

# **ARENA LIGHTING DESIGN**

**JOEY BECKER**

**Towson Arena  
Exterior  
Reception  
Court  
Press Room  
Feedback**



## Towson Arena

Exterior

Reception

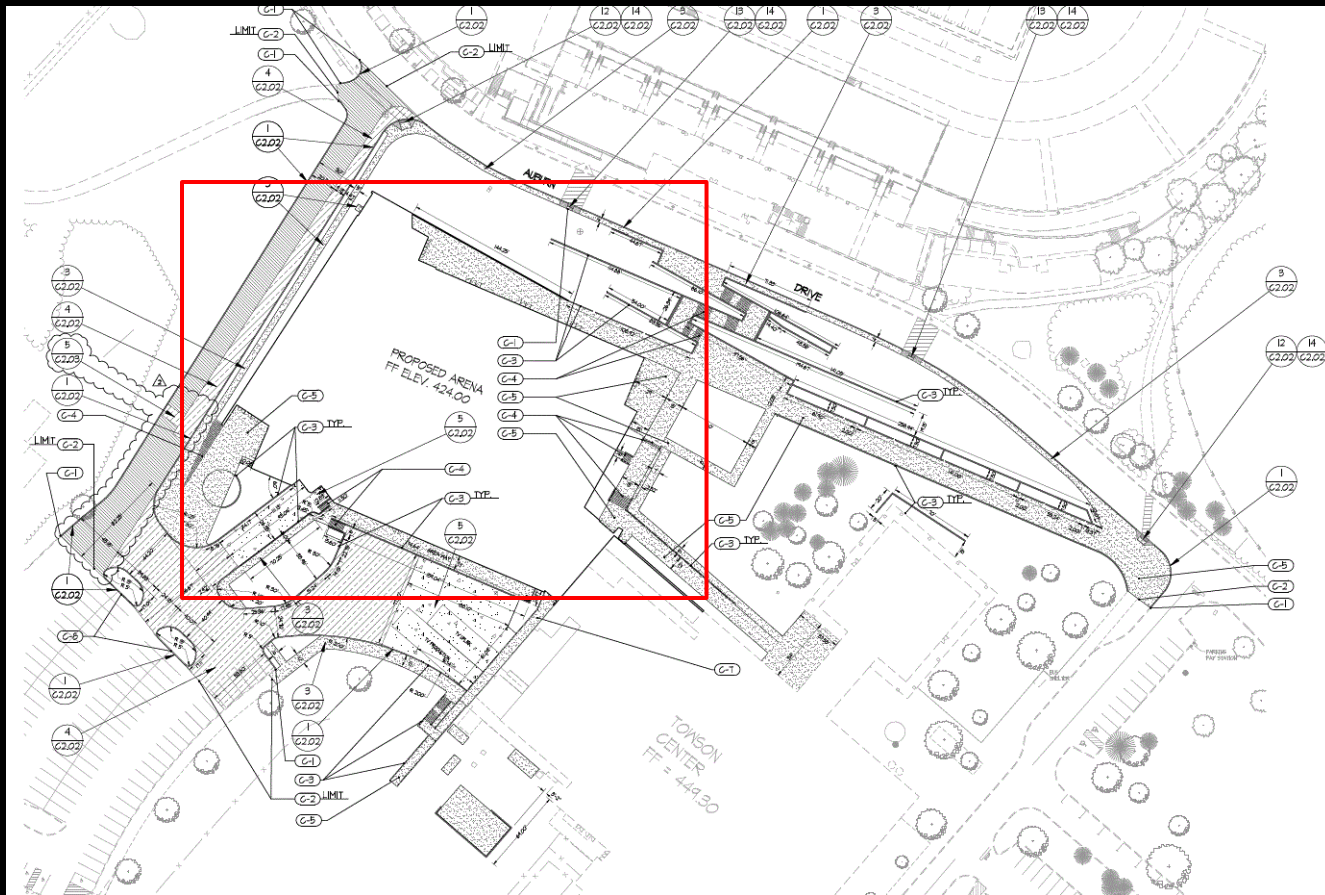
Court

Press Room

Feedback

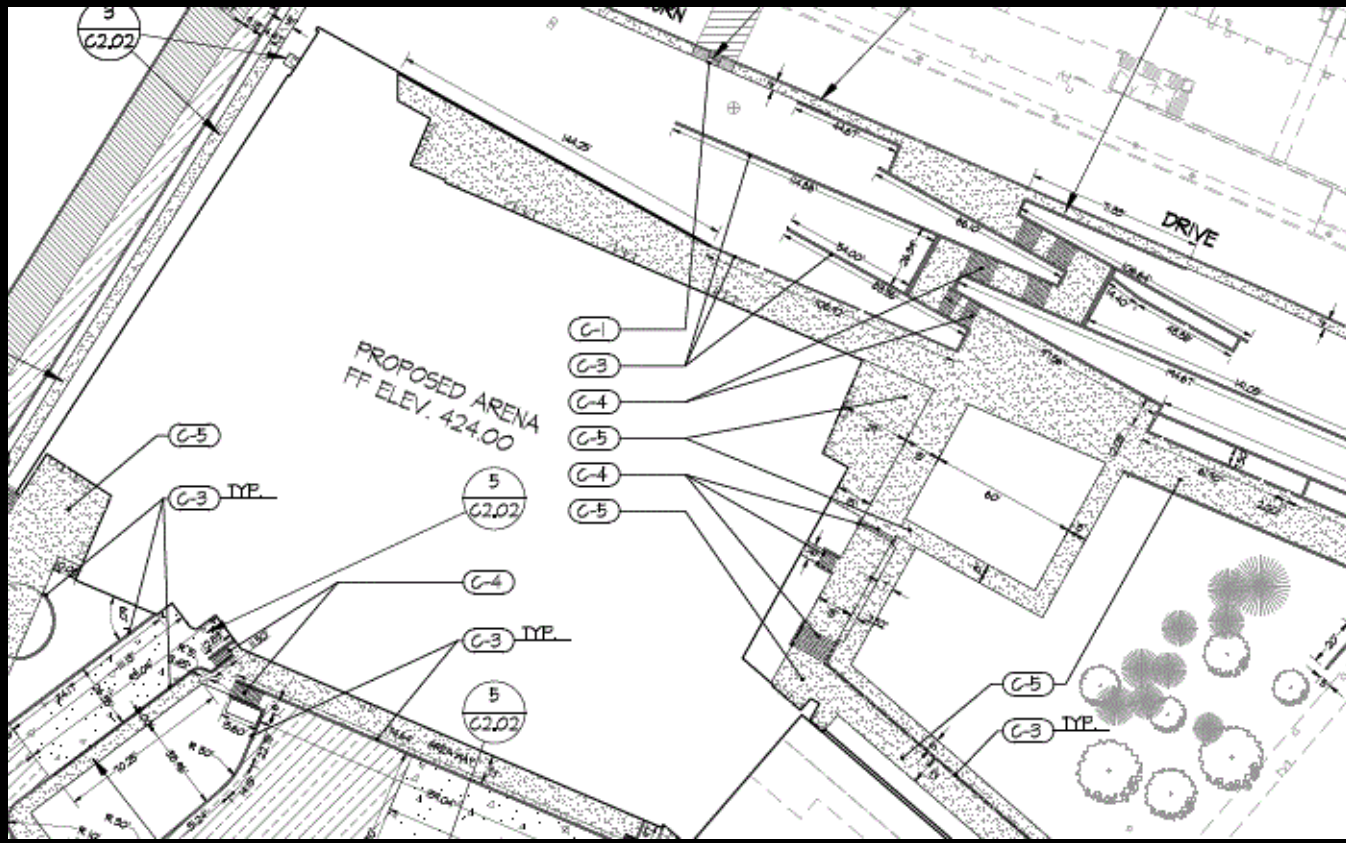
