RACING TOWARDS A SUSTAINABLE FUTURE
MATTHEW MAYER

# PROJECT OVERVIEW

How dirt track racing can become a more sustainable endeavor while improving overall user experience

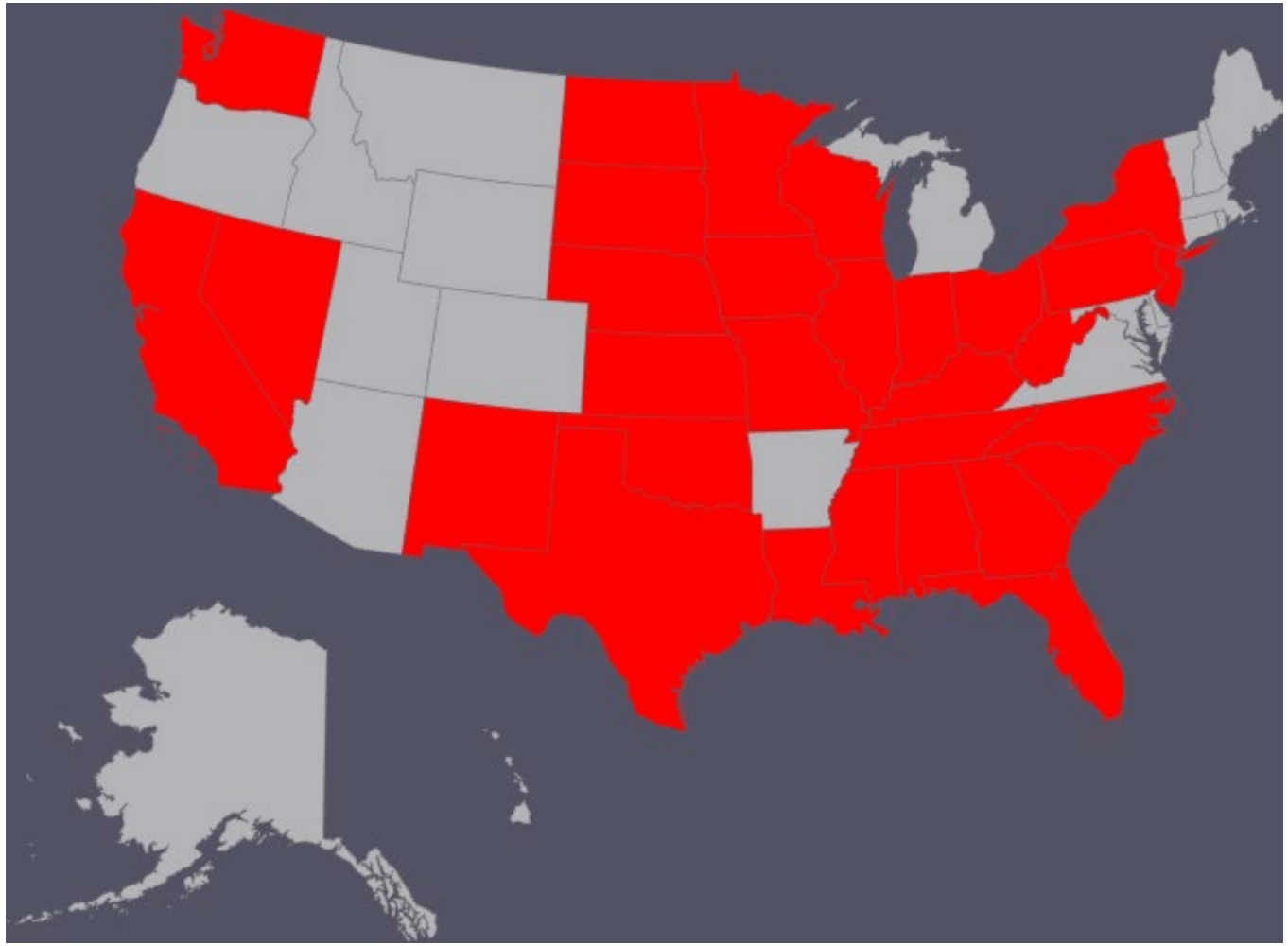
# PERSONAL SIGNIFICANCE

- Knowledgeable about the site and sport
- Family memories
- Two of my passions intermixing

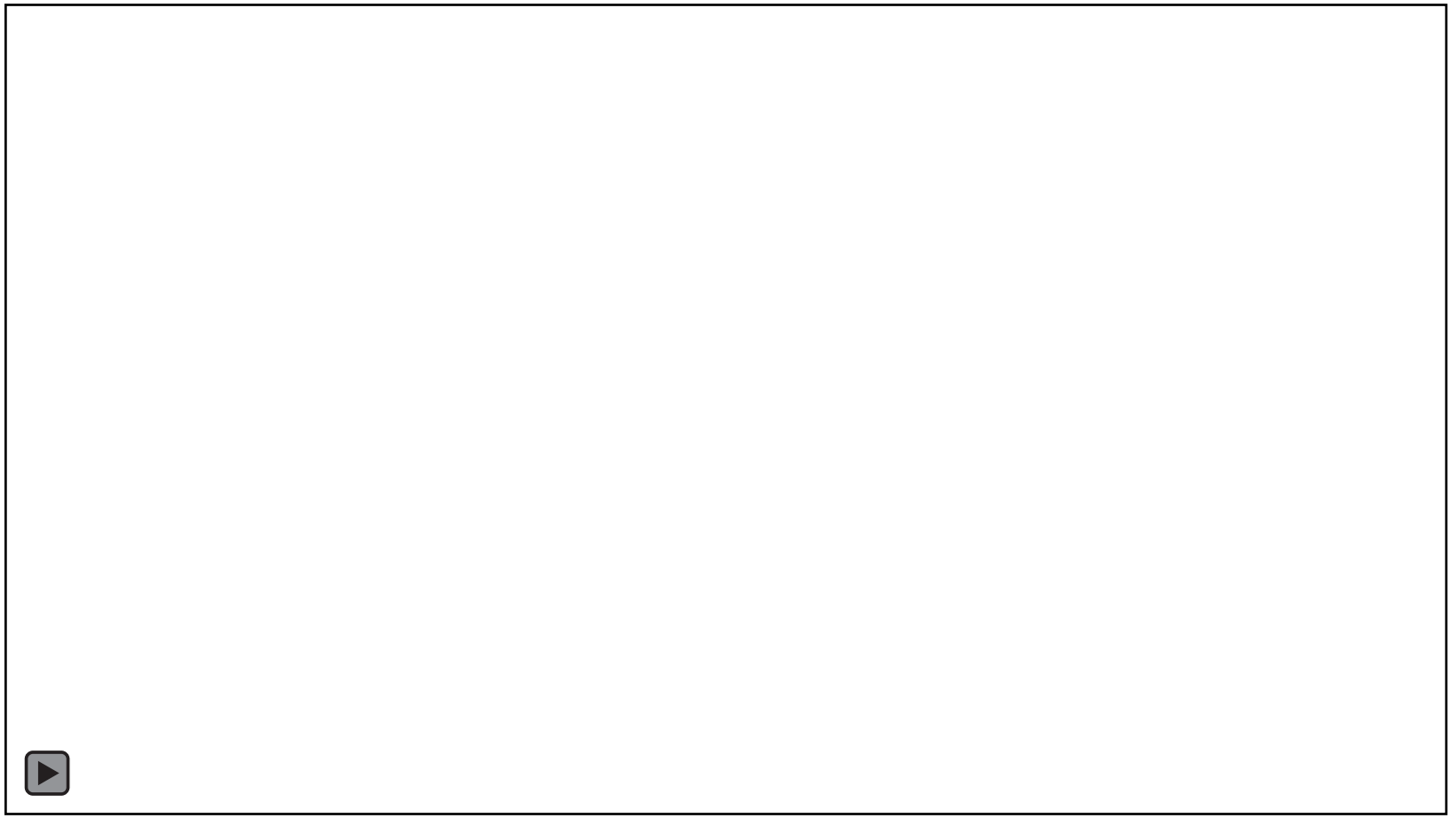
# BACKGROUND

# ABOUT THE PROJECT

- What is dirt track racing?
- World of Outlaws scheduling



# MAIN VIDEO



# RESEARCH

2
Tarlton
57
Tarlton
LUCAS OIL
9
CURB
17
NOS
ENERGY DRINK
NOS ENERGY DRINK
14
Dietz

# CASE STUDY #1 – THE DAYTONA HOTEL

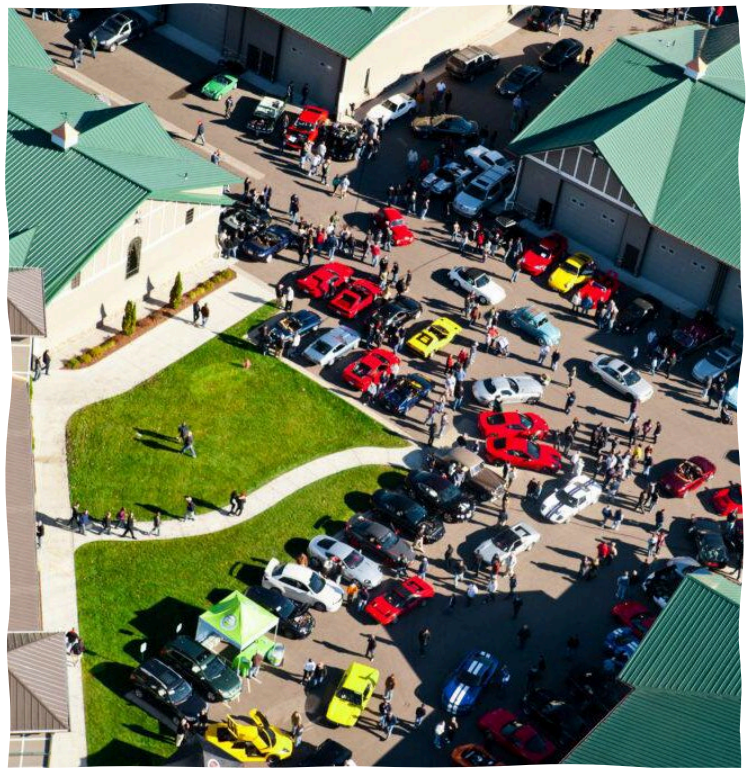
- Hotel Near Racetrack Property
- Motorsports Theme

