



49ERS FOOTBALL STADIUM

City of Santa Clara

City Council Presentation

HNTB



AGENDA

- HNTB Experience
- Animation
- Proposed Stadium, Site & Context
- Stadium Sections, Plans, Accessibility
- Stadium Event Capabilities
- Sustainable Design
- Q & A

Experience

National Football League

- INVESCO Field Denver
- Qualcomm Stadium San Diego
- Lambeau Field Green Bay
- Qwest Field Seattle
- Cleveland Stadium Cleveland
- Gillette Stadium New England
- Arrowhead Stadium Kansas City
- Giants Stadium New York
- Ralph Wilson Stadium Buffalo
- Cardinals Stadium Arizona
- RCA Dome Indianapolis
- Lincoln Field Philadelphia
- Tennessee Coliseum Nashville
- LA Coliseum Los Angeles



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Experience

NCAA Division 1 Sports

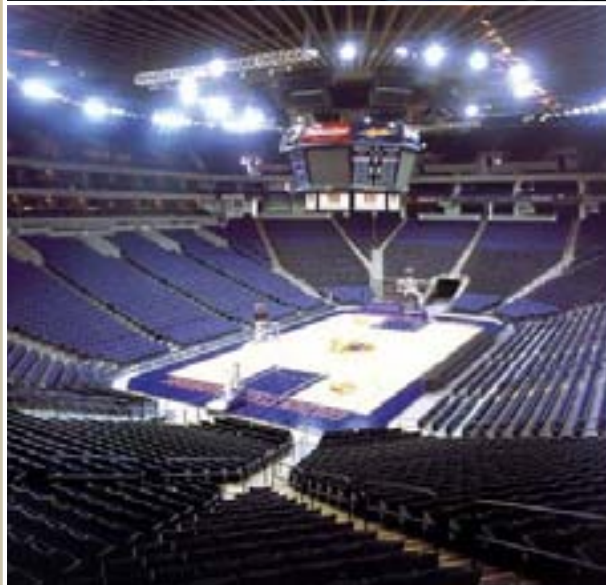
- Notre Dame
- Michigan
- Ohio State
- Cal Berkeley
- Michigan State
- Auburn
- Georgia
- Kentucky
- Air Force
- Tennessee
- Navy
- Southern Illinois
- Orange Bowl
- Iowa State
- Iowa
- Illinois
- Massachusetts
- Purdue
- South Carolina
- Citrus Bowl
- Harvard
- Oregon State
- Kansas
- USC
- Georgetown
- Buffalo
- Akron
- Army



Experience

Design Build Sports

- INVESCO Field Denver
- Chicago Speedway Chicago
- Oakland Arena Oakland
- Daytona Speedway Daytona
- Qualcomm Stadium San Diego
- Fifth-Third Field Toledo
- Citrus Bowl Stadium Orlando
- Heartland Center Lincoln
- Raley Field Sacramento
- RFK Stadium Wash DC



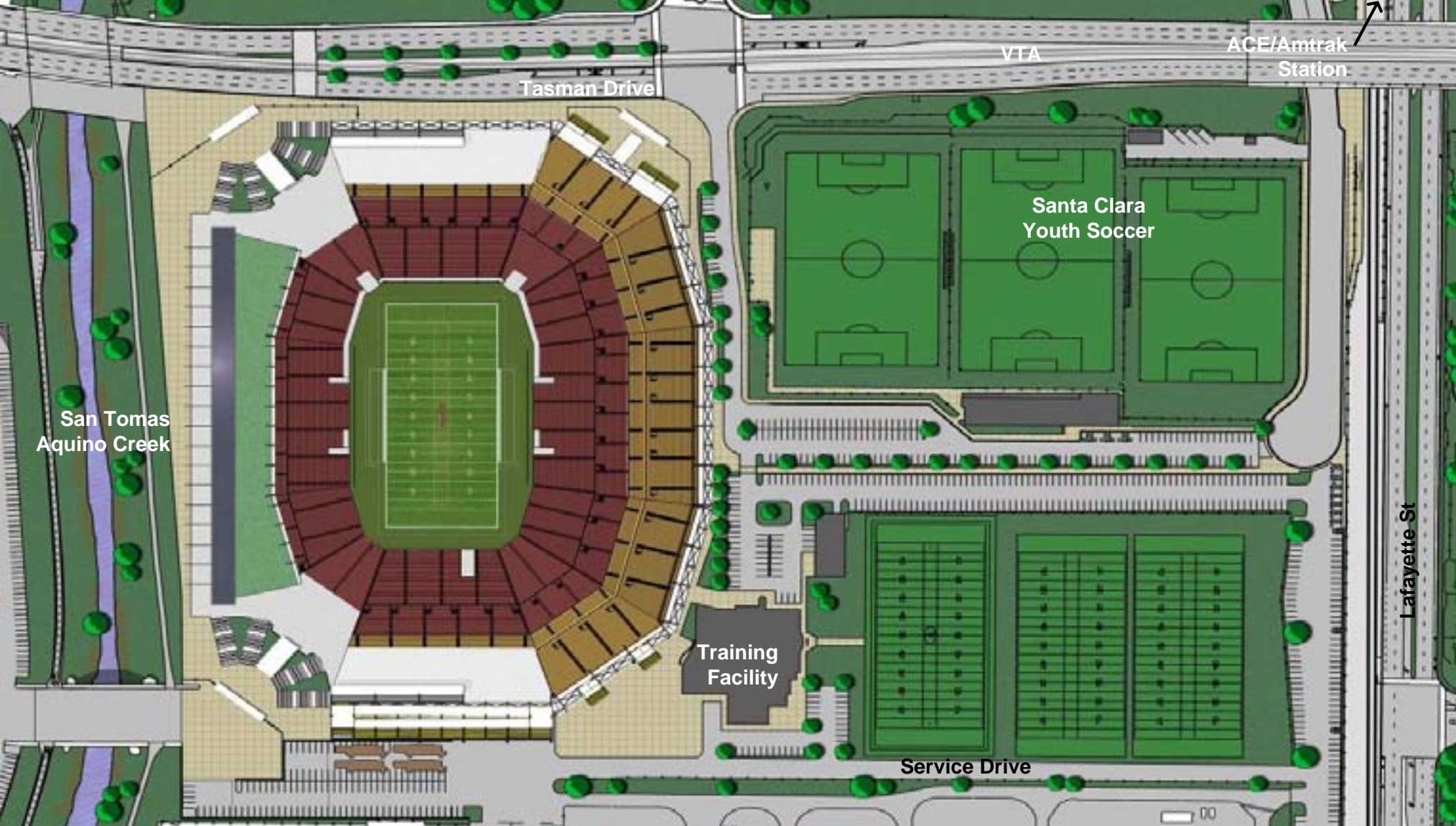
Experience

Design Build – Other Projects

- SFO Airport Extension San Francisco
- BART Extension San Francisco
- San Diego CC San Diego
- Naval Sea Command Annapolis
- IRS Headquarters Wash DC
- PAX Helicopter Facility Wash DC
- Tampa Airport Terminal Tampa
- Naval Air Systems Annapolis
- Ontario CC Ontario