# TOWSON ARENA

## BASKETBALL



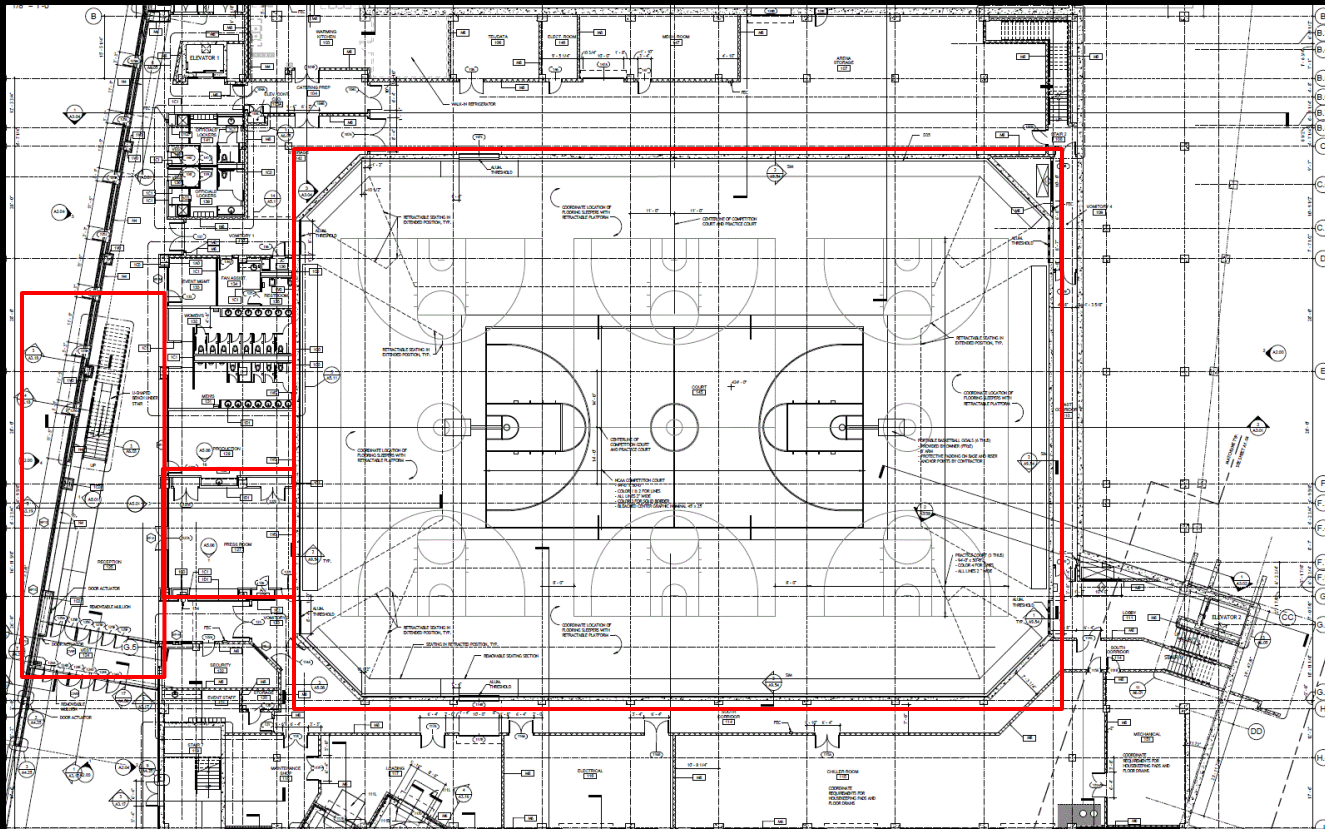
Towson Arena  
Exterior  
Reception  
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SITE



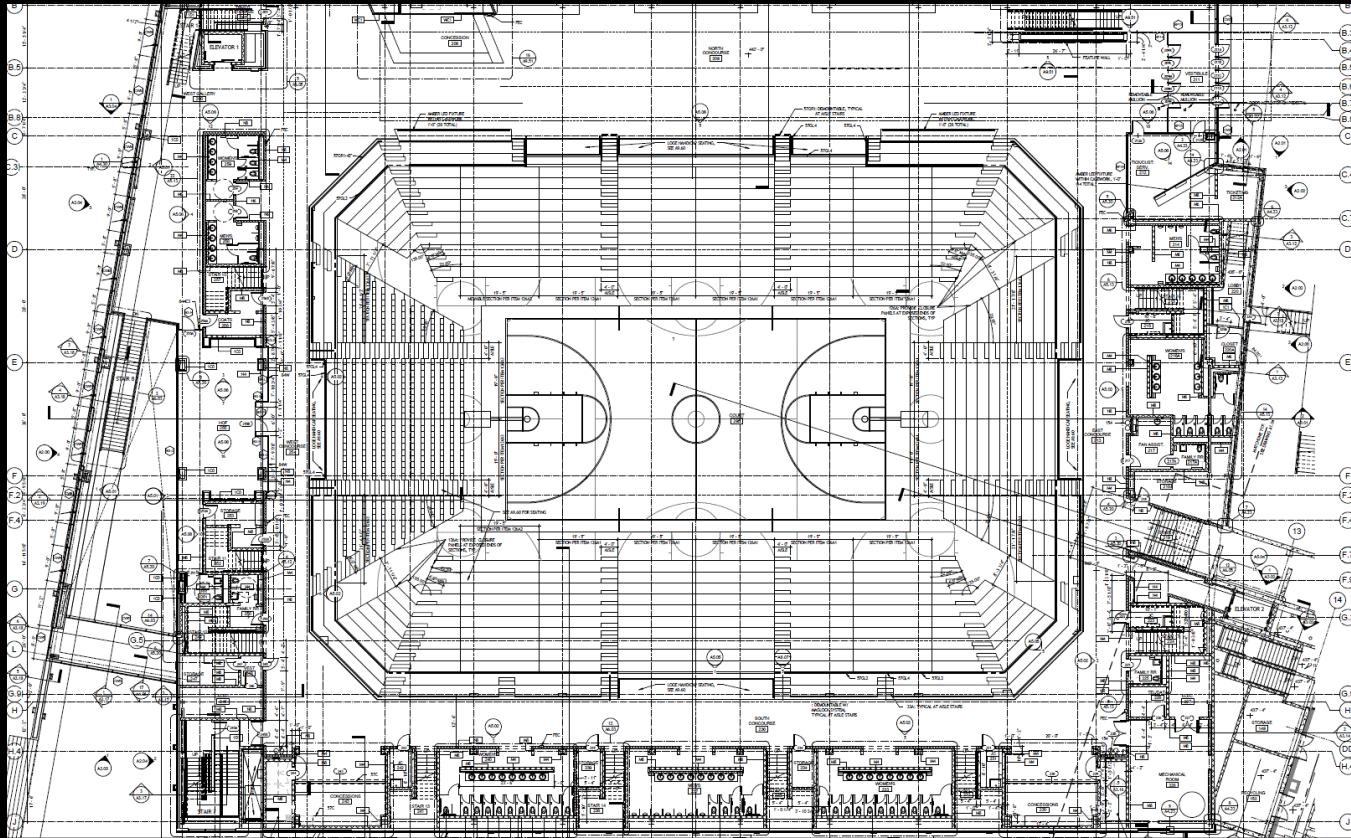
**Towson Arena**  
Exterior  
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**SITE**



