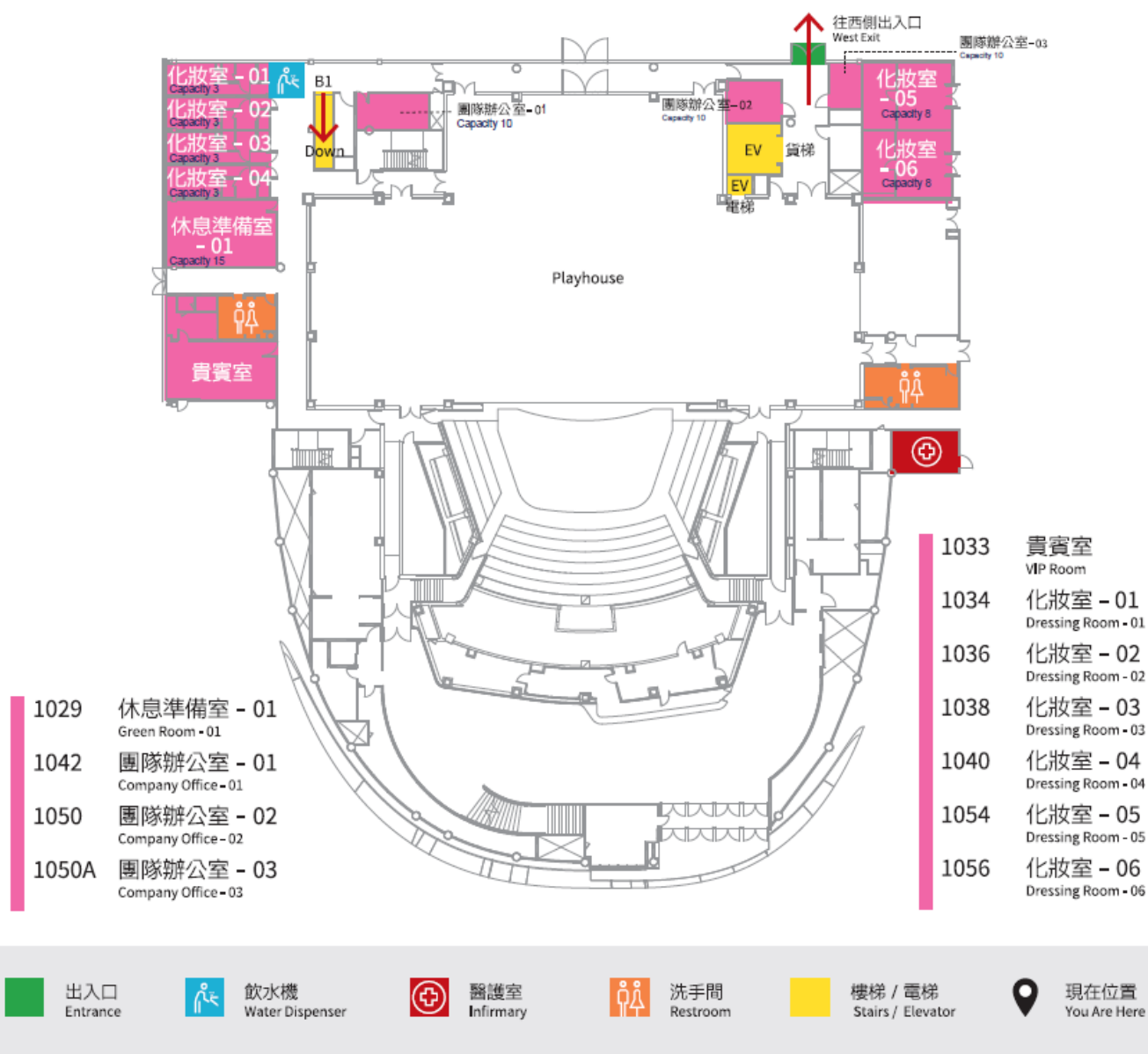


Figure 0.2- Playhouse 1F Plan

戲劇院地下一樓化妝室位置圖

Playhouse B1F Dressing Room Map

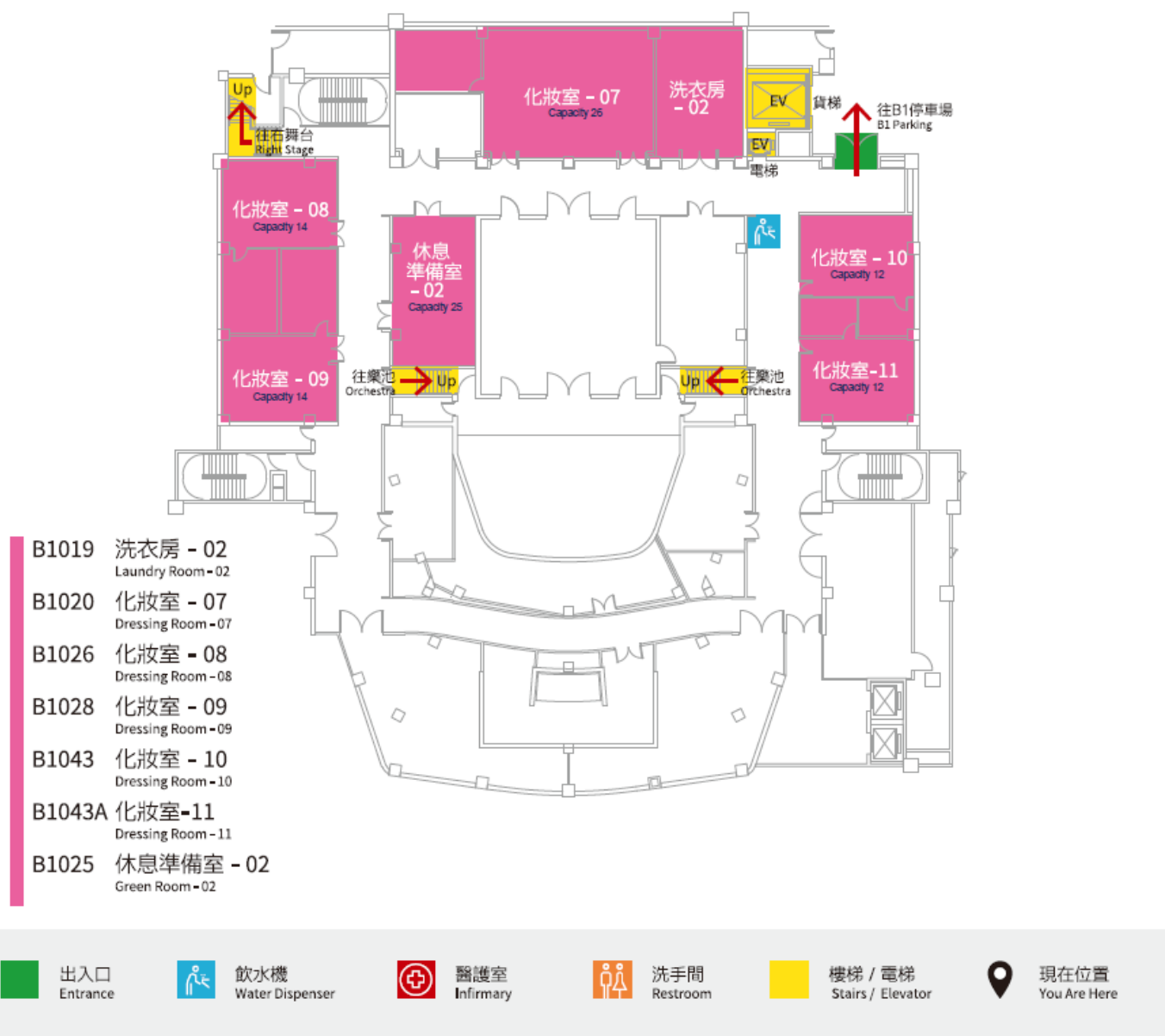


Figure 0.3- Playhouse B1 Plan

0-8 Section

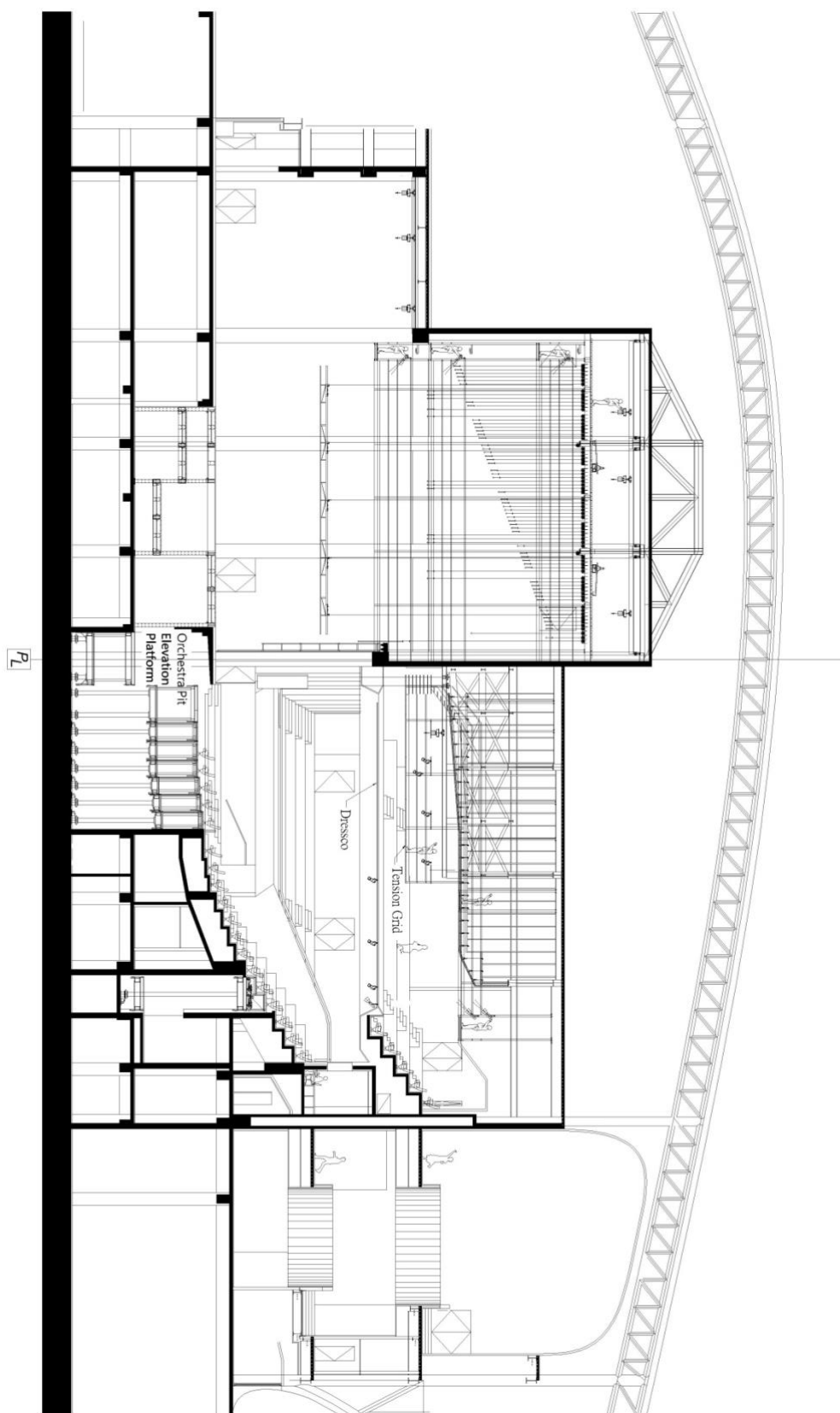


Figure 0.4- Playhouse Section

1 Stage

1-1 Stage

1-1-1 Floor

Black painted composite wood stage floor, The production scenery can secure to the deck by screws but no nails in part of stage area.
Please contact the technical service for more detail.

The trap area is made of Okoume hardwood plywood, the surface is prohibited from nailing and locking.

The main stage, side stage, rear stage, pit elevation platform, the auditorium elevation platform is made of Pitch pine, the stage surface can be locked with screws, and can not be drilled.

