

# Regulatory-Compliant Occupant Seating for T.C. Williams High School Class of 2021 Graduation

Prepared by the  
Student Advisory Group on Graduation

School Board Meeting  
Thursday, May 6, 2021

# Student Advisory Graduation Group

2025

EQUITY FOR ALL



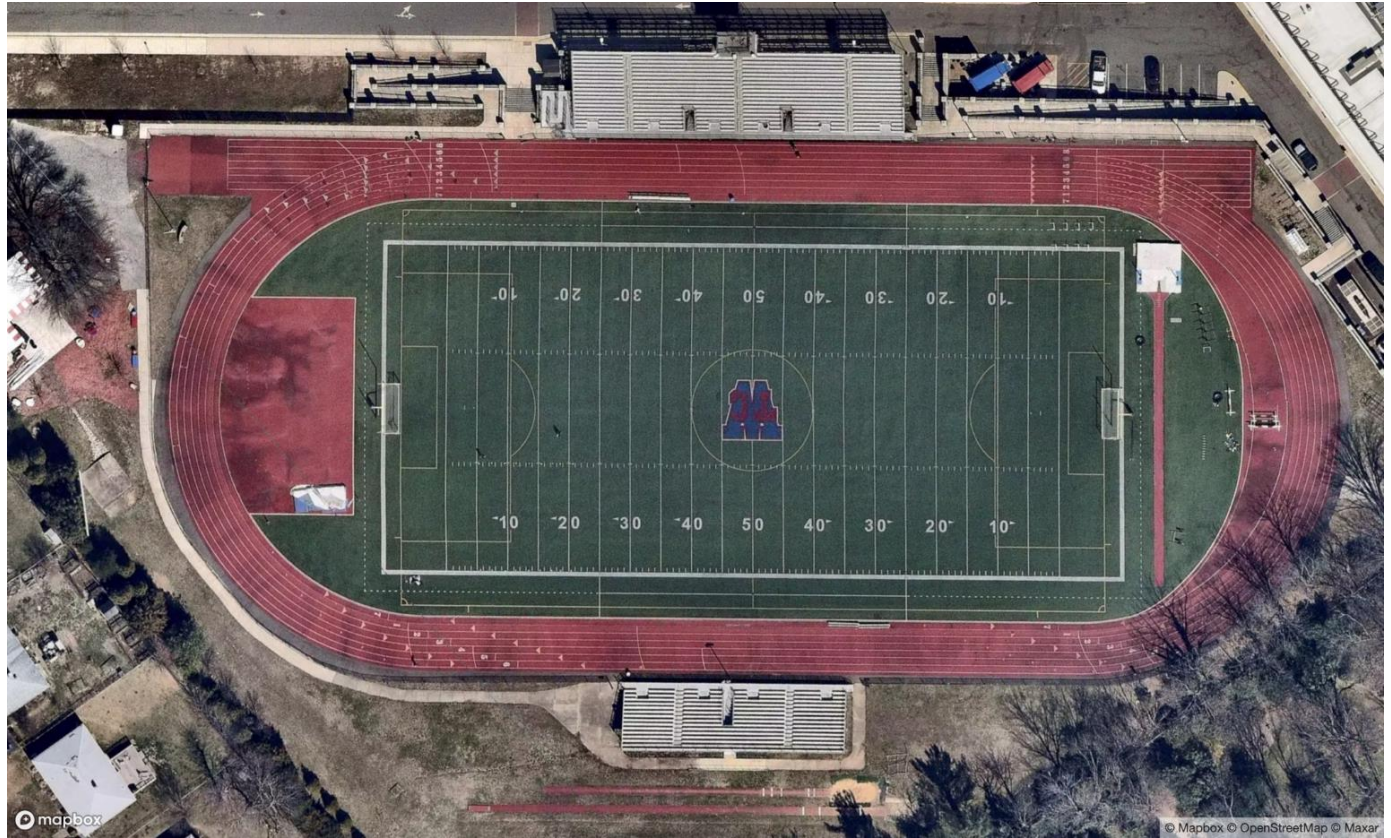
Karam Burjas. . . . .2021 Senior Class President  
Nyla Fox. . . . .2021 Senior Class Vice President  
Kiernan Almand. . . . .2021 Senior Class Secretary  
Ella Kahl. . . . . 2021 Senior Class Treasurer  
Miranda Sedehi. . . . . 2021 SGA President  
Maddie Oehler. . . . .2021 SGA Vice President  
Tyler Urban. . . . . Technical Advisor

# Introduction

In accordance with **COVID-19 restrictions and the governor's order on in-person graduations**, a concept utilizing available space and complying with safety guidelines for the class of 2021 graduation is necessary.

The following presentation demonstrates our **process and initial plans formulated for Parker-Gray Memorial Stadium**. Nonetheless, these plans can be adapted to many locations easily. The same methodology and findings are being used to assess and plan for the new venue.

**Every detail is carried out in accordance with all safety guidelines.** All numbers are based on math, distancing protocols, and published material.