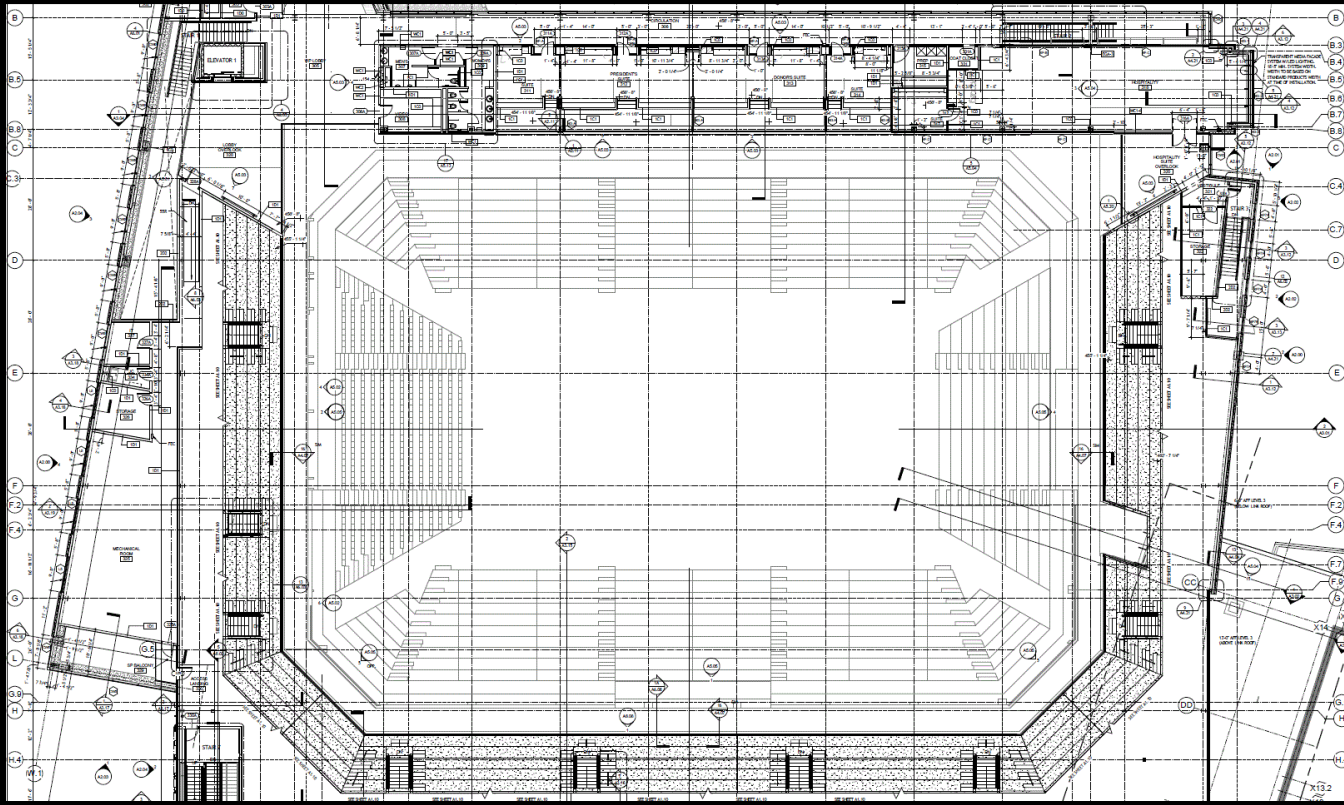
Towson Arena  
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1<sup>ST</sup> FLOOR



Towson Arena  
Exterior  
Reception  
Court  
Press Room  
Feedback

2<sup>ND</sup> FLOOR



Towson Arena  
Exterior  
Reception  
Court  
Press Room  
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3<sup>RD</sup> FLOOR



Towson Arena  
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# EXTERIOR



# Goals

Safety for Egress

Guide the User

Socially Friendly Environment

Facial Recognition

Periphery Accent Lighting



# EXTERIOR

Towson Arena

Exterior

Reception

Court

Press Room

Feedback

Lighting Zones	LZ0-4
Lighting Zone 4	High Ambient Lighting
Lighting Zone 3	Mod. High Ambient Lighting
Lighting Zone 2	Moderate Ambient Lighting
Lighting Zone 1	Low Ambient Lighting
Lighting Zone 0	No Ambient Lighting

Recommended Eh	8 lux Outdoor Plaza
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# EXTERIOR DESIGN CRITERIA

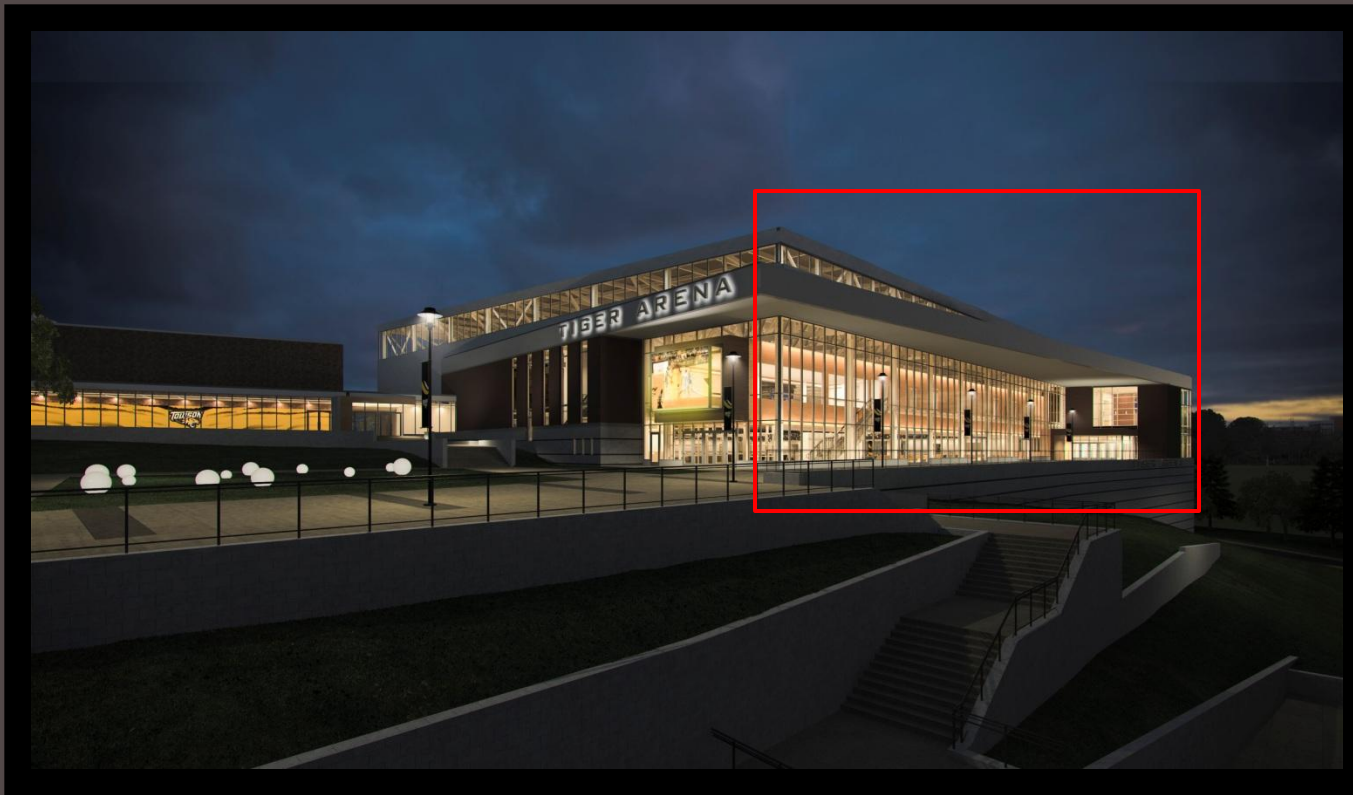
Towson Arena  
Exterior  
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Lighting Zone 3	High Ambient Lighting
Limit in Lux	
Pre-curfew	Post-curfew
8	3



# EXTERIOR DESIGN CRITERIA

Towson Arena  
Exterior  
Reception  
Court  
Press Room  
Feedback



Towson Arena  
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Press Room  
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# EXTERIOR

## DESIGN CRITERIA

### CANOPIED ENTRY

Lighting Zone 3	High Ambient Lighting	
Eh @ grade	40 lux	
Ev @ 5' AFG	20 lux	
Max:Avg	4:1	
Avg:Min	Eh 2:1	Ev 4:1