# CASE STUDY #2 – AUTOMOTORPLEX CHANHASSEN

- Garage Condominium Complex
- Shop/ Living Spaces

# CASE STUDY #3 – ELDORA SPEEDWAY

- Premier Dirt Track in the Country
- Top Notch User Experience



# CASE STUDIES

Case Study Research

# EXISTING SITE

# EXISTING SITE

RED RIVER VALLEY FAIRGROUNDS, WEST FARGO, NORTH DAKOTA

SITE CONTEXT

ZONING & SIZE

NATURAL FEATURES

MAN-MADE FEATURES

# EXISTING SITE

CIRCULATION

UTILITIES

SENSORY

HUMAN & CULTURAL

# HISTORY OF RED RIVER VALLEY SPEEDWAY

- Leadership Change/ Scheduling Change
- Track Remodel
- Track Closure
- Track Reopening

# RED RIVER VALLEY SPEEDWAY

- Weekly Racing
- Special Events

IMCA Hobby Stock

IMCA Sport Mod

INEX Legend

IMCA Stock Car

IMCA Modified

IMCA Racesaver Sprint Car

Minn-Kota Lightning Sprint

WoO Late Model

WoO Sprint Car

# FACILITY SCHEDULE

SNOCROSS

DIRT TRACK SEASON

