RETROFITTING SUBURBAN PLAINS

CREATING A WALKABLE MIXED-USE NEIGHBORHOOD FOR SOUTH FARGO

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LA 572 Design Thesis
Primary Advisor: Jay Kost
Secondary Advisor: Dominic Fischer
RETROFITTING SUBURBAN PLAINS

INTRODUCTION

The Fargo-Moorhead metropolitan area is currently experiencing tremendous population growth. According to Census data, the F-M metro was the fourth fastest growing metropolitan area in 2013 and that growth continues today. With this population growth, the cities of Fargo, Moorhead and West Fargo have been expanding their city boundaries and creating low density, automobile-dependent neighborhoods known as suburban sprawl. Downtown Fargo provides a dense and walkable neighborhood center for north Fargo, but south Fargo is lacking any similar type of pedestrian orientated urban center.

THESIS VISION

To create a walkable mixed-use urban center that allows people to live, work, and play. The development will integrate retail, commercial, residential, civic, and open spaces together to create a walkable community with a unique sense of identity within the region.
American cities began as urban cores, with most people living near downtown. People lived close to work, entertainment, and each other. Many cities had expansive public transportation systems in place before the takeover of the automobile.

Fargo was no exception. The photo above shows Broadway in 1935. Department stores, streetcars, and mixed use buildings all add to a successful downtown.
Suburban sprawl began to gain popularity in the United States in the 1950’s. The popularization of the automobile allowed people to move out of the urban cores of cities and into a detached single family home on the outskirts of town and commute to work.

Fargo has experienced rapid population growth throughout the past 25 years, with most of the new development occurring in the south part of the city in the form of suburban neighborhoods.
American cities have seen a resurgence in people’s desire to live in downtowns or other urban centers throughout the city. This migration back into the urban cores is being led by the millennial generation, or those who are born between 1980 and 2000. According to a Nielsen study conducted in 2014, 62% of millennials say they prefer to live in mixed-use type communities found in urban centers. As a result of millennials lifestyle trends, the millennial generation is currently living in these mixed-use urban areas higher than any other generation. In 2014, it was the first time since the 1920's that growth in US cities has outpaced the growth of the suburbs. According to 2015 Census numbers, millennials now make up more than 25% of the total US population.
THE PLACES THAT HAVE INSPIRED

MARKET SQUARE // PITTSBURGH, PA

SAN ANTONIO RIVERWALK // SAN ANTONIO, TX
INTRODUCTION

THE PLACES THAT HAVE INSPIRED

SOUTH LAKE TOWN SQUARE // SOUTH LAKE, TX

DOWNTOWN FARGO // FARGO, ND
As study published by USA Today in 2014 showed how Fargo compares to other cities across the nation in attracting millennials.

**Fargo as a Millennial Magnet**

<table>
<thead>
<tr>
<th>City</th>
<th>People 20-29 years old per 100 teens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arlington, VA</td>
<td>344</td>
</tr>
<tr>
<td>Cambridge, MA</td>
<td>303</td>
</tr>
<tr>
<td>Alexandria, VA</td>
<td>284</td>
</tr>
<tr>
<td>Gainesville, FL</td>
<td>241</td>
</tr>
<tr>
<td>San Francisco, CA</td>
<td>239</td>
</tr>
<tr>
<td>Seattle, WA</td>
<td>232</td>
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<tr>
<td>Provo, UT</td>
<td>223</td>
</tr>
<tr>
<td>Boston, MA</td>
<td>214</td>
</tr>
<tr>
<td>Fargo, ND</td>
<td>210</td>
</tr>
<tr>
<td>Tallahassee, FL</td>
<td>209</td>
</tr>
<tr>
<td>Tempe, AZ</td>
<td>207</td>
</tr>
</tbody>
</table>

People 20-29 years old per 100 teens
INTRODUCTION
FARGO IN THE NEWS

#10 BEST CITIES FOR YOUNG ENTREPRENEURS
January 2016

FARGO REINVENTS ITSELF AS A MAGNET FOR CREATIVE TYPES AND ENTREPRENEURS
June 2014

#7 - TOP 10 BEST DOWNTOWNS
March 2015

#1 BEST-PERFORMING SMALL METRO
December 2015

FARGO REINVENTS ITSELF AS A MAGNET FOR CREATIVE TYPES AND ENTREPRENEURS
June 2014

#1 - BEST SMALL COLLEGE TOWN
March 2016

BEST SMALL CITY FOR BUSINESS AND CAREERS
August 2014
A VISION FOR URBAN LIVING IN SOUTH FARGO

Overview

“Urban Plains is a place where architecturally inviting retail and office spaces intermingle with restaurants, parks & housing where tasteful spaces and places combine the serene and the social.”

