SPORT TODAY: NATIONAL INTRAMURAL SPORTS KICK OFF IN DAINGERFIELD, MORRIS COUNTY

Morris County’s new facility selected by the Governor to host the 12 games and the final of the ongoing high-school soccer intramural competition. We are expected to witness over 50 schools from around Texas visit Daingerfield, Morris County for the prestigious competition. We already have our helicopter team covering the opening ceremony.
Preface

Neatness in the Messiness

I believe a community is only as strong as its health care resources. I have divided this book into three parts to emphasize on the continuous process of developing this community center in Morris County. The first stage is the integrative dialogue between my committee, my client and myself in order to understand the problem statement, build a matrix and create a program. The second and third part will show in detail how every decision was made using free hand sketch and computer design.

In writing this book, I have not assumed the reader would necessarily be acquainted with knowledge of architecture. Therefore I have tried to provide as much background raw process and data as necessary to make the story clear and allow the book to stand on its own without leaving gaps that could only be filled with imaginations or trying to reach out to me, but should the reader wish to learn more, the last page provides reference to my contract and reference sources I used.

The biggest question before I started this book became more relevant as my ideas began to turn into reality.
Architecture as Problem Seeking/Solving

If you take a look at the County Health Rankings you will see that Morris County ranks 242 out of 244 in overall health.

Morris County lacks recreational facilities.
A doctor-patient ratio of 1:3200.
Lack of access to nutritious food.
Lack of quality childcare facilities.
And a high poverty rate among other social determinants.

Our nearest hospital is Titus Regional Medical Center which is 24 miles away.

We believe a medical campus will not only solve some of these problems but also attract other businesses and jobs to our area that will influence other economic multipliers as well.
Morris County, North Texas, USA

Digression in Vernacular

These are problems that all architects face, and all architecture must resolve. Let the design produce an excitement and yearn an experimental feel. A study of vernacular form-making that is inspired by the local Typology.
THE GROWING COUNTY

MORRIS COUNTY

32° 15' 15.6" N, 95° 24' 52.5" W
154,055
Population: 154,055
2020 Census: 153,528
Natural area: 353 square miles (917 km²)
252 square miles (997 km²) of land
8.7 square miles (22 km²) of water

Morris County is located in northeastern Texas, one county removed from the state’s northern boundary and one county removed from the state’s eastern boundary. Dairington, the county seat and largest town, is fifty miles southeast of Texarkana and 125 miles northeast of Dallas. The county’s center lies at 32°15′ north latitude and 95°24′ west longitude. U.S. Highway 67 traverses the northern part of the county from east to west. U.S. Highway 30 crosses the northwestern part of the county, and U.S. Highway 259 crosses north and south.

The county’s transportation needs are also served by two railroads, the St. Louis and Southwestern and the Louisiana and Arkansas, originally constructed in the late 1870s as the Texas and St. Louis and the East Line and Red River, respectively.
THE COMMUNITIES

A CITY GUIDE

DANGIERFIELD

Dangierfield, the county seat of Morris County, was named for Captain London Dangierfield, supposedly a native of Nova Scotia, but beyond that and a few other facts, Captain Dangierfield remains a mystery man. A spring known locally as Dangierfield Spring was once a popular camp used by Indians such as the Cheyannas and Cadilous. Around 1835, Captain Dangierfield and a company of 100 men attacked an Indian village at the spring and, after a long, bloody fight, the Indians were driven away. In those days, it was the custom of settlers to plant cedar trees around the graves of their loved ones. Near the spot where the Dangierfield were buried, large cedar are now growing.

LONE STAR

Although the area had received settlers decades before, a proper community didn’t form until the 1930s. That was when Lone Star Steel (from Dallas) opened a steel mill and modestly named the town after the business. WWI gave Lone Star a shot in the arm with a huge expansion for the war effort. Employes were said to number 6,000 workers, more than a few workers decided to stay after the war ended. The town was incorporated in 1936 with a population of just over 1,000.

The 1980 census showed Lone Star breaking the 2,600 person barrier (success!). The steel plant remained active, but in the 1980s, due to foreign competition, demand caused the plant to lay off half of its 1,800 employees.

OMAHA

Not named after the city in Nebraska, Omaha had its name drawn from a hat in 1886. Citizens had tired of the towns previous name of Morrisville. The eight or so contributors submitted names from their former state of Alabama and Omaha came up the winner.

The town had a healthy population of 495 in 1890 and it remains a robust community.

