

CATEGORY:

GENERAL DESIGN

PROJECT:

VIKING LAKES TCO PERFORMANCE CENTER
EAGAN, MN

ABSTRACT

As one of Thirty Two teams that play in the National Football League, the Minnesota Vikings wanted to create a world class facility that would put their organization under one roof, attract and retain top talent and provide an asset to the community and their fan base. The result was a grand vision that transformed an old corporate headquarters, abandoned and overgrown with invasive species, into the 200 acre Viking Lakes community development and the Twin Cities Orthopedics Performance Center (TCO). The role of the Landscape Architecture team was critical in developing this grander vision – leading site master planning, creating overall development guidelines and regulations, introducing sustainability and ecological restoration, and emphasizing the importance of a unified public realm through landscape, circulation, programming and branding.

NARRATIVE

Viking Lakes and the Twin Cities Orthopedics Performance Center, in Eagan, Minnesota is a 200-acre master planned community that is home to the Minnesota Vikings corporate headquarters and training facilities. The development transformed an overgrown, abandoned corporate headquarters that was filled with invasive plants, debris, and wetlands that served as runoff settlement ponds for the freeway. What started as a small single use facility blossomed into a multi use community for medical rehabilitation, sports training, stem incubation, multifamily residential, hospitality, retail, and corporate offices transforming this site into a place to work live and play.

The Landscape Architect was brought in early in the process to work with a multidisciplinary team of architects, engineers, owners, and other key stakeholders. The led and developed multiple concepts that built upon the initial program - introducing ideas of sustainability, circulation and the importance of the public realm serving as a catalyst to bring together a cohesive development. The Landscape Architect redeveloped the original concepts by rerouting the initial roadway to protect the existing wetlands and native vegetation stands and provides opportunities for future connections and interrelationships in the development. The Landscape Architect was also responsible for the development of site development guidelines required by the city to maintain an overall vision for future development in the coming years. These regulatory controls and design standards included all aspects of the development such as zoning, phasing, land use, architectural style and character, circulation, site furnishings, ecology and sustainability, wayfinding and signage, lighting, tree mitigation, and wetland rehabilitation.

The Landscape Architect developed an extensive Tree inventory assessment and mitigation documentation. Utilizing GIS mapping and surveying to record and preserve existing quality vegetation, remove invasive species and restore and reintroduce healthy native habitats. As part of this process, 1,200 trees native to regional habitats are currently being reintroduced over the next five years. The Landscape Architect working with ecologists and water quality specialist also conducted analysis of the existing site wetlands to remove invasive species and improve water quality diminished by buried debris and freeway runoff as part of the ongoing site rehabilitation. The initiatives are transforming algae covered ponds and reestablishing shoreline habitat, reintroducing healthy aquatic vegetation and fish species, building prefiltration basins to treat new site and incoming stormwater and the introduction of pond aeration through nano bubble technology to eliminate the dead zone and create a healthy pond environment. The Landscape Architect applied the overarching themes defined by the owner - *Innovative*, *Unifying*, and *Relentless*, to the landscape and site design. The Landscape Architect reintroduced native vegetation to the site utilizing native biomes of the region to define all areas of the site with plant material suited for those conditions and uses. The native planting also helped to break up and divide the larger plaza spaces needed for flexibility in public gathering and organization of the circulation patterns and access throughout the development. Extreme changes in elevation required innovative thinking in providing ADA accessibility intertwining pedestrian ramps with planted areas to minimize hardscape and define various areas of activity and programming on multiple levels. These same dramatic changes in elevation also proved useful to separate both private and public spaces for programming daily, weekend and major events on site. Flexibility was the key with multiple points of control and access through a series of gates, fences, landscaping, grading and well defined circulation routes that could function during any use.

In addition to developing four outdoor grass practice fields (two of which are heated) and one 6,000 seat outdoor stadium with synthetic turf, the landscape architect introduced enhanced and specialized training facilities - working closely with coaching and training staff to provide progressive and innovative training techniques. Some of the features include outdoor training facility for football position training, utilization of the emergency and vehicular service access as a sprinting track, and a training hill for specialized sprinting, jumping, step, wall and sand training

techniques. The public realm is a nod to the Scandinavian heritage of the region. The overall look is modern Nordic, with simplicity, minimalism and functionality at the core. Additionally, the team's brand is a unifying element that is incorporated into every facet of the development - the architecture and site which is visible in the materials, landscape, signage and wayfinding, lighting, and furnishings.

CONCLUSION

This project demonstrates the range and abilities a Landscape Architect can play in leading and shaping a development from the ground up rooted in sustainability, ecology and the importance of the public realm as a unifying element. The Landscape Architect transformed the vision for Viking Lakes and the TCO Performance Center through thoughtful master planning, calculated and planned restoration and meaningful design. The Landscape Architect's early involvement was critical in the development's implementation and is engaged with new phases of the master plan in design and under construction.

TCO PERFORMANCE CENTER

THE TWIN CITIES OTHOPEDICS PERFORMANCE CENTER IS A STATE OF THE ART CORPORATE FACILITY IN THE HEART OF A LARGER MASTER PLANNED DEVELOPMENT THAT TRANSFORMED AN ECOLOGICALLY BROKEN SITE, ESTABLISHED A SENSE OF COMMUNITY AND USED THE PUBLIC REALM TO UNIFY AND LINK THE CURRENT AND FUTURE USE.