1-1-2 Tormentor

Proscenium size : 18m (width) x 8m (height)

Proscenium opening: 12m to 18m (width)

Apron to PL: 1.8m

1-1-3 Stage Dimensions

Main stage: 27.2m (width) x 16.2m (depth) x 20.5m (height) (from stage surface to under above grid beams)

Rear stage: 22.3m (width) x 10m (depth) x 11m (height) (8.5m height from stage surface to under gallery)

Side stage: 10.2m (width) x 16.2m (depth) x 11m (height) (8.5m height from stage surface to under gallery)

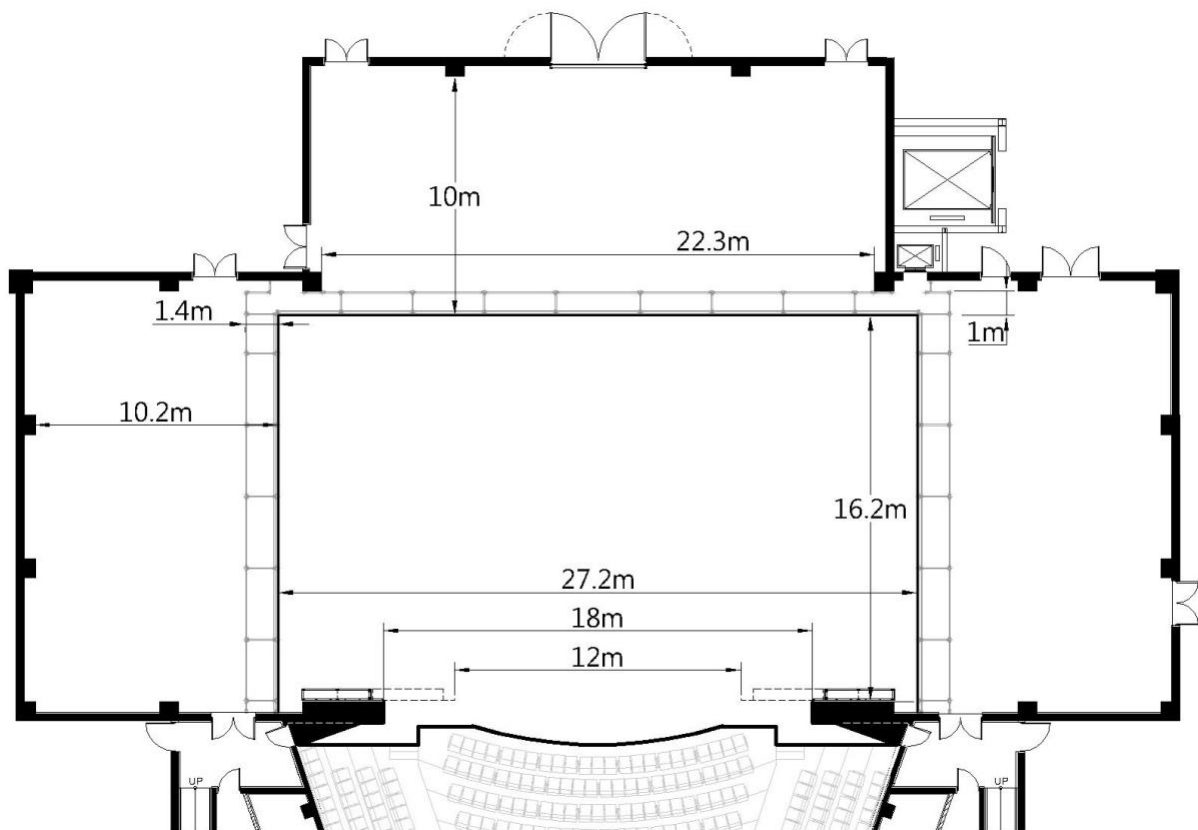


Figure 1.1- Stage Plan

1-2 Elevation Platform / Stage Traps

1-2-1 Orchestra Pit

Orchestra pit may combined with elevation platform No.1 and 2, as the extend.

Amount: 1 row, arc shape platform

Size: 15m (width) x 2.85m (depth), 38.5 m²

Elevation: -4.5m to -2.25m

Capacity

Dead load : 750kg/ m²

Live load : 500kg/ m²

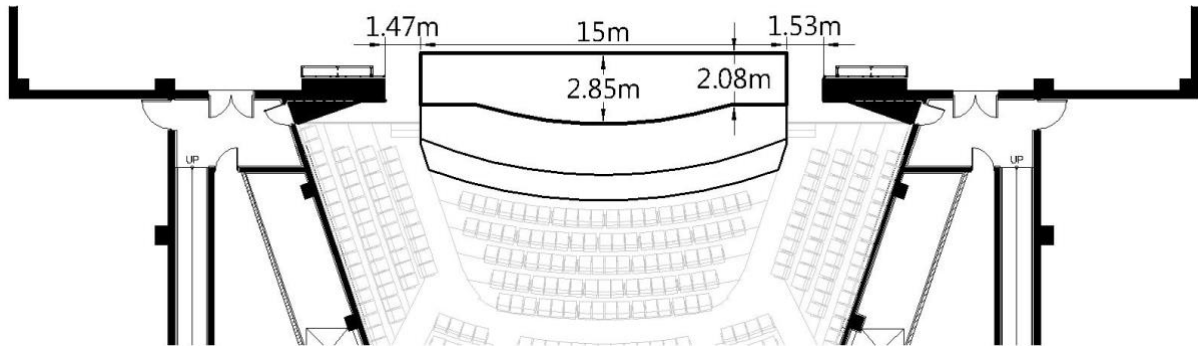


Figure 1.2.1.1- Orchestra Pit Elevation Platform location plan

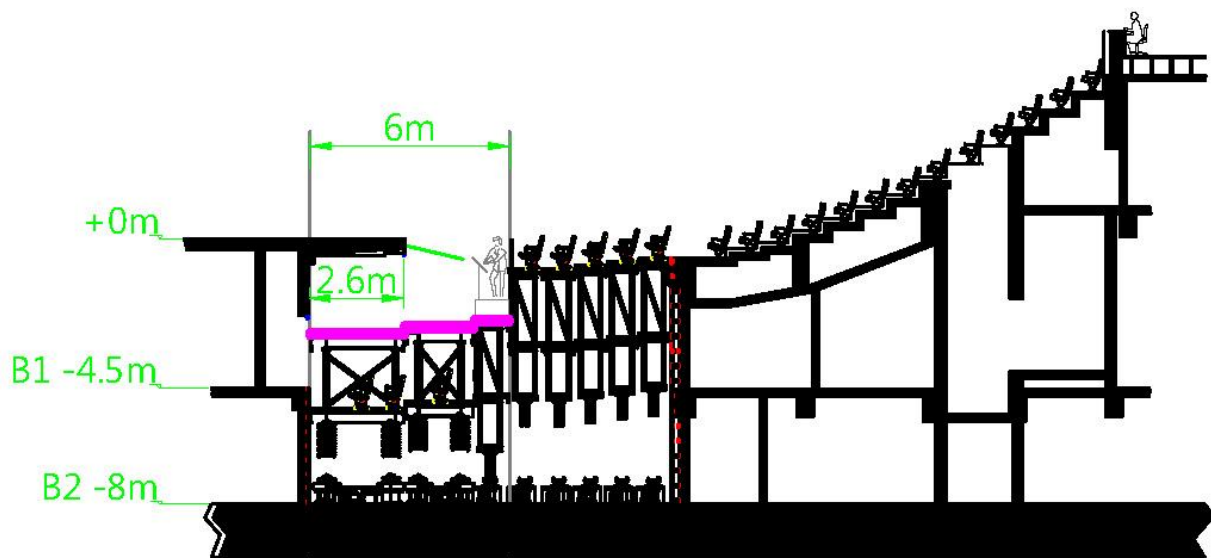


Figure 1.2.1.2- Orchestra Pit Elevation Platform Section

1-2-2 Elevation Platform

Elevation Platforms can be adjust for different function, as auditorium, thrust stage and extend orchestra pit (No.1 ~ 2) by need.

- No.1, 15 m (width) x 2.1m (depth), 31.2 m²
- No.2, 15m (width) x 1.05m (depth), 16 m²
- No.3, 14.6m (width) x 1.05m (depth), 15 m²
- No. 4, 13.8m (width) x 0.95m (depth), 12.7 m²
- No.5, 13m (width) x 0.95m (depth), 11.9 m²
- No.6, 12.3m (width) x 0.95m (depth), 11.2 m²
- No.7, 11.6m (width) x 1m (depth), 9.9 m²

Elevation

No.1 : -4.5m to 1.65m

No.2~ No.7: -2.25m to 1.65m

Capacity

Dead load : 750kg/ m²

Live load : 500kg/ m²

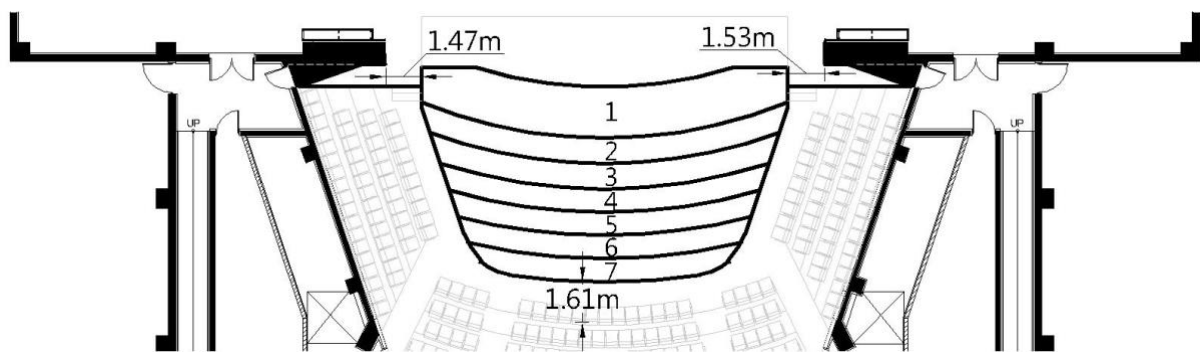


Figure 1.2.2- Elevation Platform location plan

1-2-3 Chinese Orchestra Pit (Side Auditorium Platform)

SAP-1: 8m (width) x 0.95m (depth), 6.9 m²

SAP-2: 9.25m (width) x 0.95m (depth), 8 m²

SAP-3: 10.6m (width) x 1m (depth), 9.6 m²

Elevation

SAP-1: -0.6m to 0.3 m

SAP-2/ SAP-3 :-0.6m to ±0.0m

Capacity:

Dead load : 750kg/ m²

Live load : 500kg/ m²

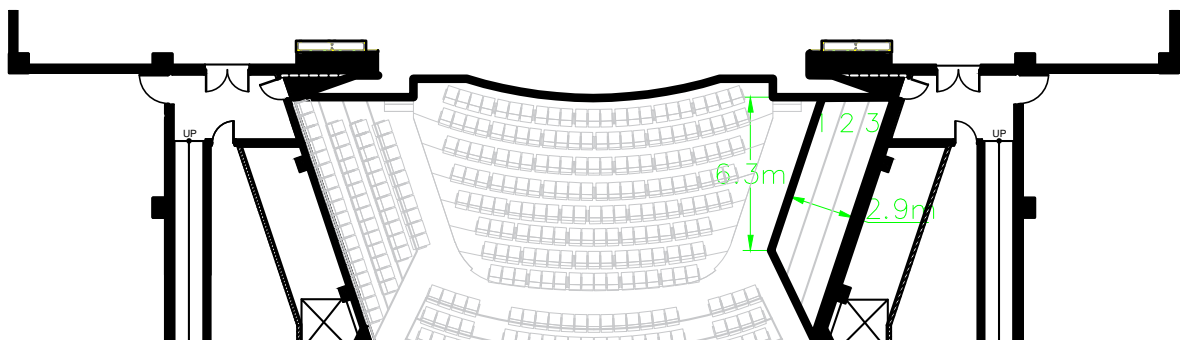


Figure 1.2.3- Chinese Orchestra Pit (Side Auditorium Platform) location plan

1-2-4 Auditorium Control Area

16 Seats, No.1~8, Row 17 ~18

For large equipment, please enter the platform from B1 floor.