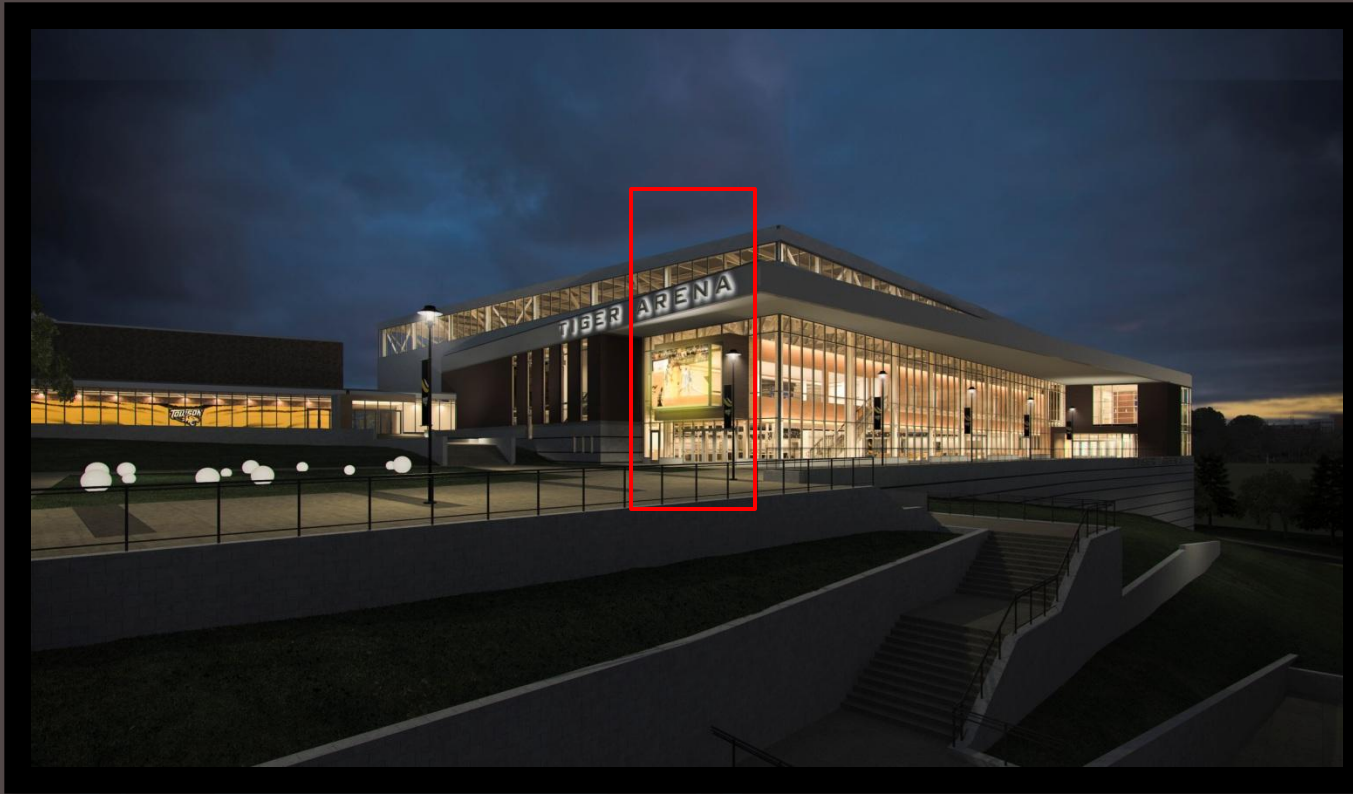


# EXTERIOR

## DESIGN CRITERIA

### CANOPIED ENTRY

Towson Arena  
Exterior  
 Reception  
 Court  
 Press Room  
 Feedback



Towson Arena  
Exterior  
Reception  
Court  
Press Room  
Feedback

# EXTERIOR

## DESIGN CRITERIA

### NON-COVERED ENTRY

Lighting Zone 3	High Ambient Lighting
Eh @ grade	15 lux
Ev @ 5' AFG	8 lux
Max:Avg	3:1

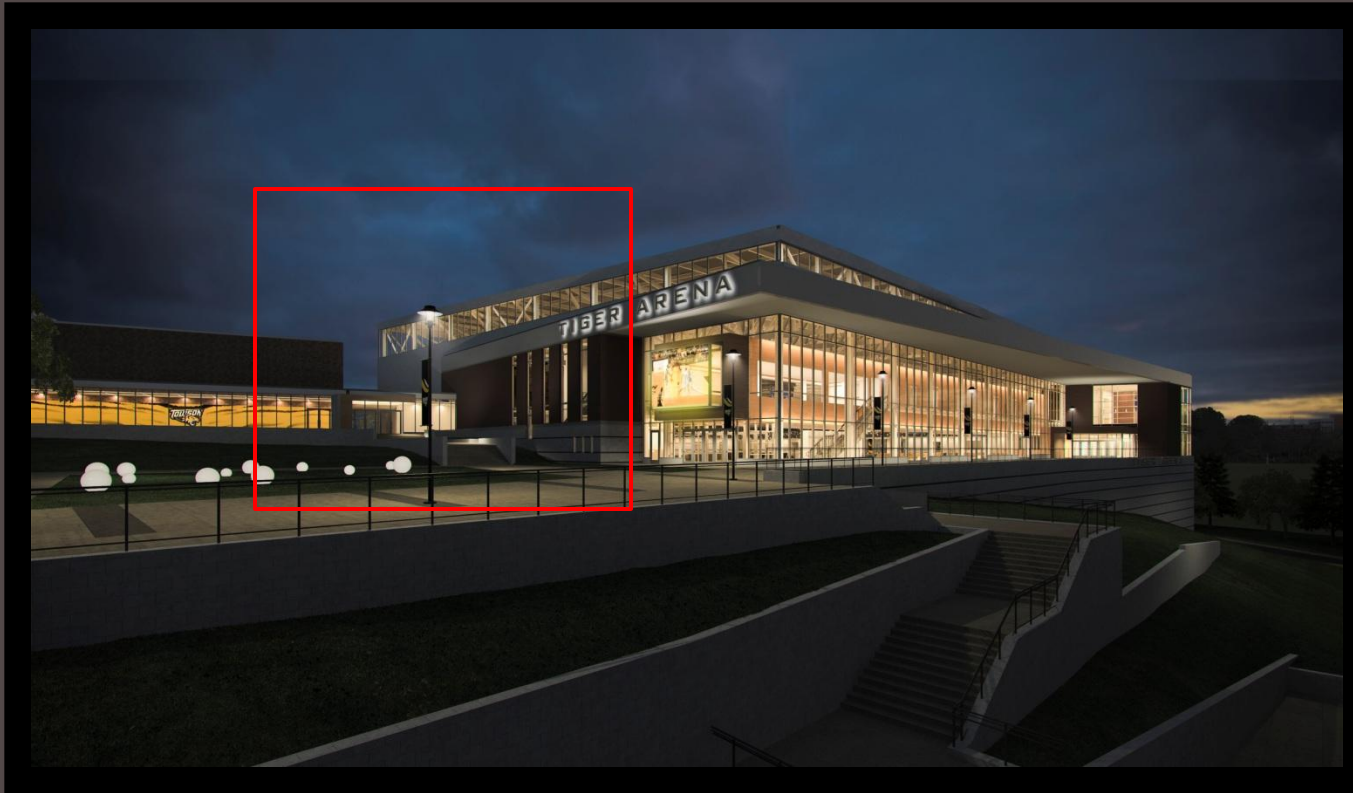


# EXTERIOR

## DESIGN CRITERIA

### NON-COVERED ENTRY

Towson Arena  
Exterior  
Reception  
Court  
Press Room  
Feedback



Towson Arena  
Exterior  
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# EXTERIOR

## DESIGN CRITERIA

### OUTDOOR PLAZA



Lighting Zone 3	High Ambient Lighting
Eh @ pavement	8 lux
Ev @ 5' AFG 2-dir	4 lux
Max:Avg	4:1
Avg:Min	5:1