WoO LATE MODELS

RED RIVER VALLEY FAIR

WoO SPRINT CARS

BIG IRON FARM SHOW

LOST IN THE VALLEY

HOLIDAY LIGHTS

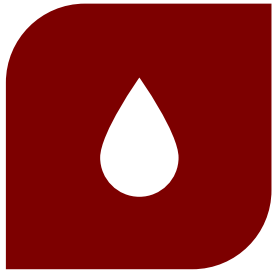
SNOCROSS

DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN

# AREAS FOR REFINEMENT

DISTANCE BETWEEN RACE NIGHTS

LACK OF LODGING



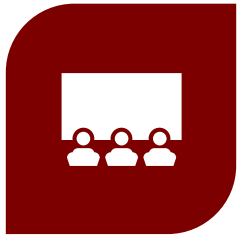
WATER & ENERGY USAGE

USER EXPERIENCE

# DESIGN SOLUTIONS

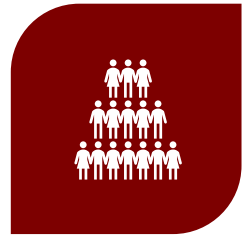
HOTEL, RESTAURANT & MUSEUM

SHOP CONDOS



GRANDSTAND CANOPY

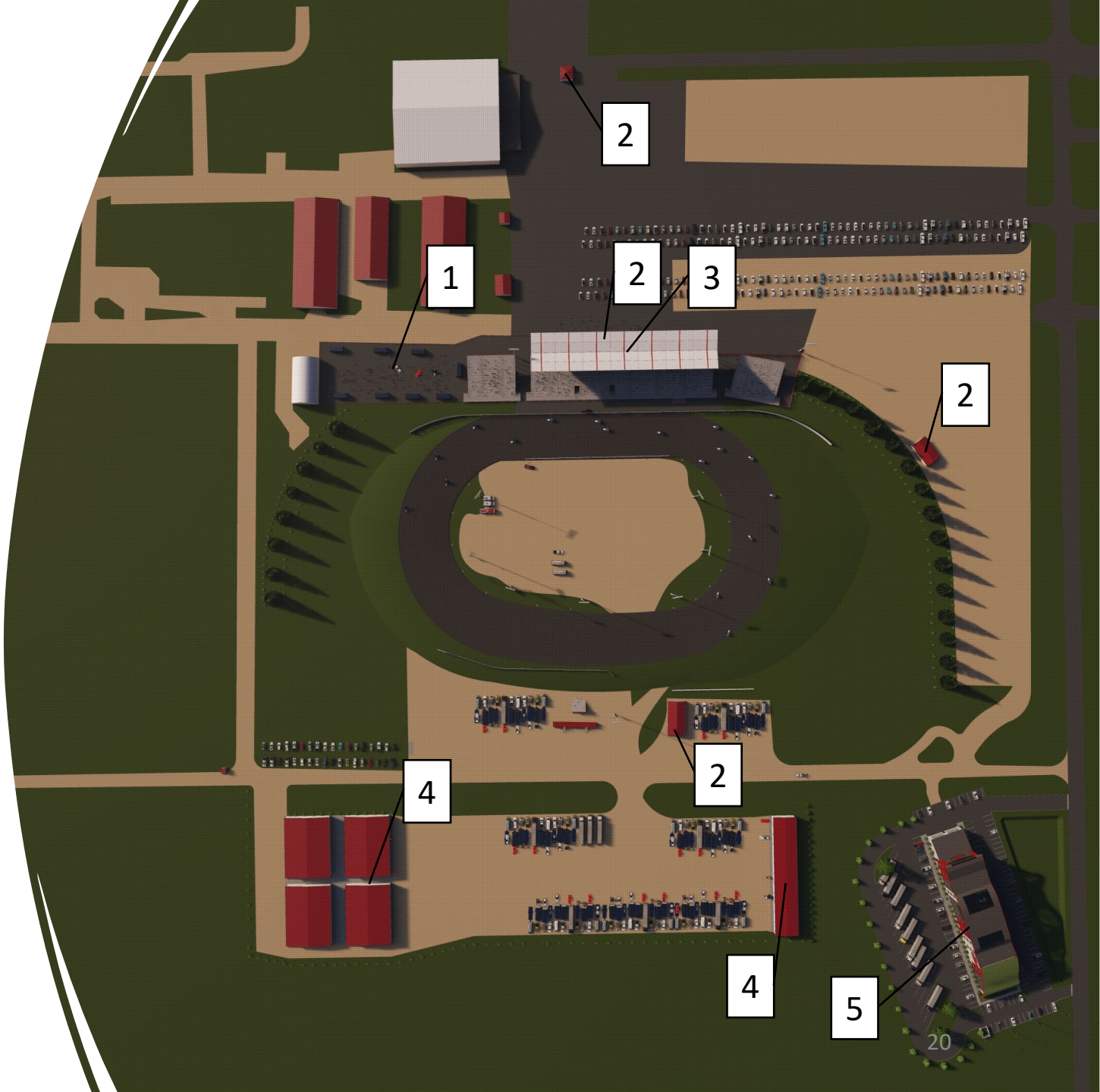
FACELIFT OF EXISTING BUILDINGS ON SITE



FAN ZONE

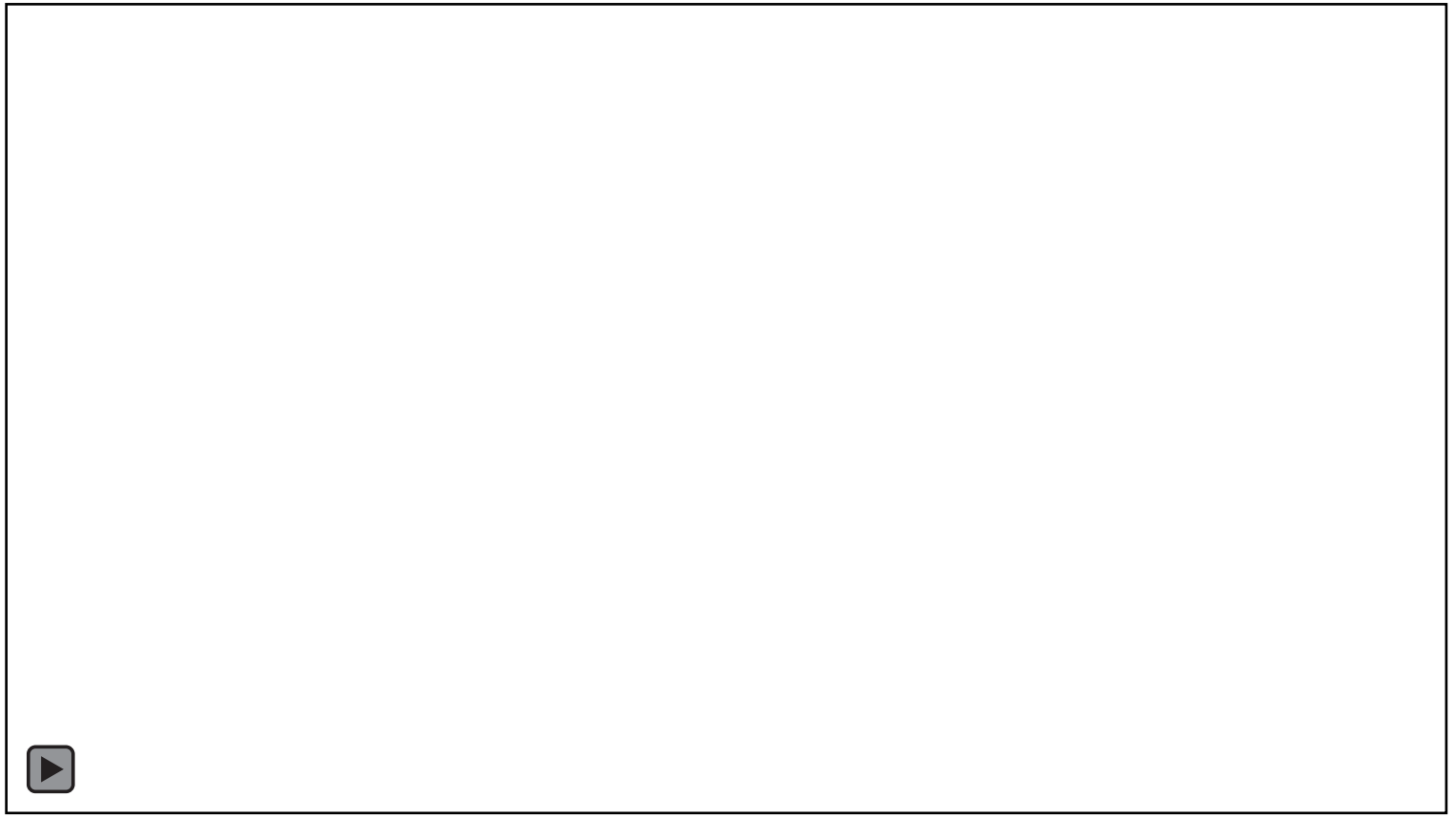
# MASTER PLAN

1. Fan Zone
2. Existing Building Facelifts
3. Grandstand Canopy
4. Shop Condos
5. Hotel | Restaurant | Museum



# HOTEL RESTAURANT MUSEUM

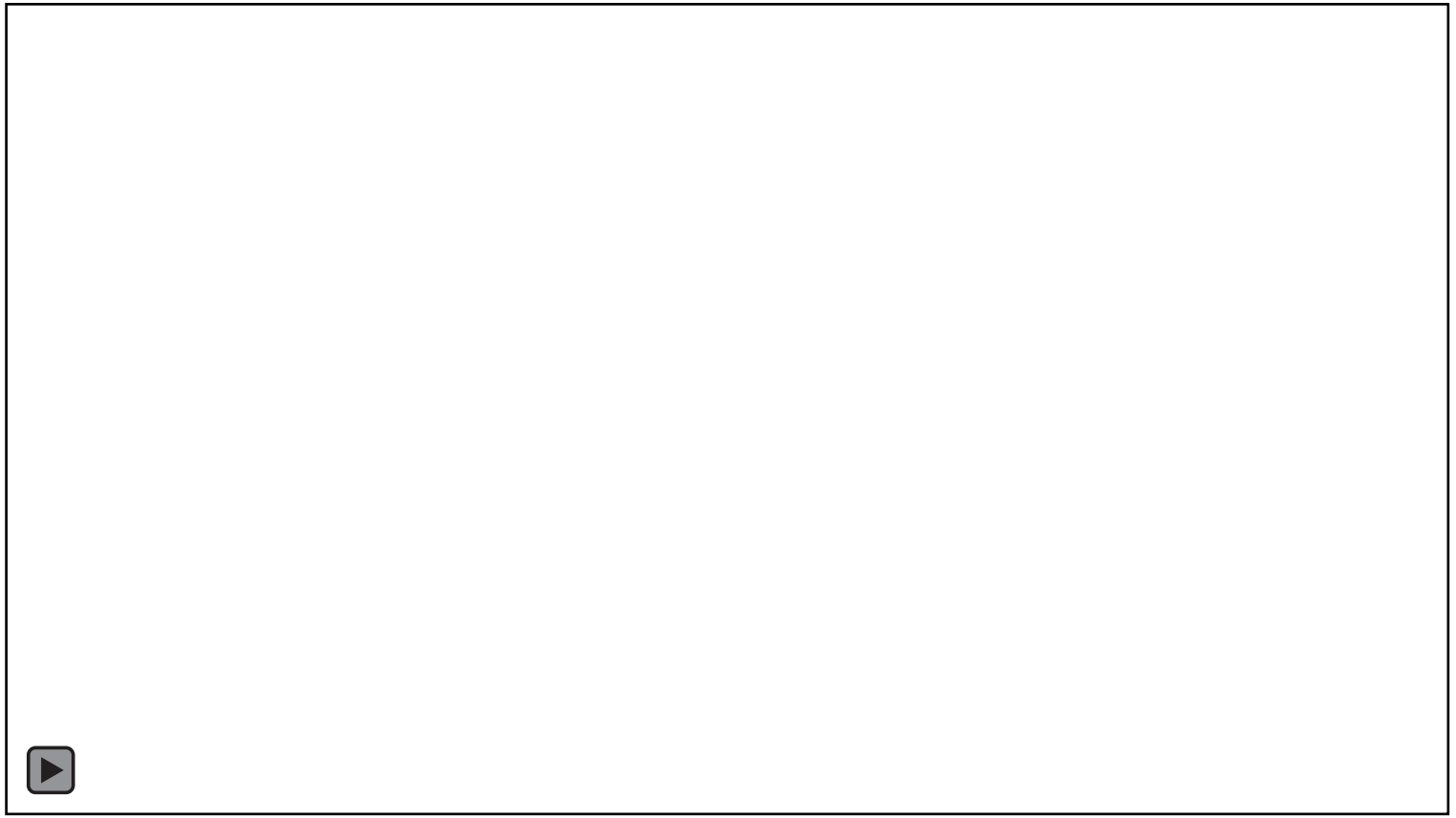
- The Cushion Hotel
- Design Inspiration