Our Goals

“Urban Plains strives to incorporate 21st century ideals into an urban lifestyle. Through the use of design standards, and co-locating work, living, and recreational spaces, the Urban Plains Development is a unique project. Residents of Fargo - Moorhead - West Fargo are also voicing their desire to live in a location that provides amenities of living in downtown.”
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Zoning instead of form-based codes
Large block sizes
Single use buildings

Large setback distances
Large parking lots
Single Story parking garages
THE REALITY / ANOTHER SUBURBAN NEIGHBORHOOD
INTRODUCTION

THE

REALITY / ANOTHER

SUBURBAN NEIGHBORHOOD
INTRODUCTION

THE REALITY / ANOTHER SUBURBAN NEIGHBORHOOD
INTRODUCTION

THE REALITY / ANOTHER SUBURBAN NEIGHBORHOOD
DESIGN HYPOTHESIS
I expect to find that a majority of the existing infrastructure can be retrofitted to create a more walkable neighborhood. Practices such as street narrowing and infilling can be used to achieve a successful retrofit. By studying successful urban centers, I expect to find a balance between uses of buildings, with a higher percentage of mixed-use buildings than is currently in the Urban Plains neighborhood. I expect to find that building placement can create a sense of place in open spaces and along transportation corridors. I expect to find that street widths, sidewalk widths, on-street parking, and setbacks will play a very important role in creating a walkable neighborhood. I also expect to find that Urban Plains can have strong connections to it’s surrounding neighborhoods.

DESIGN FOCUS
Buildings
Streets
Open Spaces
CASE STUDY / UPTOWN MINNEAPOLIS

DESIGN FOCUS
Buildings
CASE STUDY / MUELLER AUSTIN

DESIGN FOCUS
Streets

METHODOLOGY & RESEARCH

Streetscape Concept
- Community Connector
- Linear Park Connector
- Greenway Street
- Neighborhood Boulevard
- Neighborhood Connector
- Town Center Main Street
- Neighborhood Local Street
- Community Gateway
CASE STUDY / KETTLE STONE DES MOINES

DESIGN FOCUS
Open Spaces
**CASE STUDY COMPARISONS**

**METHODOLOGY & RESEARCH**

**BLOCK SIZES**

<table>
<thead>
<tr>
<th>Block</th>
<th>Average Area of Block</th>
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<tbody>
<tr>
<td>Overall</td>
<td>2 Acres</td>
</tr>
<tr>
<td>Mueller</td>
<td>1.2 Acres</td>
</tr>
<tr>
<td>Kettlestone</td>
<td>2.4 Acres</td>
</tr>
<tr>
<td>Uptown</td>
<td>1.9 Acres</td>
</tr>
<tr>
<td>Villebois</td>
<td>1.5 Acres</td>
</tr>
<tr>
<td>Legacy</td>
<td>2.9 Acres</td>
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</table>

**STREET INTERSECTION DENSITY**

<table>
<thead>
<tr>
<th>Community</th>
<th>Average</th>
<th>Intersection Density</th>
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</thead>
<tbody>
<tr>
<td>Mueller</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Kettlestone</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Uptown</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Villebois</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Legacy</td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

**INTERSECTIONS / 80 ACRES**

Average: 32

**STREET WIDTHS**

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Average Street Width (curb to curb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Connector</td>
<td>76'</td>
</tr>
<tr>
<td>Neighborhood Boulevard</td>
<td>96'</td>
</tr>
<tr>
<td>Neighborhood Connector</td>
<td>62'</td>
</tr>
<tr>
<td>Mueller</td>
<td>63'</td>
</tr>
<tr>
<td>Kettlestone</td>
<td>96'</td>
</tr>
<tr>
<td>Uptown</td>
<td>45'</td>
</tr>
<tr>
<td>Villebois</td>
<td>42'</td>
</tr>
<tr>
<td>Legacy</td>
<td>45'</td>
</tr>
<tr>
<td>Average</td>
<td>32'</td>
</tr>
<tr>
<td>Legacy</td>
<td>40'</td>
</tr>
</tbody>
</table>
THESIS VISION

To create a walkable mixed-use neighborhood that allows people to live, work, and play. The development will integrate retail, commercial, residential, civic, and open spaces together to create a walkable community with a unique sense of identity within the region.