View from Tasman Drive



View from Tasman Drive





View Looking Southeast



View Looking Northeast



Interior Bowl View

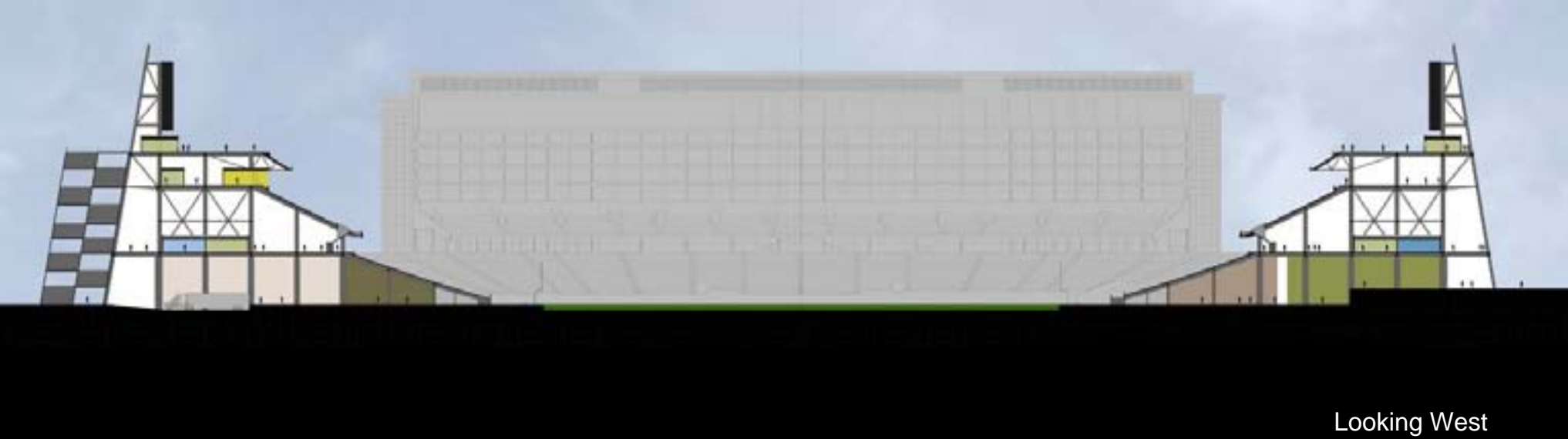


Night View Looking Southeast

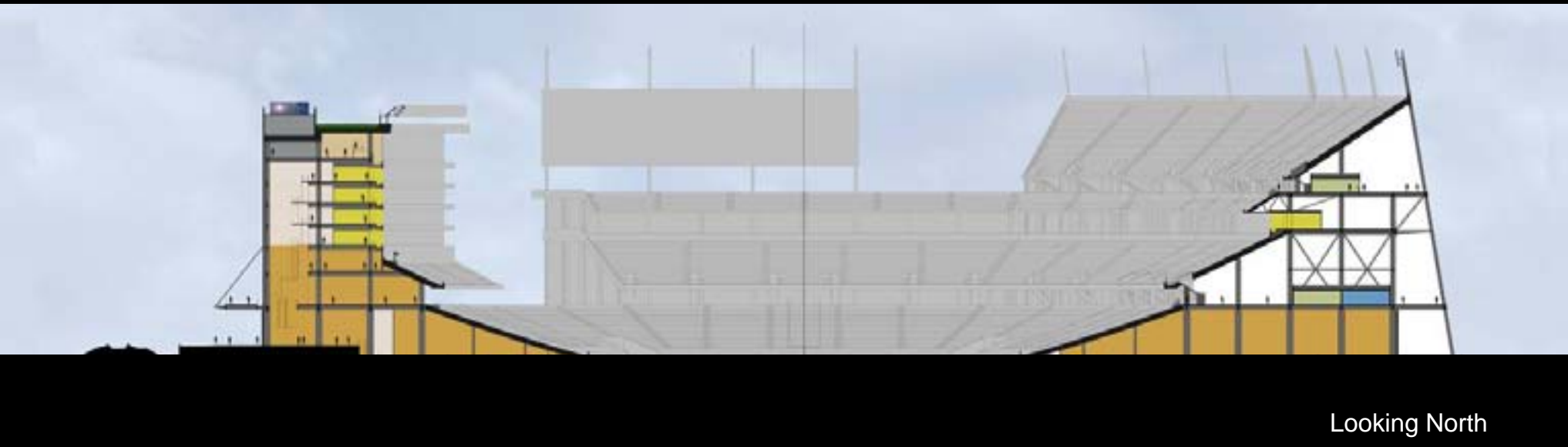


Estimated Surrounding Heights





Looking West



Looking North

Top of Light Tower

195'-0"

Last Row

162'-8"

Upper Concourse

106'-3"

Amenity Level

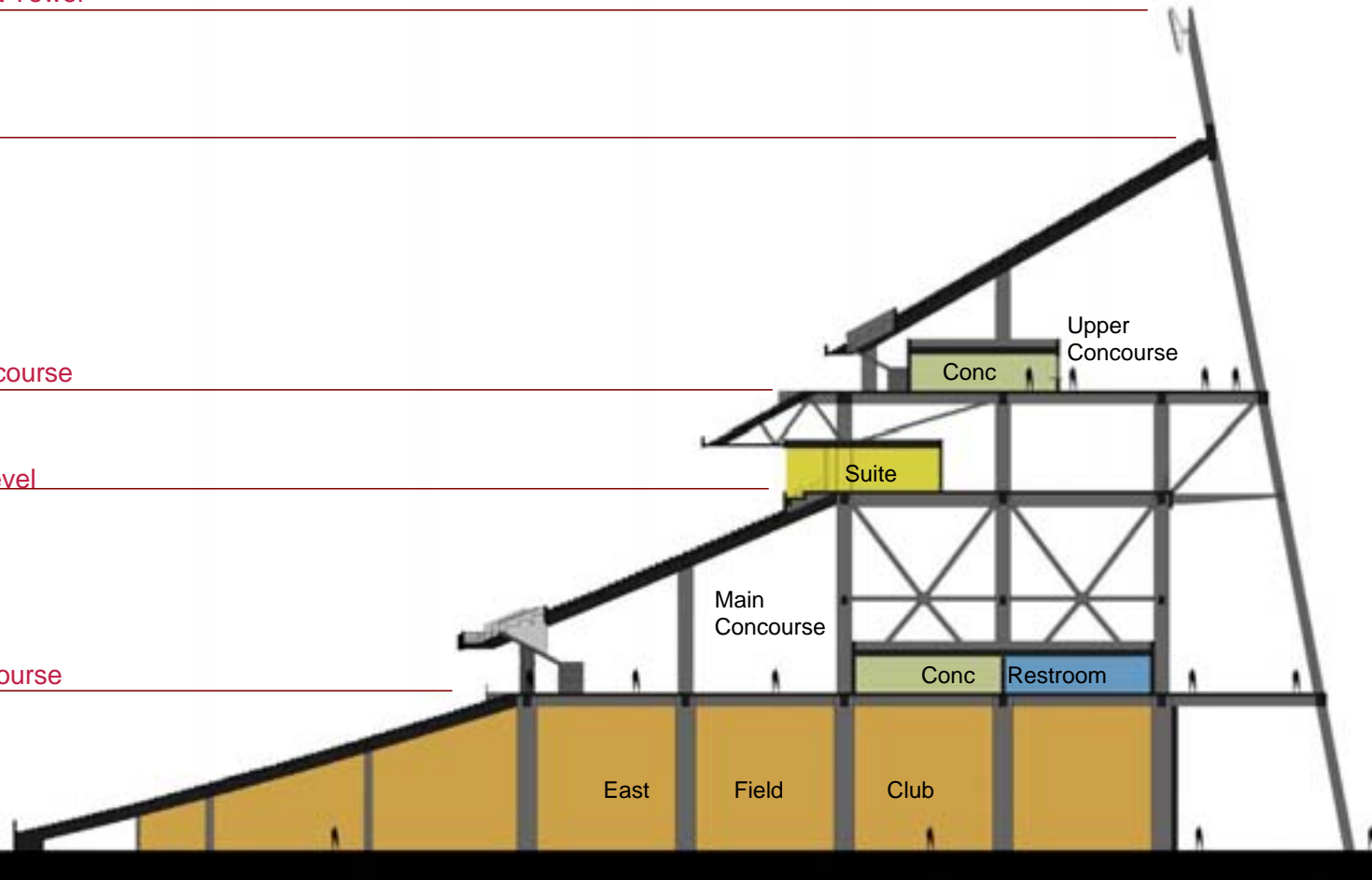
83'-4"