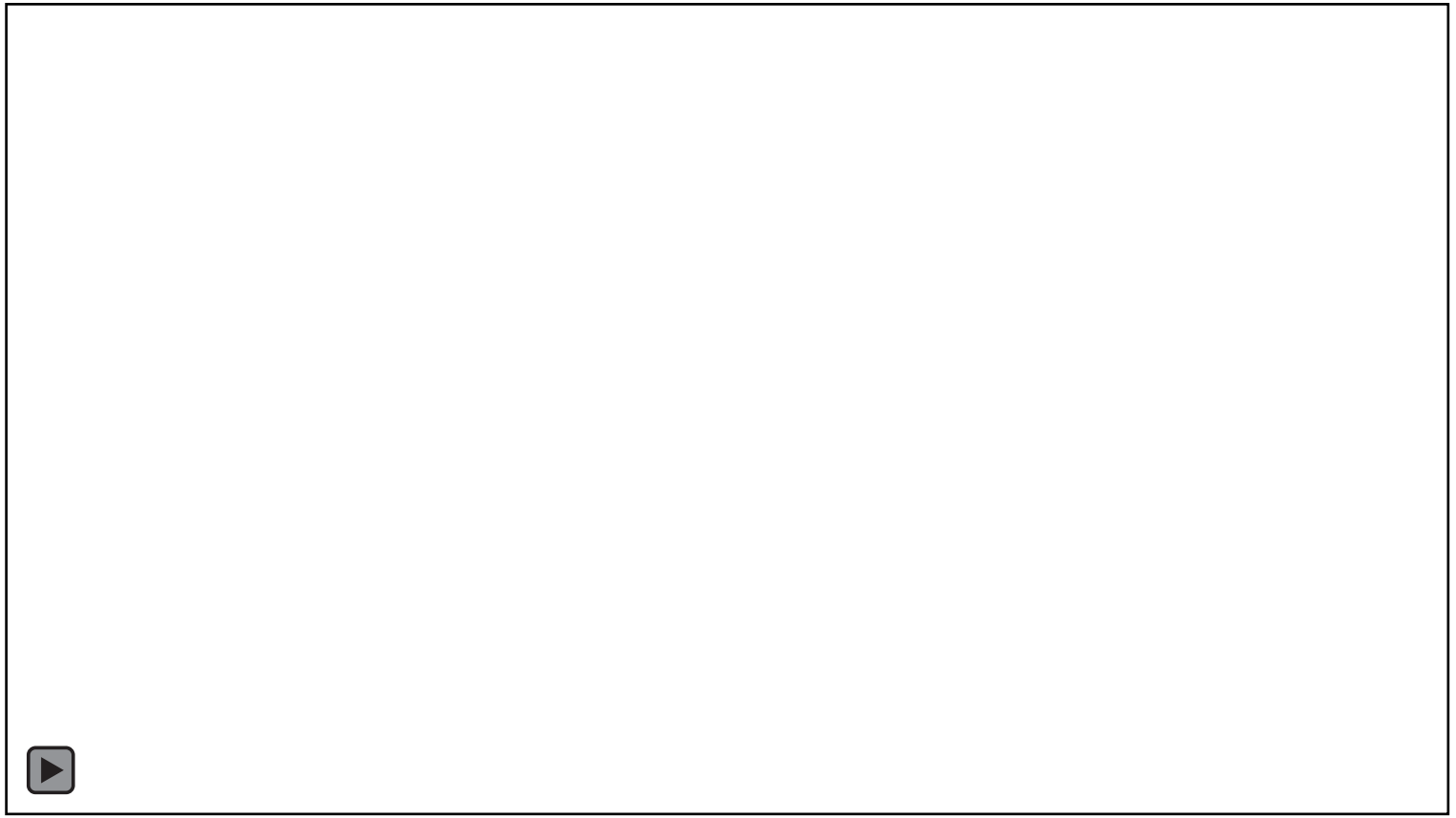
# HOTEL RESTAURAUNT MUSEUM

- Hotel Amenities
- Multiuse Conference Rooms
- Red River Racing History Display

# HOTEL
# RESTAURAUNT
# MUSEUM

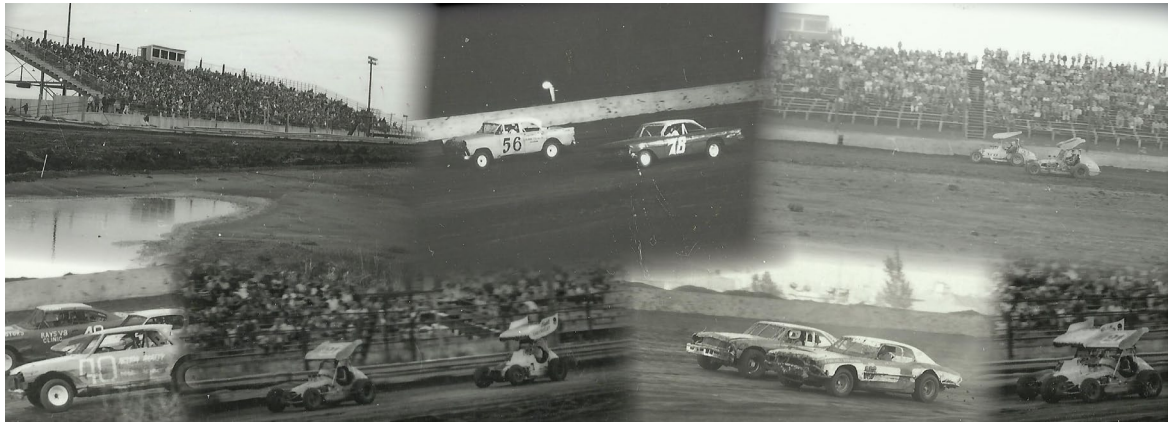


# HOTEL
# RESTAURAUNT
# MUSEUM



# HOTEL RESTAURAUNT MUSEUM

- Red River Racing History Museum
- Picture Walls
- Hands-on Fan Experience

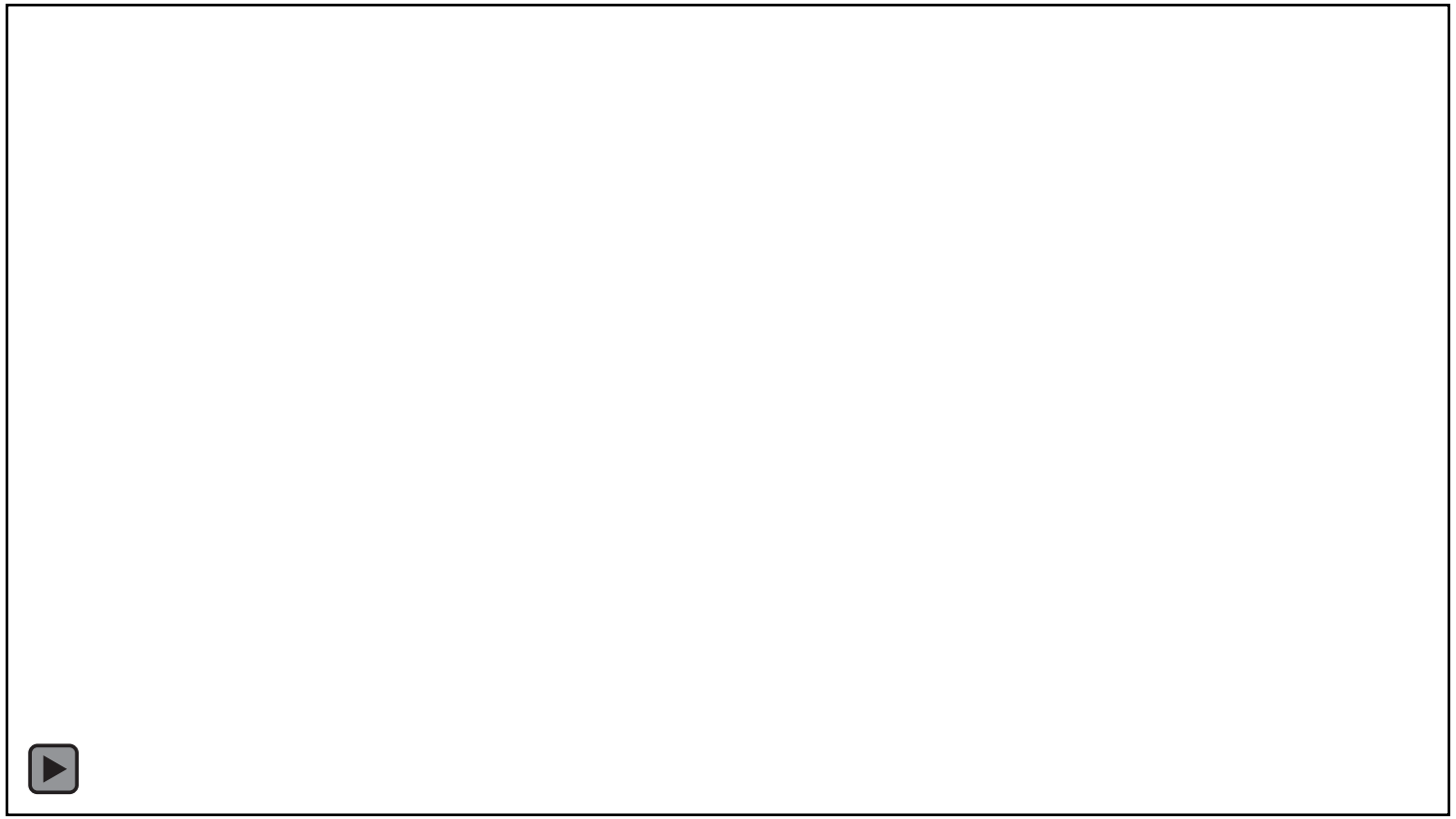