Parker-Gray Memorial Stadium, Aerial View  
From: Mapbox

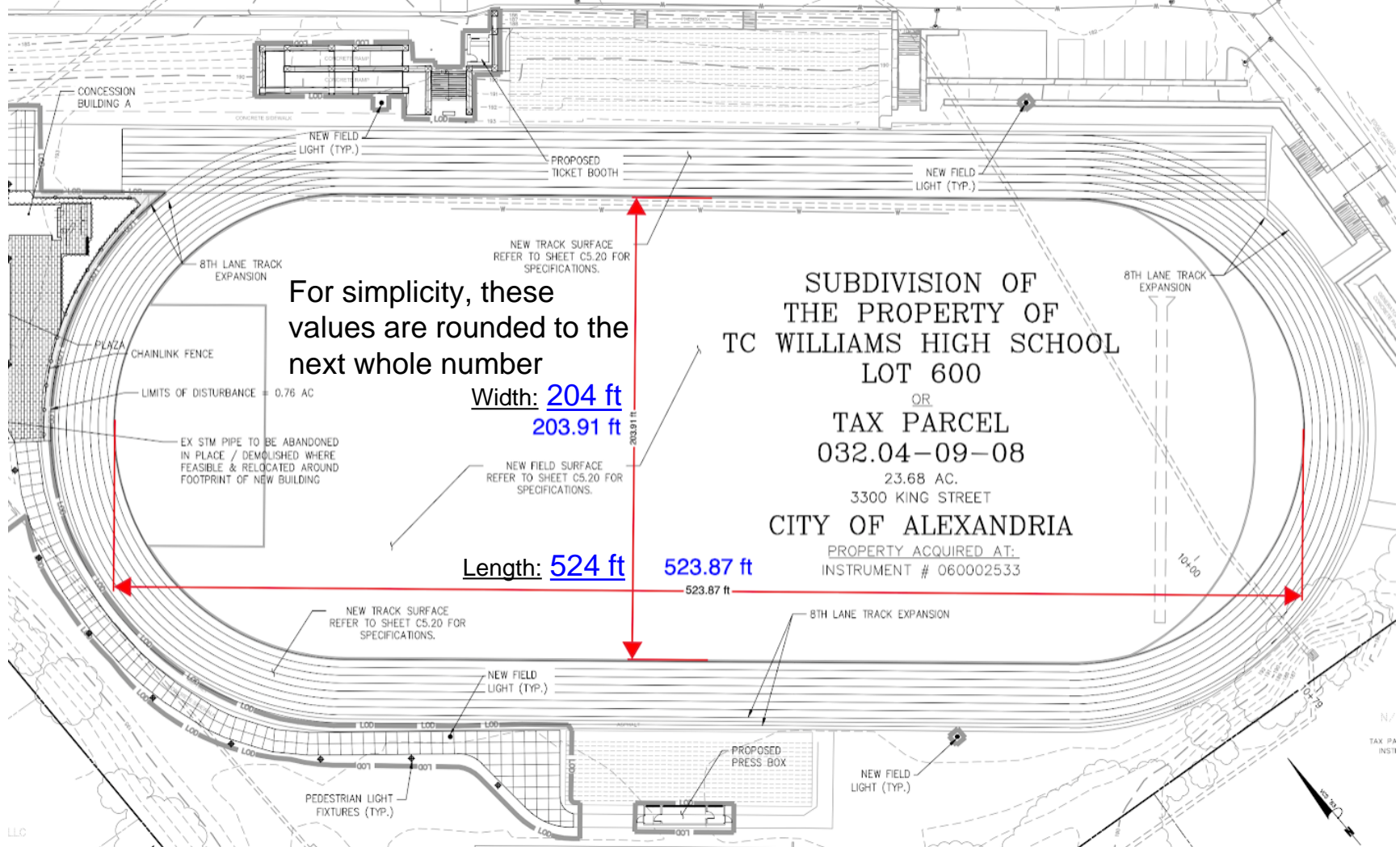
2025

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Alexandria City Public Schools