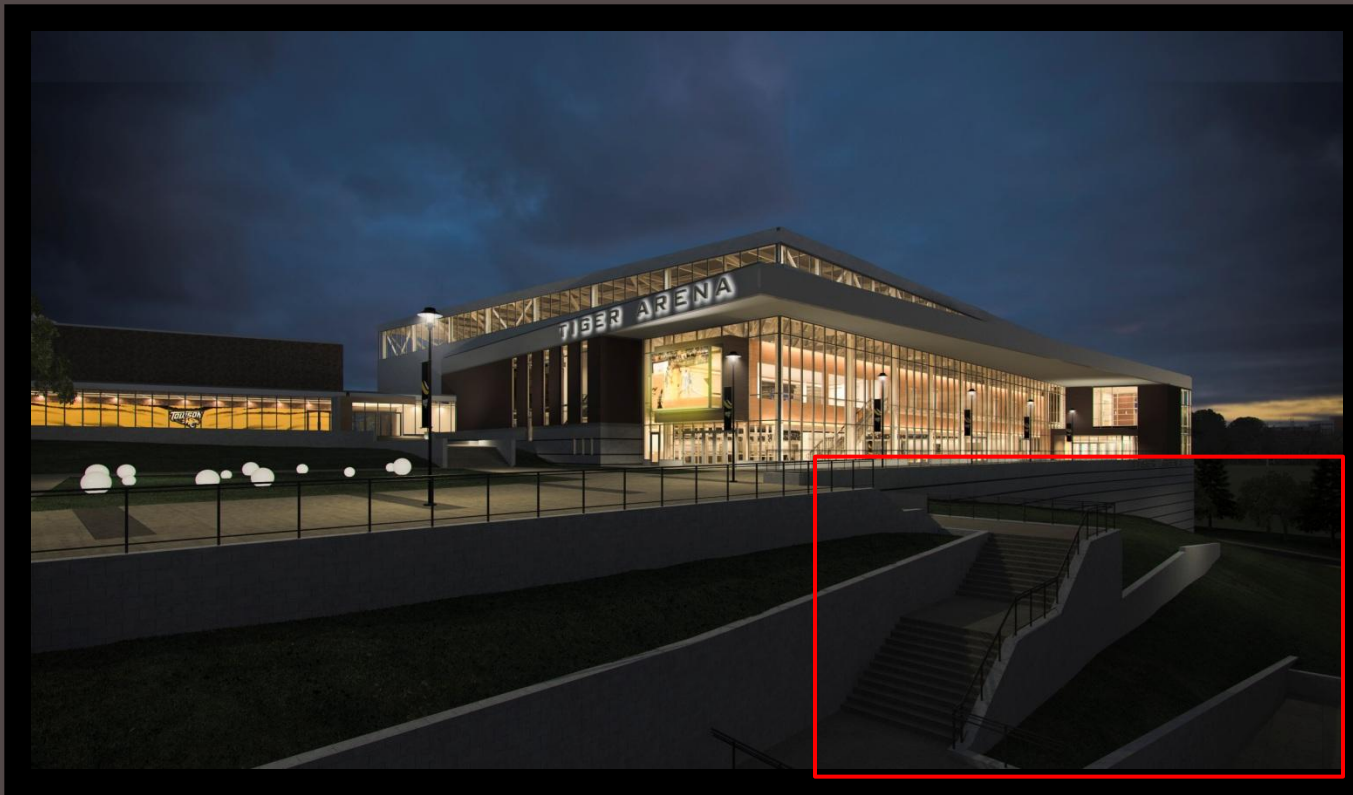


# EXTERIOR

## DESIGN CRITERIA

### OUTDOOR PLAZA

Towson Arena  
Exterior  
Reception  
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Press Room  
Feedback



Towson Arena  
Exterior  
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# EXTERIOR

## DESIGN CRITERIA

### OUTDOOR RAMPS, STAIRS & STEPS

Lighting Zone 3	High Ambient Lighting
Eh @ treads	10 lux
Ev @ 5' AFG 2-dir	6 lux
Max:Avg	4:1
Avg:Min	5:1

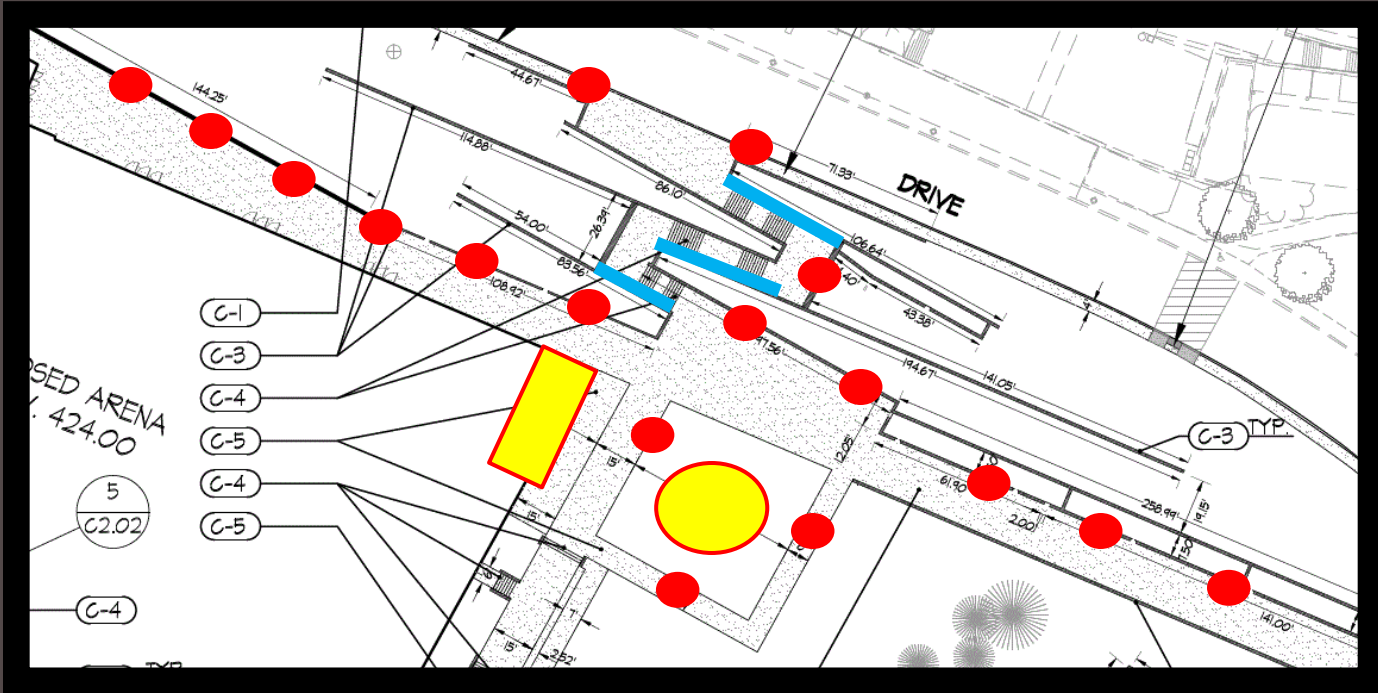


# EXTERIOR

## DESIGN CRITERIA

### OUTDOOR RAMPS, STAIRS & STEPS

Towson Arena  
Exterior  
Reception  
Court  
Press Room  
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Towson Arena  
Exterior  
Reception  
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Feedback

# EXTERIOR SCHEMATIC DESIGN



Lawson Arena  
Interior  
Reception  
Court  
Press Room  
Feedback

CONCEPTUAL DESIGN

flickrriver.com



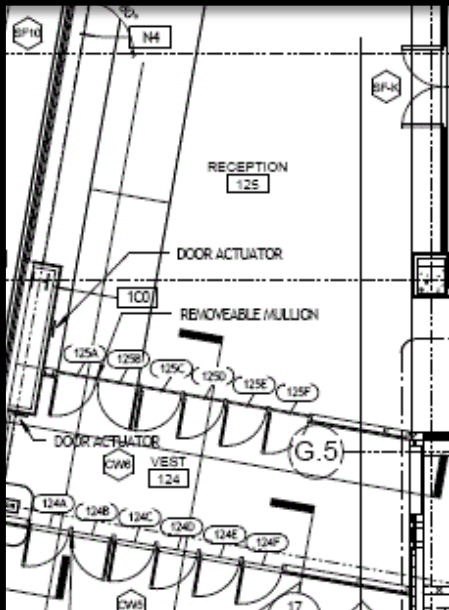
# ERIOR HARDWARE

[moonlightdesign.co.uk](http://moonlightdesign.co.uk)

Towson Arena  
Exterior  
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Towson Arena  
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# RECEPTION

# Goals - 3 Schematic Designs

Safety for Egress

Guide the User – Low Social Interaction

Lighting Conversation – Medium Social Interaction

Socially Friendly Environment – High Social Interaction



# RECEPTION

Towson Arena  
Exterior  
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Vestibules		
	Day	Night
Eh @ floor	100 lux	50 lux
Ev @ 5' AFF	50 lux	30 lux
Avg:Min	2:1	2:1