# HOTEL RESTAURAUNT MUSEUM

- 69 Rooms Over 3 Floors
- Multiple Room Configurations

# HOTEL RESTAURAUNT MUSEUM

- 2 Separate Dining Areas
  - Traditional Area
  - Racetrack Viewing
- Bar



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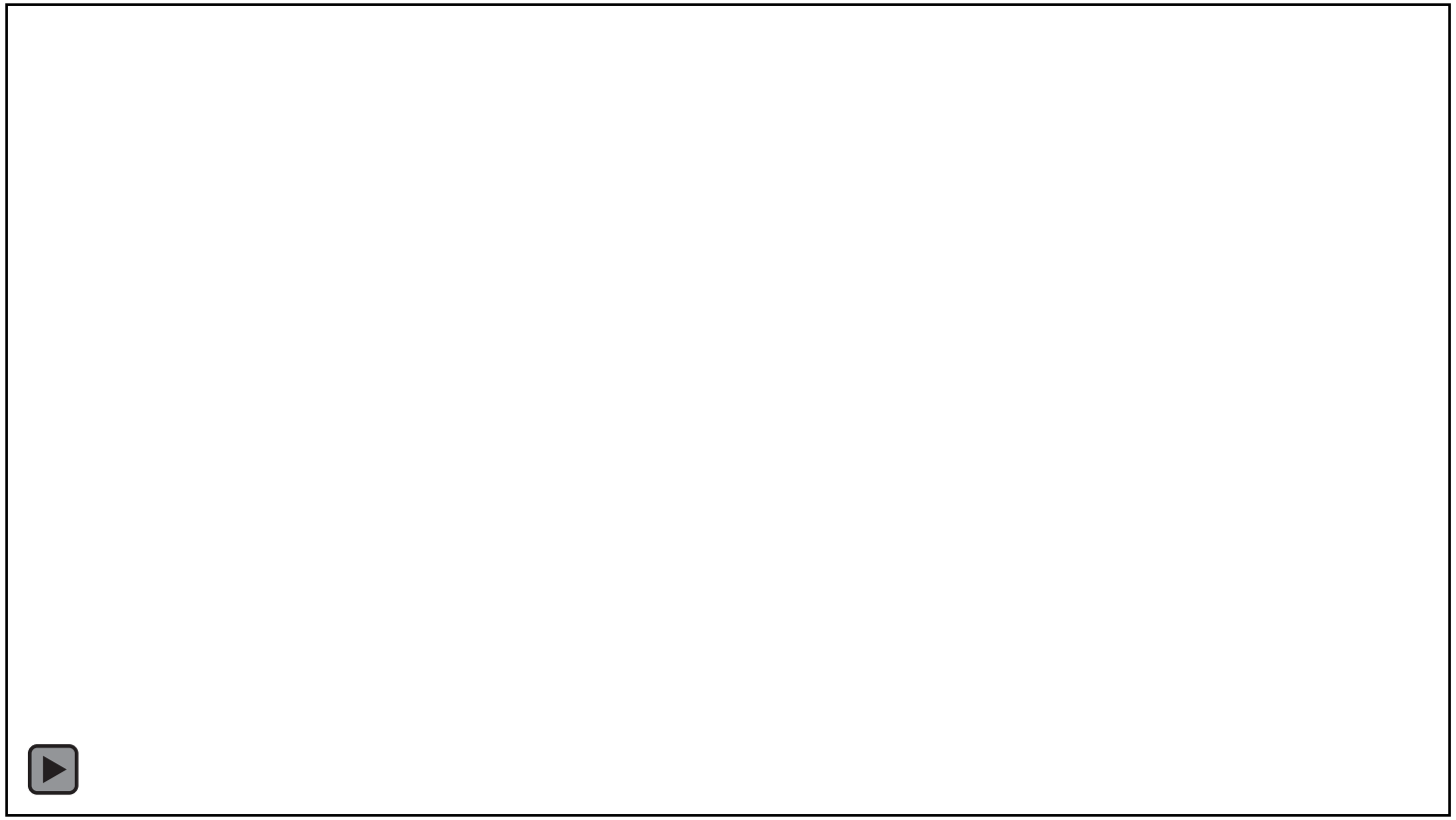
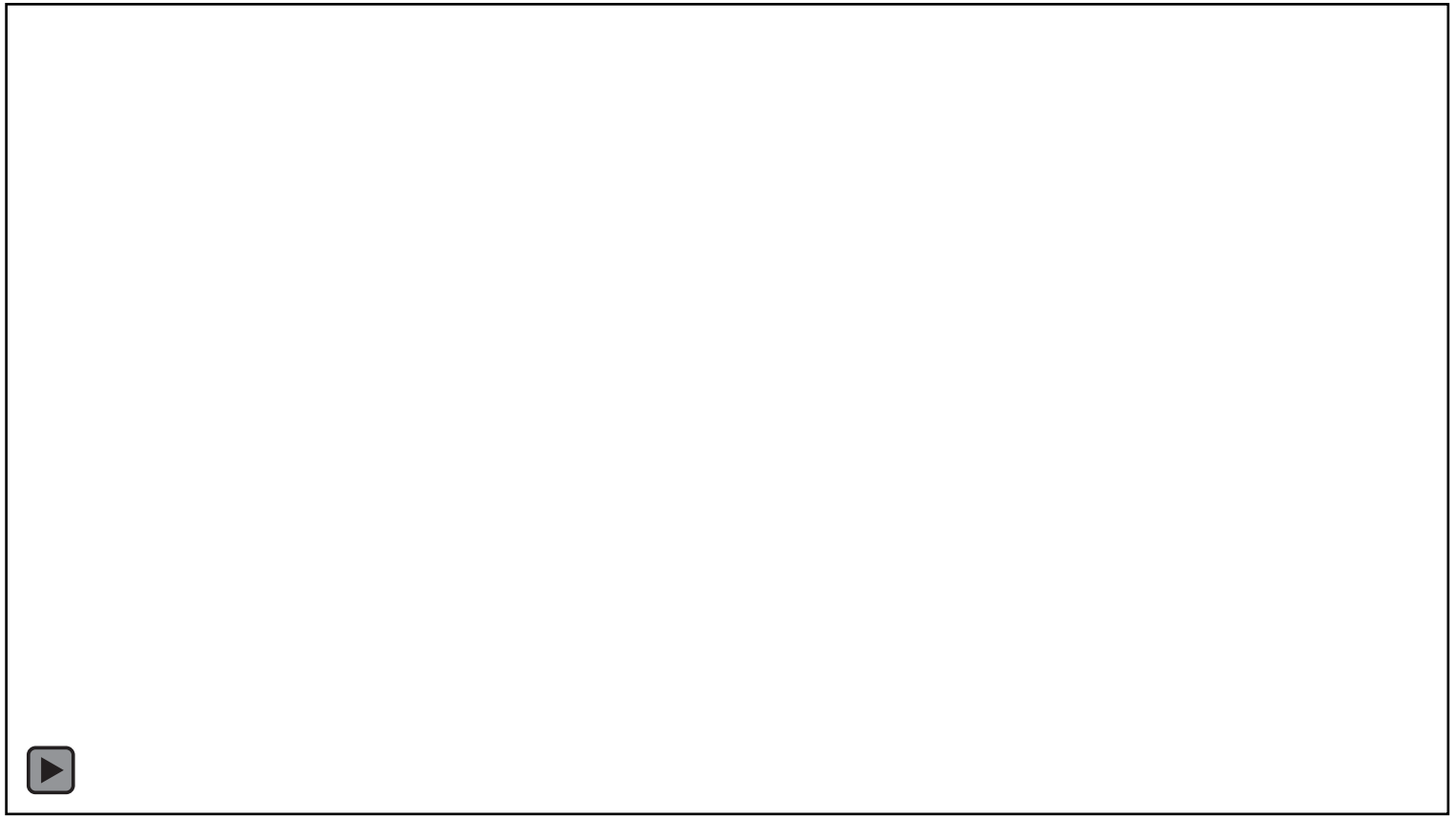
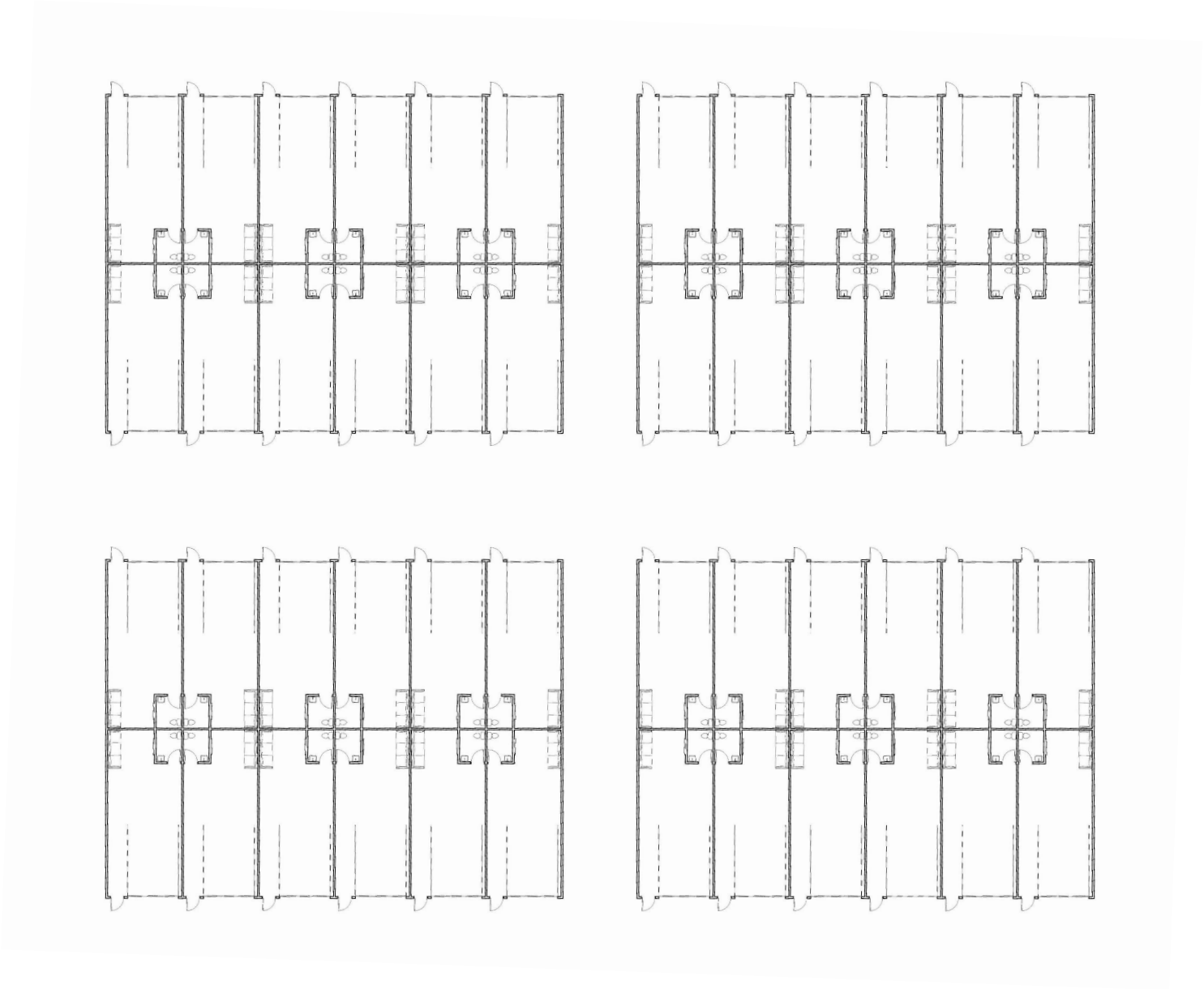