THESIS QUESTION

What programming elements must be achieved in order to create a successful walkable mixed-use urban center in south Fargo?
RETROFITTING SUBURBAN PLAINS

GOALS FOLLOW THE FIVE C’S OF NEIGHBORHOOD PLANNING (PLACEMAKERS)

1. COMPLETE
   Mix of uses to provide our daily need to live, work, play, worship, dine, shop, and talk to each other.

2. COMPACT
   5-minute walk from center to edge.

3. CONNECTED
   Walkable, drivable, and bike-able with or without transit access.

4. COMPLEX
   Variety of street, building, and open space types.

5. CONVIVIAL
   Provide gathering places where people can connect.
ALREADY PART OF FARGO’S VISION

Why This Neighborhood?

- Downtown Neighborhood
- Sustainable Mixed Use Center
- Signature Complete Street

Site Inventory & Analysis

Go2030 Fargo Comprehensive Plan

West Acres
Urban Plains
Near Walmart

2.5 Miles
2 Miles
2 Miles
**Why This Neighborhood?**

- Close to many attractions

**Location**

- Sanford Medical Center
- Scheels Arena
- Sandford Medical Center
- Red River Zoo
- Anderson Softball Complex
- I-94
- I-29

**Sanford Medical Center**
- 384 Beds
- .36 miles to Urban Plains

**Scheels Arena**
- 6,000 People
- Home of the Fargo Force Hockey Team
- Hosts high school hockey games
- Occasionally hosts NCAA Hockey Regionals
- Concerts
- Basketball games and wrestling matches
- Festivals

**Sandford Medical Center**
- 384 Beds
- .36 miles to Urban Plains

**Red River Zoo**
- 90,000 Visitors per year
- 1 mile to Urban Plains

**Anderson Softball Complex**
- Annually plays host to state and national softball tournaments.
- .5 miles to Urban Plains

**Site Inventory & Analysis**
WHY THIS NEIGHBORHOOD?

SITE INVENTORY & ANALYSIS

SIZE & SETUP

Walkable and Connected
TOP GOALS FROM GO2030

1. Permanent Flood Protection
2. Promote Infill
3. Public Art
4. Bicycle/Pedestrian Infrastructure
5. Design Standards
6. City-Wide Trail Loop
7. Public Gathering Spaces
8. Community-Wide Energy Efficiency
9. Quality New Development
10. Year-Round Recreational Opportunities
11. Tree Canopy
12. Parks, Open Space, and Habitat
13. Healthy Food
14. Amenities and Beautification as an Economic Development Tool
15. Festivals and Cultural Events
Fargo Density Comparisons

Fargo has a similar size in footprint to these other cities, but is far behind them in terms of density.

- **Population:**
  - Fargo: 115,863
  - Boston: 645,149
  - San Francisco: 852,469
  - Pittsburgh: 305,841

- **City area (sq. miles):**
  - Fargo: 48.82
  - Boston: 48.43
  - San Francisco: 46.87
  - Pittsburgh: 55.50

- **Density (people/acre):**
  - Fargo: 3.7
  - Boston: 20.8
  - San Francisco: 28.4
  - Pittsburgh: 8.6

Fargo / Moorhead Metropolitan population growth

The metropolitan area has been experiencing high population growth since for many years, and has the opportunity to begin to infill (build on existing sites) instead of continuing to expand the city boundaries.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
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<tbody>
<tr>
<td>1990</td>
<td>153,296</td>
</tr>
<tr>
<td>2000</td>
<td>174,367</td>
</tr>
<tr>
<td>2010</td>
<td>208,777</td>
</tr>
<tr>
<td>2015</td>
<td>233,836</td>
</tr>
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</table>
Neighborhood Walkability Comparisons

Fargo / West Fargo Neighborhoods

Based on data from Walkscore.com which measures walkability on a scale from 1-100 based on walking routes to destinations such as grocery stores, schools, parks, restaurants, and retail.