# Site Feasibility Study



For simplicity, these values are rounded to the next whole number

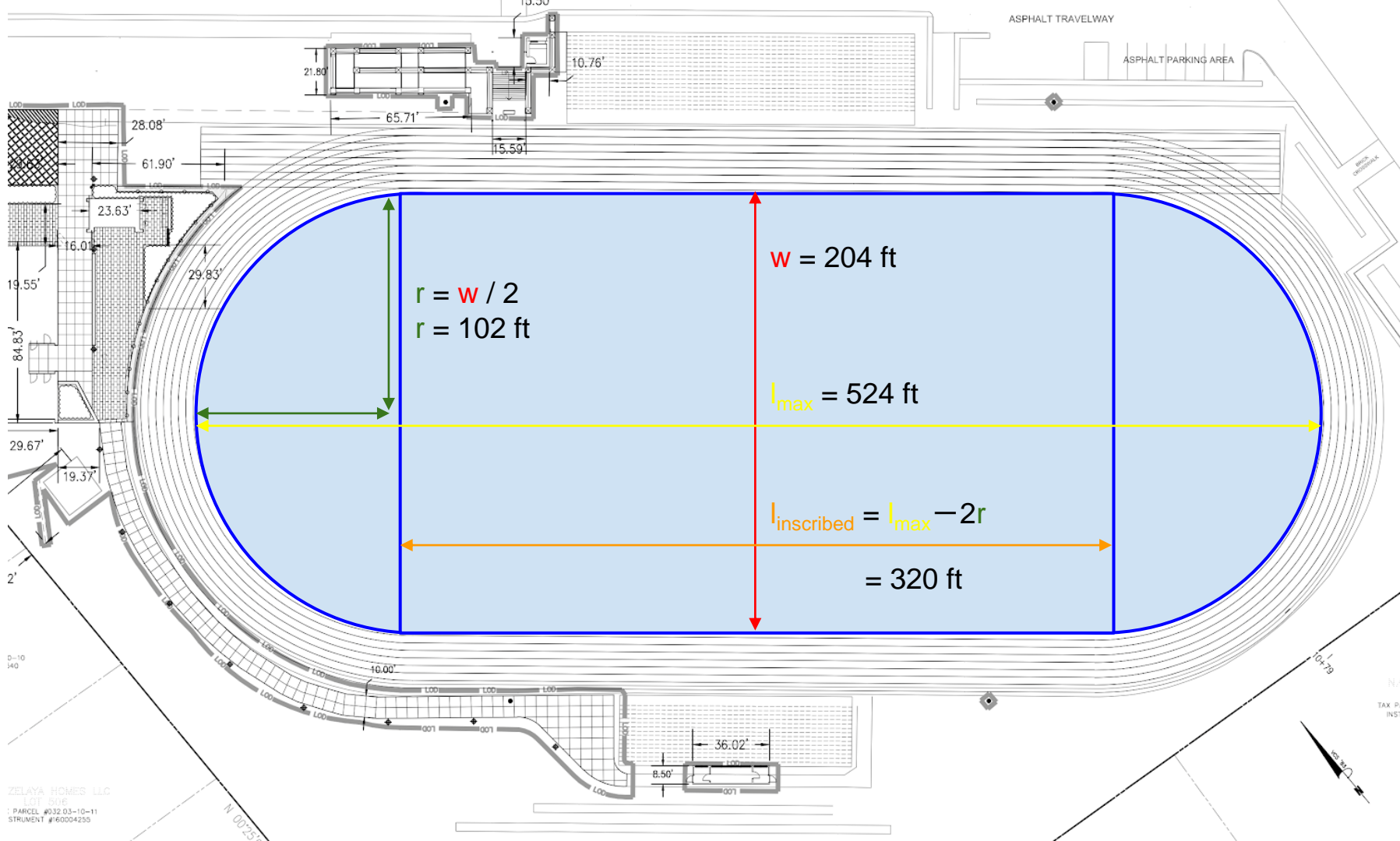
Width: **204 ft**  
203.91 ft

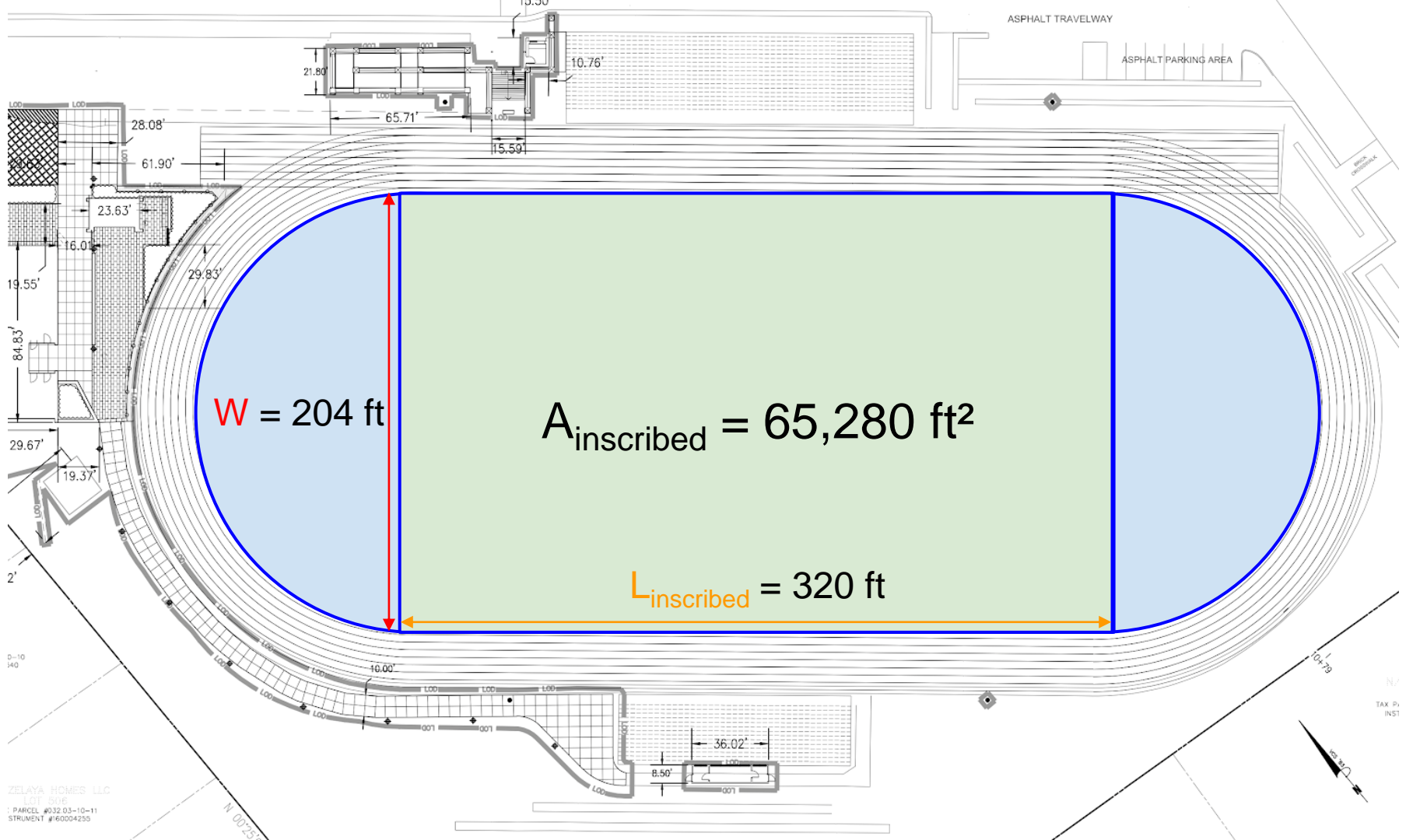
Length: **524 ft**  
523.87 ft

SUBDIVISION OF  
THE PROPERTY OF  
TC WILLIAMS HIGH SCHOOL  
LOT 600

OR  
TAX PARCEL  
032.04-09-08  
23.68 AC.  
3300 KING STREET  
CITY OF ALEXANDRIA

PROPERTY ACQUIRED AT:  
INSTRUMENT # 060002533





$W = 204 \text{ ft}$

$A_{\text{inscribed}} = 65,280 \text{ ft}^2$

$L_{\text{inscribed}} = 320 \text{ ft}$



2025

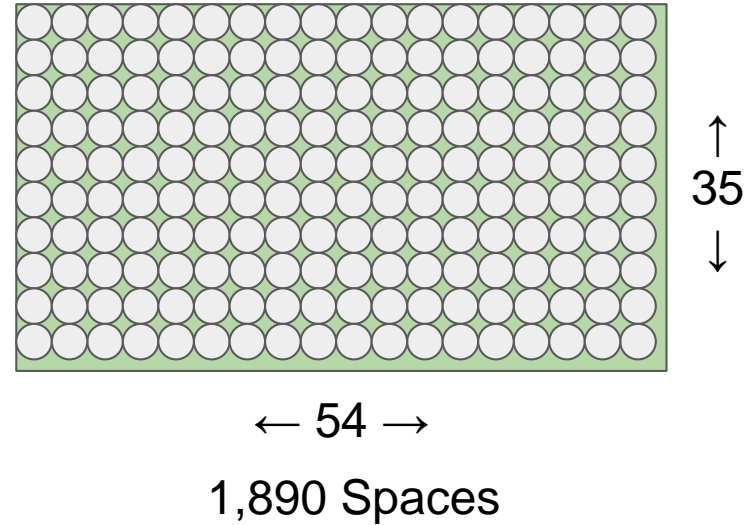
EQUITY FOR ALL



# Occupant Seating Arrangement

Seating capacity was calculated based on the maximum number of 6-foot-apart spaces that could fit on the inner rectangular portion of the field.

A square packing arrangement (while not fitting the most seats) is easier to set up and was considered optimal. This gives us a total of 1,890 spaces.



This *full* square packing was not feasible however, due to the fact that physical distancing cannot be maintained when moving.

A seating configuration with aisles is necessary and was developed.

## Circles within a Rectangle

### The maximum number of circles possible within a rectangle - ex. numbers of pipes or wires in a conduit

The calculator below estimates the maximum number of circles that may fit within a rectangle. The calculator can be used to calculate

- the number of pipes - or wires - that fits within a conduit or similar applications

Input the rectangle inside dimensions - height and width and the circles outside diameters.

Default values are for *0.5 inch* circles inside a *10 inch x 10 inch* square. The calculator is generic and any kind of units can be used - as long as the same units are used for all values.

<input type="text" value="210"/>	<i>w - rectangle width (in, mm, m)</i>	*6ft added to accommodate
<input type="text" value="326"/>	<i>h - rectangle height (in, mm, m)</i>	for edge cases
<input type="text" value="6"/>	<i>d - circle diameter (in, mm, m)</i>	
<input type="text" value="0"/>	<i>s - space between circles - and between circles and rectangle walls (in, mm, m)</i>	
<input type="button" value="Calculate!"/>	<input type="button" value="Switch width/height!"/>	