Land was first purchased for a public school in Omaha in 1892 and a large wooden building near the railroad tracks soon housed three teachers and 165 students. The community formed an independent school district in 1945 and built a new two-story brick structure the following year.

NAPLES

Naples came into being with the arrival of the Texas and St. Louis Railroad in 1885. The small town of Wheatville had been bypassed by the railroad and moved the three miles south, providing the new town with its first resident. The name Naples was chosen from a list submitted by residents in 1895. The following year the population had reached 1,200. Naples incorporated in 1919. The Great Depression hit Naples hard and in 1930 the population had fallen to 862. But the 1930 census, Naples increased to 1,246. In the mid-1940s, nearly half of the population worked at Lone Star, Dangierfield, or the Red River Army Depot in neighboring Bowie County. The 1960 population of 1,998 had decreased to just 1,410 by the year 2000.

CASON

Cason is on state highway 11 and the Louisiana and Arkansas Railway, five miles west of Dangierfield in southwestern Morris County. The town grew up around a station on the east line and red river railroad, which was constructed through western Morris county in the late 1870s. Many of the early businesses were transformed from snow hill, three miles north. When the post office, which had been in snow hill, was moved in 1878, the postmaster, William m. Cason named the new town Cason in honor of this father, J. W. B. The population declined between world war II and 1972 when a population of 140 and five paid businesses was reported. In 1966 the population was estimated at 165, and Cason had four paid businesses. In 1990 and 2000 the population was 173.
The space program is divided into four departments to create space zoning in relation to functions and phases.

1. Red is Recreation and Sport with a net square feet of 18,400 and a gross square feet of 25,780.
2. Orange is Teaching and Training with a net square feet of 3,350 and a gross square feet of 4,950.

“18 Million Dollars is good! Let’s build this in PHASES!”

3. Purple is Senior citizen Hub and Auditorium space with a net square feet of 4,332 and a gross square feet of 6,545.
4. Green is Wellness and Health with a net square feet of 5,782 and a gross square feet of 8,439.
CONCEPT, PLANS AND PARAMETRISM

This is not a sentimental work. It understands the past but doesn't seek to replicate it. It responds to gravity, climate and the horizon elemental forces of earth.
DESIGN CONCEPT

SCHEME

Based on the activity analysis, the community center should be spatially organized to focus all small group activities on the central program area with the transitional spaces integrating the two elements. A hierarchy of characteristics should be established which orders the activities away from the central program area according to size - large to small, active to passive, communal to private.

DISPERSED

The dispersed scheme scatters spaces to reduce conflicts, uses enclosed spaces to buffer sound and separates open spaces. The transitional space acts as a decentralised link that both connects and separates activities. Buffer activities separate the large group area from peripheral small group activities. This arrangement enhances opportunities for social interaction but allows diverse activities to occur within a relatively constrained area.

CENTRAL

The central scheme places the central program area in a core position with small group activities encircling it; the transitional space separates the two elements. The large group activity area is central and separates conflicting small group activities. Since the large group area is adjacent to all other areas across the transitional area, opportunities for social interactions are maximised.

AXIAL

The axial scheme combines the intents of the linear and central schemes; the transitional space is divided into two axial paths around the central program area which separate incompatible small group activities. The central large group area separates conflicting small group activities and is adjacent to most areas including the lobby across the transitional area. This arrangement should maximize opportunities for social interaction.

LINEAR

The linear scheme is characterized by a single transitional spine along which the activity spaces are arranged. The central program area is centrally located. The linear plan maximizes distance between activities which facilitates noise control but inhibits visual control. However, in smaller centers, the proximity of activities necessitates a technological approach to social control as well as planning considerations.
**DESIGN CONCEPT**

**ITERATIONS AND ADORATIONS**

Way finding and accessibility will be the approach to the program arrangement. The linear scheme is used here due to its typology of expansion, flexibility and adaptation.

Here are important things to note:
1. The form is generated from parti-diagrams showing space developed with density and consolidation of program.
2. Way finding for easy accessibility.
3. Volume size based on hierarchy.
4. Material - We will use Wood for floors. Concrete for structure and Steel for large areas.
5. Create a passive solar zone for sustainable lighting.
6. Undulate for dynamism and reconstructive architecture - first of its kind in Moeris County.

**Design Consideration**
1. Accommodate level access for people with disabilities.
2. Building and site in harmonious relationships.
3. Use of Soft Colors for a Salutogenic and wellness environment.