<table>
<thead>
<tr>
<th>Neighborhoods</th>
<th>Population</th>
<th>Area (acres)</th>
<th>Density (people/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amber Valley</td>
<td>1,143</td>
<td>329</td>
<td>3.5</td>
</tr>
<tr>
<td>Urban Plains</td>
<td>1,200</td>
<td>320</td>
<td>3.75</td>
</tr>
<tr>
<td>Brandt Crossing</td>
<td>886</td>
<td>570</td>
<td>1.5</td>
</tr>
<tr>
<td>Anderson Park</td>
<td>828</td>
<td>638</td>
<td>1.3</td>
</tr>
<tr>
<td>Pointe West</td>
<td>2,692</td>
<td>572</td>
<td>4.7</td>
</tr>
<tr>
<td>The Pond @ the Preserve</td>
<td>832</td>
<td>320</td>
<td>2.6</td>
</tr>
<tr>
<td>Oak Ridge</td>
<td>0</td>
<td>80</td>
<td>0</td>
</tr>
<tr>
<td>Shadow Wood</td>
<td>904</td>
<td>80</td>
<td>11.3</td>
</tr>
<tr>
<td>West Fargo Public Schools</td>
<td>0</td>
<td>80</td>
<td>0</td>
</tr>
<tr>
<td>Downtown Fargo</td>
<td>4,405</td>
<td>512</td>
<td>8.6</td>
</tr>
</tbody>
</table>
Concept Zoning
Retail
Office - Retail
Office
Residential
Civic
Park

Building Uses
- Residential:
  1: Urban Plains Apartment Complex
  2: Under Construction
  3: The Retreat
  4: Urban View Apartments
  5: The Fountains
- Office/Civic:
  6: Unknown Office
  7: ND Center for Distance Education
  8: Starion Financial
  9: Pediatric Therapy Partners
  10: Baby Bloomers
  11: Horace Mann Insurance

Currently Developed
- 12: Multiple businesses
- 13: Multiple businesses
- 14: Multiple businesses
- 15: Scheels Arena
- 16: Sanford Training Center
- 17: Family Wellness

Retail:
- 18: Strip Mall
- 19: Taco John's
- 20: People's Organic
- 21: Five Guys
- 22: Holiday Gas Station
- 23: Mexican Village

Methodology & Research
Increase density by providing a variety of housing options, with a focus on mixed-use buildings that allow people to live near or above retail and office spaces.
14 Total Intersections
(1 intersection/ 23 acres)

Average Crosswalk distance
40'

1 - 2 story retail buildings
2 - 3 story office / civic buildings
3 - 4 story apartment buildings
1 story parking garages
Parking lots
Existing streets
THE NEIGHBORHOOD DESIGN
THE NEIGHBORHOOD DESIGN

STREETS

Block Grid Size 300’

Average area of block

Overall Average: 2 Acres
When streets become pleasant places, more people are likely to leave their cars at home

- Smart Growth Manual
THE NEIGHBORHOOD DESIGN

STREETS

Community Connector

15' Sidewalk

Angled Parking

7' Boulevard

10' Driving Lane

7' Buffered Bike Lane

Community Connector // 51st Street S
“Perhaps the most anti-pedestrian feature of contemporary retail practice is the front parking lot. For retail to attract pedestrians, the shops must open directly onto the sidewalk, with parking lots located to the rear or elsewhere.”

- Smart Growth Manual
THE NEIGHBORHOOD DESIGN

BUILDINGS

- Mixed Use Commercial
  - 4 - 6 stories
- Mixed Use Residential
  - 3 - 5 stories
- Live Work Units
  - 3 - 4 stories
- Apartments / Row homes
  - 2 - 4 stories
- Yard House
  - Avg. lot size = 35’ x 90’
- Existing Building
THE NEIGHBORHOOD DESIGN
BUILDINGS

- Existing Building - Keep
- Existing Building - Remove
Existing Buildings
THE NEIGHBORHOOD DESIGN

BUILDINGS

Mixed Use Commercial

4 - 6 stories
BUILDINGS

THE NEIGHBORHOOD DESIGN

Apartments / Row homes
2 - 4 stories

Live Work Units
3 - 4 stories

Yard House
Avg. lot size = 35' x 90'
“Smart growth communities make the most of their context by preserving and celebrating their natural amenities.”
- Smart Growth Manual

THE NEIGHBORHOOD DESIGN

OPEN SPACE

Central Neighborhood Park
5 - 10 Acres
Large areas for social gatherings
Service Area Radius = 1/2 mile (10 min walk)

Neighborhood Park
1/4 - 10 acres
Active and Passive Recreation
Service area = 1/4 mile (5 min walk)

Pocket Park
1/4 - 2 acres
Simple and flexible open space
Service area = 600 feet

Plaza
Adjacent to mixed-use building
Over 50% hardscape
THE NEIGHBORHOOD DESIGN

OPEN SPACE

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5-10 Acres
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Service area = 1/4 mile (5 min walk)

Pocket Park
1/4 - 2 acres
Simple and flexible open space
Service area = 600 feet

Plaza
The 320 acre site is divided into five districts, each with its own unique character. Each district represents a piece of the Red River Valley’s historical attributes. The character of these districts will be represented through the use of building materials, open spaces, and streetscapes.
THE PARK DESIGN

PRAIRIE MEADOWS PARK

DESIGNED FROM FARGO

DESIGNED FOR FARGO
Prairie Meadows Park was designed with Fargo’s natural landscape in mind. The park is a native oasis placed in an urban environment that creates a unique juxtaposition. The plantings in the park were inspired by the large open prairies of the Red River Valley. The native prairie grasses rule the park, with tree canopies along the outer edges of the site to allow for some shady places for seating and other activities.