# RECEPTION

## DESIGN CRITERIA

Towson Arena  
Exterior  
Reception  
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Lobbies		
	Day	Night
Eh @ floor	100 lux	50 lux
Ev @ 5' AFF	30 lux	20 lux
Avg:Min	4:1	4:1



# RECEPTION

## DESIGN CRITERIA

Towson Arena  
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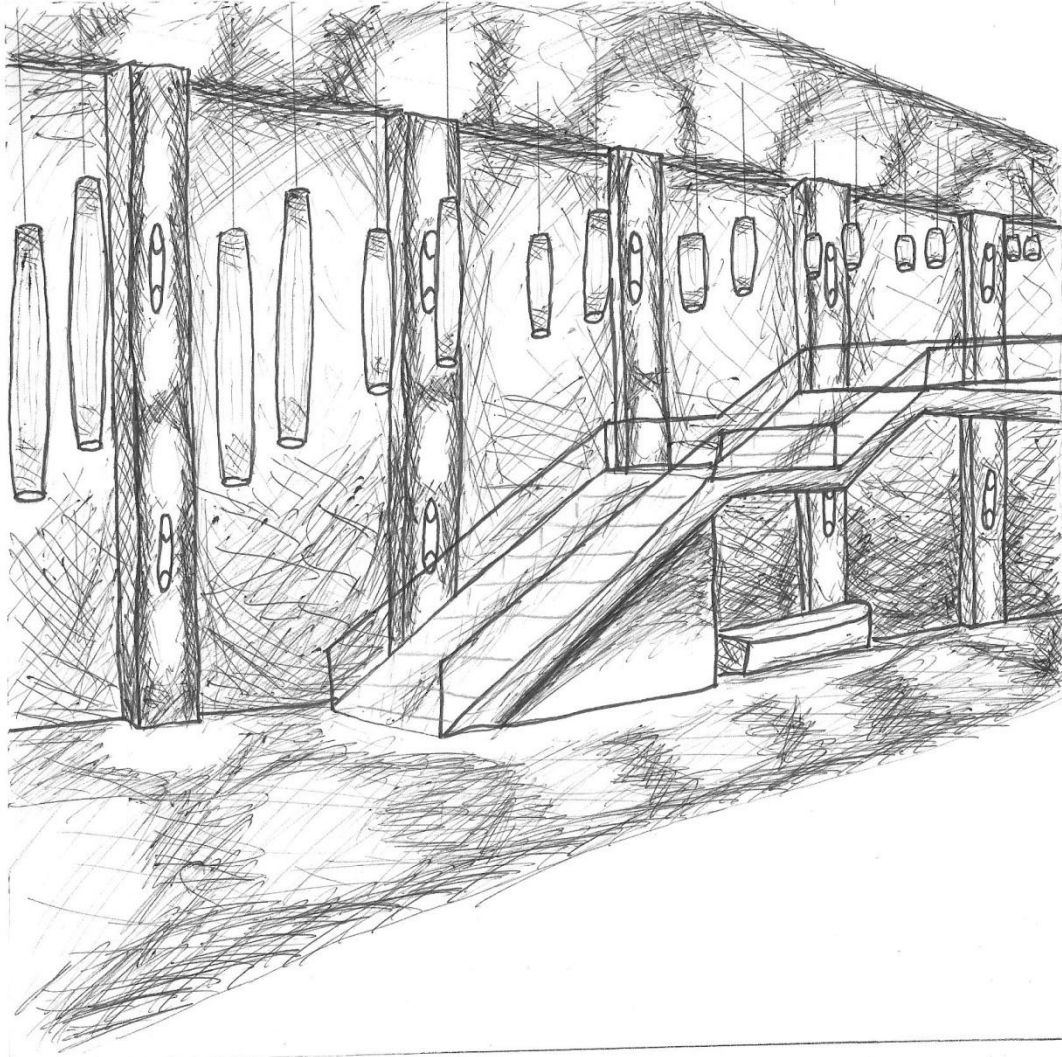
Stairs	
Eh @ floor	50 lux
Ev @ 5' AFF	30 lux
Avg:Min	2:1



# RECEPTION

## DESIGN CRITERIA

Towson Arena  
Exterior  
Reception  
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Press Room  
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Towson Arena  
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RECEPTION  
SCHEMATIC DESIGN

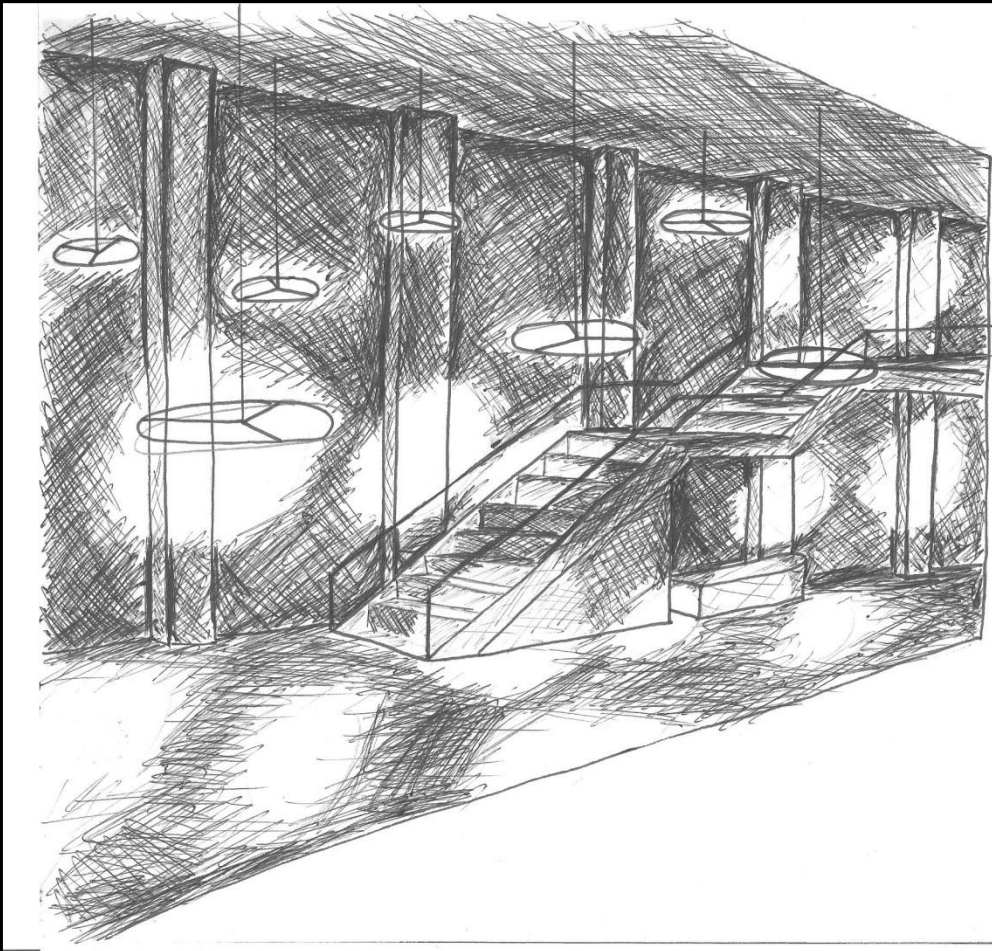


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Towson Arena  
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# ON SCHEMATIC DESIGN

Towson Arena  
Exterior  
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Towson Arena  
Exterior  
Reception  
Court  
Press Room  
Feedback





Towson Arena  
Exterior  
Reception  
Court  
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COURT



# Goals

Safety for Egress

Arena Lighting

Secondary Lighting System

Ample Light for Special Effects

Reduce Glare

# COURT DESIGN CRITERIA

Towson Arena  
Exterior  
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## College Arena

5000 seats

Class II has maximum of 5000 seats



# COURT

## DESIGN CRITERIA

Towson Arena

Exterior

Reception

Court

Press Room

Feedback

College Arena	Observers age 25-65
Eh @ 3' above competition surface	750 lux
Ev @ entire height of playing area	200 lux
Cvmax	0.21
Max:Min	2.5:1