Size: 4.7m (width) x 2.1m (depth), 9.87 m²

Elevation: -4m (B1) to 2.8m

Capacity

Dead load : 500kg/ m²

Live load : 250kg/ m²

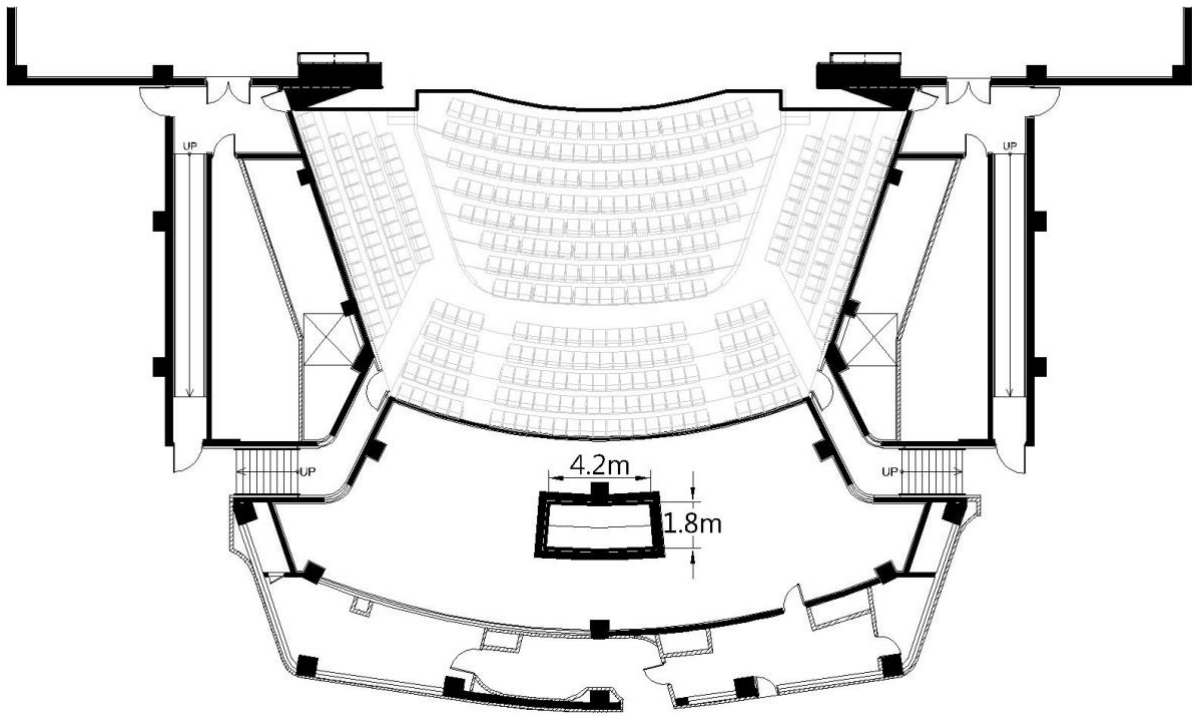


Figure 1.2.4- Auditorium Control Area location plan

1-3 Traps

72 pieces individual trap door

Size: 11.4m x 11.4m / 0.95m (width) x 1.9m (depth) each

Capacity: 750kg/ m², average

Distance to PL : 1.87m

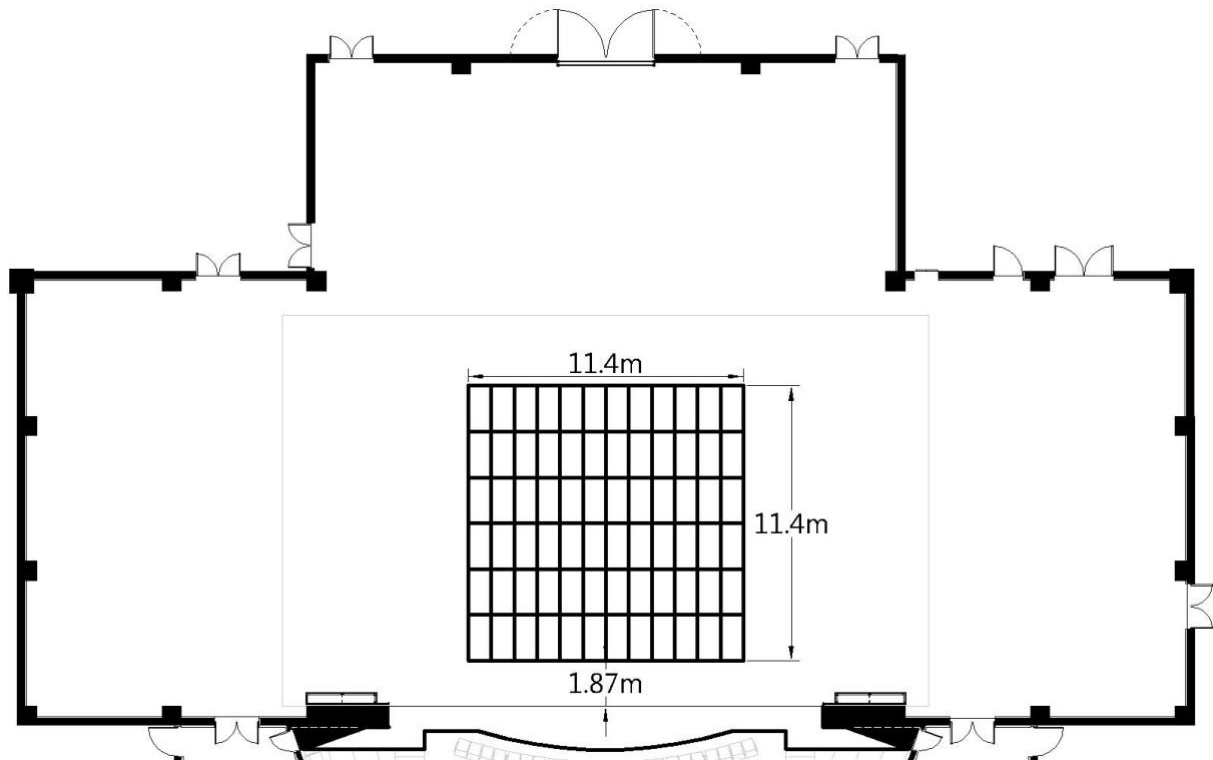


Figure 1.3- Stage Traps location plan

1-4 Tension Grid

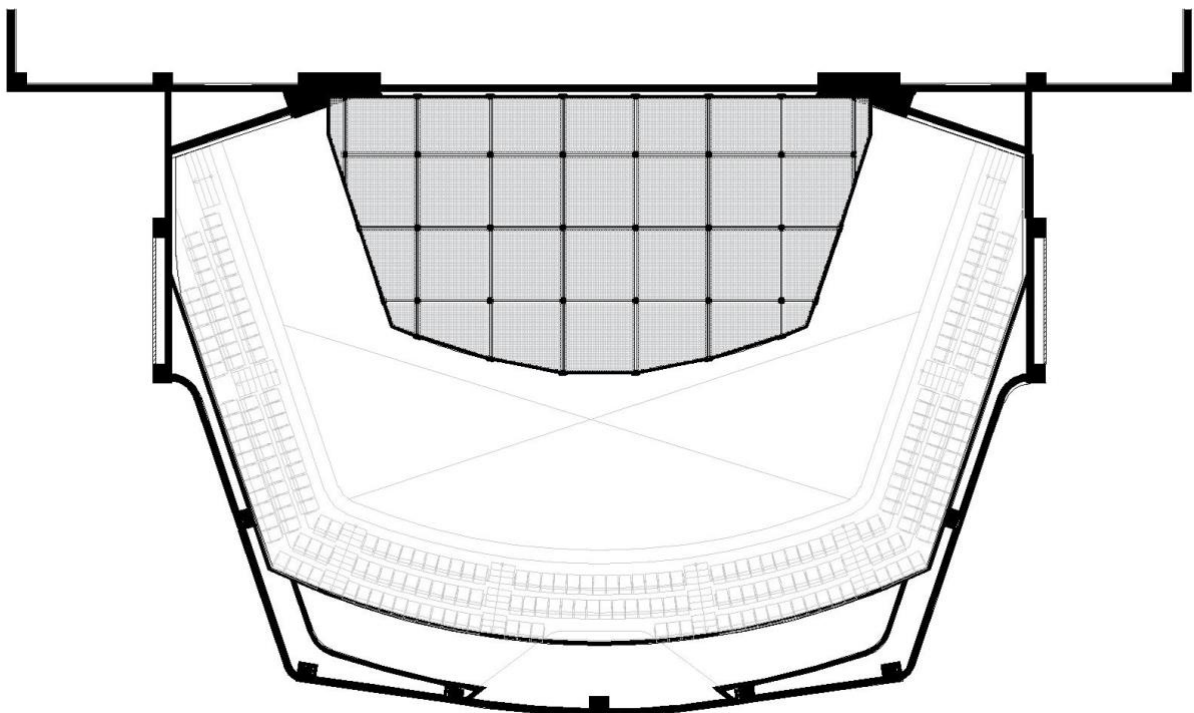


Figure 1.4- Tension Grid location plan

1-5 Fly

1-5-1 Controller

Waagner Biro CAT120、CAT190、CAT192

1-5-2 Main Stage Fly bars

22m (length), 4.8cm (diameter), +0.5cm to 19m, 67 sets

Safe load

0.5 m/s : 750kg

1.0 m/s : 500kg

2.0 m/s : 350kg

1-5-3 House Curtain

House Curtain, guillotine 24m (length), 1.1m from PL, Speed: 0.24~1.8M/S

Safe load

0.5 m/s : 750kg

1.0 m/s : 500kg

2.0 m/s : 350kg

1-5-4 Side Fly Bar (2 on both side)

Side Fly Bar 1, 14.4m, 11.8m from CL, +0.05cm to 19m

Side Fly Bar 2 / 3, 14.9m, 12.2 / 12.6 from CL, +0.05cm to 19m

Safe load

0.5 m/s : 750kg

1.0 m/s : 500kg

2.0 m/s : 350kg

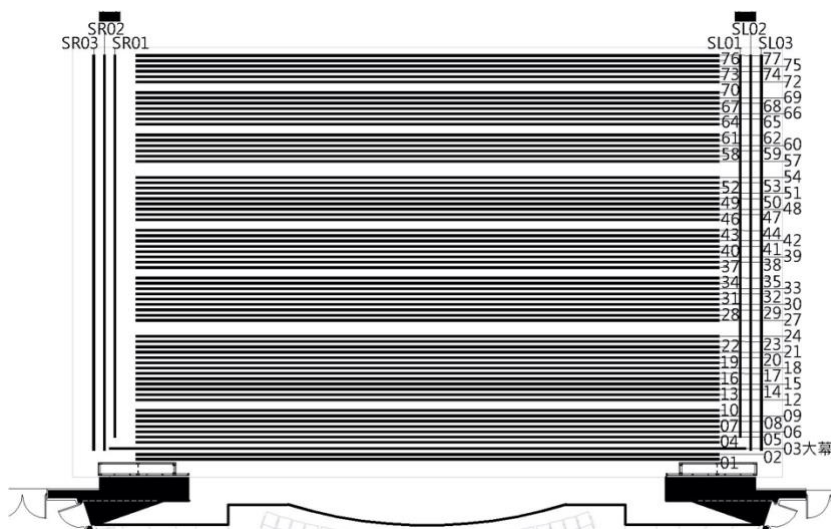


Figure 1.5.1- Fly Bars Plan

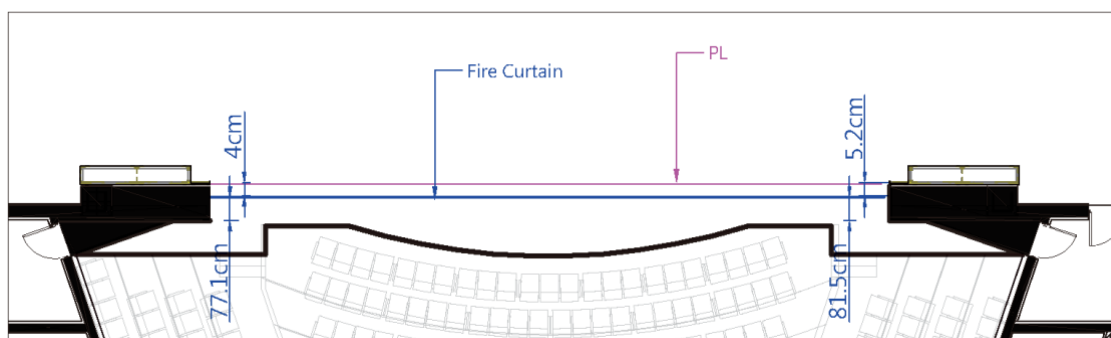


Figure 1.5.2- Fire Curtain

※ Area underneath the fire curtain must stay clear to allow the curtain to fall into position. Without advanced permission, to set any scenic pieces in this area is strictly prohibited. Only when permitted by the house, the units that could be removed rapidly or damaged can be on the deck. If there is circuit that must go through the area, we accept flat tapping down the cables, and unplugging the instruments before leaving.

1-6 Hoisting

1-6-1 Point Hoist (load 250kg)

8 sets, winch line length 31.2m, lifting speed: 0 to 1.8m/s

Operation range: available for using on grid area. Boundless except for Fly Bars operation space.

1-6-2 Chain Hoist with Trolley (load 1000kg, fixed speed: 9.6m/min)

Grid: 12 sets, operation length 28m (Boundless except for Fly Bars operation space)

Side stage: 6 sets, operation length 12m

Rear stage: 12 sets, operation length 12m

Tension Grid: 5 sets, operation length 21m

1-6-3 Hoist for Subtitle Display (load 500kg)