**EXPANSION POTENTIAL**
Can be expanded at either end.

**ACTIVITY RELATIONSHIP**
Facilities relate centrally.

**FLEXIBILITY OF USE**
Opportunity for social interaction. Highly flexible.

**ADAPTATION TO SITE**
Can be focused outwards. Require solar path orientation. Suitable for temperate climate. Natural cooling results from orientation to prevailing wind.

Several basic spatial organisation schemes can be developed by manipulating the transitional space. Each scheme is evaluated in terms of activity interrelationships, flexibility of use, adaptation to site and climate variables, and provision for expansion.

Highly used areas should be strategically located to draw users past new activities. This arrangement encourages movement, social interaction, and allows direct control of the greatest possible area and the largest number of people.
DESIGN
CONCEPT

SKETCHES & VISUALIZATION

After selecting the initial scheme which best suits the program, I began conceptualizing and sketching because going straight to Revit or Sketch-Up won’t give me the freedom like putting pen or pencil to paper.

Sketching allowed me use my visual inventiveness to solve the program visualization and convey a quick idea of the materiality and sustainable measures. Reacting to the primary principles of conceptualizing this building was not easy.

After going through several sketch iterations, skin to design consideration was next to test how the volumes and undulating lines will play out.

A very fluid and non-specific style of architecture was the goal, something parametric like Zaha Hadid’s Architectures, a style Morris County hadn’t seen before but will still feel like part of the community and lead them into the future of wonderful things to come.
BUILDING SITE PLAN

FUNCTIONS & ACCESSIBILITY

The site plan shows how the site encourages active interaction and pedestrian centered accessibility. This site takes advantage of the multiple transportation choices or otherwise reduced motor vehicle use, thereby reducing greenhouse gas emissions, air pollution, and other environmental and public health harms associated with motor vehicle use. Located next to the high school football field, the Community Center will provide ample parking space on football game days and open field for family activities.
BUILDING SITE PLAN

DEPARTMENT LOCATION

In the spirit of collaboration and innovation, each department building, with a focus on understanding the unique planning, social, and economic environment, the departments show how they collectively play a role in achieving the design goals and making each successful and wayfinding the primary goal.

The next phase, with most of the work completed, will involve the creation of the primary goal. Each department will provide guidelines for the most appropriate secondary form for each of the two big spaces.
Building Phase I
This initial scope that provides the
resources for the County Youth
Empowerment Initiative.

Planning: Phase 1, 2, 3

Advantages
- Less initial risk: The overall project is split into smaller, more affordable pieces. You may be able to move forward without a guarantee of future funding.
- Less impact on cash flow: Costs are spread over a longer period of time.
- Shorter construction time: A smaller scope of work results in an abbreviated construction schedule.

Take advantage of high interest rates: The phased construction method allows shorter duration loans. Shorter construction time: A smaller scope of work results in an abbreviated construction schedule. Less Down Time/Continued Income: Even if earnings are reduced, the money that continues to come in will help to offset construction costs. Also, you can start generating income from the completed phases while the others are in progress.

First Phase "Mock-Up": The first phase can show how the rest of the project will go and allow for fine-tuning of details early in the process. Quality and efficiency may increase in future phases as processes are repeated.

Work out Bugs: Completing smaller portions provides the opportunity to get insight into problems you may encounter in other phases.

Disadvantages
- Higher overall cost: Increased efficiency, decreased complexity, and reduced duration loans. Increased inflation, multiple deliveries, need for temporary barricades, requirements for separate phase permits, and other factors drive the price up. There are potential costs for temporary utilities during shutdowns or cut-overs, and to maintain building systems.
- Decreased Efficiency: More confined workflow. Dust, debris, construction traffic, work schedules and noise must be managed.

Initial Cost Play
The project can be divided into a series of smaller projects spread out over a period of months or even years, and the construction crew will have more time to focus on each area of construction before moving to the next.
Dixiefield basketball team having a team practice with Lone Star basketball team.

Running track above the basketball court.
STRUCTURE, TECTONICS & TACOS

The form feels primitive, simple and wavy which was derived from careful study of the history of Morris County. There’s a pragmatism to the structure; a sense of inevitability, as if there’s no other.
DESIGN
PHASE ELEVATIONS

PHASE EVOLUTION

View showing phase 1

Longitudinal section of phase 1

View showing phase 2

Longitudinal section of phase 3

Gymnasium

Outdoor Activity Space

Retail Store

Aquatic Center

Outdoor Soccer
DESIGN SUSTAINABILITY

SITE AND TRANSPORTATION: LT LEED

**LT CREDIT: GREEN VEHICLES**
BD+C: 1 Point

Designate 5% of all parking spaces used by the project as preferred parking for green vehicles. Clearly identify and enforce for sole use by green vehicles.