DEVELOPMENT - DESIGN GUIDELINES

OVERALL DEVELOPMENT GUIDELINES WERE LEAD BY THE LANDSCAPE ARCHITECT TO ESTABLISH STANDARDS OF DEVELOPMENT AND ULTIMATELY INFORM THE SITE DEVELOPMENT, CIRCULATION, ARCHITECTURE, PUBLIC REALM, ECOLOGY AND SUSTAINABILITY GUIDELINES FOR CURRENT AND FUTURE PHASES.

CONNECTIVITY AND TRAIL NETWORKS

PRESERVED AND RESTORED NATIVE WETLANDS AND TREES



SUSTAINABLE STRATEGIES

Wetlands

The development site falls within the Eagan River Green Heights Watershed Management Organization. Based upon a wetland delineation report issued by the Project on October 6, 2015, the AECM area contains three wetlands and one existing restoration feature. The total wetland area is approximately 25.6 acres and includes a restoration pond to be located in the upper portion of the site. The Master Plan will strive to avoid or minimize potential impacts to wetlands and associated buffers. Potential fill impacts to wetlands will be minimized where feasible by the use of compact design and in some cases by installing earth retention to the wetland. For the wetland and portions of wetlands being preserved, they will be protected from adjacent land uses by the City required wetland buffer of 50 feet for the boundary of the wetland's delineation as well as restoration restoration features.

The site wetland mitigation will be considered if there are wetland restoration opportunities located within the AECM study area that would yield wetland mitigation credit. Wetland banking will be considered if one because are not available and/or if agencies recommending the use of a wetland bank.

Storm Water

Quantity Management

All storm water management shall apply to the AECM Project Development, per the City of Eagan code and the local state and national standards.

Quality Management

Green infrastructure practices will be utilized wherever possible.

- Utilize low-impact or porous pavement.
- Reduce impervious surfaces.
- Utilize best management practices for storm water management methods to the extent feasible and allow to infiltrate the soil and have particulates with out of a pipe in entering the drainage system.

Soils and Vegetation

Soil Erosion Control Measures

The development shall follow all rules of Minnesota and City of Eagan standards. NRMPS Permit guidelines shall be followed.

Construction Health Safety

- Special shall be prepared and installed on site or nearby for erosion.
- A storm water management plan shall be prepared and approved. This document shall be updated as compliance with the City's rules. Minimum erosion control shall be applied during the construction process as needed. This will minimize sediment, decrease runoff, increase the retention of all planting, and minimize erosion control.

Parking Lot Erosion

Parking lot and roadways shall be sealed to reduce the Urban Heat Island effect.

Health and Well Being

Soil Erosion Control Measures

- Provide Operation Site Accessibility, Safety, and Way-Finding
- The development will plan for and provide any pedestrian access to the adjacent trail system and proposed Dakota Center regional trail.
- The trail system will be well lit at construction points and provide signage that clearly directs users, employees, and visitors.
- Facilities to Multi-Modal Transportation Systems

DISTRICT CHARACTER AND ARCHITECTURAL GUIDELINES

LAND USE DISTRICTS



Land Use Districts

The Northeast Eagan Development is divided into seven (7) distinct districts. These districts are accessible from Northwest Parkway and each boasts connectivity to active green belts as well as unique amenities offered by existing lakes and wetlands which are conserved as focal points within each district. Each district is intended to take on a distinct architectural characteristic based on its building type, amenities, and geographic features. The seven (7) districts are identified as follows and shown in context on the map to the right.

- District 1 is conceived to be a 'gateway' site with visibility to and from Interstate 494 to the west, Lone Oak Parkway and Northwest Parkway. Proposed uses include office, hotel, retail and multi-family residential.
- District 2 will accommodate multi-family housing in a forested environment that seeks to preserve, to the fullest extent possible, the existing groves of trees found on site.
- District 3 will be the new headquarters for the Minnesota Vikings and their practice facilities.
- District 4 is another 'gateway site' with visibility to Interstate 494 from the east, Ames Crossing Road and Northwest Parkway. Proposed uses include office, hotel and conference center.
- District 5 is a residential village that features multi-family housing and potentially ground level retail with residential above.
- District 6 also features multi-family housing with dramatic views to an existing lake and wetlands.
- District 7 is the commercial core of the development. Ground level retail and restaurants ring a promenade that is focused on the existing lake. The master plan envisions office and potentially multi-family residential and/or hotels on top of the ground level retail restaurants. Other foregrounding office, retail and hotel structures are also accommodated.