2 sets, operation length 15m, lifting speed: 0 to 0.5m/s

Load

1.0 M/S² : 500 公斤

2.0 M/S² : 350 公斤

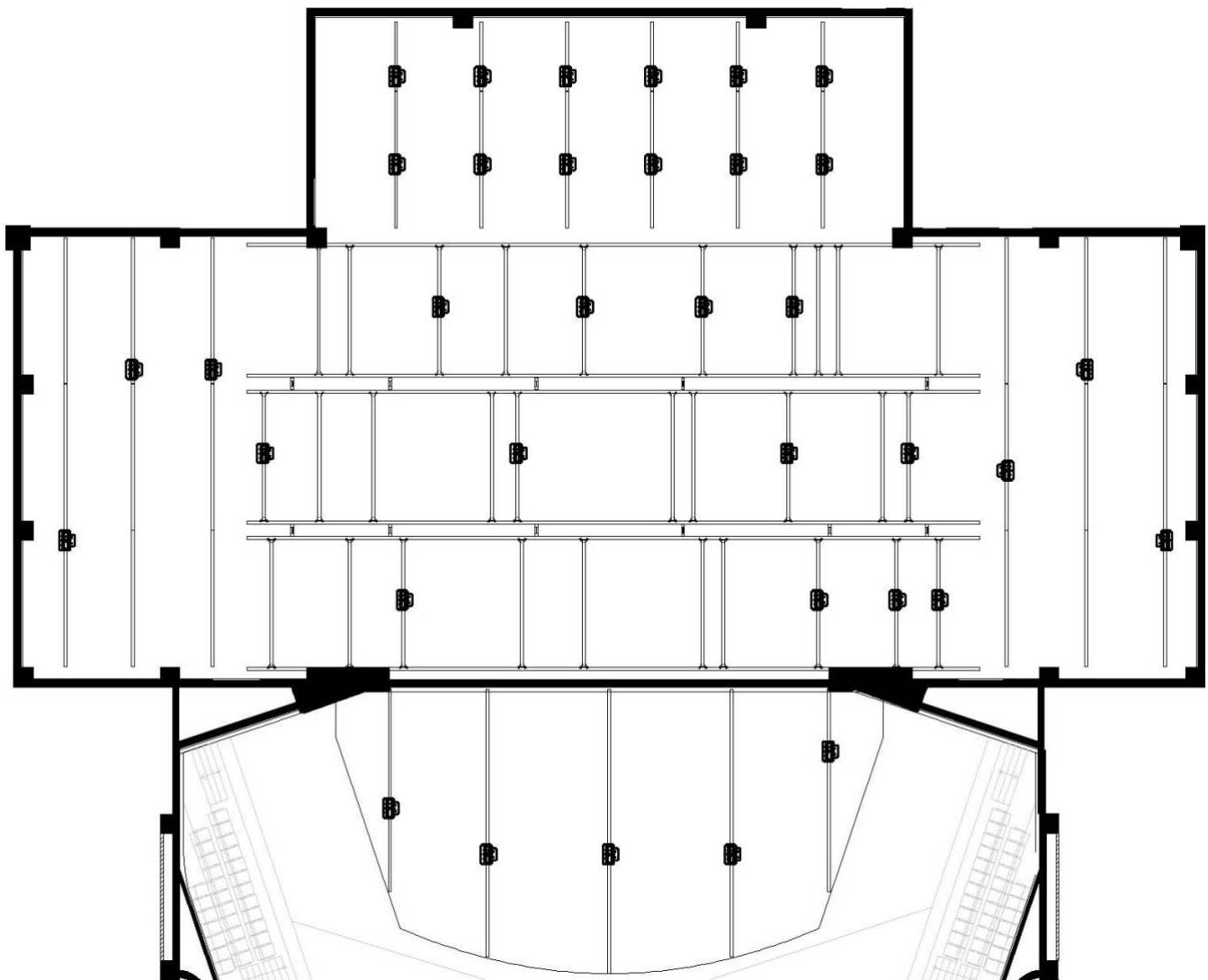


Figure 1.6- Chain Hoisting plan

1-7 Curtain and Others

Item Number	Product Name	Quantity	Notes (unit: meter)	Paid Item
01	House Curtain	1 pair	10 x 12.9 ShowTex –Paris CS (Black color)	
02	Border	8 pc	3.5 × 22 ShowTex –Bellini	
03	Leg	10 pc	9 × 2.7 ShowTex –Bellini	
04	Leg	22 pc	9 × 4 ShowTex –Bellini	
05	Tab	8 pc	8.8 × 3 ShowTex –Bellini	
06	Cyclorama (Rear Projection Screen) Grey	1 pc	9 × 22 ShowTex – Retro Screen Grey plus	* The first piece is rent-free. The second piece will be charged. Please refer to the rate tables of National Kaohsiung Center for the Arts.
07	Cyclorama (Rear Projection Screen) Black	1 pc	9× 21.5 ShowTex – Retro Screen Black	
08	Black Scrim 6pt	1 pc	10 × 22 ShowTex - Sharks Tooth Scrim 6 point	*
09	Black Scrim 8pt	1 pc	10 × 22 ShowTex - Sharks Tooth Scrim 8 point	*
10	White Scrim 6pt	1 pc	10 × 22 ShowTex - Sharks Tooth Scrim 6 point	*
11	Cotton Cyclorama	1 pc	10 × 22 ShowTex –Cyclo 270	
12	Black Backdrop	1 pc	9 × 22 ShowTex –Bellini	
		2 pc	10 × 9 ShowTex –Bellini	
13	Hydraulic Lift Platform	1	1.Shared with Playhouse 2.1.8M(length) x 0.9M (width) ∙ Elevation : 1M-1.5M	*
14	Wooden Sprung Floor 2m*1m	152 pc	1.Shared with Opera House 2.Area (installation area adjustable) 20m x 16m, built-up, portable with latch, wooden plywood with high density mitigation block, 3.7 cm (depth),point load 1000kg, average shock-absorbing ability 65 %	
15	Wooden Sprung Floor 1m*1m	16 pc		
16	Black Dance Floor For Wooden Floor only	8 rolls	1.Shared with Opera House 2.20m (length) x 2m (width) x 2mm (depth)	
17	Black and Gray Dance Floor	20rolls	1.Shared with Opera House 2.20m (length) x 2m (width) x 1.7mm (depth)	
18	Black and White Dance Floor	20 rolls	1.Shared with Opera House 2.24m (length) x 1m (width) x 1.8mm (depth)	
19	Black and Gray Dance Floor	20 rolls	1.Shared with Opera House 2.22m (length) x 0.95m (width) x 1.8mm (depth)	

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

1-8 Fly Bar List

Bar Number	Distance to PL	Content	Length (cm)	Bar Number	Distance to PL	Content	Length (cm)
PL							
FLYBARS_STAGE. / High limitation : 19m low limitation : 1.25m							
FB01	67		2200	FB40	853		2200
FB02	87		2200	FB41	872		2200
FB03	110	HOUSE_CURTAIN Guillotine	2400	FB42	890		2200
FB04	133		2200	FB43	915		2200
FB05	152		2200	FB44	931		2200
FB06	171		2200	FB45			2200
FB07	190		2200	FB46	970		2200
FB08	212		2200	FB47	991		2200
FB09	232		2200	FB48	1013		2200
FB10	251		2200	FB49	1031		2200
FB11			2200	FB50	1051		2200
FB12	292		2200	FB51	1069		2200
FB13	312		2200	FB52	1092		2200
FB14	330		2200	FB53	1112		2200
FB15	353		2200	FB54	1130		2200
FB16	373		2200	FB55			2200
FB17	392		2200	FB56			2200
FB18	410		2200	FB57	1190		2200
FB19	433		2200	FB58	1211		2200
FB20	452		2200	FB59	1230		2200
FB21	471		2200	FB60	1250		2200
FB22	492		2200	FB61	1270		2200
FB23	512		2200	FB62	1290		2200
FB24	529		2200	FB63			2200
FB25			2200	FB64	1330		2200
FB26			2200	FB65	1350		2200
FB27	593		2200	FB66	1370		2200
FB28	612		2200	FB67	1390		2200
FB29	633		2200	FB68	1412		2200
FB30	651		2200	FB69	1431		2200
FB31	673		2200	FB70	1453		2200
FB32	692		2200	FB71			2200
FB33	711		2200	FB72	1493		2200
FB34	733		2200	FB73	1512		2200
FB35	751		2200	FB74	1532		2200
FB36			2200	FB75	1553		2200
FB37	792		2200	FB76	1571		2200

FB38	812		2200	FB77	1591		2200
FB39	833		2200				
FLYBARS_SIDE / High limitation : 19m low limitation : 1.25m							
SFB-1L	1180		1440	SFB-1R	1180		1440
SFB-2L	1219		1490	SFB-2R	1219		1490
SFB-3L	1259		1490	SFB-3R	1259		1490
HOIST FOR SUBTITLE							
HS-01				HS-02			
ORCHESTRA & AUDITORIUM PLATFORM							
OP				AP04			
AP01				AP05			
AP02				AP06			
AP03				AP07			
SOUND MIXER & SIDE AUDITORIUM PLATFORM							
MIX				SAP02			
SAP01				SAP03	-		

2 Lighting

2-1 Lighting instrument

Important : All lighting data is on network system.

Item	Position	Model	Specification	Quantity	Frame Size	Note	Paid Item
Lighting Console	Control Booth	GrandMA 2 Light		1			
	Auditorium			1			
Dimmer System		State Automation Solution	220V 3kW/Circuit	536ch			
			220V 5kW/Circuit	30ch			
Ellipsoidal Reflector Spotlight	Catwalk	Strand Leko Lite 10°	220V/800W	14	30.5x30.5cm		
		Selecon SPX 14°		18	15.8x15.8cm		
	Tension	Strand Leko Lite 10°	220V/800W	5	30.5x30.5cm		
		Selecon SPX 14°		10	15.8x15.8cm		
		Selecon SPX 19°		30			
		Selecon SPX 15°-35°		10			
	Side Stage	Selecon SPX 14°	220V/800W	6	15.8x15.8cm		
		Selecon SPX 19°		40			
		Selecon SPX 26°		70			
		Selecon SPX 36°		48			
		Selecon SPX 15°-35°	220V/750W	15	15.9x15.9cm		
		ETC Souce Four 50°		20			
2KW Fresnel Spotlight 8"		Selecon Arena Theatre 8" Fresnel 7°-60°	220V/2kW	70	24.5x24.5cm		
Parabolic Aluminized Reflector Spotlight		PAR 64-Kupo PL-64LB	220V/1kW	96	25.4x25.4cm	Lamp : W x 16 、 M x 32 、 N x 32 、 VN x 16	
CYC Light		Selecon Aurora 4-Cell Linear CYC	220V/1kW	12	30.5x31.5cm		
Ground Row		Selecon Aurora 3-Cell Linear GroundRow		12			
Long Throw Follow Spot	Follow Room	Lycian M2 Model 2040 1.2	220V/1.2kW	2			
Strip Light	Storage	Selecon PL TR2 RGB 18 Striplights	110-220V/ 2.5A-1.3A 280W	8		If Strip manual needed, please contact TC Team.	*
HMI Fresnel Spotlight 12"		ARRI D40 HMI Fresnel	220V/4kW	4		No Douser	*
Fog Machine		Antari F-5D	220V/3.6A 810W	2			*
Haze Machine		Antari HZ-500	220V/2A 500W	2			*
Effect Fan		Antari AF-4	220V/0.48A 115W	4			*

*Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.*

2-2 Accessories

Item	Specification	Size	Quantity
Barn Door	2kW Fresnel		30
Iris	For Selecon Ellipsoidal Reflector Spotlight		50
Gobo Holder	For Selecon Ellipsoidal Reflector Spotlight	B Size	70
	For ETC Source Four Ellipsoidal Reflector Spotlight	A Size	20
Power Distribution Box	8CIR CEE Form Female Plug 		40
Multi-Cable	16pin Multi Cable Harting Connector	5m	24
		10m	20
		15m	10
Ex-Cable	CEE16A	1.5m	40
		2m	60
		3m	30
		5m	45
		10m	40
		15m	40
		20m	20
Y-Cord	CEE16A Parallel Cord		80
Adapter Cable	CEE 16A(M) To Stage-Pin(F)		50
MA2 2 Port Node			5
Boom Base	Boom Base & Pipe	Boom Base:45cm(W)x60cm(L) Pipe:300cm	12
Portable Sidelight Tower		74cm(W)x74cm(L)x280cm(H)	10