**LT CREDIT: BICYCLE FACILITY**
BD+C: 1 Point

Design or locate the project such that a functional entry or bicycle storage is within a 200 yard (180 meter) walking distance or bicycling distance from a bicycle network.

**LT CREDIT: DENSITY & DIVERSE USES**
BD+C: 1-6 Points

Conserve land and protect farmland and wildlife habitat by encouraging development in areas with existing infrastructure. To promote walk-ability and transportation efficiency and reduce vehicle distance traveled. To improve public health by encouraging daily physical activity.

**LT CREDIT: ACCESS TO QUALITY TRANSIT**
BD+C: 1-6 Points

Develop the community center in location shown to have multi-modal transportation choices or otherwise reduced motor vehicle use, thereby reducing greenhouse gas emissions, air pollution, and other environmental and public health harms associated with motor vehicle use.

**LT CREDIT: HIGH-PRIORITY SITE**
BD+C: 2-3 Point

Priority Designation

**LT CREDIT: REDUCED PARKING FOOTPRINT**
BD+C: 1 Point

Provide preferred parking for carpools for 5% of the total parking spaces after reductions are made from the base ratios.

**CREDIT: LOW WATER VEGETATION**

When water restrictions are implemented. Low water plants will tend to survive and thrive, while more ornamental plants may be unable to adapt.

**CREDIT: INFECTIOUS ENVIRONMENT**

On-site sewage and water collected is piped to drains and directed to surrounding native gardens.

**CREDIT: HARVEST WATER MANAGEMENT**

Use Biophils approach to water use and contain to promote curability in users and continuous flow in functionally pattern.
DESIGN SUSTAINABILITY

ENERGY, WATER & AIR QUALITY

SS CREDIT: PROTECT / RESTORE HABITAT
BD+C: 1 Point
Using native or adapted vegetation, restore 30% (including the building footprint) of all portions of the site identified as previously disturbed.

SS CREDIT: OPEN SPACE
BD+C: 1 Point
Provide outdoor space greater than or equal to 30% of the total site area (including building footprint). A minimum of 25% of that outdoor space must be vegetated.

SS CREDIT: RAINWATER MANAGEMENT
BD+C: 5 Points
To assess site conditions before design to evaluate sustainable options and inform related decisions about site design. Reduce runoff volume and improve water quality by replicating the natural hydrology and water balance of the site.

SS CREDIT: HEAT ISLAND REDUCTION
BD+C: 1 Point
To minimize effects on micro-climates and human and wildlife habitats by reducing heat islands.

Non-roof Measures (Paved area covered by trees or shaded)
High-Reflectance
Roof Vegetated
Roof Install a vegetated roof.

EA CREDIT: RENEWABLE ENERGY PRODU.
BD+C: 1-4 Points
Use renewable energy systems to offset building energy costs.

Provide Reduce fossil fuel energy usage by in-creating self-supply of renewable energy.

Deciduous Trees

Natural ventilation will be used unless extreme weather when thermostats ventilation (VAH) will be used. Nova has a moderate climate of USC, Feb in June to Oct.

Photo-voltaic Panels

Photosynthetically, with provide more than 70% of energy to power all elements of the building with surplus power feeding back to the other buildings.

Ventilation System

Natural ventilation will be used unless extreme weather when thermostats ventilation (VAH) will be used. Nova has a moderate climate of USC, Feb in June to Oct.

SOUTH
SUNRISE - 7:02 AM

EAST

SUNRISE - 7:02 AM

Using large glass windows and free-standing roof overhangs, allow large glass areas, provide the building from overinsulating in the summer, cool shaded areas, shade from the sunlight and heat, keep the roof surface on the sunny side.

FIVE DESIGN STEPS

1. Selective system: A permeable surface treatment to be used in the building's joint areas, and a vegetation cover to be selected and maintained for the system's long-term effectiveness.
2. Prevent infiltration by modification of building water collection and runoff systems, eliminating the use of non-vegetated areas that are permeable.
3. Performance test to ensure that the system is effective.
4. Distribution planning system to allow rainwater collection and runoff to be used.
5. Prevention of water loss from the public right-of-way and available to harvest.
PROGRAM SECTION
TRANSITIONAL SPACE

GYM - JUXTAPOSITION EFFECT
The big box wing type of the gymnasium and swimming center utilizes interior elements which are geometrically in contrast with the organic movement of the users through the space.

SPACE FRAME - CONTEXT
The structure expresses a certain futurist feel and essence of Texas burn.