Site Plan / Zoning

- Medium Density Residential** - Multi-family attached homes horizontally attached, typically referred to as town homes or row houses, and dwellings attached both vertically and horizontally, typically referred to as apartments or condominiums. Density is between 6 to 16 dwelling units per acre.
- High Density Residential** - Multi-family residential structures consisting of dwelling units attached horizontally and vertically typically referred to as apartments or condominiums. Density is 16 or more dwelling units per acre.
- Retail Commercial** - Lots or parcels containing retail sales, services and all recreational services that are predominantly privately owned and operated for profit (for example, sporting goods stores, hotels and restaurants).
- Mixed Use** - A denser and more walkable, urban type area with multi-story buildings that house a variety of uses including retail, office, and residential tenants. Mixed Use areas shall contain a mix of uses with retail and limited office uses on the first floor to provide street level activity. Parking is generally more limited with the intent to promote pedestrian traffic and reduced number of vehicle trips per use.
- Office** - An area that provides for office uses as a transition from residential to commercial uses, or for large planned office areas. Permitted uses included business, professional, medical and financial offices as well as offices for individuals and non-profit organizations.
- Parks and Open Space** - Public and private recreational facilities such as parks, trails, fields, play areas, town greens and plazas. Open space that is typically not developed and left in its natural state. This can include floodplains, drainage ways, bluffs, wetlands, woods, and other natural areas. Often these areas are impractical to develop due to flood plain elevation, floodway, wetlands, steep slopes, or contain a natural splendor that is desirable to be preserved.
- Hotel** - An area that provides for hotel and conference center uses ranging from 100 rooms up to 200 rooms as currently planned. Conference facilities could range in size from 25,000 to 200,000 square feet.
- Phase One** - Located in District 3, the new Headquarters Complex for the Minnesota Vikings represents the first phase of development. Key program elements include: headquarters office, athletic training facilities, an indoor practice facility, outdoor practice fields and training areas, an outdoor stadium (6,000 to 10,000 seats), maintenance grounds keeping buildings plus dedicated and accessible surface parking.

LIGHTING ZONES AND OVERALL CHARACTER



BRANDING / SIGNAGE INTENT

TREE MITIGATION

THE LANDSCAPE ARCHITECTURE TEAM, DEVELOPED AN EXTENSIVE TREE MITIGATION PROCESS TO RECORD VALUED AND INVASIVES SPECIES AND DEVELOP A STRATEGY FOR REMOVAL AND REFORESTING INCLUDING PLANTING OVER 2,000 NATIVE TREE SPECIES IN THE NEXT FIVE YEARS.