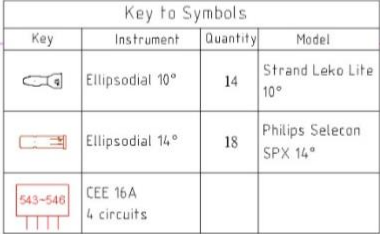


Figure 2.1- FOH Lighting Plot

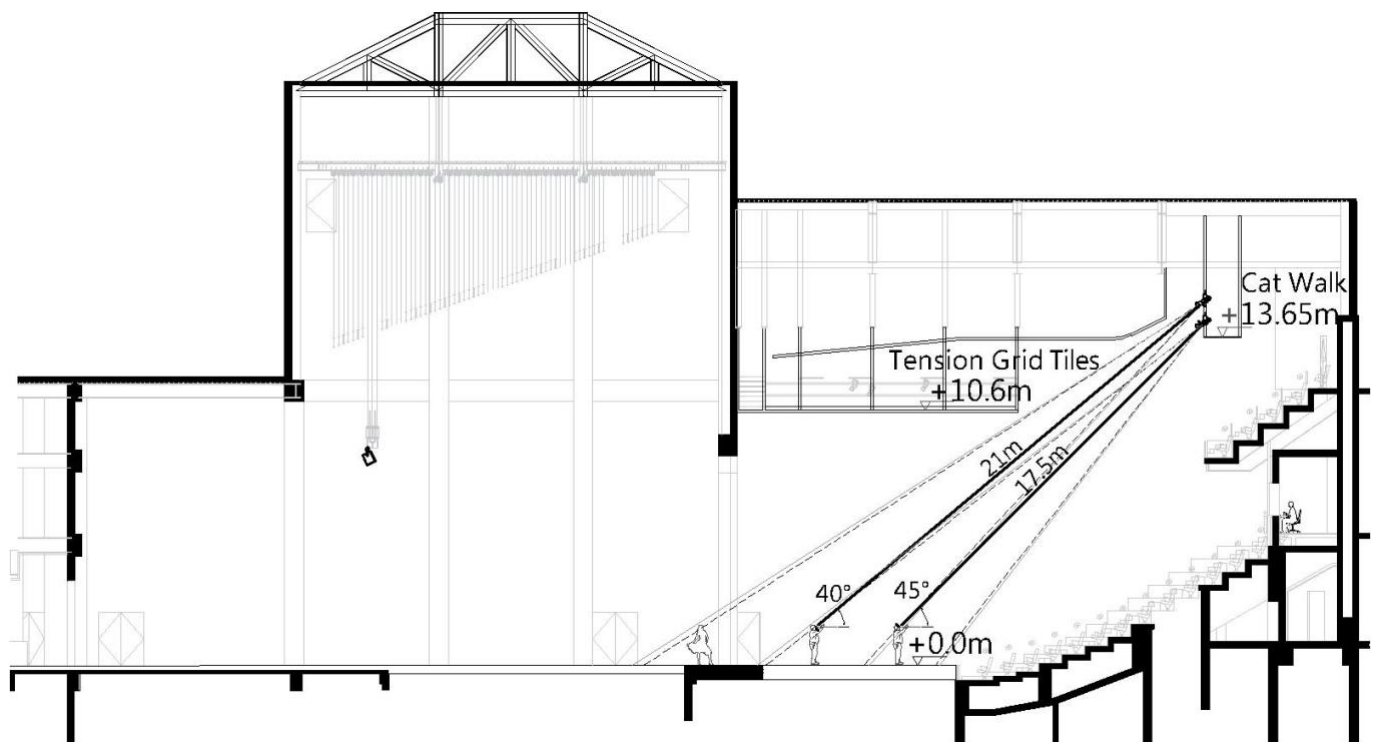


Figure 2.2- Lighting Section

2-3 Lighting Circuit

2-3-1 Stage area

Area and Position	Dimmer Circuit No.	Load	Network Circuit No.
Trap Room	001 ~ 004	3kW	LN01 ~ 02
	005 ~ 008		
Down Stage/L	009 ~ 016	3kW	LN05 ~ 06
	017 ~ 024		
Down Stage/R	025 ~ 032	3kW	LN07 ~ 08
	033 ~ 040		
Off Stage/L	049 ~ 056		LN17 ~ 18
Off Stage/R	065 ~ 072		LN19 ~ 20
Rear Stage/L	073 ~ 080	3kW	
Up Stage/L	041 ~ 048		
	081 ~ 088		LN21 ~ 22
Rear Stage/R	089 ~ 096	3kW	
Up Stage /R	057 ~ 064		
	097 ~ 104		LN23 ~ 24
Rear Stage	105 ~ 112	3kW	
	113 ~ 120		LN25 ~ 26
Adjustable Proscenium Stage/L	121 ~ 124	3kW	
	125 ~ 128		
	129 ~ 132		
	133 ~ 136		
Adjustable Proscenium Stage/R	137 ~ 140	3kW	
	141 ~ 144		
	145 ~ 148		
	149 ~ 152		
Above Left Stage Rear Cable Reel	153 ~ 160	3kW	
	161 ~ 168		
	169 ~ 176		
Gallery S.L.	177 ~ 180	3kW	
	181 ~ 184		LN55 ~ 56
	185 ~ 188		
	189 ~ 192		LN57 ~ 58
Gallery S.R.	193~ 196	3kW	
	197 ~ 200		LN59 ~ 60
	201 ~ 204		
	205 ~ 208		LN61 ~ 62
Gallery Rear Stage	209 ~ 212	3kW	
	213 ~ 216		LN63 ~ 64
	217 ~ 220		
	221 ~ 224		LN65 ~ 66
Stage Grid Area	321 ~ 328	3kW	
	329 ~ 336	3kW	
	337 ~ 344	3kW	
	345~ 352	3kW	LN93 ~ 94
	353~ 360		LN95 ~ 96
	361 ~ 368	3kW	LN97 ~ 98
	369 ~ 376		
	377 ~ 384	3kW	LN99 ~ 100
	385 ~ 392		
	393 ~ 400	3kW	LN101 ~ 102
	401 ~ 408		
	409 ~ 416	3kW	LN103 ~ 104
	417 ~ 424		
	425 ~ 432	3kW	LN105 ~ 106
	433 ~ 440		
Down Stage/L	443 ~ 446	5kW	
Down Stage/R	449 ~ 452	5kW	
Up Stage/L	453 ~ 456	5kW	
UP Stage/R	461 ~ 464	5kW	
Gallery S.L.	441 ~ 442	5kW	

	465 ~ 468	5kW	
Gallery S.R.	447 ~ 448	5kW	
	457 ~ 460	5kW	
Rear Stage	469 ~ 470	5kW	