# COURT DESIGN CRITERIA

Towson Arena  
Exterior  
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## College Arena

Excess Light helps with special effects(i.e. slow motion)

Avoid low f HID ballasts to minimize stroboscopic effect

CCT range 3000K – 6000K good for television

CRI of at least 65



# COURT

## DESIGN CRITERIA

Towson Arena

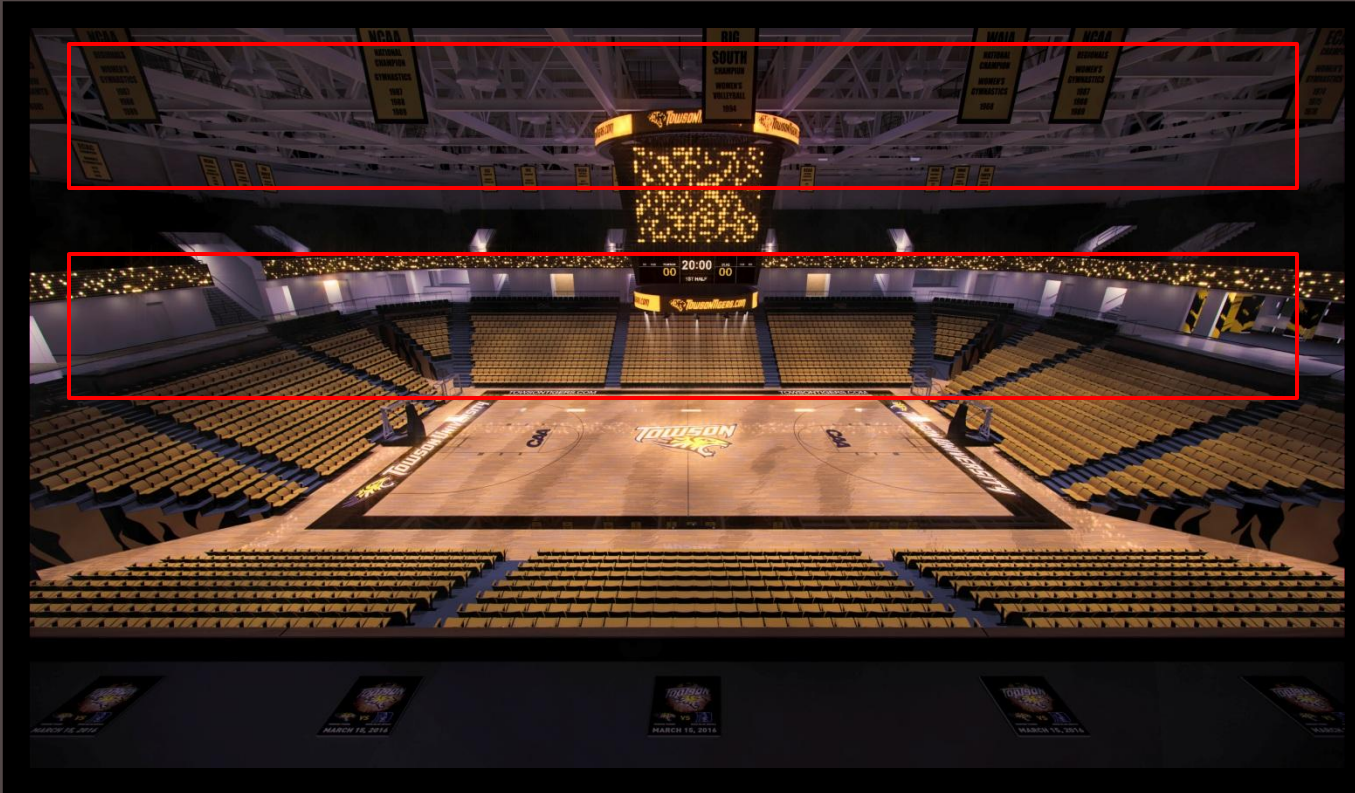
Exterior

Reception

Court

Press Room

Feedback



Towson Arena  
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# COURT SCHEMATIC DESIGN

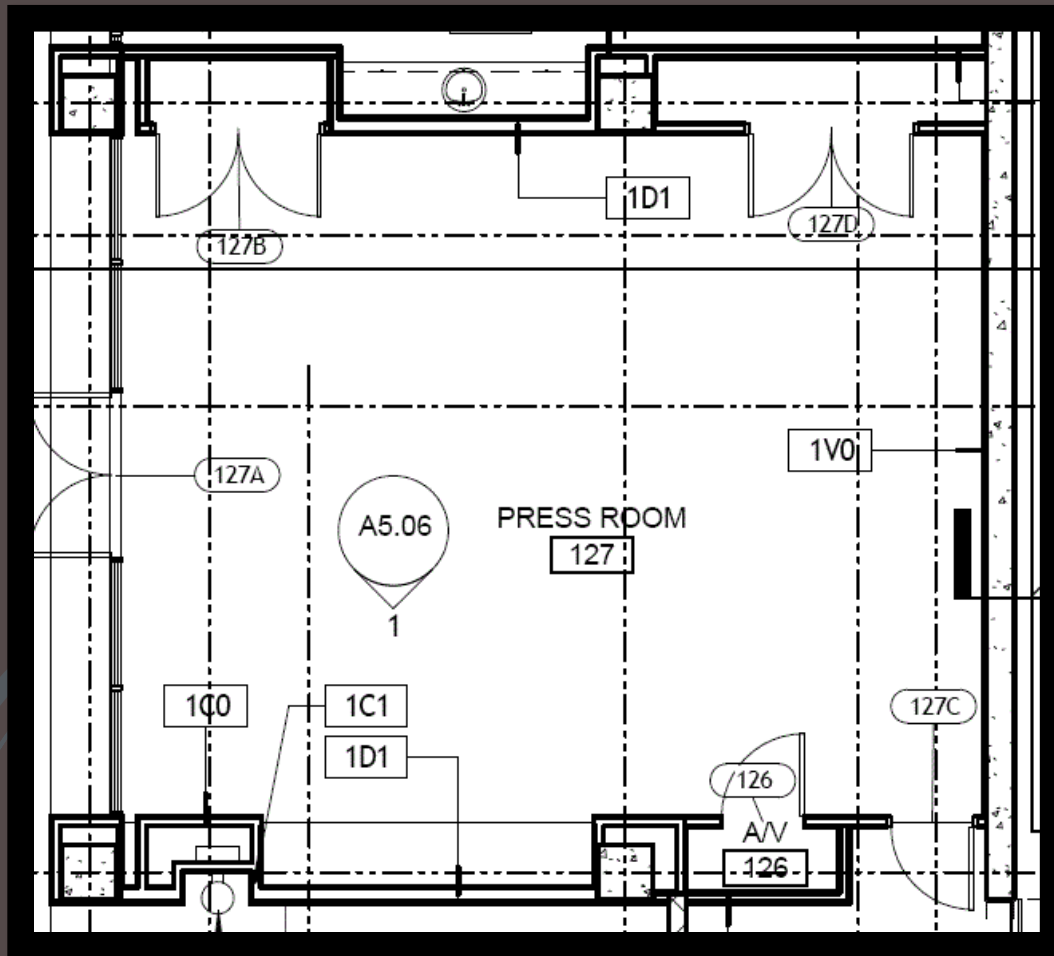


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**URT  
DWARE**

Towson Arena  
Exterior  
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# PRESS ROOM

## PERSONAL

Towson Arena  
Exterior  
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# Goals

Safety for Egress

Ample Light for Recording Information

Adequate Vertical Speaker(s) Illumination

# PRESS ROOM

## DESIGN CRITERIA

Towson Arena  
Exterior  
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## Meeting: Discourse

Eh @ 2' - 6"

300 lux Task Area

Ev @ 4' AFF

75 lux Task Area

# PRESS ROOM

## DESIGN CRITERIA

Towson Arena  
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## Presenter: Fixed Position

Face: Ev @ 5' AFF

Avg:Min - 3:1

Task Surface: Eh @ 3'-6" AFF

Avg:Min - 2:1

# PRESS ROOM

## DESIGN CRITERIA

Towson Arena  
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<b>Video Conferencing</b>	
Face: Eh @ 4' AFF	300 lux
Face: Ev @ 3'-5" AFF	400 lux
Avg:Min	1.5:1
Walls: Ev @ 2'-6" – 6'-6" AFF	
40% matte reflectance	400 lux
50% matte reflectance	300 lux
60% matte reflectance	200 lux