OVERALL DEVELOPMENT TREE DOCUMENTATION

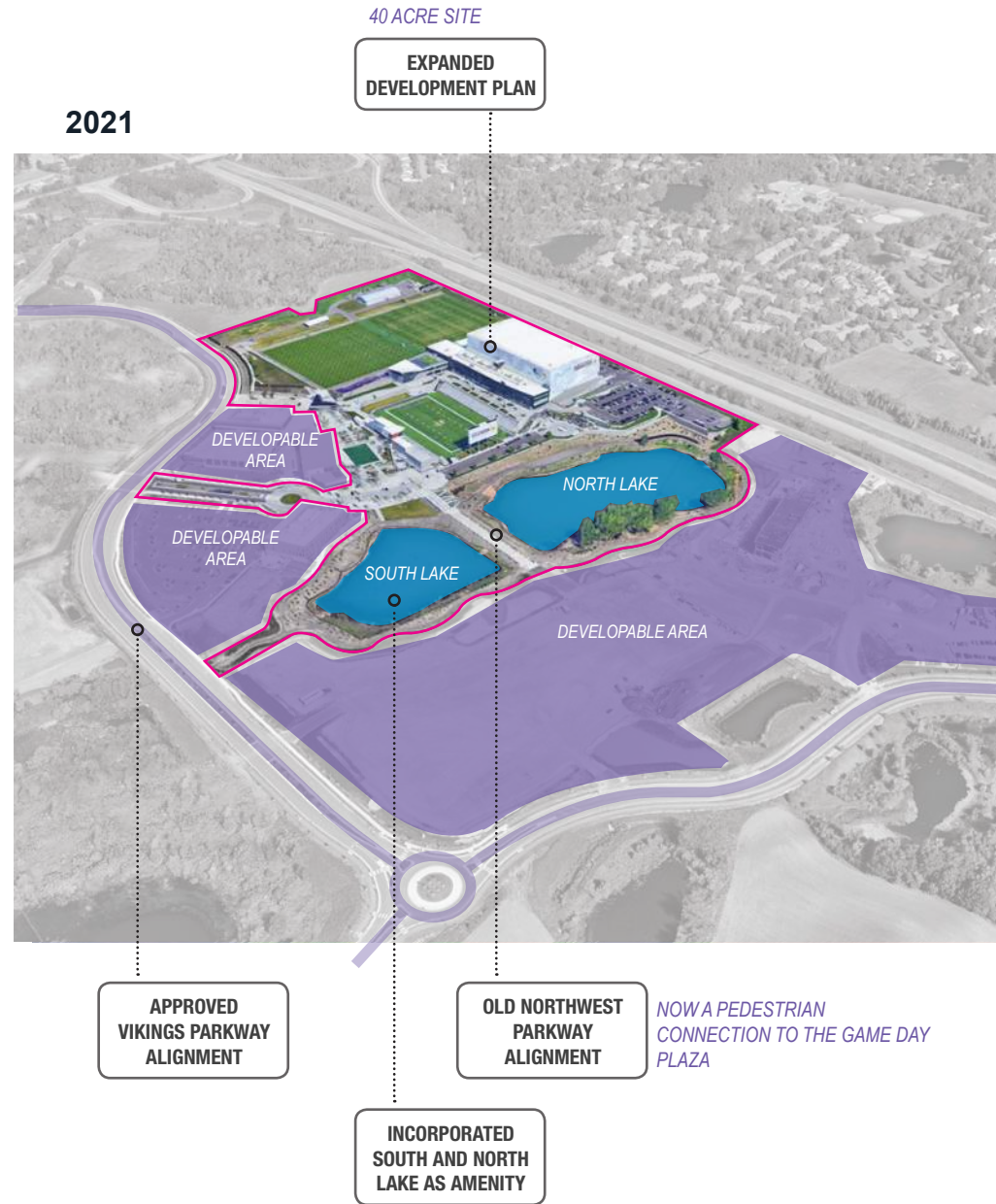
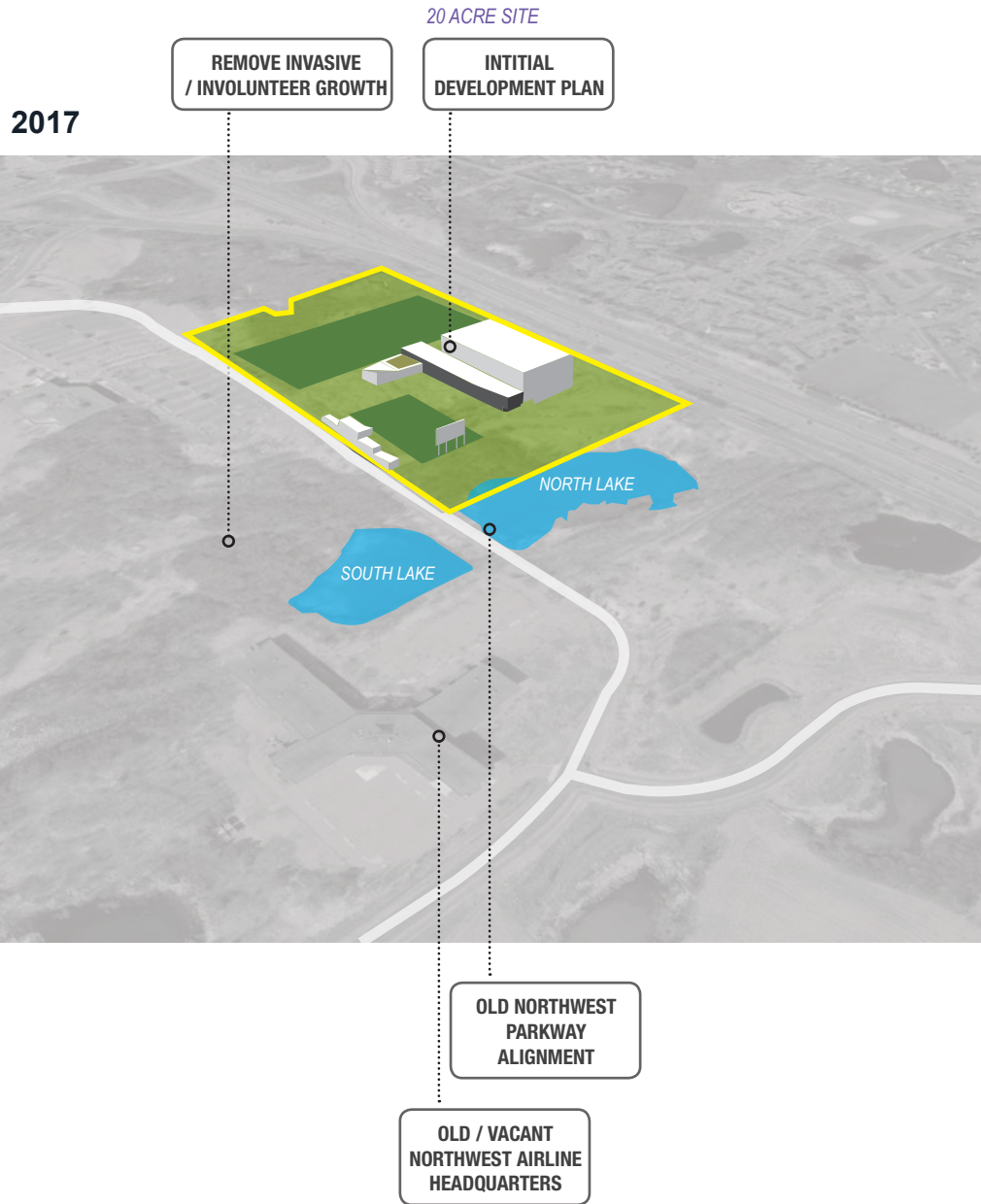