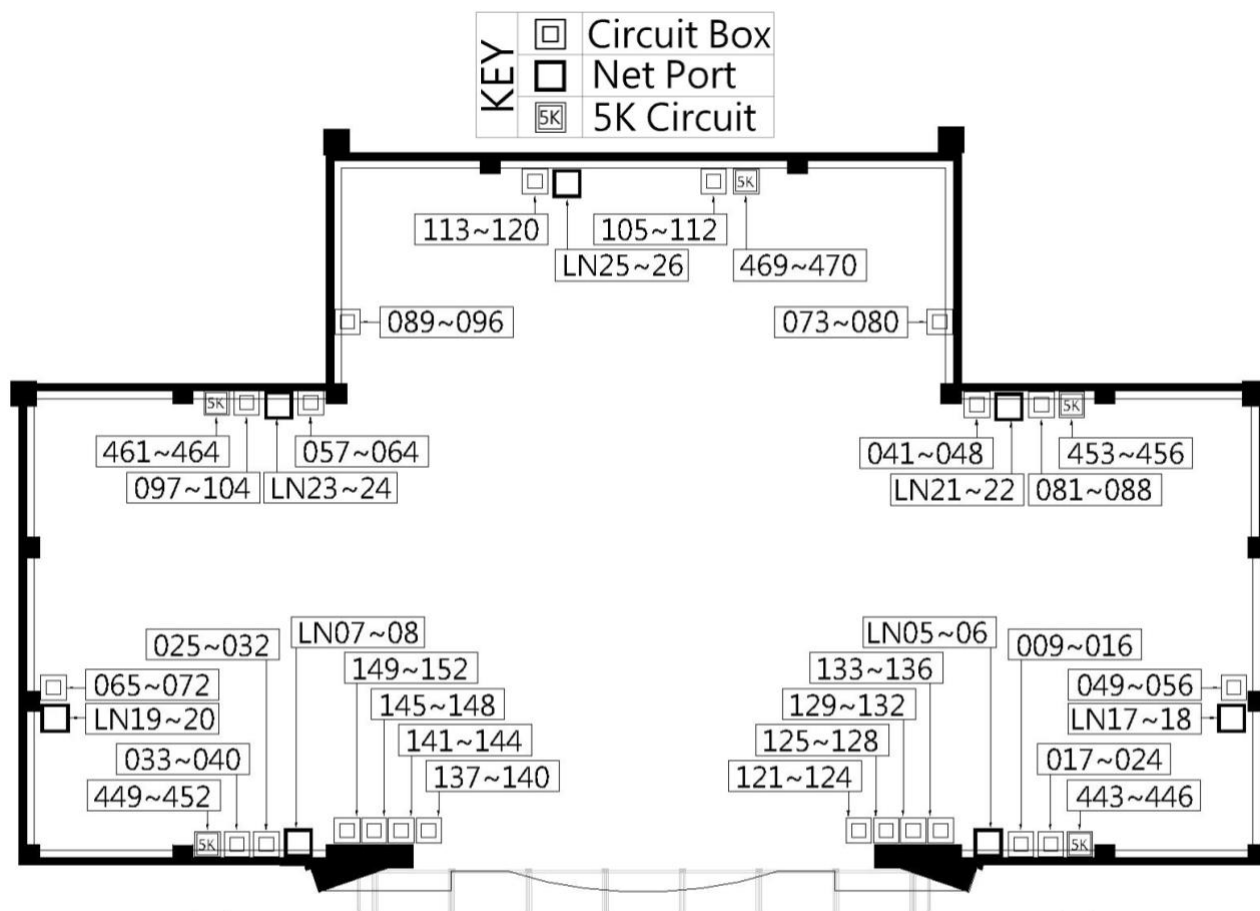


Figure 2.3.1- Stage Area Circuit Layout

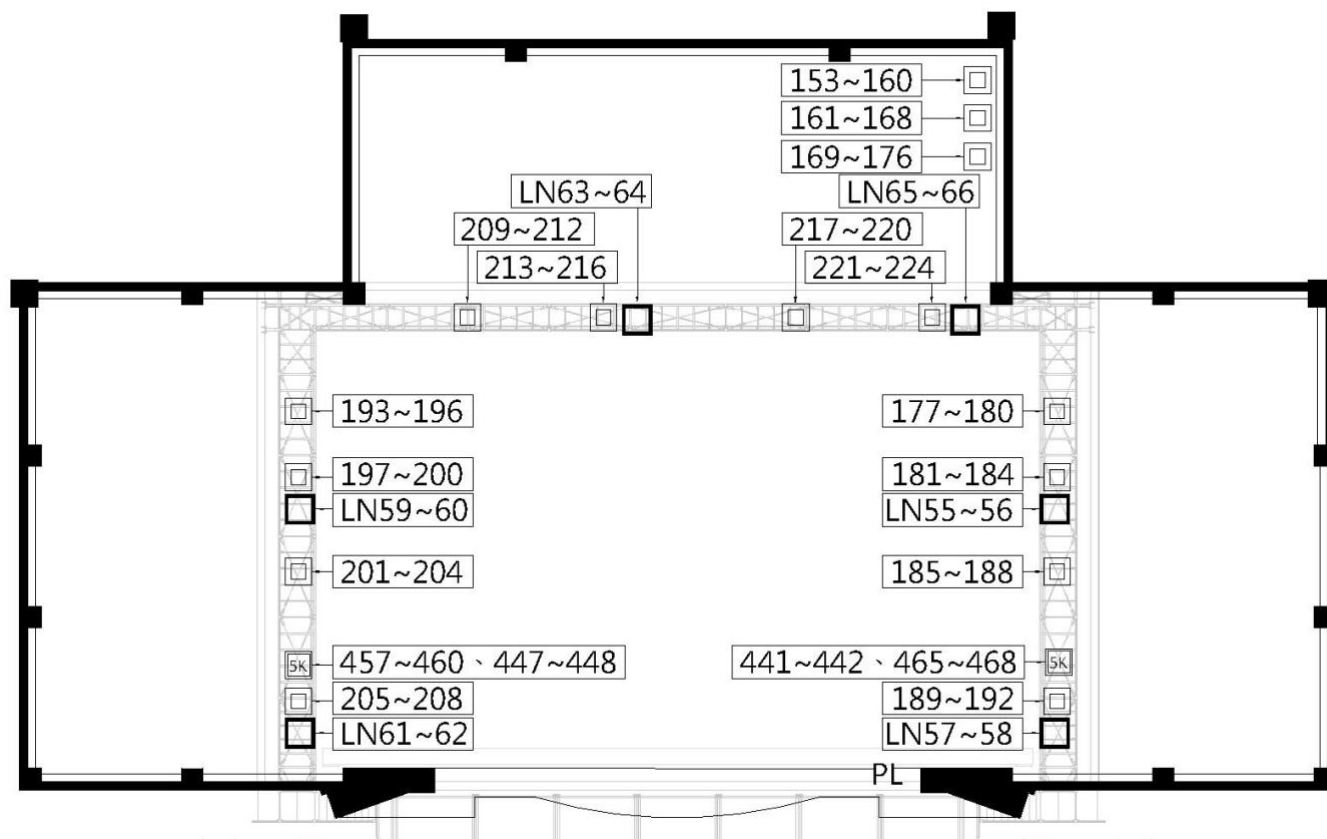


Figure 2.3.2- Gallery Circuit Layout

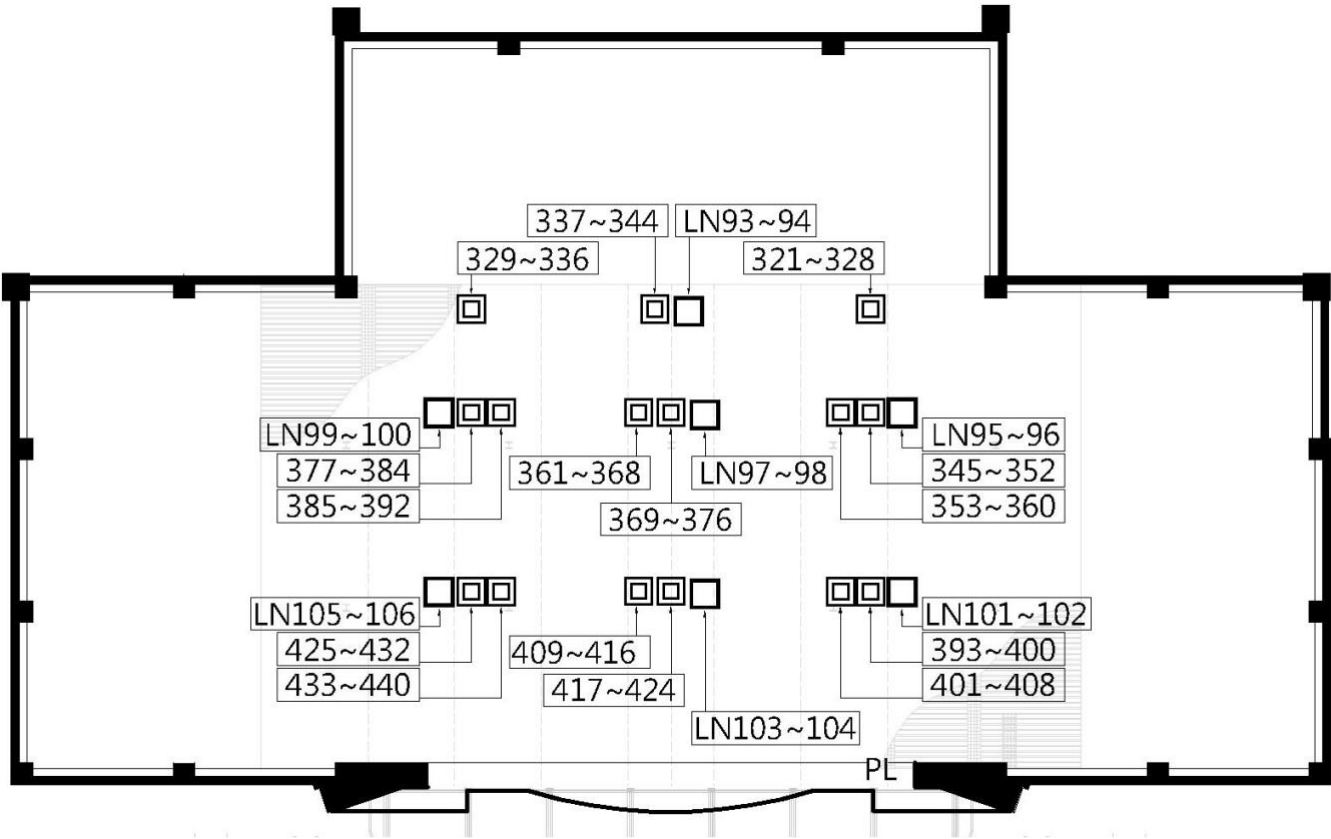


Figure 2.3.3- Grid Area Circuit Layout

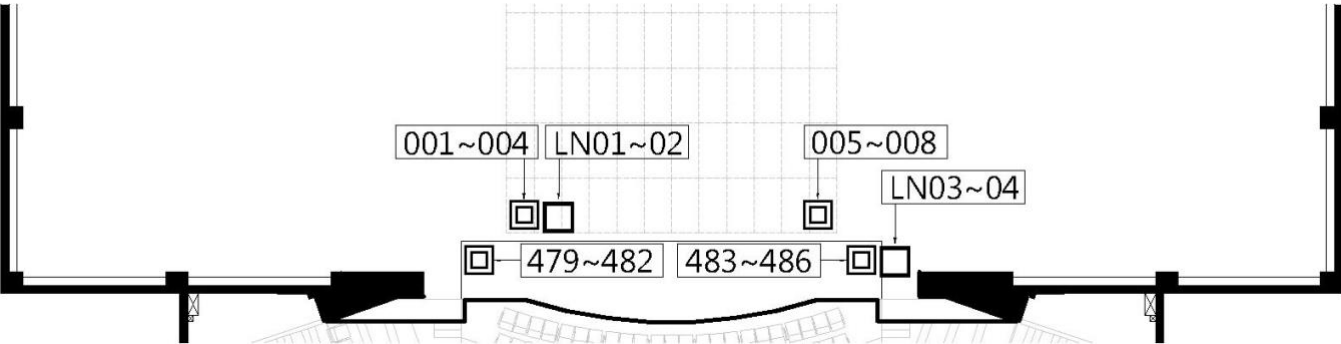


Figure 2.3.4- Stage Traps Room and Orchestra Pit Elevation Platform Circuit Layout

2-3-2 Front of House

Area and Position	Dimmer Circuit No.	Load	Network Circuit No.
Tension Grid 1(Up)	225 ~ 228	3kW	
Tension Grid 1(Center)	229 ~ 232	3kW	
Tension Grid 1(Down)	233 ~ 236	3kW	
Tension Grid 2(Up)	273 ~ 280	3kW	LN71 ~ 72
Tension Grid 2(Center)	281 ~ 288	3kW	LN73 ~ 74
Tension Grid 2(Down)	289 ~ 296	3kW	LN75 ~ 76
Tension Grid 3(Up)	237 ~ 240	3kW	
Tension Grid 3(Center)	241 ~ 244	3kW	
Tension Grid 3(Down)	245 ~ 248	3kW	
Tension Grid 4(Up)	249 ~ 252	3kW	
Tension Grid 4(Center)	253 ~ 256	3kW	
Tension Grid 4(Down)	257 ~ 260	3kW	
Tension Grid 5(Up)	297 ~ 304	3kW	LN77 ~ 78
Tension Grid 5(Center)	305 ~ 312	3kW	LN79 ~ 80
Tension Grid 5(Down)	313 ~ 320	3kW	LN81 ~ 82
Tension Grid 6(Up)	261 ~ 264	3kW	
Tension Grid 6(Center)	265 ~ 268	3kW	
Tension Grid 6(Down)	269 ~ 272	3kW	
Auditorium Aisle	471 ~ 474	3kW	LN37 ~ 38
	475 ~ 478		LN39 ~ 40
Orchestra Pit Lift	479 ~ 482	3kW	LN03 ~ 04
	483 ~ 486		
Balcony Rail S.R.	487 ~ 489	3kW	LN67 ~ 68
	490 ~ 492		
	493 ~ 495		
	496 ~ 498		
	499 ~ 501		
	502 ~ 504		
	505 ~ 507		
Balcony Rail S.L.	508 ~ 510	3kW	LN69 ~ 70
	511 ~ 513		
	514 ~ 516		
	517 ~ 519		
	520 ~ 522		
	523 ~ 525		
	526 ~ 528		
Catwalk	529 ~ 531	3kW	LN83 ~ 84 LN85 ~ 86 LN87 ~ 88
	532 ~ 534		
	535 ~ 538		
	539 ~ 542		
	543 ~ 546		
	547 ~ 550		
	551 ~ 554		
	555 ~ 558	3kW	
	559 ~ 562		
	563 ~ 566		

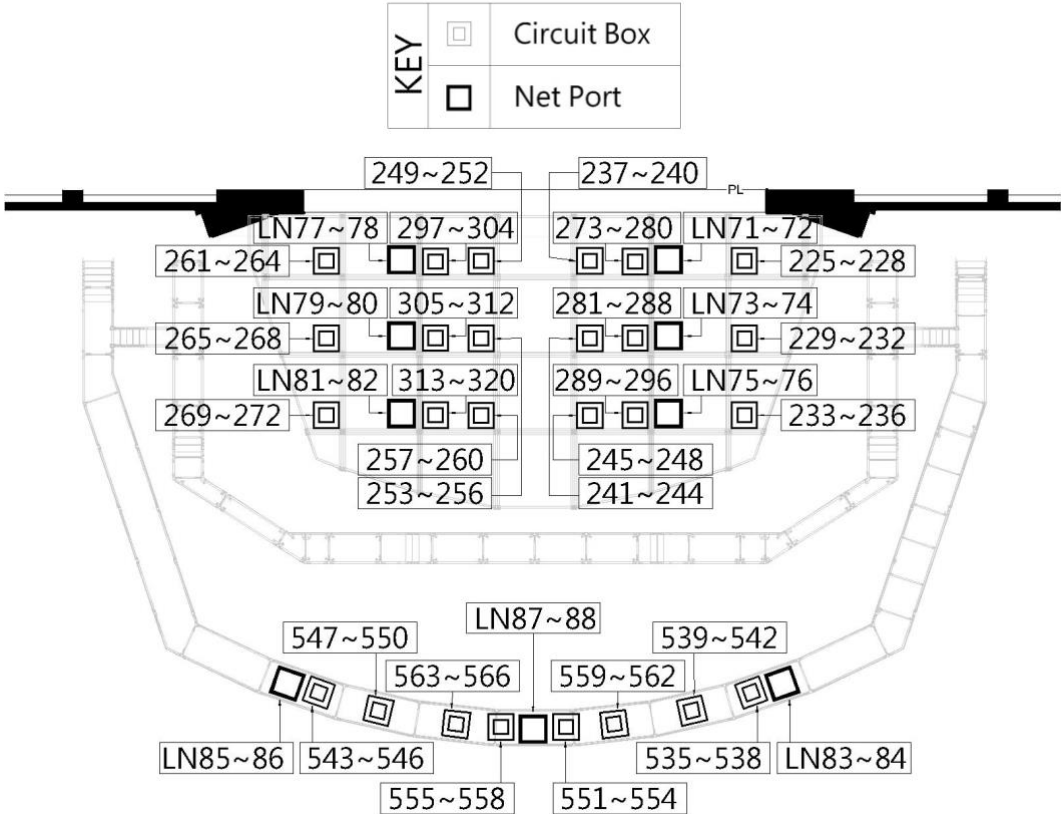


Figure 2.3.5- Tension Grid and Catwalk Circuit Layout

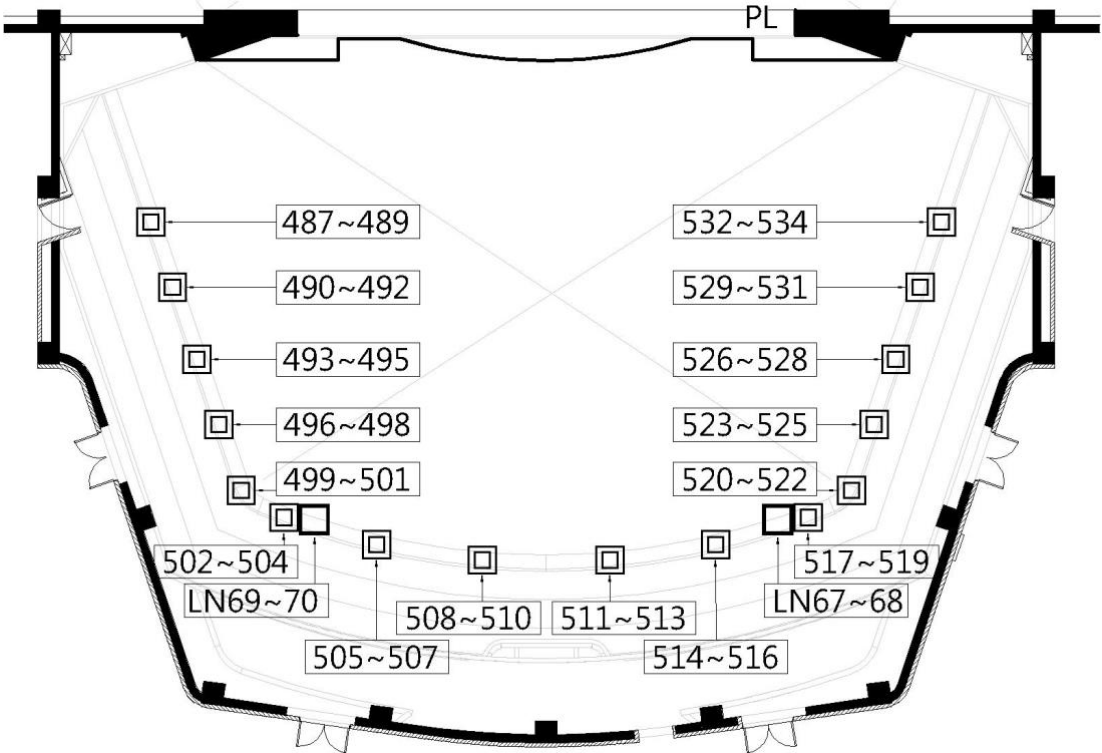


Figure 2.3.6- Balcony Rail Circuit Layout

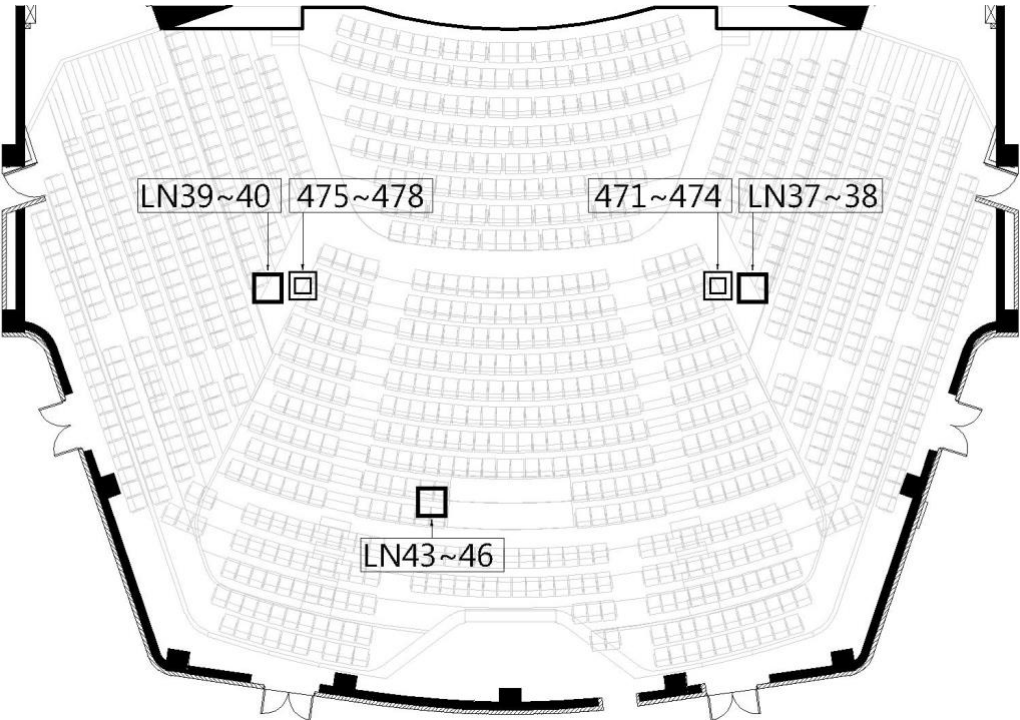


Figure 2.3.7- Auditorium Circuit Layout

2-4 Portable Lift

Brand and Model : Snorkel UL-40 (Battery Power Supply)