FITNESS AREA
The idea of siting the fitness area between the gymnasium and the swimming center to open the view to the soccer field so that the fitness center users can get a sense of what happens and also have no sense of confinement.

LIBRARY
This big organic box will be supported by wooden columns painted gray, which allow an ingenious system of joints. The result is a fascinating modern space, giving way to the glass frame to carry its own load with the support of the spider load bearing glass.

INTERIOR & EXTERIOR SERENITY
The play between geometric and organic space creates a profound atmospheric rhythm. Also, the gymnasium can transform into a bed setup for the surge space and other emergencies like hurricane and storm. Due to the beautiful relationship between the exterior and interior, active energy use can be reduced without discomforting the users.
All spaces are designed with high consideration to accommodate level access for people with disabilities. The clinic will serve as a dynamic space since it may be forced to transform into a surge capacity space.

Utility supplies like electricity, air and water will be run in the ceiling. Also, the gymnastics can be transformed into a negative and positive pressure room depending on the surge emergency. Structurally strong horizontal datum is established to sink the concrete into the timber using glass and inexpensive steel for shading device.

Folding doors, floor-to-ceiling glass windows and skylights fill the interior with natural light as smart indoor-outdoor interplay creates multiple activity zones for both adults and kids alike. Parallel refurbished aluminum fins have been used to control the amount of daylight. The mechanical utility supplies like electricity, air and water will be run in the ceiling so that the relationship between the containing space and contents are unhindered.
SECTION: WALL / DETAILS

Construction Drawing

The project creates a porous campus open field that facilitates visual and physical access to ample events. Creativity, criticality, and teamwork require spatial passage. Transparency of space inspires user trans-disciplinary dialogues. Here, the concept to revolutionize big-box typology from inside as building form is kept simplistic and lightweight for the climate. The humanistic landscape is created by the interior’s programmatic and spatial sophistication rather than the outside.
SECTION: AXONOMETRY

Construction Drawing

Its undulating roof recreates the curve seen on the facade of adobe buildings. The austere metallic architecture design of the project, along with its parametric syntax, reflect the technical and aesthetics that the future of architecture in Morris County is aiming for.

METRO FRAMELESS GLASS SYSTEM

445 SPIDER SERIES CONSTRUCTION DETAIL

THE CPTZ CONCEALED POST BASE

CPTZ CONSTRUCTION DETAIL
SECTION: WALL / DETAILS

Construction Drawing

Tilt wall panels are spaced in the most efficient lengths to minimize the summer sun penetration and allow good amount of winter sun. Inexpensive shining dark panels will blur the line between concrete, glass and steel.
Climbing wall in the central corridor next to the basketball court.

Main staircase connecting the first and second floor.

View from the first floor parking space.
SPORT TODAY: NATIONAL INTRAMURAL SPORTS FINAL IN DAINGERFIELD, MORRIS COUNTY

After 12 competitive soccer games in the new youth community center in Daingerfield, Morris County. We have a Winner! CONGRATULATIONS!!!
ABOUT THE AUTHOR

Joseph Oche Ali is a second-year master of an architecture student, currently one of the lucky 12 pursuing a certificate in architecture for health (Center for health system and design) and an extra certificate in sustainability at Texas A&M University. He is a member of the Texas A&M UNICEF chapter and director of graphics for SHRA (Student Health Environments Association for health). He teaches Visualization 284 (Adobe creative suite - InDesign and Illustrator) at the Department of Visualization and strong advocate for Architecture for health, sustainability, and post-conflict/reconstruction Architecture. Upon his graduation, he will resume the role of Architectural Design Professional at EKS Inc in Dallas.

Expertise: Architecture Medical Planning and Programming in Metric and Imperial System, Health Track and Sustainability, RID and Visual Analysis, Revit, Sketch-Up, Layout, AutoCAD, RHINO, Lumion, Modeling, and Fabrication.


Born in an African humanitarian-centered family, Joseph has always found helping people and organizations become the best version of themselves, and seeking solutions to a simple Utopian world. At the age of 14, his mum introduced him to volunteering for Women Empowerment Initiative in Nigeria. He continued serving his community by working with UNICEF in Africa before transferring to Texas A&M University for his Master of Architecture.

AFTERWORD: SOURCE

REFERENCE


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AFTERWORD: SOURCE

REFERENCE


Do nothing out of selfish ambition or vain conceit. Rather, in humility value others above yourselves, not looking to your own interest but each of you to the interest of others.

Philippians 2:3-4