PHASE 1 - TCO PERFORMANCE CENTER TREE MITIGATION



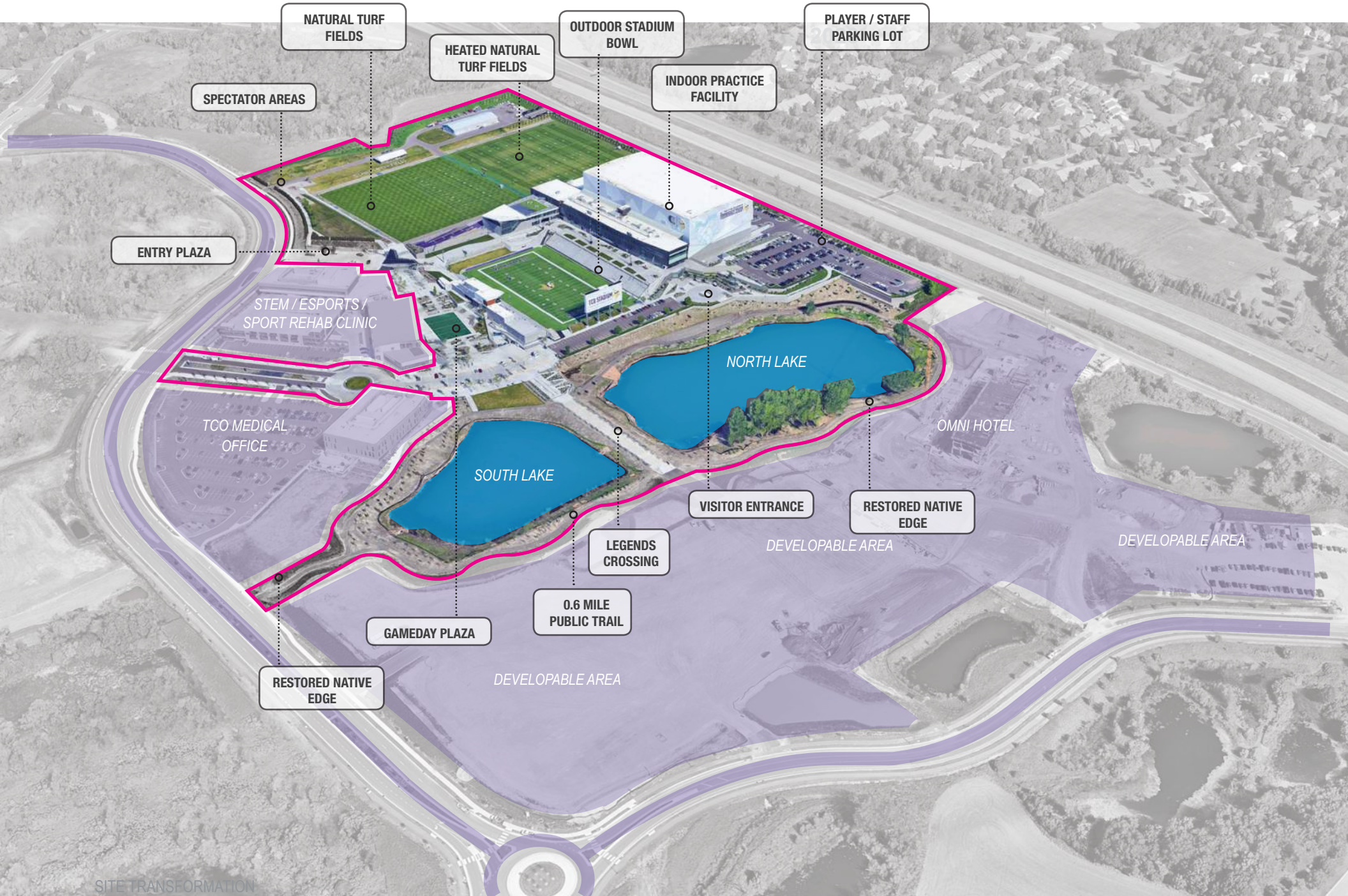
SITE MASTER PLANNING

THE LANDSCAPE ARCHITECT PLAYED A CRITICAL ROLE IN THE INITIAL PLANNING FOR THE TCO PERFORMANCE CENTER BY ENVISIONING A LARGER CAMPUS ENVIRONMENT THROUGH THE REROUTING OF A CITY STREET TO UTILIZE THE LAKES AS A CAMPUS FEATURE WITH A TRAIL SYSTEM THAT WEAVES THROUGHOUT THE DEVELOPMENT.



TCO PERFORMANCE CENTER DEVELOPMENT

THE OVERALL SITE DEVELOPMENT OF THE TCO PERFORMANCE CENTER PROVIDES MANY FUTURE GROWTH OPPORTUNITIES THAT FOCUS ON THE REHABILITATED NATURAL SYSTEMS AND OVERALL PUBLIC REALM AND TRAIL DEVELOPMENT BY THE LANDSCAPE ARCHITECT.