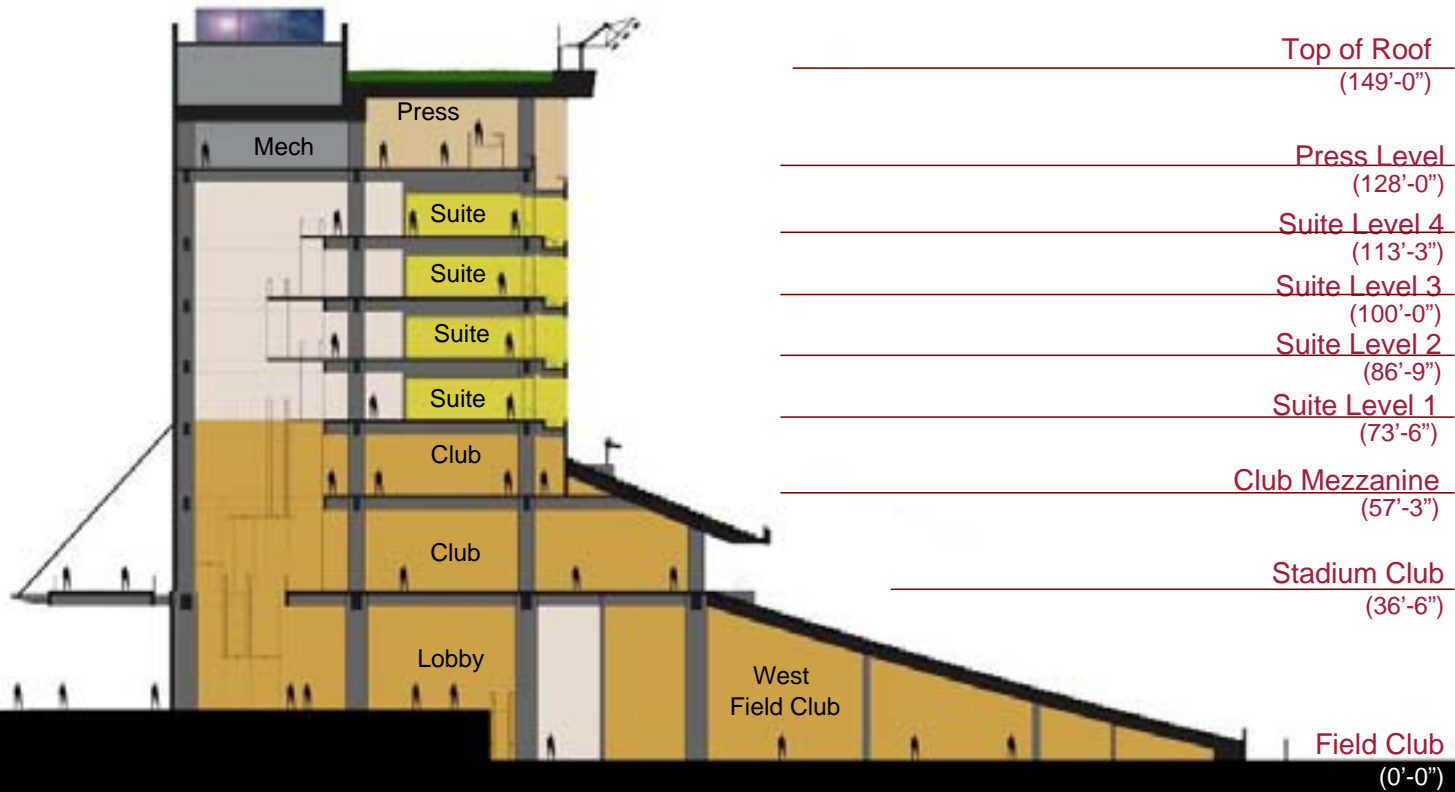
Main Concourse

36'-6"

Field

0'-0"





Stadium Section – West 50 Yd Line Section

Field Level



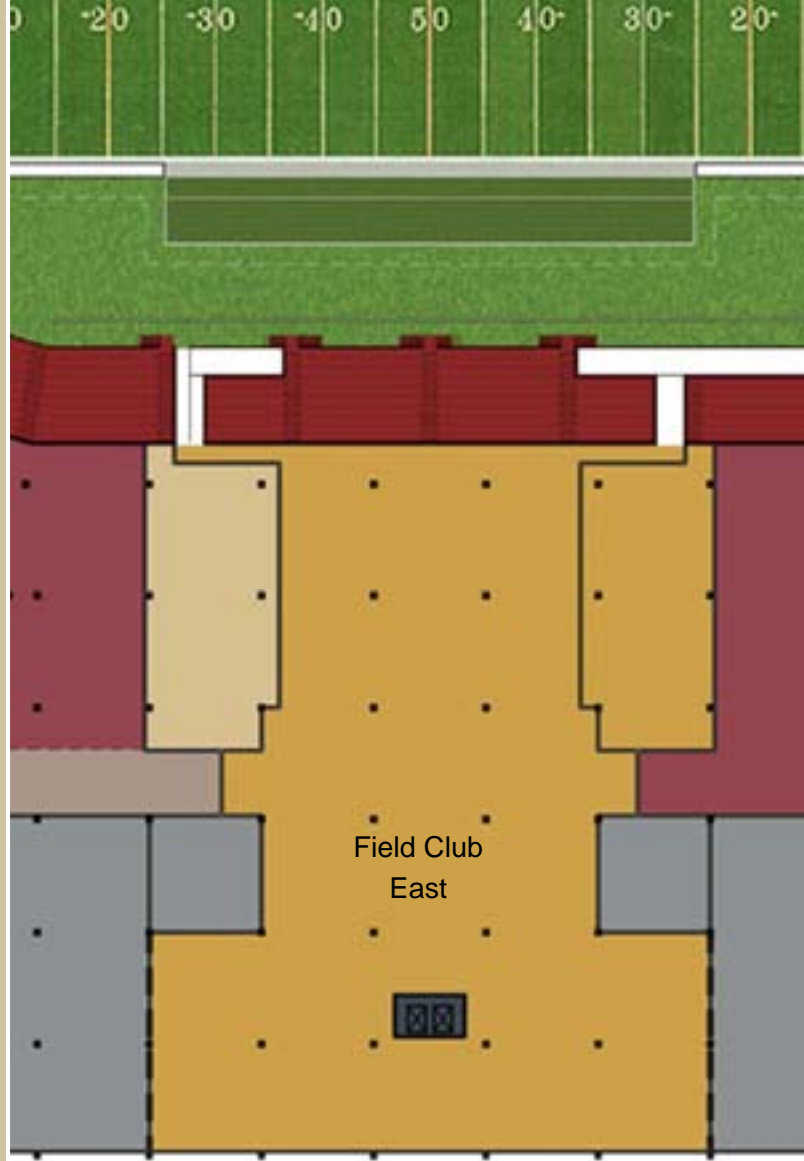
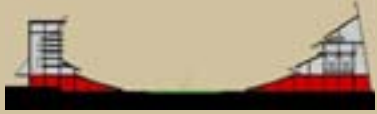
Legend