# SHOP CONDOS



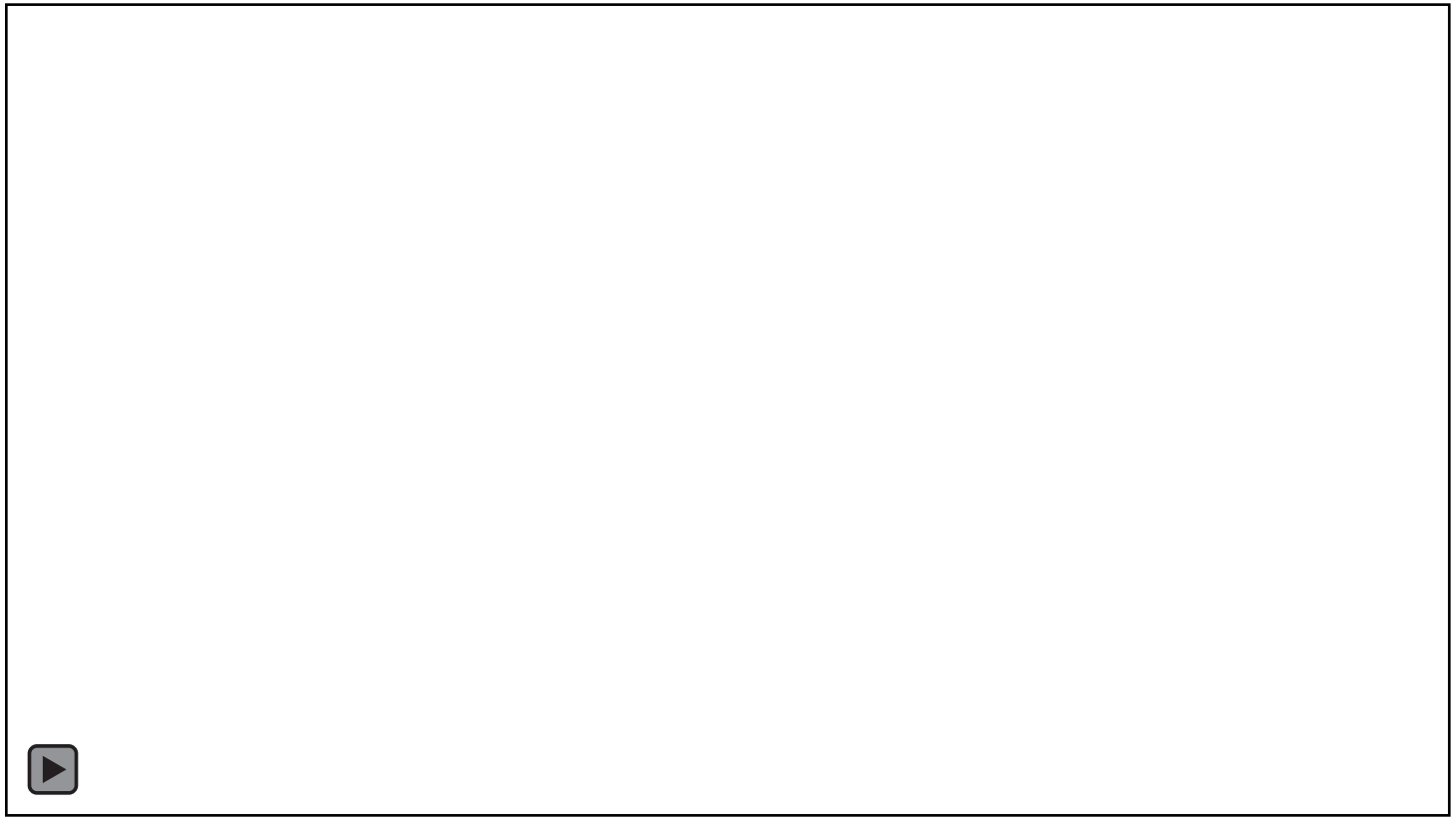
# SHOP CONDOS

- Space to Store Racecars
- Bathroom and Lounge Space
- Multiuse Facilities



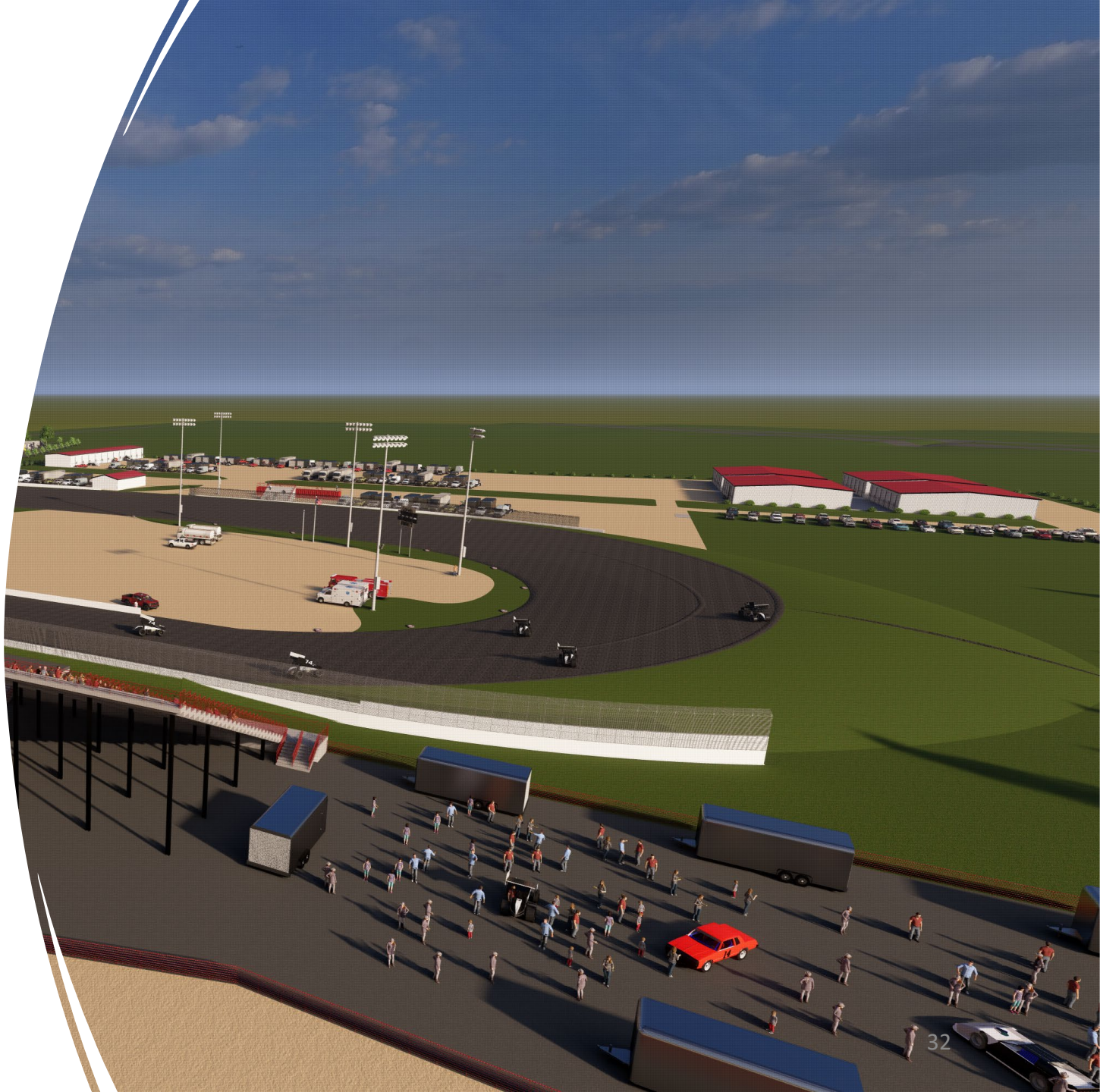
# GRANDSTAND IMPROVEMENTS

- Canopy Over Main Grandstand
- Water Collection
- Approximately 59,000 Gallons per Month in Collection