NATURAL TURF FIELDS

HEATED NATURAL TURF FIELDS

OUTDOOR STADIUM BOWL

PLAYER / STAFF PARKING LOT

SPECTATOR AREAS

INDOOR PRACTICE FACILITY

ENTRY PLAZA

STEM / ESPORTS / SPORT REHAB CLINIC

NORTH LAKE

TCO MEDICAL OFFICE

SOUTH LAKE

OMNI HOTEL

VISITOR ENTRANCE

RESTORED NATIVE EDGE

LEGENDS CROSSING

DEVELOPABLE AREA

DEVELOPABLE AREA

GAMEDAY PLAZA

0.6 MILE PUBLIC TRAIL

RESTORED NATIVE EDGE

DEVELOPABLE AREA

GUIDING PRINCIPLES

THE LANDSCAPE ARCHITECT DEVELOPED THE SITE RELATING TO THE THREE OVERARCHING PRINCIPLES DEVELOPED BY THE CLIENT FOR THE ENTIRE DEVELOPMENT, THE ORGANIZATION AND ITS RECOGNIZABLE BRANDING.

UNIFYING

- NATIVE LANDSCAPE THROUGHOUT THE SITE
- COMMUNITY PROGRAMMING AND EVENTS
- CIRCULATION AND ACCESS



INNOVATIVE

- ONE OF A KIND TRAINING FACILITIES AND SITE AMENITIES
- ADA ACCESS AND CIRCULATION THROUGHOUT EXTENSIVE SITE GRADE CHANGE
- SITE REHABILITATION AND SUSTAINABILITY

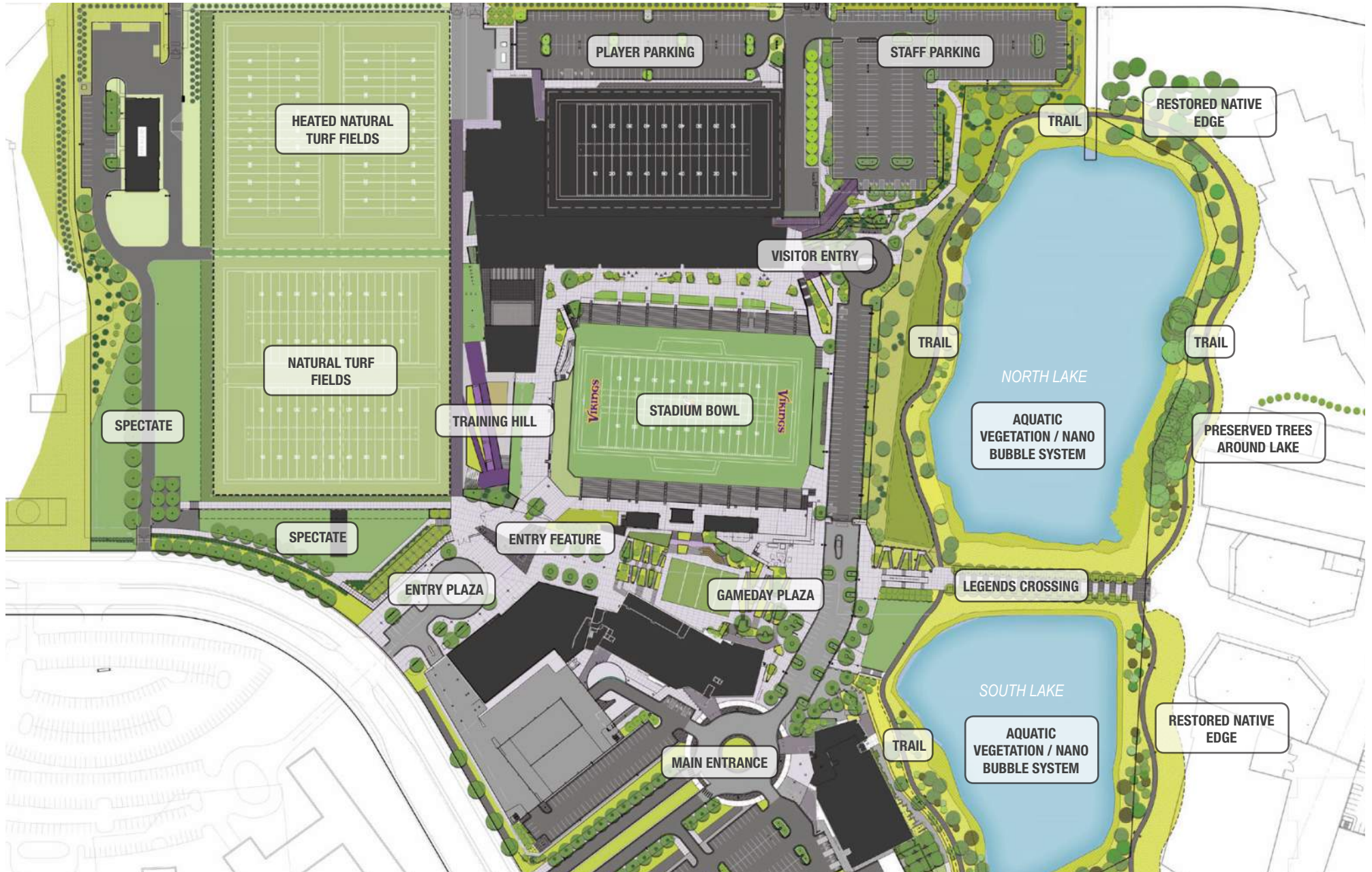
RELENTLESS

- UNIQUE SCANDINAVIAN SITE CHARACTER
- TOUGH AND HARDY MATERIALS THAT ARE LOCALLY SOURCED
- FLEXIBILITY TO HANDLE A VARIETY OF USES THROUGH ALL SEASONS



VIKING LAKES TCO PERFORMANCE CENTER

THE DESIGN OF THE SITE FUNCTIONS FOR BOTH PRIVATE AND PUBLIC EVENTS, AS WELL AS A PUBLIC REALM THAT SERVES THE DEVELOPMENT DAILY. THEMED MATERIALS, REGIONAL PLANTINGS STRONG PEDESTRIAN CIRCULATION BRING THE PUBLIC REALM AND OVERALL SITE TOGETHER.