- Club Space
- Suites
- Writing Press
- Operations
- TV / Broadcast
- Restroom - Men
- Restroom - Women
- Auxiliary Lockers
- Team Lockers
- Support
- Turf Management
- Concessions
- Retail
- Vertical Circulation
- Circulation
- Mechanical
- Future Development



- A. Security
- B. Future Lease
- C. Internet Storage
- D. Retail Storage
- E. Team Store
- F. Main Box Office
- G. Santa Clara PD
- H. Official's Lockers
- J. Beverage Distribution
- K. Mech
- L. Game Day Ops
- M. Media Interview
- N. Stadium Authority
- P. Field Performers (Game Day)
- P1. Community Use (Non Game Day)

Field Level

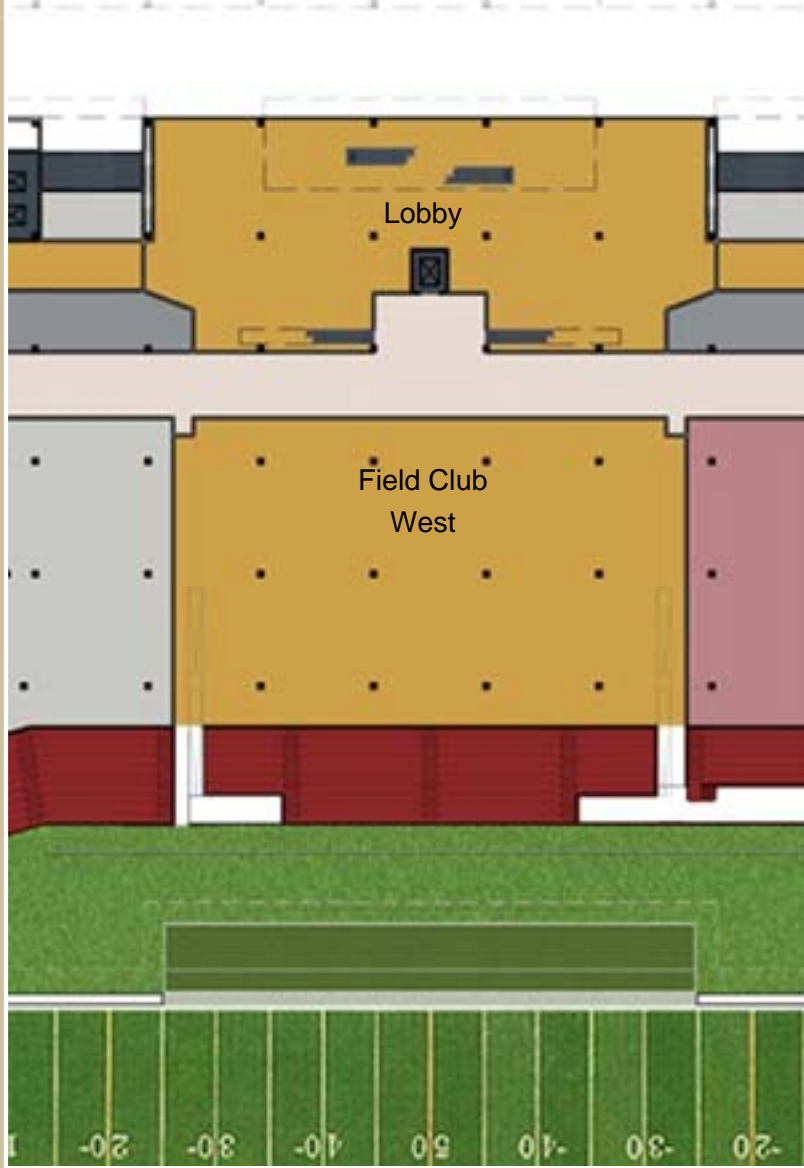


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Field Level



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- Suites
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- Future Development



Main Concourse West Club Plan



Legend

- Club Space
- Suites
- Writing Press
- Operations
- TV / Broadcast
- Restroom - Men
- Restroom - Women
- Auxiliary Lockers
- Team Lockers
- Support
- Turf Management
- Concessions
- Retail
- Vertical Circulation
- Circulation
- Mechanical
- Future Development



Club Examples

Main Concourse
Club

Purdue University

Oregon State
University



Club Level 2



Legend

- Club Space
- Suites
- Writing Press
- Operations
- TV / Broadcast
- Restroom - Men
- Restroom - Women
- Auxiliary Lockers
- Team Lockers
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- Turf Management
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- Future Development