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# PRESS ROOM

## DESIGN CRITERIA

<b>Handwritten Work</b>	
<b>Pencil, Graphite</b>	<b>Medium Veiling Reflection</b>
<b>Eh @ 2'-6" AFF</b>	<b>300 lux</b>
<b>Ev @ 4' AFF</b>	<b>75 lux</b>
<b>Ballpoint Pen</b>	<b>Small Veiling Reflection</b>
<b>Eh @ 2'-6" AFF</b>	<b>300 lux</b>
<b>Ev @ 4' AFF</b>	<b>75 lux</b>



# PRESS ROOM

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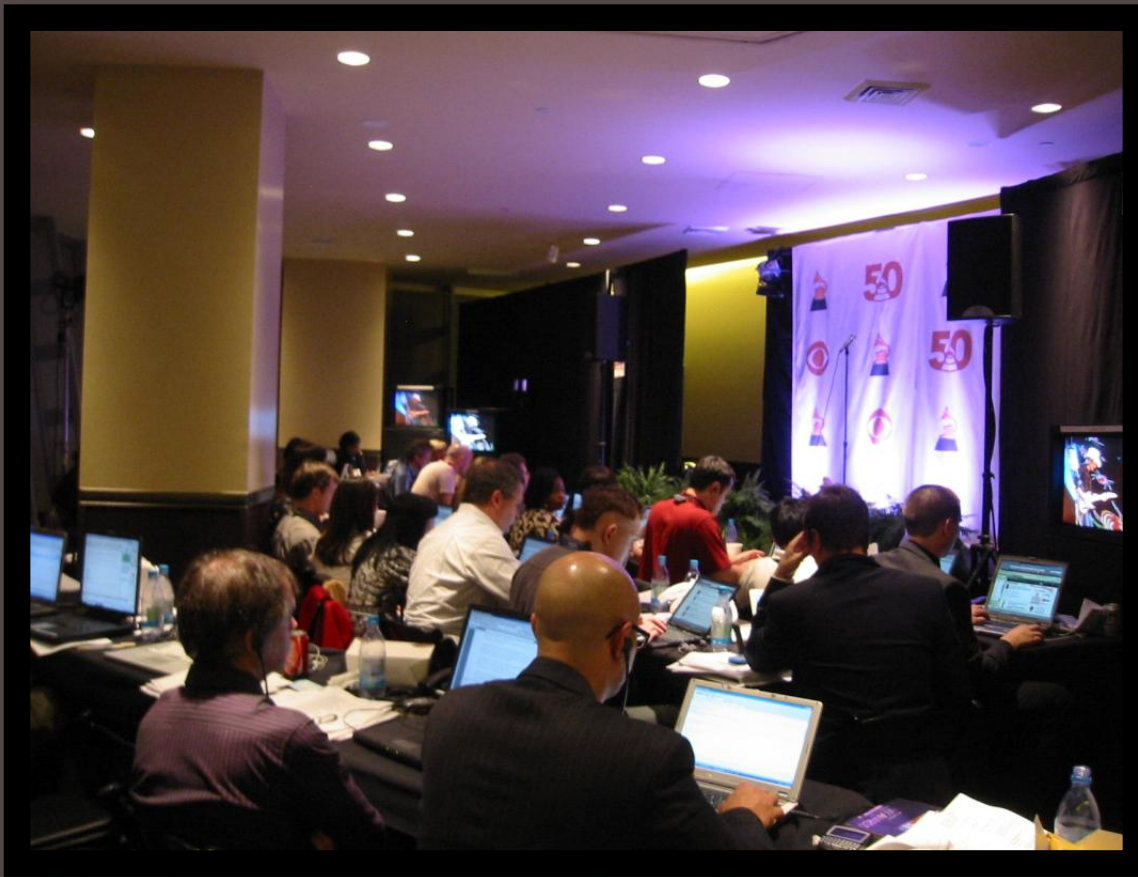
## Reading & Writing: VDT Screen & Keyboard

<b>CSA/ISO Types I &amp; II</b>	<b>Matte/Semi-specular</b>
<b>Eh @ 2'-6" AFF</b>	<b>300 lux</b>
<b>Ev @ 3'-6" AFF</b>	<b>150 lux</b>
<b>CSA/ISO Type III</b>	<b>Specular</b>
<b>Eh @ 2'-6" AFF</b>	<b>150 lux</b>
<b>Ev @ 3'-6" AFF</b>	<b>50 lux</b>

# PRESS ROOM

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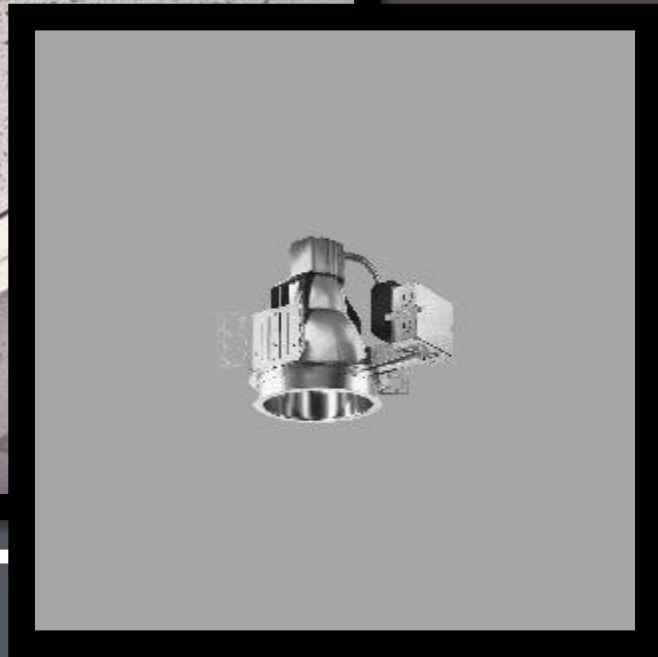


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[blogs.laweekly.com](http://blogs.laweekly.com)

# PRESS ROOM

## SCHEMATIC DESIGN



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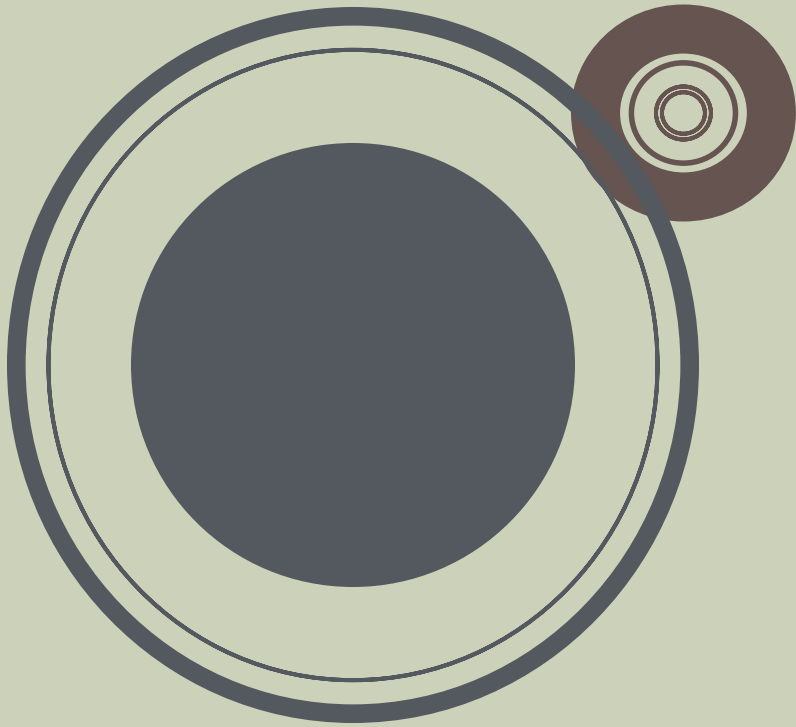
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HARDWARE

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**FEEDBACK**

**THANK YOU**

Towson Arena  
Exterior  
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