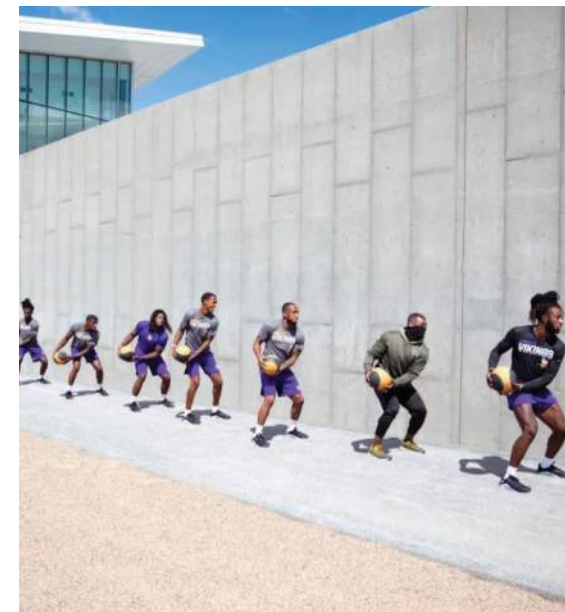
OVERALL SITE CHARACTER

THROUGH THE USE OF MANY NATIVE SPECIES, THE DESIGN BRINGS UNITY THROUGH A COMMON PLANT PALLETE. THIS PLANT PALLETE IS THEMED THROUGHOUT THE SITE WITHIN FIVE DIFFERENT REGIONAL BIOZONES THAT REPAIRED THE SITE ECOLOGY.



WORLD CLASS PERFORMANCE TRAINING

THE LANDSCAPE ARCHITECT COLLABORATED WITH NUMEROUS TRAINING STAFF TO CREATE AND OPTIMIZE INNOVATE TRAINING FEATURES. SOME OF THE KEY FEATURES INCLUDE A PLYOMETRIC TRAINING HILL, RESISTANCE SAND TRAINING PIT, HEATED NATURAL TURF FIELDS, INDOOR / OUTDOOR WEIGHT ROOM, BLOCKING / TACKLING STATIONS, AND AN OUTDOOR ARTIFICIAL TURF.



ORCHESTRATING A PROGRAM

THE LANDSCAPE ARCHITECTURE TEAM LED THE PROGRAM AND PROVIDED THE CLIENT AND COMMUNITY WITH THE ABILITY TO ENGAGE WITH THE DEVELOPMENT IN A VARIETY OF WAYS AND STYLES OF EVENTS THAT PROVIDED NECESSARY PRIVACY FOR THE TEAM AND THEIR OVERALL OPERATIONS.

PUBLIC REALM (DAILY EXPERIENCE)

ACCESSIBLE SITE, WALKING AND RUNNING THE PEDESTRIAN TRAIL SYSTEM, ATHLETE AND GENERAL PUBLIC TRAINING AND REHAB, LUNCH AND MEETINGS, RETAIL AND SHOPPING, HOSPITALITY AND CORPORATE OPERATIONS



COMMUNITY EVENT PROGRAM (OCCASIONAL EXPERIENCE)

YOUTH CAMPS, FRIDAY NIGHT LIGHTS, REGIONAL HIGH SCHOOL AND COMMUNITY SPORTING EVENTS, BROADCAST AND MEDIA TRAINING, BUSINESS CONFERENCES, FAIRS AND TRADE SHOWS



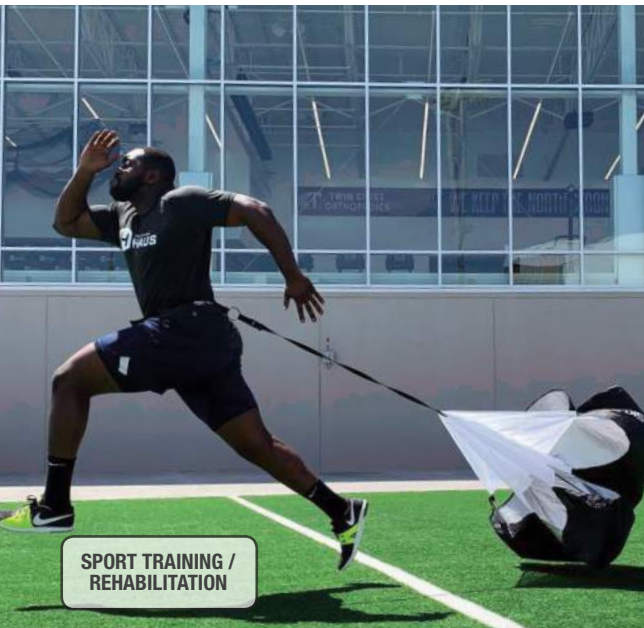
EVENT PROGRAM (ANNUAL EXPERIENCE)