Suite Level 1

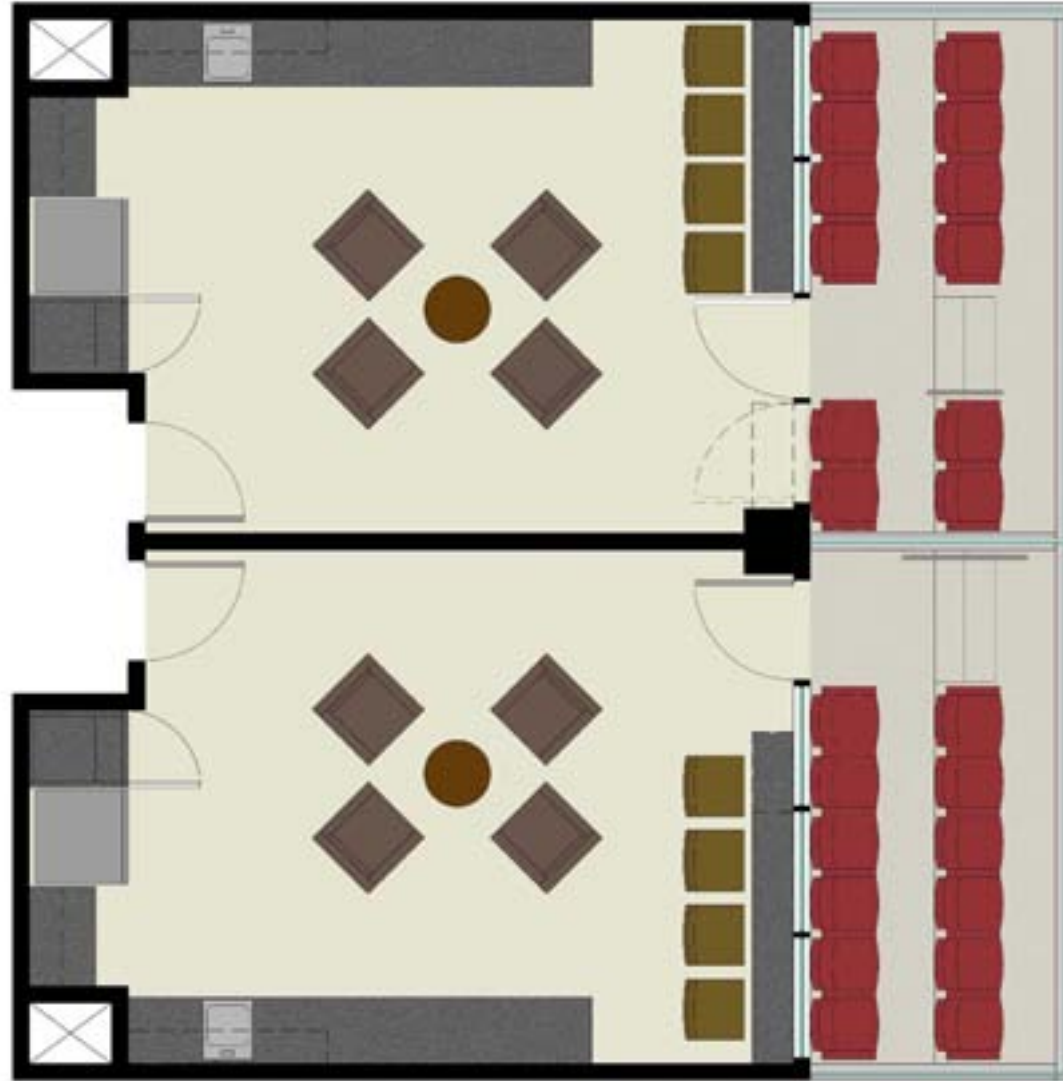


Legend

- Club Space
- Suites
- Writing Press
- Operations
- TV / Broadcast
- Restroom - Men
- Restroom - Women
- Auxiliary Lockers
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- Support
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- Concessions
- Retail
- Vertical Circulation
- Circulation
- Mechanical
- Future Development



Suite Layouts



Suite Examples

1. University of Iowa

2. Oregon State University

3. Denver Broncos

4. Michigan State University



1



2



3



4

Suite Level 2 & Amenity Level



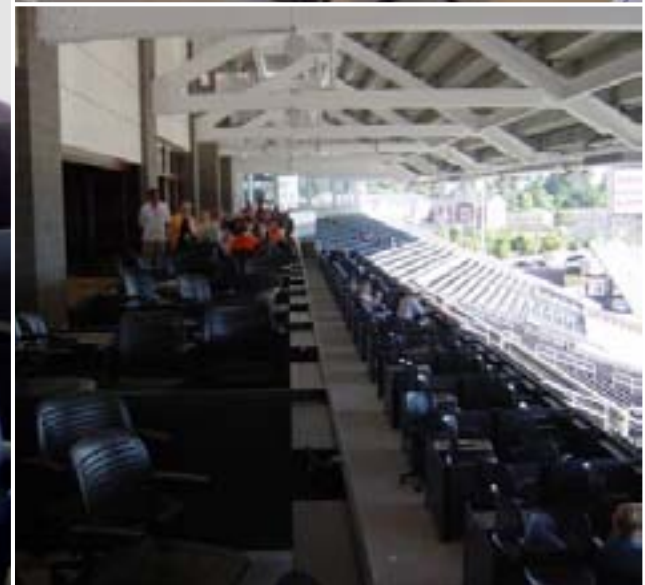
Legend

- Club Space
- Suites
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- Retail
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- Circulation
- Mechanical
- Future Development



Loge Club Seating Examples

Oregon State University



Suite Level 3



Legend

- Club Space
- Suites
- Writing Press
- Operations
- TV / Broadcast
- Restroom - Men
- Restroom - Women
- Auxiliary Lockers
- Team Lockers
- Support
- Turf Management
- Concessions
- Retail
- Vertical Circulation
- Circulation
- Mechanical
- Future Development



Suite Level 4 Upper Concourse



Legend

- Club Space
- Suites
- Writing Press
- Operations
- TV / Broadcast
- Restroom - Men
- Restroom - Women
- Auxiliary Lockers
- Team Lockers
- Support
- Turf Management
- Concessions
- Retail
- Vertical Circulation
- Circulation
- Mechanical
- Future Development