Maximum height: 12.1m

Maximum weight: 136kg

Quantity: 1

2-5 Additional Power Supply

Function	Position	Specifications	Quantity
Stage	Down Stage Left / Right	3φ4W+G 380V/220V /60Hz (CEE 125A/3P+N+PE)	1 / 1
Light		3φ4W+G 208V/120V /60Hz (Camlock 250A)	1 / 1
Sound		3φ4W+G 208V/120V /60Hz (Camlock 100A)	1 / 1
Stage	Stage Left / Stage Right /	3φ4W+G 380V/220V /60Hz (CEE 125A/3P+N+PE)	2 / 2 / 1 / 1 / 2
Light	Up Stage Left / Up Stage Right /Rear Stage	3φ4W+G 208V/120V /60Hz (Camlock 250A)	2 / 2 / 1 / 1 / 2

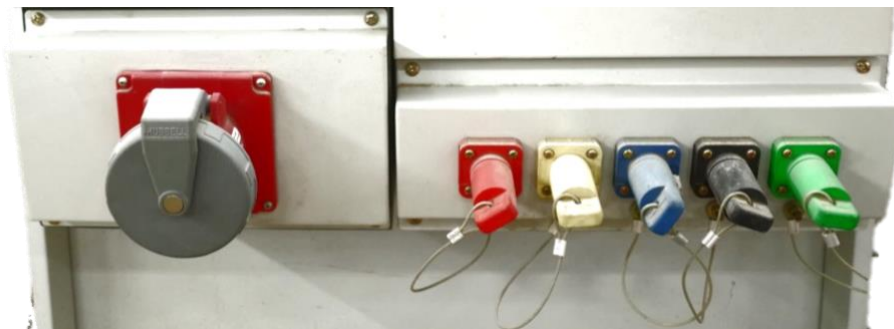


Figure 2.4- Additional Power Supply

2-6 Working Light / House Light / Blackout

Work lights

Work lights provided white and blue light mode, and the control switch is located on the stage manager' s Desk.

Lighting area: Stage, stage Traps room, under Elevation Platform (include machine pit), Orchestra Pit, Gallery, Tension Grid, Stage Grid area, Cat walk and seat storage room.

Auditorium lights

Auditorium lights consists houselights and step lights, which can be separately controlled and dimmed. The control panel is located on the stage manager' s Desk and lighting control room.

Blackout

In accordance with government Fire Services Act, there are many of emergency lights in the venue. We cannot extinguish the emergency lighting for any performance, there will be the minimal lighting levels in the auditorium and backstage areas.

3 Audio/Video Systems

3-1 Audio Facilities

Item	Quantity	Brand and Model	Paid Item
Main speaker(Left and right channels)	4	Renkus-Heinz STX2/64	
Main speaker (Center channel)	3	Renkus-Heinz STX2/64	
Left and right channel auxiliary speaker	2	Renkus-Heinz STX2/94	
3F Auditorium auxiliary speaker (Center)	4	Renkus-Heinz STX2/94	
3F Auditorium auxiliary speaker (Left and right)	4	Renkus-Heinz CA/CX121	
Subwoofer	4	Renkus-Heinz BPS15-2K	
Surround speakers	16	Renkus-Heinz PNX81/12	
Stage front speakers	12	Renkus-Heinz CFX 41	
12" Stage Active speaker	2	Renkus-Heinz PN121/9	
15" Stage Active speaker	2	Renkus-Heinz PN151/9	
12" Stage Active speaker	8	Renkus-Heinz PN121M/12	*
6.5" Stage Active speaker	6	Renkus-Heinz PN61	*
Dual channel Equalizer	4	BSS FCS960	*
Digital I/O Fiber Module	2	Studer D21M	
Follow RM. speakers	2	Dynaudio BM compact MkIII	
Movable auxiliary speaker	2	Renkus-Heinz PNX151T/9A Renkus-Heinz DRS18-1B LabGruppen PLM10000Q	
Stereo audio converter	1	Whirlwind PCUSB 2-Channel USB Direct Box	

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-2 Control Room

Item	Quantity	Brand and Model	Paid Item
Master Digital Mixer (Control Room standard configuration)	1	Studer Vista 9 M2 QS	
Digital Mixer	1	Soundcraft Vi4	*
Digital I/O Fiber Module	1	Studer D21m	
CD Player	1	Tascam CD-500B	*
CD-R Player	1	Tascam CD-RW 901 MKII	*
Dual channel Digital Effects	2	Eventide Eclipse V4	
Multitrack Recording equipment	1	JoeCo BBR1D+2.5" USB 1TB HD	*
Dual track Hard disk recorder	1	Tascam DA 3000	*
Active speaker	2	Dynaudio BM12 MkIII	

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-3 Stage Manager' s Console

The stage manager' s console is equipped with a near-field monitor speaker,stage video monitors ,synchronous show screens with lighting and flying system controller ,communication system and live announcements to individual space in backstage.

3-4 Machine Room

Item	Quantity	Brand and Model	Note
Digital Audio Management	1	Studer D21M (Studer Score Live)	
Audio Control Manager Switch	1	HP 1410-24	
Digital I/O Fiber Module	1	Studer D21M	

3-5 Microphone

Item	Quantity	Brand and Model	Paid Item
Dynamic microphone	4	Audio Technica AE4100	*
Condenser microphone	4	Audio Technica AE5400	*
Dynamic microphone	8	Audio Technica ATM250	*
Cardioid Condenser microphone	6	Audio Technica AT4021	*
Gradient Condenser microphone	4	Audio Technica BP4073	*
Cardioid Condenser Boundary Microphone	4	Audio Technica U851R	*
Stage reception Microphone	4	DPA 4017B / DPA UA 0836 Holders	
Hypercardioid Condenser microphone	6	AKG CK63-ULS+C480B	*
Cardioid condenser microphone	6	AKG CK61-ULS+C480B	*
Wireless microphone	4	Sennheiser SKM500G3+MME865	*
Mini wireless microphone	12	Sennheiser SK500G3+MKE2	*
Single channel wireless microphone receiver	16	Sennheiser EW500G3	
Wireless microphone wave antenna	2	Sennheiser AD3700	
Wave antenna distributor	3	Sennheiser ASA1	

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-6 Communications

Item	Quantity	Brand and Model	Paid Item
Intercom host machine (Matrix 32 x 32)	1	Clear-Com Eclipse HX-Delta	
System interface	1	Clear-Com Helixnet HMS-4X	
Double circuit intercom	8	Clear-Com Helixnet HBP-2X	
Fixed intercom microphone/ speak	2	Clear-Com V12PDXY 110 / 340 Clear-Com V12PDDXY 110 / 340	
Single head receiver microphone	8	Clear-Com CC-300	
Double head receiver microphone	4	Clear-Com CC-400	
Telephone intercom	2	Clear-Com HS-6	
Digital Wireless Intercom set	8	1. Portable wireless sub-station / Clear-Com FSII-BP 2. Single-ear headset / Clear-Com CC-300	*

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-7 Locations of Communications

Each floor is paired with intercom system, 34 units in total.

No.	Floor	Location
1	B1F	Orchestra area
2		Orchestra area
3		Orchestra area
4		Stage trap area
5		Rest room
6	1F	Stage left
7		Stage right
8		Upstage left
9		Upstage right
10		Rear stage
11		Stage left proscenium
12		Stage right proscenium
13		Loading Dock
14		Left downstage
15		Right downstage
16		Dressing room 01
17		Dressing room 02
18		Dressing room 03
19		Dressing room 04
20		Sound room
21	2F	Auditorium control area
22		Control room
23		Control room
24	2MF	Stage right work corridor
25		Stage left work corridor
26		Rear stage work corridor
27		Floor leading edge
28	3F	Right tension
29		Left tension
30		Dimmer room
31		Amplifier room
32	4F	Follow room
33		Winch room
34		Catwalk

3-8 Stage Cameras and Video Surveillance Systems

Stage monitors are installed in right and left stage entrances, first, second, and third floor lobbies, master and secondary control rooms, dressing rooms and green rooms.

Item	Quantity	Brand and Model	Paid Item
Camera (2/3 inch 3CCD)	1	Panasonic AW-HE870 Panasonic LZ20M85G	
Remote control	1	Panasonic AW-RP50	
Switcher	1	Panasonic AW-RP120	
Camera	1	Panasonic AW-HE60SN	
Infrared camera	1	AIDA GEN3G-200	
Video recording	Show	Fixed camera for stage panoramic view recording, only suitable for archived copy.	

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-9 Paging Systems

Backstage Paging Systems

There are four venues individually Backstage Paging Systems in National Kaohsiung Center for the Arts. For Playhouse paging available to all dressing rooms, green rooms, Company office and passage, it can also available paging to separately 5 zones. The Paging and Program position is located on the stage manager's console.

Zone 1 : 1042 Company office-01 、1050 Company office-02 、1050A Company office-03

Zone 2 : Toilet(1031 、1032 、1060 、1061) 、Corridor (1028 、1049 、1051 、1064 、1066 、1072 、1091)

Zone 3 : Passage B1018

Zone 4 : 1034 Dressing Room-01 、1036 Dressing Room-02 、1038 Dressing Room-03 、1040 Dressing Room-04 、1029 Green room-01 、1033 VIP Room

Zone 5 : B1020 Dressing Room-07 、B1025 Green room-02 、B1026 Dressing Room-08 、B1028 Dressing Room-09 、B1043 Dressing Room-10 、B1043A Dressing Room-11

Zone A : 1054 Dressing Room-05 、1056 Dressing Room-06

Zone B : 1058 VIP Room

3-10 Projector

Item	Quantity	Brand and Model	Paid Item
20000 Ansi Projector	2	Digital Projection Titan Super Quad 1080p	*
Wide-angle lens(Prime)	2	0.67:1 fixed HB Lens (Optimised focus range:1.1m-10m)	
Normal lens(Zoom)	2	1.87-2.56:1 zoom HB Lens (Optimised focus range:4m-24m)	
Telephoto lens(Zoom)	2	2.56-4.16:1 zoom HB Lens (Optimised focus range:9.1m-45m)	

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-11 Projector connections

Video & Computer			Communication & Control		
Type	Connector	Quantity	Type	Connector	Quantity
Qty DVI-D / DVI-A	DVI-I	1	3D Sync Out	BNC	1
HDMI 1.3	HDMI	1	3D Sync In	BNC	1
3G-SDI	BNC	1	LAN	RJ45	1
VGA/ Analog RGB	15-pin D-Sub	1	RS232	9-pin D Sub	1
Component Video	4 x BNC	1	Wired Remote In	3.5mm Stereo Jack	1
S-Video	4-pin Mini DIN	1	Wired Remote Out	3.5mm Stereo Jack	1
Composite Video	RCA	1	Update Port	RJ45	1
Composite Video	BNC	1	Service Port	USB Type B	1

3-12 Subtitle

Item	Quantity	Brand and Model	Paid Item
LED Subtitle display screen	1 / 12 pieces in total	1. 12 Panasonic(TH-55LFV70W) 、2 Laptop 、1 Switcher 2. Include installation 3. After second performance will discount 50% 4. Shared with Playhouse	*

* Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

4 Backstage

4-1 Dressing Room and Green Room · Company office

No.	Floor	Room No.	Name	Capacity	Notes
1	1	1029	Green room 01	15	Includes upright piano, table and chairs, sofa
2		1034	Dressing room 01	3	Includes mirror, table and chairs, toilet and shower
3		1036	Dressing room 02	3	Includes mirror, table and chairs, toilet and shower
4		1038	Dressing room 03	3	Includes mirror, table and chairs, toilet and shower
5		1040	Dressing room 04	3	Includes mirror, table and chairs, toilet and shower
6		1042	Company office 01	10	Includes table and chairs, sofa
7		1050	Company office 02	10	Includes table and chairs.
8		1050A	Company office 03	10	Includes table and chairs.
9		1054	Dressing room 05	8	Includes mirror, table and chairs, toilet and shower
10		1056	Dressing room 06	8	Includes mirror, table and chairs, toilet and shower
11	B1	B1020	Dressing room 07	26	Includes mirror, table and chairs, toilet and shower
12		B1025	Green room 02	25	Includes table and chairs, sofa
13		B1026	Dressing room 08	14	Includes mirror, table and chairs, toilet and shower
14		B1028	Dressing room 09	14	Includes mirror, table and chairs, toilet and shower
15		B1043	Dressing room 10	12	Includes mirror, table and chairs and toilet
16		B1043A	Dressing room 11	12	Includes mirror, table and chairs and toilet

4-2 Orchestra Facilities

No.	Item	Quantity		Notes
1	Chair	100	*	
2	Ensemble stool	12	*	
3	Conductor' s chair	1		
4	Music stand	90	*	
5	Music stand light	110	*	White light, two brightness mode
6	Conductor' s podium(single layer)	1	*	WENGER L 120cm x W 115cm x H 25cm
7	Conductor' s stand	1	*	
8	Percussion table stand	4	*	
9	Acoustic shield	5	*	
10	Music stand Tray	10	*	
11	Endpin stopper	10	*	
12	Solo Musician' s PODIUM 130*60*16(cm)	2	*	
	Solo Musician' s PODIUM 100*60*16(cm)	2	*	
	Solo Musician' s PODIUM 130*60*30(cm)	10	*	
	Solo Musician' s PODIUM 100*60*30(cm)	8	*	

Items with * mark are shared with Opera House

4-3 Pianos (shared between four theatres)

No.	Item	Brand	Model Number	Quantity	Notes
1	Model-D Concert grand	Steinway & Sons	D-274	3	*
2	Concert grand	FAZIOLI	F308	1	*
3	Grand Piano	YAMAHA	C7XPE	1	*
4	Grand Piano	KAWAI	SK-6L	1	*
5	Celesta	Schiendmayer	5 ½ Octave Studio model	1	*
6	Harpsichord	J.C.NEUPERT	Hemsch	1	*
7	Upright Piano	YAMAHA	U3	1	*

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

Important :

Pianos shared with four venues, booking in advance is required.