### Rectangular Pattern

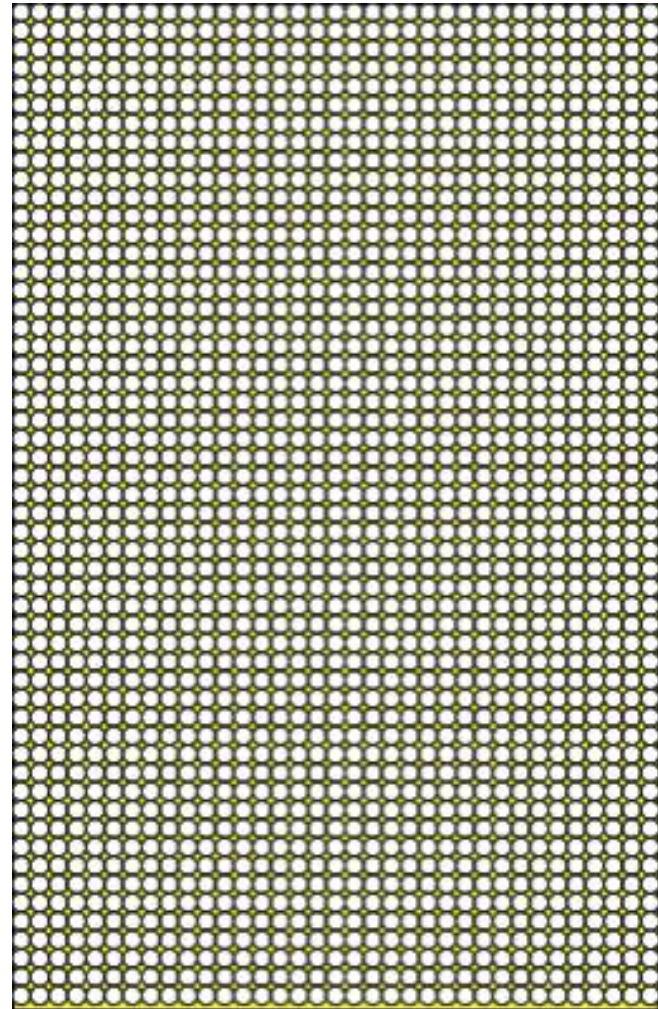
Maximum number of circles inside the **210 x 326** rectangle is: **1890**

Area Rectangle (in<sup>2</sup>, mm<sup>2</sup>, m<sup>2</sup>): **68460**

Area Circle (in<sup>2</sup>, mm<sup>2</sup>, m<sup>2</sup>): **28.3**

Area all Circles (in<sup>2</sup>, mm<sup>2</sup>, m<sup>2</sup>): **53438**

Circles to Rectangle Area Ratio (%): **78.1**

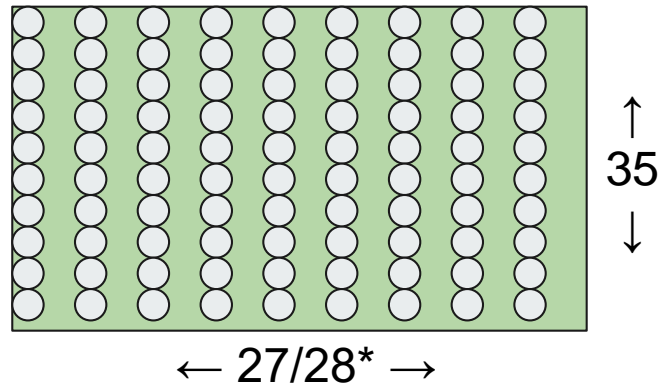


Widthwise aisles were deemed better because of a lesser volume of people moving per aisle, as well as shorter distances to travel.

A packing configuration with **aisles** allows the safe, physically-distanced movement of people through the grid of seats.

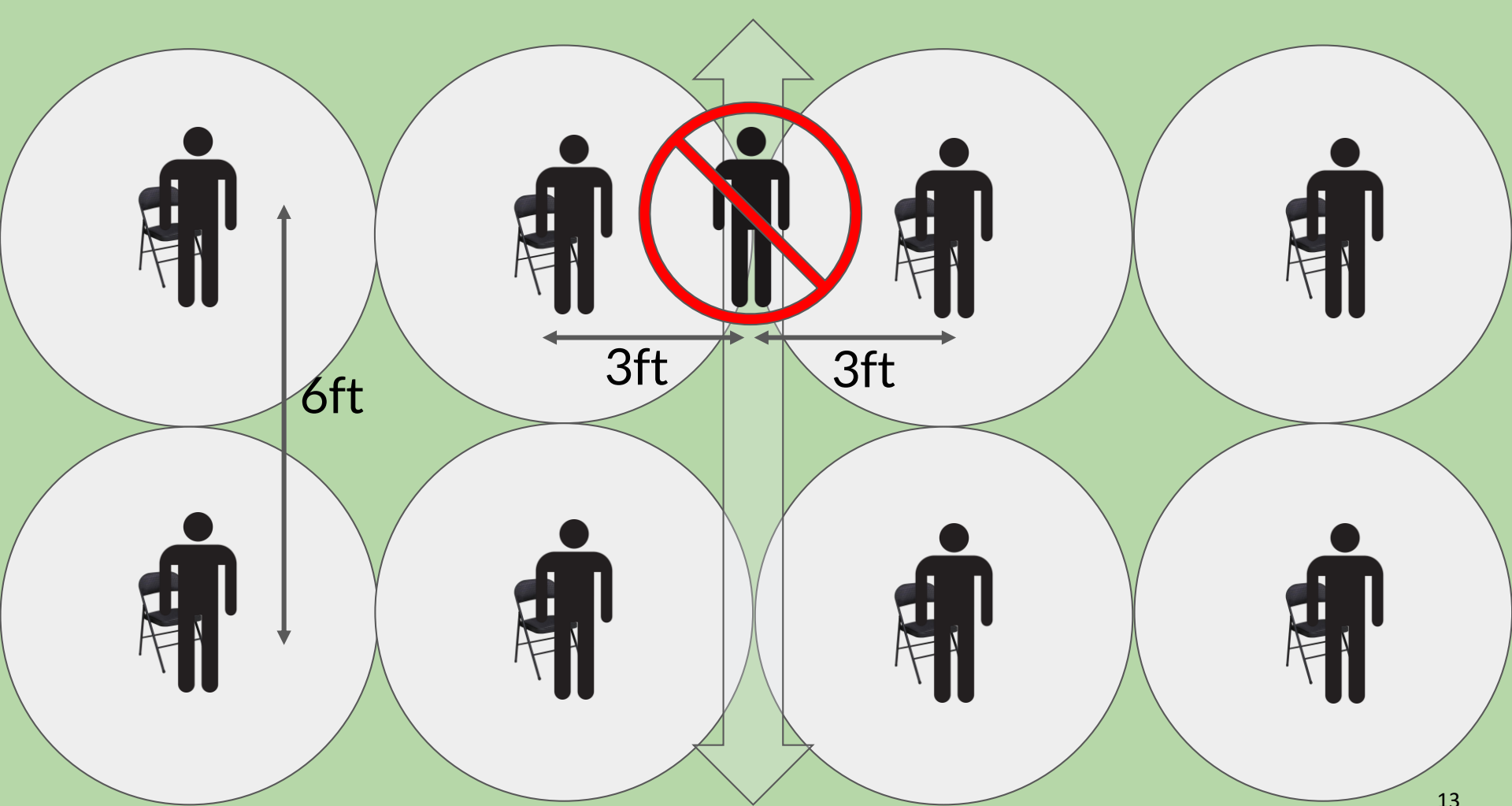
**Graduating class size:**  
**approx. 925**