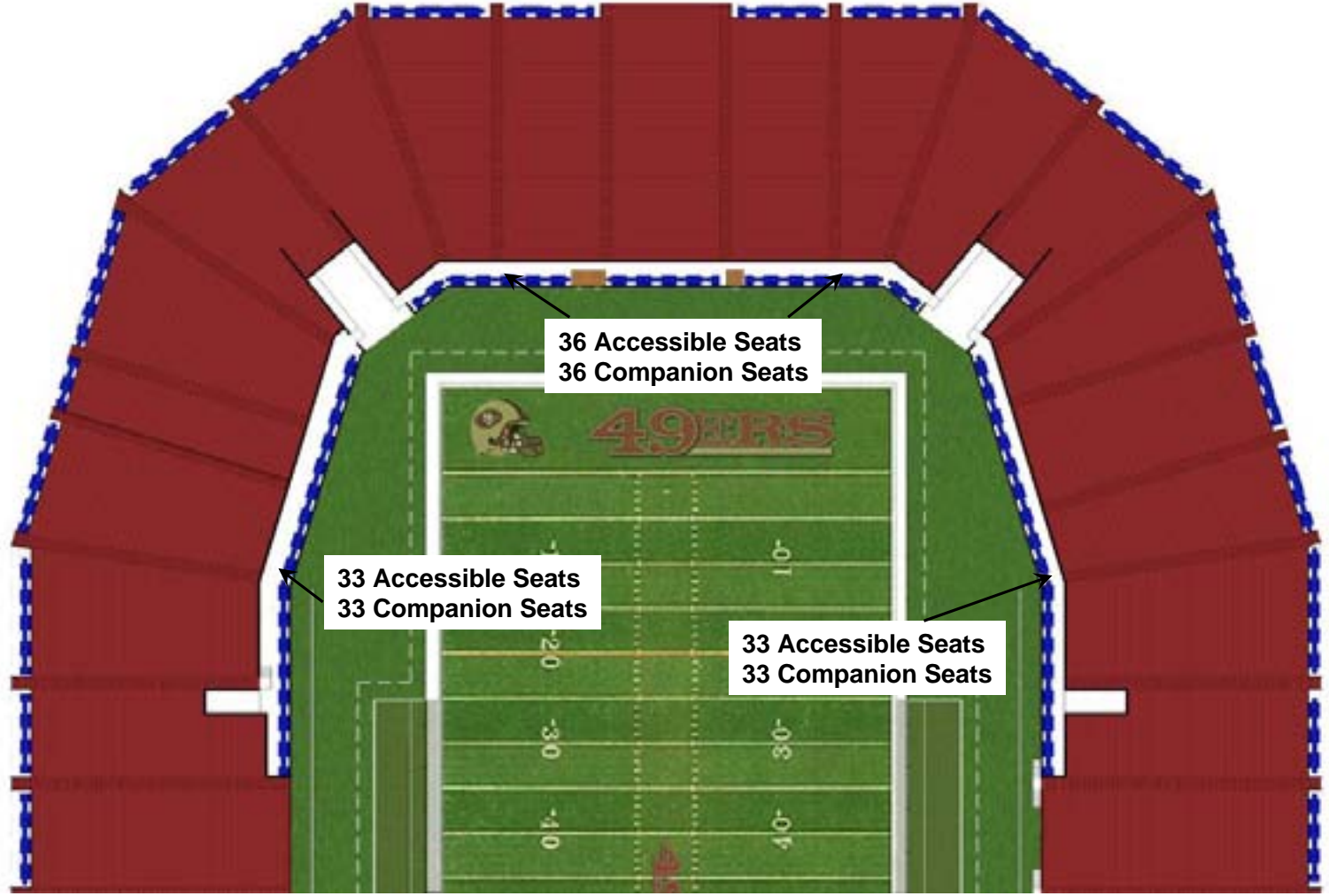
Press Level



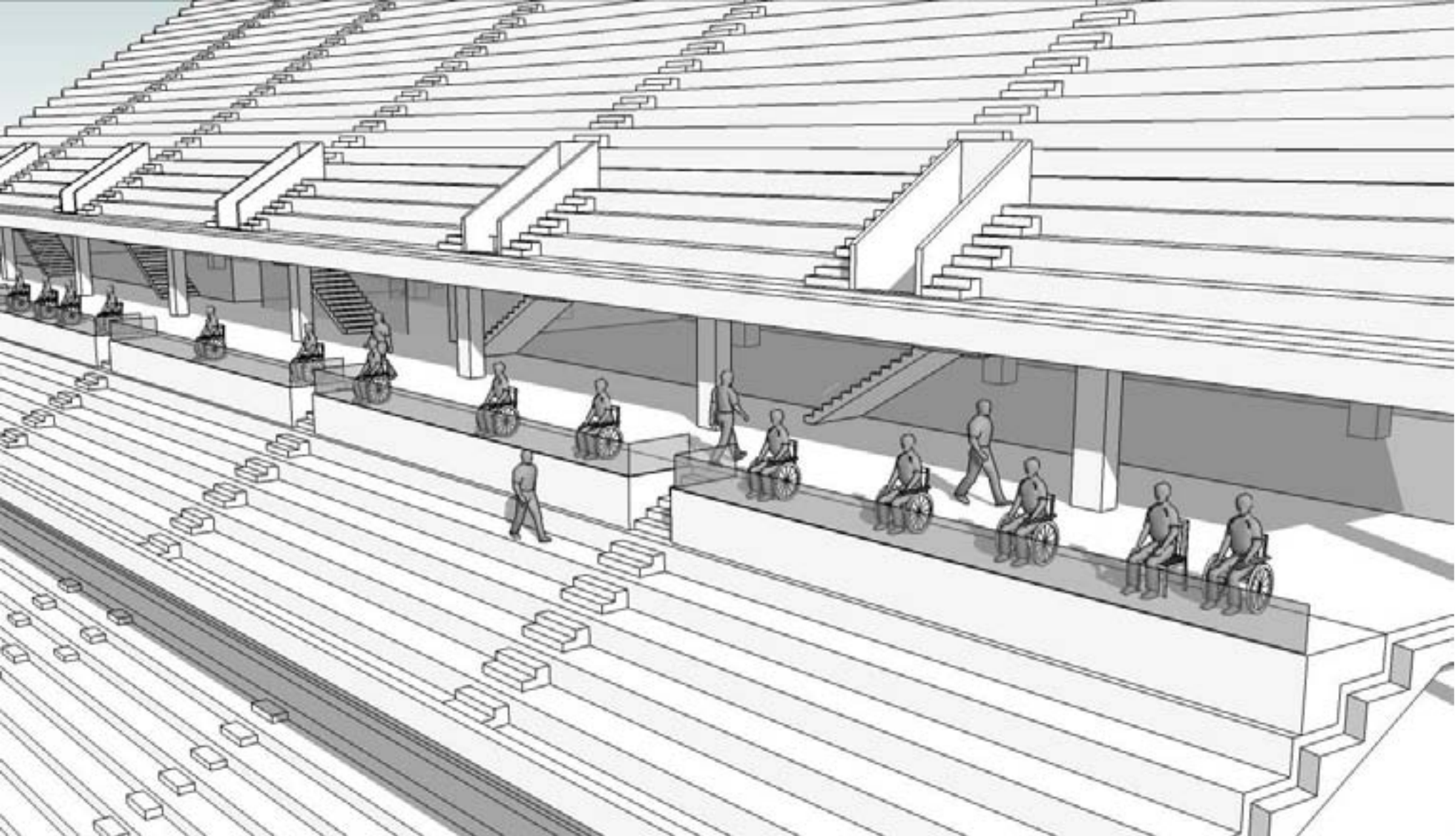
Legend

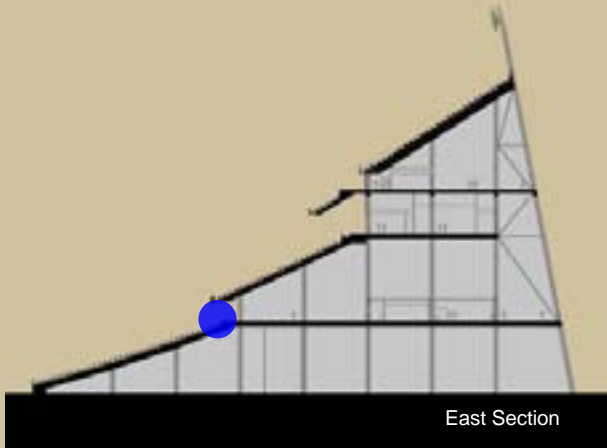
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- Future Development