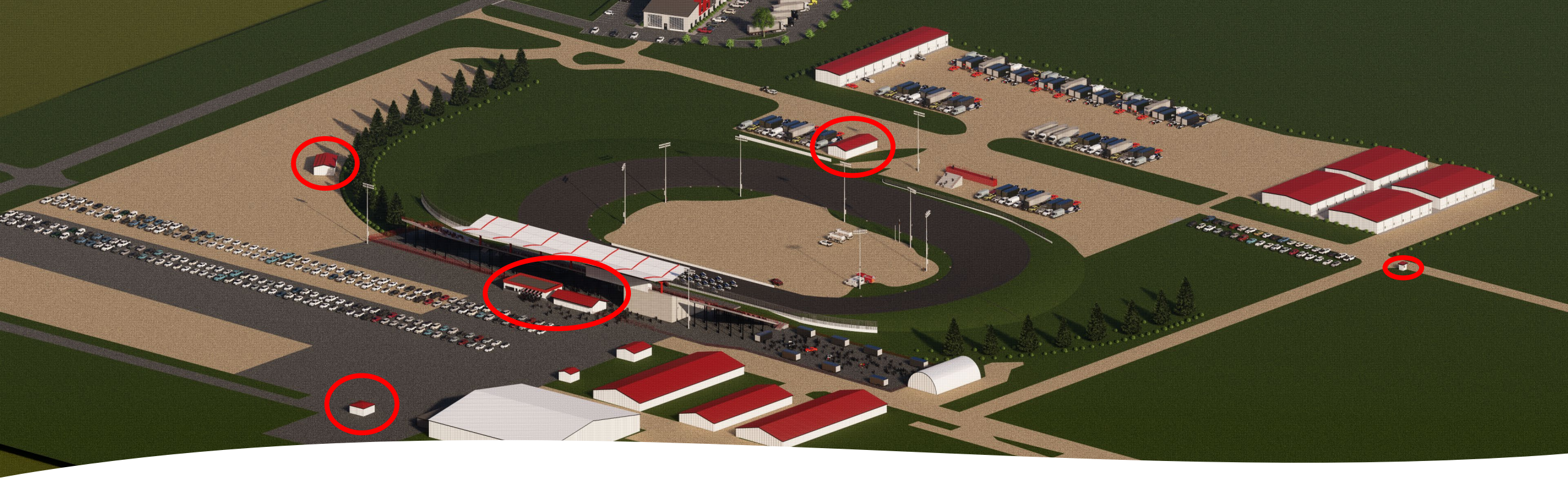
# RACETRACK FACILITY IMPROVEMENTS

- Addition of Fan Zone for Increased Fan Interaction



# RACETRACK FACILITY IMPROVEMENTS

- Added Canopies to Main Entry

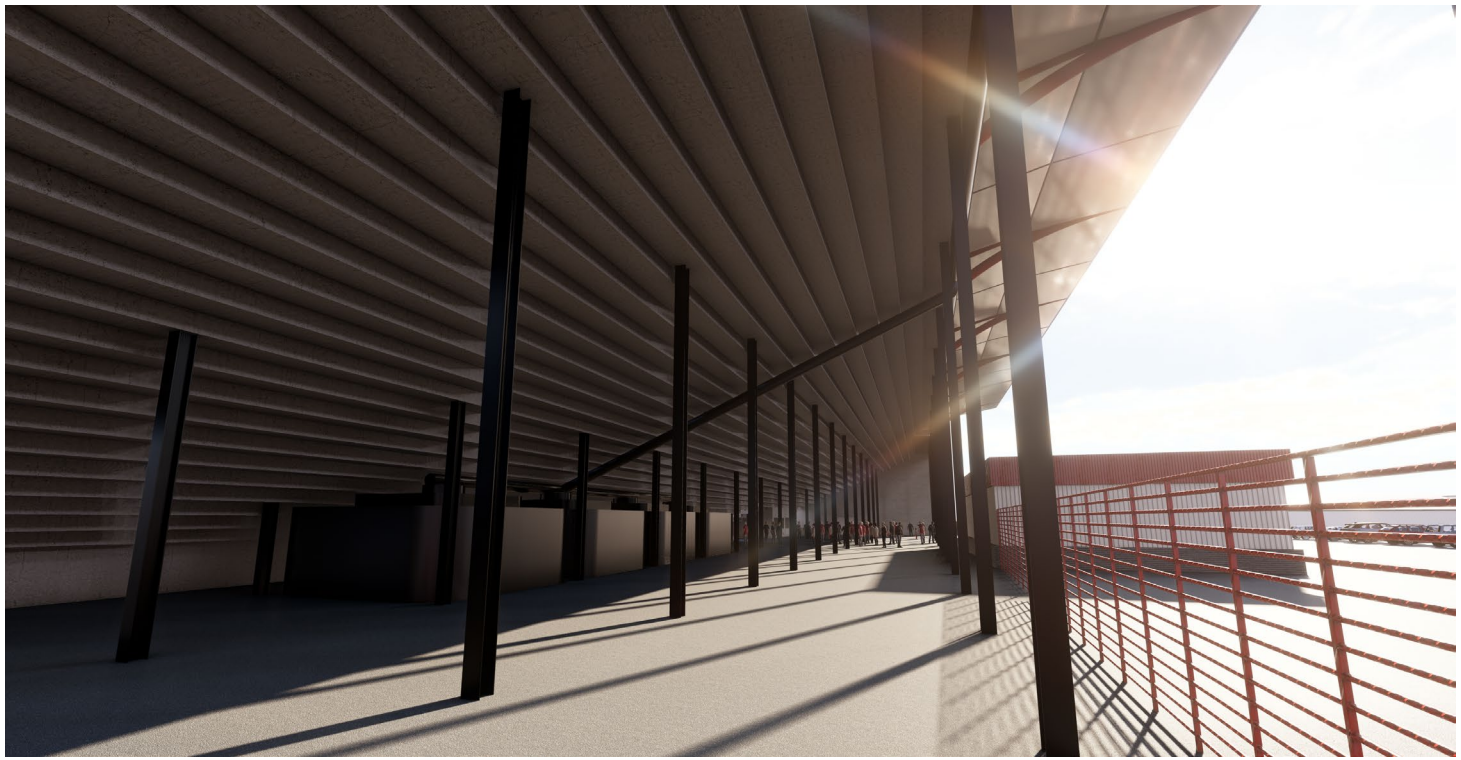


# RACETRACK FACILITY IMPROVEMENTS

- Facelifted Existing Buildings on Site
- Creates a Sense of Identity

# SUSTAINABILITY

- Water Collection

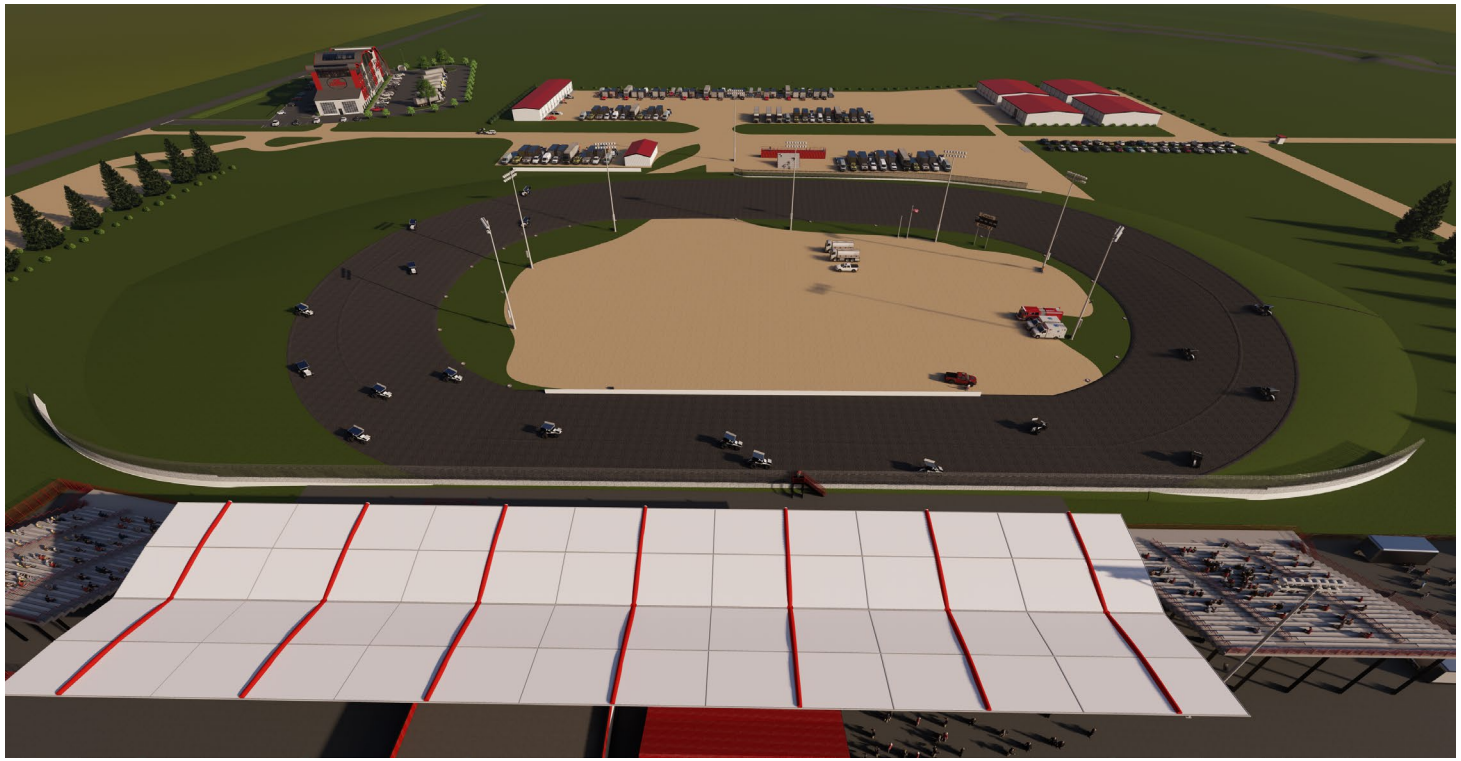


# SUSTAINABILITY

- Green Wall

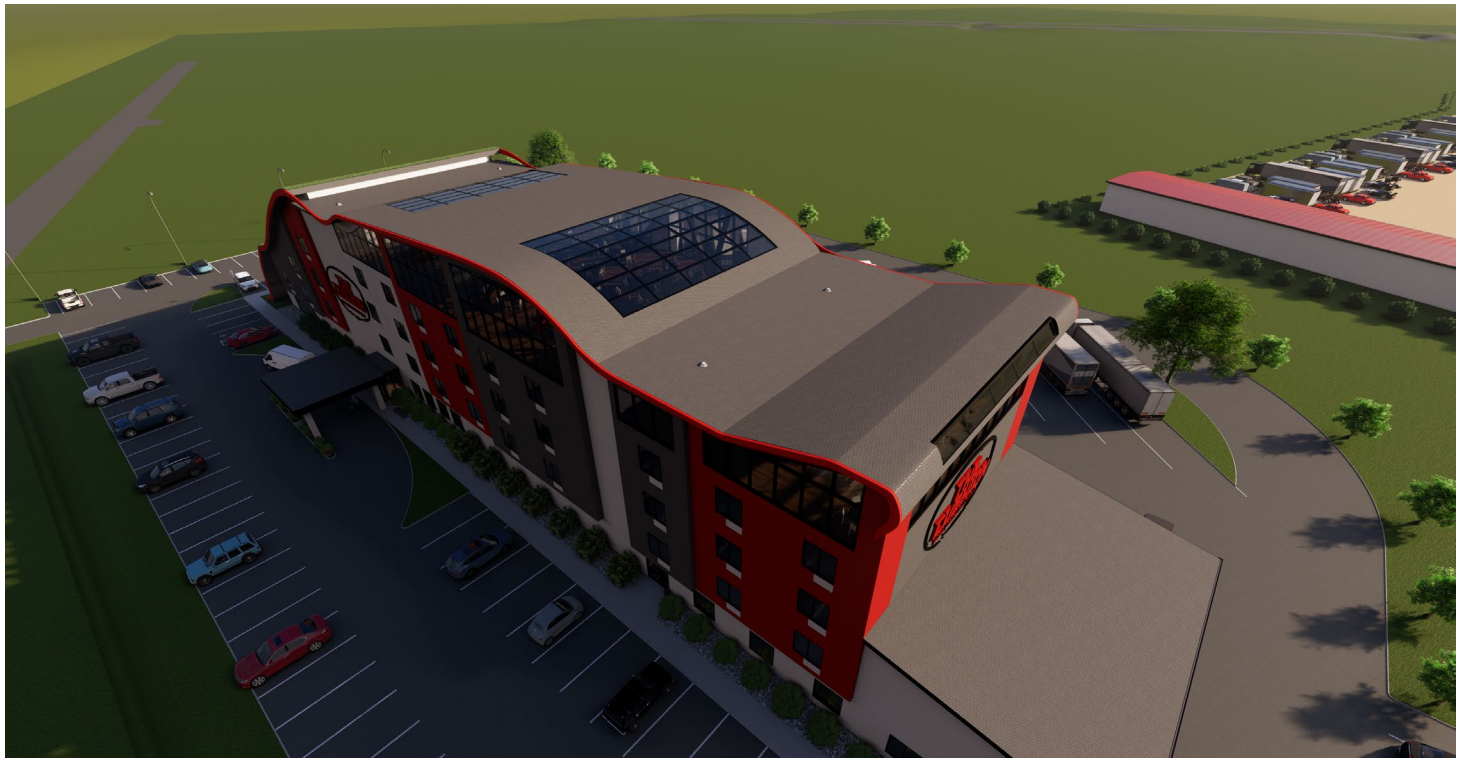
# SUSTAINABILITY

- Solar Assisted Lighting



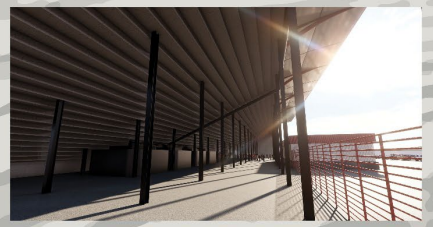
# SUSTAINABILITY

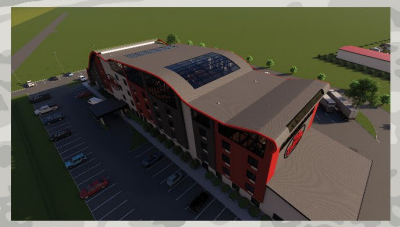
- Daylighting

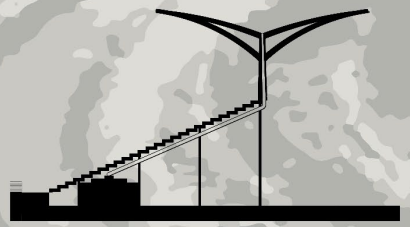


# RACING TOWARDS A SUSTAINABLE FUTURE

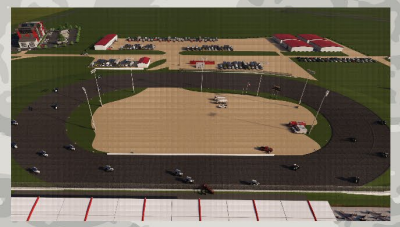
## HOW DIRT TRACK RACING CAN BECOME A MORE SUSTAINABLE ENDEAVOR WHILE IMPROVING OVERALL USER EXPERIENCE

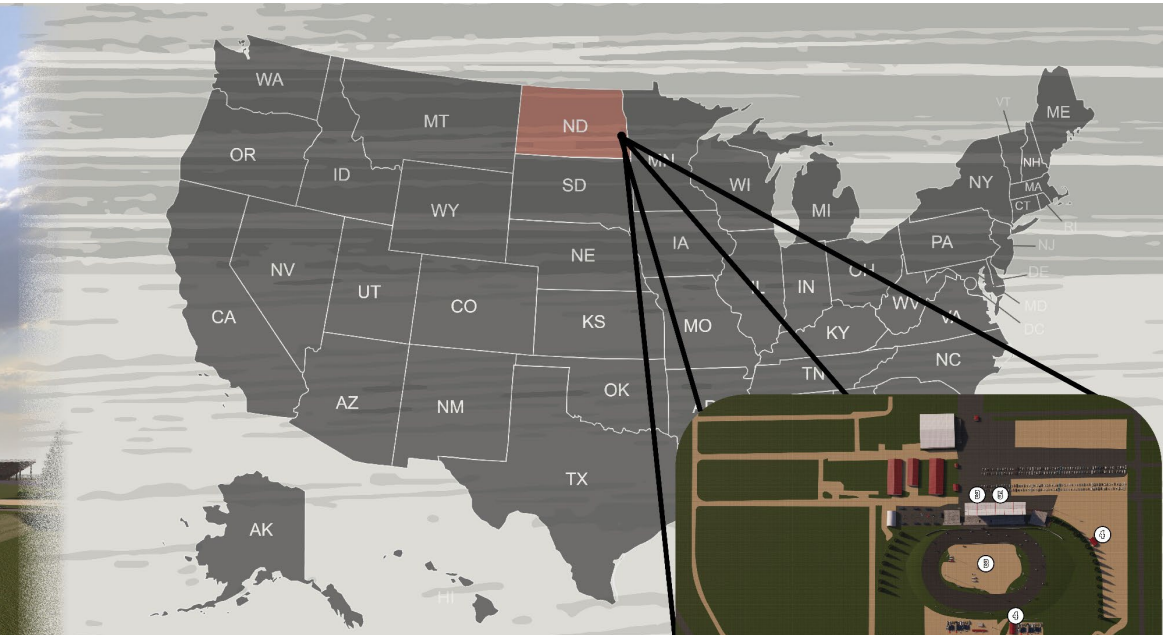






- Water collection integrated into design of grandstand canopy to conserve water, limit costs, and reduce flood risk
- Green wall design to help with air quality, temperature control, and a reduction in noise pollution
- Solar assisted lighting around the racetrack will help by reducing carbon emissions and conserving energy
- Daylighting in the restaurant will minimize energy costs and limits the need for non-renewable energy sources





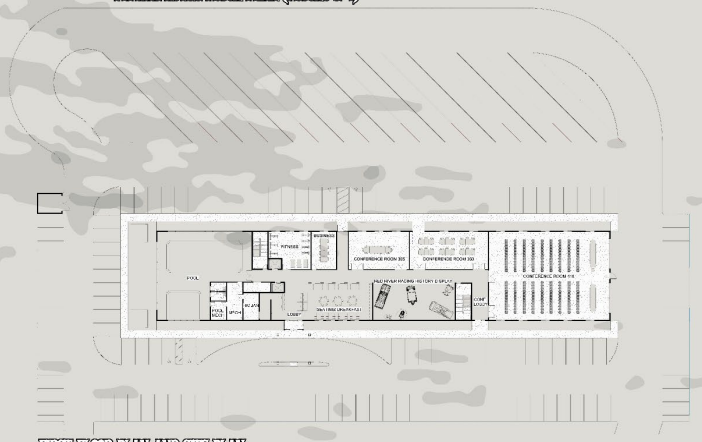

The site is located at the Red River Valley Speedway and Fairgrounds in West Fargo, North Dakota. The design consists of racetrack facility improvements, shop condos, and a hotel. The hotel contains a restaurant/bar on the top floor and a racing history display on the first floor.

1 - Hotel/Restaurant/Bar/History Display
2 - Shop Condos
3 - Racetrack Facility Updates
4 - Facelifted Existing Buildings