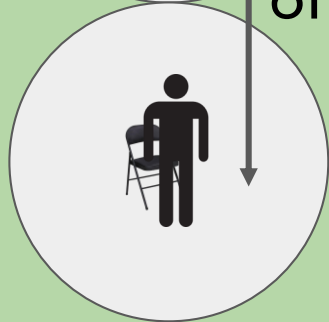
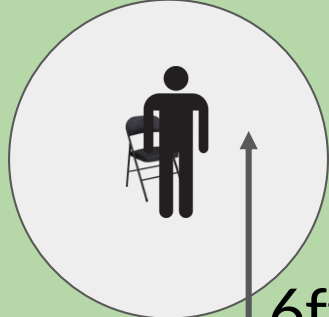
Widthwise, aisles every other row



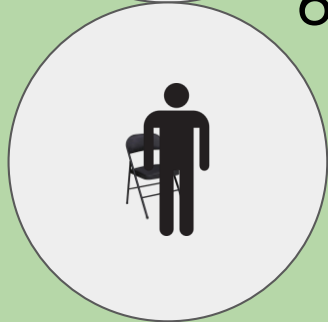
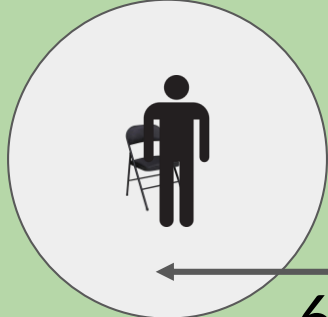
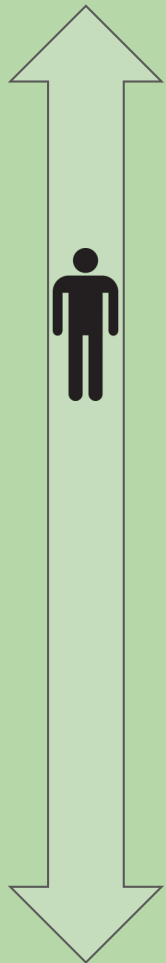
945/980 Spaces\*

\*depending on edge cases

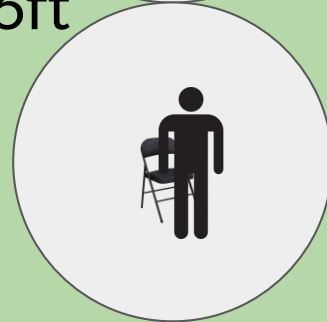
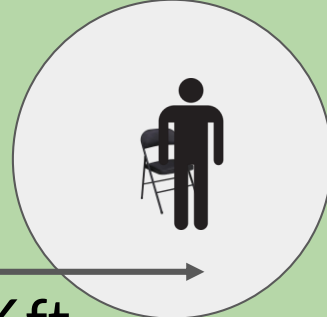