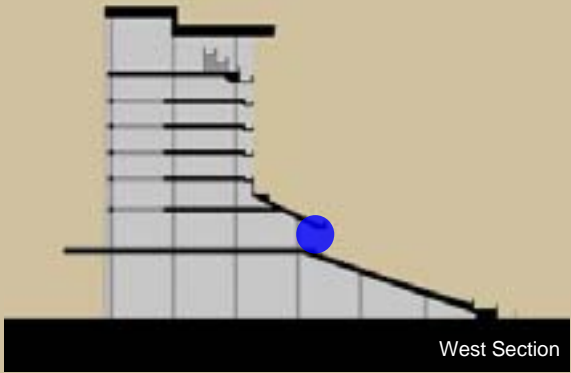


● Accessible Seating Locations





East Section



West Section



Overall Bowl Plan

Lower Concourse Bowl

45,686

Upper Concourse Bowl

18,736

Suite / Loge

3,606

Total

68,028



Super Bowl Seating

Total Capacity: 75,000







Multi-Use Facility

Stadium Diagrams

Concert Configuration 1

Seat Count: 52,150



Stadium Diagrams

Concert Configuration 2

Seat Count: 27,995



Stadium Diagrams

Concert Configuration 3

Seat Count: 53,311



Stadium Diagrams

NFL Configuration

360' x 160' Field

Seat Count: 68,028



Stadium Diagrams

Soccer Configuration

70yd x 115yd Field

FIFA International

70yd x 110yd

NCAA

70yd x 115yd

MLS

Varies from 70yd to 75yd &
110yd to 115yd



Stadium Diagrams

Rugby Configuration

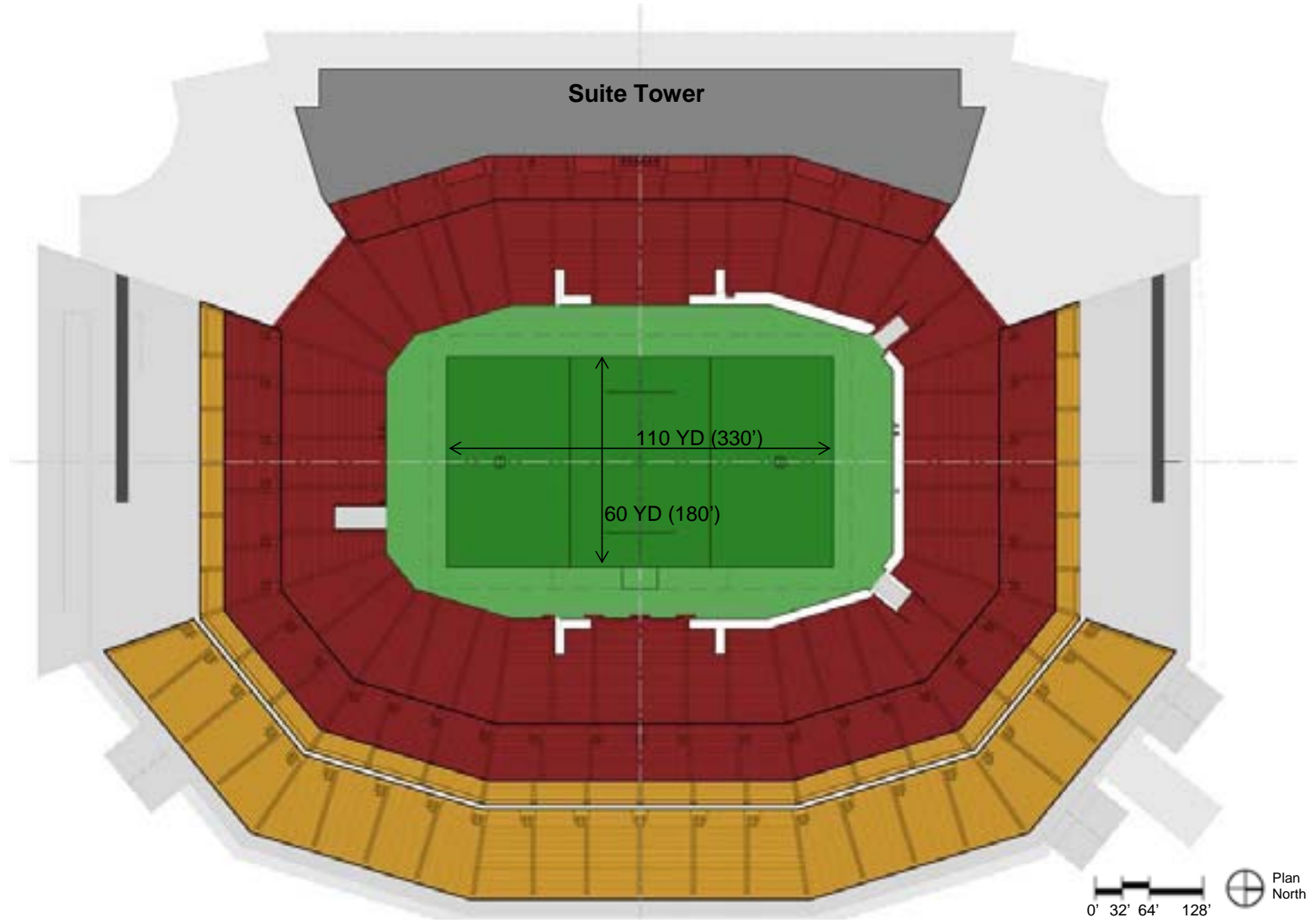
390' x 195' Field



Stadium Diagrams

Lacrosse Configuration

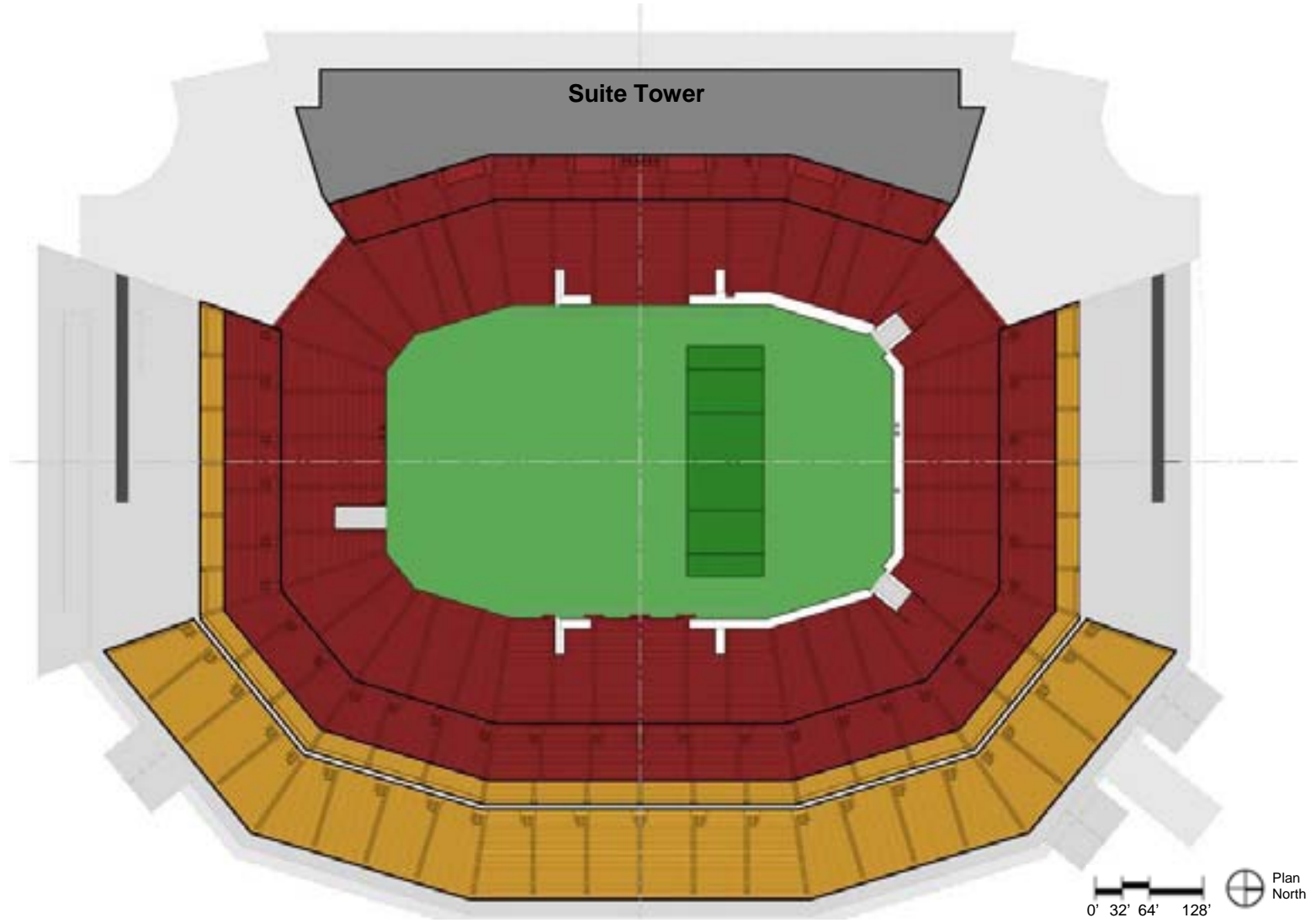
330' x 180' Field



Stadium Diagrams

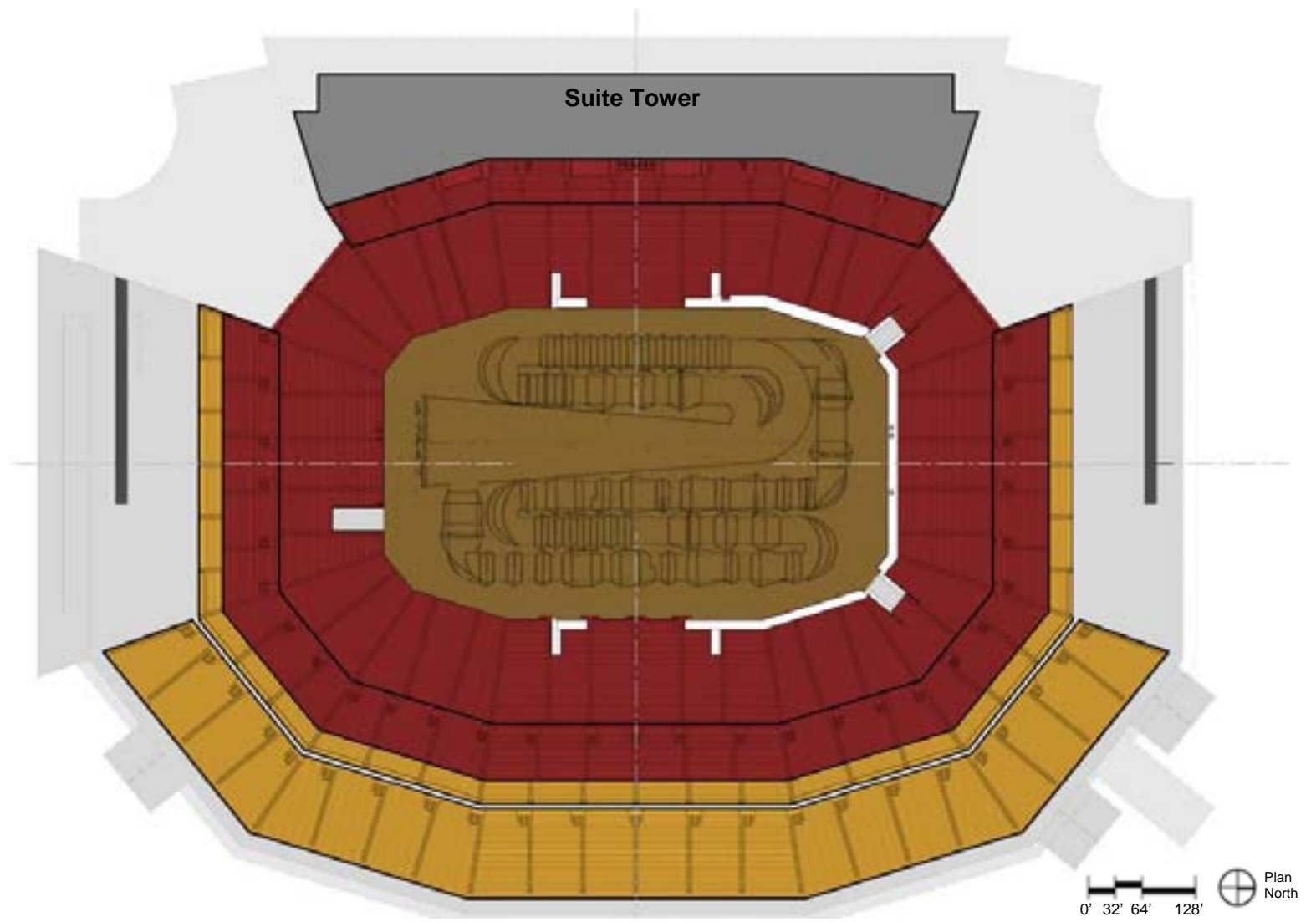
Equestrian Events
Dressage

197' x 66'



Stadium Diagrams

Supercross Configuration



Sustainable Design Goals

Team Experience

- Sustainable projects currently in progress: over 225
- Includes:
 - LEED Certified or Registered buildings
 - Title 24 compliance
 - EPA Rating Systems
 - Self reporting state or government agency rating systems
- Access to over 250 LEED AP's.



Sustainable Design Goals

What is “Green” Design?

- Design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in five broad areas:
- Sustainable site planning
- Safeguarding water and water efficiency
- Energy efficiency and renewable energy
- Conservation of materials and resources
- Indoor environmental quality



Sustainable Design Goals

U.S. Building Impacts:

IMPACTS OF U.S. BUILDINGS ON RESOURCES

40% primary energy use*

72% electricity consumption*

39% CO₂ emissions*

13.6% potable water consumption**

*Environmental Information Administration (EPA), 2004 Annual Energy Outlook
**U.S. Geological Survey (2000, 2002 data)

Sustainable Design Goals

Approach

- Second largest stadium registered with USGBC.
- Using the LEED NC Rating System
 - Third party verification & oversight
- Applying LEED to a stadium:
 - Developed for an office building
 - A square peg in a round hole.
 - USGBC unable to create a specialty rating system