WeiWuYing's contract-signed piano technician must tune all pianos before performance. (Piano hire fees do not include tuning costs)

While WWY' s piano is in part of the performance, the Fog and Haze Machine can' t be used.

4-4 Loading Dock / Scenery Shipping Path / Loading Flow

4-4-1 West Dock

Playhouse and Opera House use the West Dock for loading and unloading. The dock is equipped with three hydraulic dock leveler that can be adjusted according to the required height.

Dock Dimension

Big loading dock: 7.25m (width) x 4.3m (height)

Small loading dock: 3.5m (width) x 4.3m (height)

Loading entrance and exit: 4.3m height from floor to top (Truck height limit 4.2m)

3.8m height from dock to grid area

Stage entrance and exit: minimum 4m (width) x 3.4m (height)

Height from dock to floor: 0.98m

※Notes for Container Transport:

Due to the limitation of the slope at the entry of the loading dock, the minimum height of the trailer's low bed should be higher than 100cm. Also, if the company hires a 40' high-cube container, the bed rack should be within the height of 135~140cm to accommodate the height of loading gate.

4-4-2 West Dock Handling equipment

2.5mt Electric Forklift x1

1.5mt Stand-Up Automatic Electric Forklift x1

3mt Manual Hydraulic Pallet Jack x2

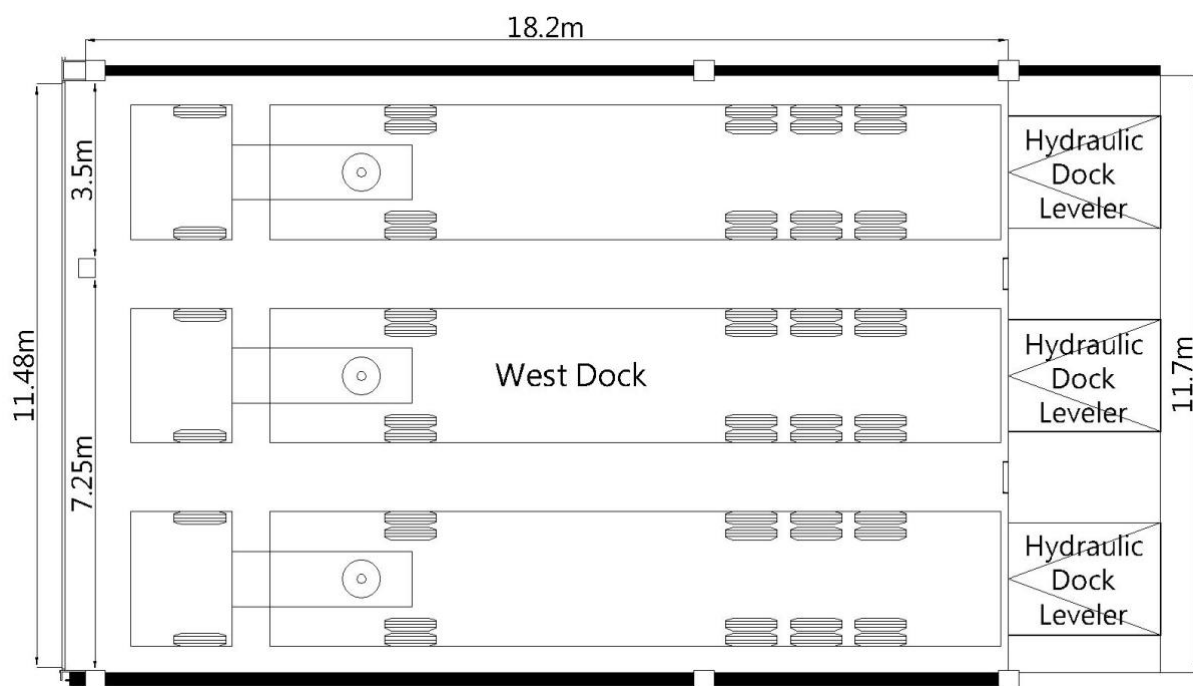


Figure 4.1- West Loading Dock Plan

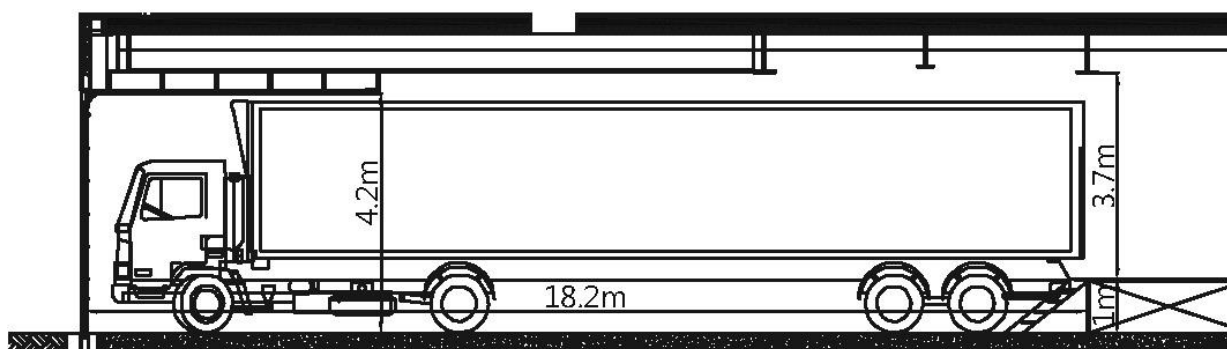


Figure 4.2- West Loading Dock Section

4-4-3 Loading Flow

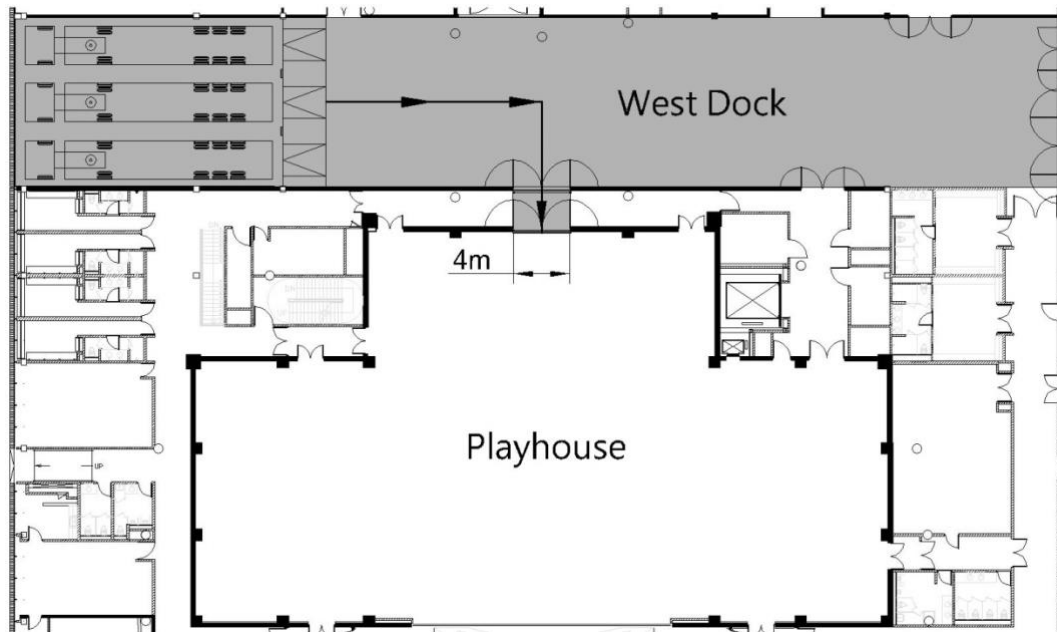


Figure 4.3- Loading Flow

4-4-4 Hydraulic Dock Leveler

Capacity: 22.6mt

Area: 198cm (width) x 221.9cm (length)

Elevation: +/- 30.5cm

Quantity: 3

4-5 Other Facilities

4-5-1 Rehearsal Rooms

There is no rehearsal studio dedicated to the Playhouse. Additional rehearsal space is limited across the WeiWuYing. There are 13 different function and accommodated rehearsal studios, these available for hire between four major theatres .Requests should be discussed well in advance to determine availability. The hire fees please refer to the rate tables of National Kaohsiung Center for the Arts.

Room No.	Name	Dimension (Length x Width x Height / m)	Notes
1171	Rehearsal Studio-01 (Opera House rehearsal room)	16.4x12.3x10.4	1. Grand Piano, Wooden floor covered black color dance floor, Wall mount glassless mirrors x 1 side 2. Capacity : 110
		Subsidiary space 6.9x5.3x3	
1182	Rehearsal Studio-02	11.4x10.8x3.8	1. Wooden floor covered gray color dance floor, Sound absorption wall x 2 side, Wall mount glassless mirrors x 2 side 2. Capacity : 50
1184	Rehearsal Studio-03	11.1x10.8x4	1. Grand Piano, Wooden floor covered gray color dance floor, Sound absorption wall x 2 side, Wall mount glassless mirrors x 2 side 2. Capacity : 50
1186	Rehearsal Studio-04	17.5x12.1x3.9	1. Grand Piano, Wooden floor, black color dance floor, Wall mount glassless mirrors x 2 side, Fixed Ballet barre on the single sided wall mirror x 2 2. Capacity : 110
		Subsidiary space 6.6x8.8 x3	Rehearsal Studio-04 use only Green Room-01(With dressing room)
1192	Rehearsal Studio-05	19.3x12.2x3.9	1. Grand Piano, Wooden floor, black color dance floor, Wall mount glassless mirrors x 2 side, Fixed Ballet barre on the single sided wall mirror x 2 2. Capacity : 110
		Subsidiary space 6.6x8.8 x3	Rehearsal Studio-05 use only Green Room-02(With dressing room)
B1111	Rehearsal Studio-06	8x7.4x2.3	1. Upright piano, Chair, Music stand, Wooden floor, Sound absorption wall 2. Capacity : 25
B1112	Rehearsal Studio-07	5.2x4.4x2.3	1. Chair, Music stand, Wooden floor, Sound absorption wall 2. Capacity : 10
B1113	Rehearsal Studio-08	7.2x5x2.7	1. Chair, Music stand, Wooden floor, Sound absorption wall 2. Capacity : 15
B1114	Rehearsal Studio-09	5.2x3.7x2.7	1. Chair, Music stand, Wooden floor, Sound absorption wall 2. Capacity : 10
B1115	Rehearsal Studio-10	5.2x4.1x2.7	1. Chair, Music stand, Wooden floor, Sound absorption wall 2. Capacity : 10
B1116	Rehearsal Studio-11	5.2 x 4.1 x 2.7	1. Chair, Music stand, Wooden floor, Sound absorption wall 2. Capacity : 10
B304	Chorus Rehearsal Room	15.9x9.9x8.8	1. Grand Piano, Chair, Ensemble stool, Wooden floor, Sound absorption curtain 2. Capacity : 80
B313	Orchestra Studio	18.7x14.3x7.8	1. fixed auditorium < 84seats >, Grand Piano, Chair, Ensemble stool, Wooden floor, Sound absorption curtain 2. Capacity : 200

4-5-2 Carpentry Shop / Costume Shop / Laundry Room

National Kaohsiung Center for the Arts is equipped with basic production facilities, include Carpentry Shop, Costume Shop, and laundry rooms. Those for hire between four major theatres .The hire fees please refer to the rate tables of National Kaohsiung Center for the Arts.

Room No.	Name	Dimension (Length x Width x Height / m)	Notes
1002	Carpentry Shop	8.9x5.8x3	General welding facilities for repairs
1165	Costume Shop-01	5.9x10.2x3	Basic facilities for the maintenance of costume; Sewing machine, overlock machine and steam / iron equipment
1181	Costume Shop-02	5.8x11.8x3	
1163	Laundry Room-01	5.8x4.9x3	Washing machine, tumble dryers, sink and clothes folding table
B1019	Laundry Room-02	6x8.2x3	