6ft

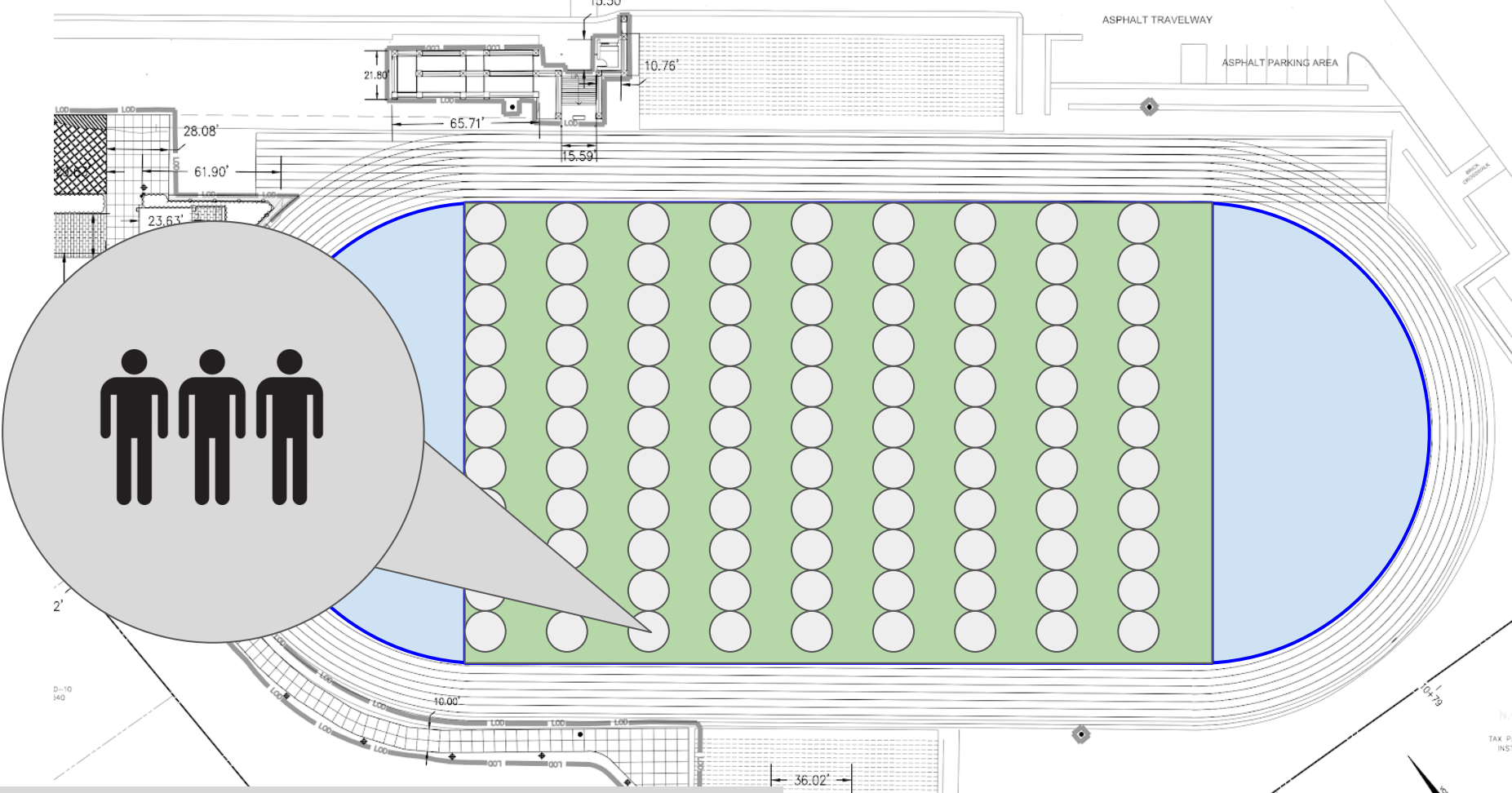


6ft



6ft

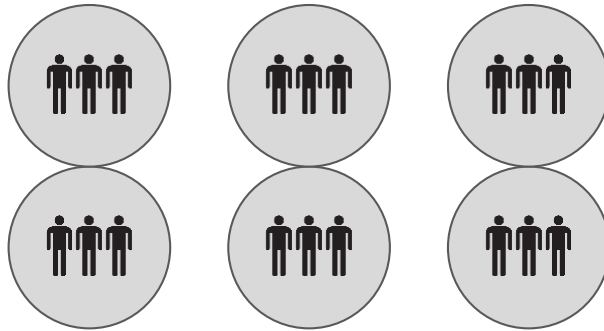
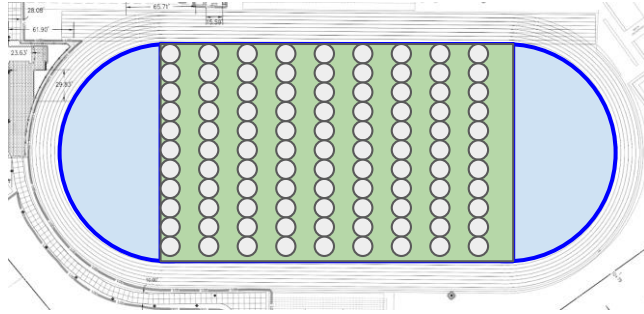