5 - Grandstand Canopy

The shop condos will provide drivers and teams with places to store and work on their cars. They can also be utilized year round for various events on the site. Each unit consists of a bathroom, lounge area, and open garage space.

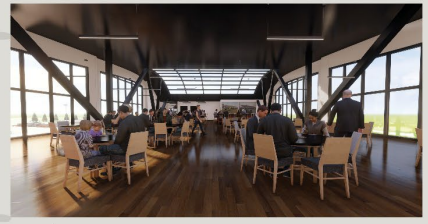
RESTAURANT AND BAR FLOOR PLAN (FLOOR 5)

TYPEAL HOTEL FLOOR PLAN (FLOORS 2-4)

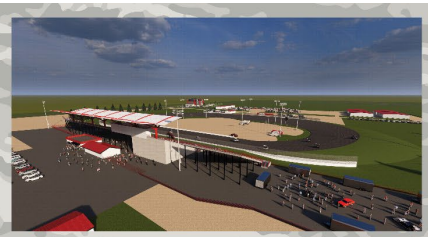




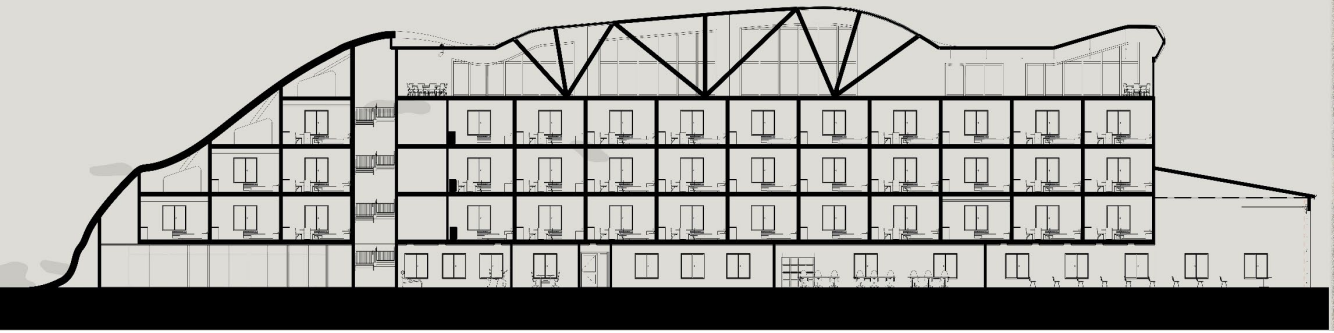
FIRST FLOOR PLAN AND SITE PLAN



The Cushion contains 69 hotel rooms, a top floor restaurant and bar, 3 conference rooms, a pool and hot tub, a seating/ breakfast area, and a Red River Racing History Display. The hotel utilizes daylighting strategies in the restaurant with the glazed roof to maximize sunlight in the winter and minimize it in the summer. The restaurant has a tiered eating space with views to the racetrack. The Racing History display showcases multiple racecars and a mural of historical pictures of the racetrack and cars from the early 70's to the present. The main conference room duals to accomodate large equipment for various events.



Improvements to the raceway include a canopy for rainwater collection and protection from the elements. The canopy can collect almost 59,000 gallons of water per month based on average rainfall. The existing buildings on the site, including a concession building, bathroom buildings, and two sheds, recieved a facelift in materials to match the shop condos and canopy to create a sense of identity. The ticket booth also recieved the same facelift but also included canopies over the ticket windows made from sprint car wings. The lighting on the track utilizes a solar assisted powering system limiting the amount of non renewable energy used.



THANK YOU
SPEEDWAY
WEEKLY RACING