NFL TRAINING CAMP, CONCERTS, NFL EXPERIENCE, PLAY 60 PROGRAM, 5K RUN



UNIFYING PUBLIC REALM

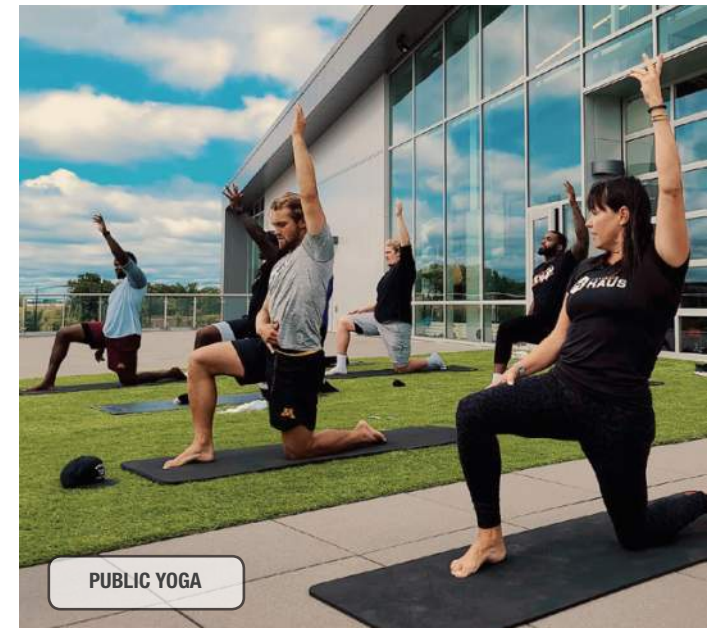
THE PLAZAS AND THE LANDSCAPE UNIFIES THE CAMPUS AND SUPPORTS THE FUTURE GROWTH OF THE OVERALL DEVELOPMENT. THIS FLEXIBLE OPEN SPACE HAS BECOME A HUB FOR HIGHSCHOOL / COLLEGE SPORTS REHABILITATION, SMALL COMMUNITY EVENTS, PLAYER / FAN ENGAGEMENTS, AND IS CONNECTED BY A HALF MILE TRAIL SYSTEM.



SPORT TRAINING / REHABILITATION



YOUTH ENGAGEMENT



PUBLIC YOGA

EVENT PROGRAMMING

THROUGH STRATEGIC PROGRAMMING AND SPATIAL DESIGN, THE CAMPUS PROVIDES OPPORTUNITIES FOR GATHERING AND OFFERING IT'S SPACE TO THE PUBLIC FOR COMMUNITY EVENTS SUCH AS 5K RUN EVENTS, HIGH SCHOOL SPORTS, CONCERTS , MOVIE NIGHTS AND MEDIA AND BROADCAST TRAINING.



EVENT PROGRAMMING

THE DESIGN NEEDED TO PROVIDE ADEQUATE SPACE FOR A VARIETY OF EVENTS AND ACTIVITIES. THE LANDSCAPE ARCHITECT WORKED COLLABORATIVELY WITH VIKING STAFF TO PROGRAM TRAINING CAMP AND OTHER LARGE SCALE EVENTS THAT OPENED UP THE ENTIRE CAMPUS TO THE PUBLIC.

OCCUPANCY
 (1/4) HILL SEATING - ±4,480 SF = ±1,176 PEOPLE
 (1/2) STANDING ROOM - ±21,880 SF = ±1,850 PEOPLE

SEASON TICKET HOLDERS

NEWS / MEDIA STAGING

CONCOURSE / SEATING / VENDING

KID FUN ZONE / FAMILY ACTIVITIES

- NFL EXPERIENCE, PLAY 60, SKILLS COMPETITION, INFLATABLES, MADDEN ZONE, LAWN GAMES, ETC. (ADULT AND YOUTH).

CONCOURSE / SEATING / VENDING

AUTOGRAPH STAGING

0.5 MILE TRAIL

GENERAL ADMISSION

BLEACHER SEATING - ±12,690 SF = ±2,307 PEOPLE
 TABLES AND CHAIRS - ±3,670 SF = ±245 PEOPLE
 STANDING ROOM - ±12,970 SF = ±1,996 PEOPLE

ENTRY PLAZA

VENDOR PLAZA

GAMEDAY PLAZA

(1/2) STANDING ROOM - ±37,925 SF = ± 3,611 PEOPLE

(1/4) TABLES AND CHAIRS - ±21,877 SF = ±1,459 PEOPLE
 (1/2) STANDING ROOM - ±43,754 SF = ±6,250 PEOPLE

MEDIA / VENDOR STAGING

EVENT PROGRAMMING

THESE LARGE EVENTS OPEN THE CAMPUS TO THE COMMUNITY AND PROVIDE A PLACE OF COMING TOGETHER TO SHARE A COMMON INTEREST.