 - Should not blindly waste energy and materials for inapplicable standards
- Benchmark: Nationals Park, Washington DC (certified March 2008)
 - Built on a damaged urban site
 - Energy conservation bar raised





Sustainable Design Goals

Approach

- Exploring customized EPA program:
 - NY Jets and NY Giants prototype
- May allow a workable approach for this unique building type
- Third party verification and oversight





Sustainable Design Goals

Sustainable Site Targets

- Ease of access to public transportation
- Bicycle parking
- Minimal amount of new parking
- Storm water management plan
- Vegetated areas on roof for on-site storm water infiltration.
- Energy Star Compliant white roofing material

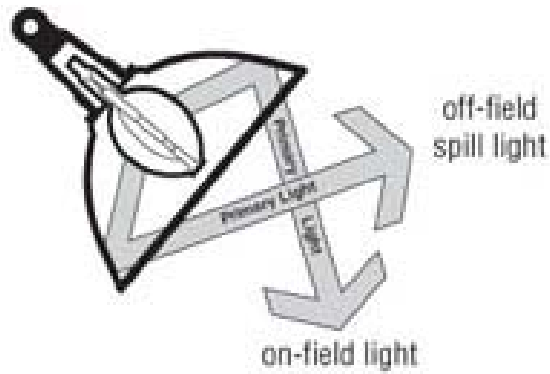


Sustainable Design Goals

Sustainable Site Targets

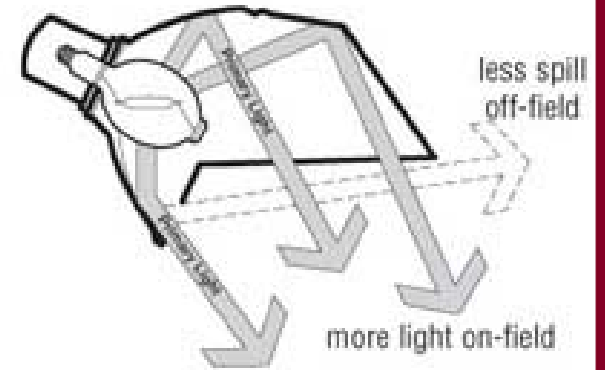
- Light colored paving surfaces for heat island reduction
- Adoption of site lighting criteria to avoid off-site light trespass and night sky pollution
- Use of reflector systems to reduce spill & glare from field lights

Old Generation



Standard Symmetrical Reflector

New Technology



Redirects Off-Field Spill Light



Sustainable Design Goals

Water Efficiency Targets

- Native or adapted landscaping plants
- High-efficiency irrigation equipment
- Use of reclaimed water for non-potable uses
- High-efficiency plumbing fixtures with occupant sensors



Sustainable Design Goals

Energy Efficiency Targets

- Commissioning of building systems
- No use of CFC-based refrigerants in base building HVAC&R systems
- Building systems designed to exceed Title 24
- Building automation system – accountability of energy consumption and indoor air quality
- Solar power in strategic areas



Sustainable Design Goals

Sustainable Material and Resource Targets

- Game day and non-game day collection of recyclables
- Development of a construction waste management plan
- Appropriate use of recycled content materials



Sustainable Design Goals

Indoor Environmental Quality Targets

- 100% outside air, in lieu of mechanical cooling, to ventilate interior spaces
- Construction IAQ management plan
- Adhesives, sealants, paints and carpet systems with reduced off-gassing
- Environmentally friendly cleaning products
- Day lighting in strategic areas





Night View Looking Southeast