# Guest Seating

Proposed guest maximum: 2  
 Theoretical guest maximum: 4

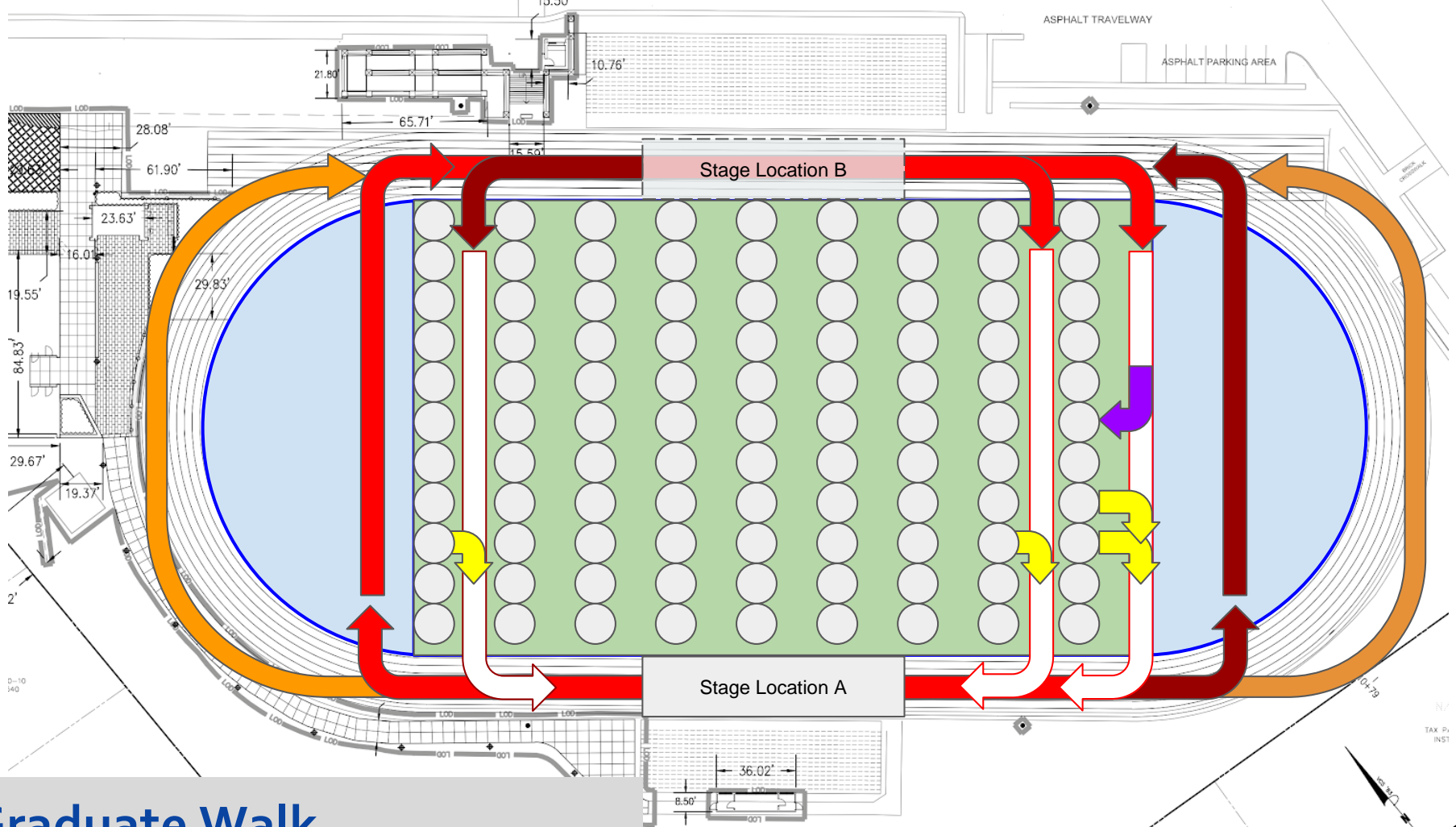




This **945/980-space occupant seating arrangement** has been considered the most feasible for the following reasons:

- Ease of execution;
- Ease of incorporation to existing procedures;
- Allowance of physically-distanced aisles;
- Reasonable number of spaces; and
- Meets and exceeds 6-foot distancing requirements.

***\*Seating may be reduced further to a fraction of the maximum capacity for less occupants and multiple sessions.***



# Graduate Walk

# Additional Viewing

☆ Accessibility for as many people as possible

Remote Viewing	Virtual Viewing + Streaming
<p>Extra family members and friends can have remote viewing screens/locations set up.</p> <ul style="list-style-type: none"><li>● <b>Remote Viewing Locations</b><ul style="list-style-type: none"><li>○ Chinquapin park</li><li>○ Public parks/fields/lots</li><li>○ Hammond and GW viewing parties</li></ul></li><li>● <b>Multi-Screen Setups</b><ul style="list-style-type: none"><li>○ People can stay in cars or physically distance themselves when watching live streams</li></ul></li></ul>	<ul style="list-style-type: none"><li>● <b>All Available ACPS Live Streaming Platforms</b><ul style="list-style-type: none"><li>○ ACPS-TV, Xfinity Ch. 71</li><li>○ ACPS Website</li></ul></li><li>● <b>Social Media Streaming</b><ul style="list-style-type: none"><li>○ YouTube, Facebook, etc.</li></ul></li></ul>

# Recommendation

We recommend graduation to be implemented as a single-session ceremony, with the developed seating layout, guest seating accommodations, and remote viewing options.

Next steps for graduation include finalizing aesthetic and logistical details, as well as community-oriented initiatives.

# Questions and Discussion



**Peter Balas**

Principal

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