A greenway trail connects existing trails from south of 32nd Avenue north up to the Sanford Medical Center and potentially further north by going underneath I-94. The greenway is named the Gerardii Greenway after the latin name for Big Bluestem native grass, since the main experience along the greenway is traveling through the open prairie. The trail features bike lanes, a pedestrian lane, and tree canopy coverage in certain areas.

Pedestrians can easily go through the park by way of two pedestrian bridges that connect Park Street and 51st Street.
Prairie Meadows Park was designed with Fargo’s natural landscape in mind. The park is a native oasis placed in an urban environment that creates a unique juxtaposition. The plantings in the park are inspired by the large open prairies of the Red River Valley. The native prairie grasses rule the park, with trees along the outer edges of the site to allow for some shady places for seating and other activities, while not taking away from the views of the open prairie.

The existing storm water retention pond was larger than what was needed so the retrofitted pond is designed in a way to meet the new water capacity needs. The site was designed to allow users to view the water at different levels. There is an elevation change of twelve feet from street level to the water edge. The water is meant to provide recreation for all seasons including kayaking, paddle boarding, and ice skating.

Prairie Meadows Park is designed to provide outdoor activities for different types of users and interests. There are many trails that go through the site, along with water recreation, large lawn areas for sunbathing or pickup games, a flex space that vendor tents can use during community events, a children’s playground, and plazas for festivals to take place, such as a food truck fair in West Meadows Plaza.

“Smart growth communities make the most of their context by preserving and celebrating their natural amenities.”
- Smart Growth Manual
THE PARK DESIGN
PRAIRIE MEADOWS PARK FORM

Wild Rice River
Sheyenne River
Red River
PRAIRIE MEADOWS PARK

GERARDII GREENWAY SECTION

THE PARK DESIGN

- 7' Walking Trail
- 6' Planted Bed
- 6' south bound bike lane
- 6' north bound bike lane

Map showing:
- Sandpiper Band Shell
- Great Lawn
- Nutans Bridge
- Bluestem Blvd
- Prarie Island
- Children's Playground
Fire festivals take place on Prairie Island and provide a unique event for the community along with providing ecological benefits for the plants and soil.
Lazy Lawn - a place where people can relax and recreate on a maintained turf area.

The outdoor patio space allows people to dine closer to the waters edge.

Native prairie area

6' walking trail

Picnic Paradise

5' walking trail

Native prairie area

Picnic Paradise

6' walking trail

Native prairie area

Picnic Paradise
THE PARK DESIGN

WINTER ACTIVITIES

View of hockey game from the Pond Prospect
THE PARK DESIGN
WEST MEADOWS PLAZA

PLANTING CONCEPT

T1 TERRACE 1
Big Bluestem
Rattlesnake Master
Sneezeweed
Cardinal Flower

T2 TERRACE 2
Western wheatgrass
Purple Coneflower
Swamp Milkweed
Culvers Root

T3 TERRACE 3
Sideoats Grama
New England Aster
Paprika Yarrow
Autumn Bride Coral Bells

T4 TERRACE 4
Little Bluestem
Golden Alexander
Birds- Foot Violet
The Pearl Yarrow
WEST MEADOWS PLAZA

THE PARK DESIGN

PRAIRIE FALLS
THE PARK DESIGN
WEST MEADOWS PLAZA
THE PARK DESIGN

WEST MEADOWS PLAZA

STAINED CONCRETE RETAINING WALLS

The walls have a simplistic character much like the simplistic quality of the Red River Valley landscape.

MODERN PAVING MATERIAL

The modern paving pattern will have a dark gray/slate color to create an interesting combination when placed next to the earth tones of the native grasses.

BENCH DESIGN

The bench design centered around the horizontal elegance of the prairie. A solid piece of stone is used for the base of the bench to represent a horizontal plane rising from the ground. A backrest bench made of wood is placed atop the stone to match the materials of the boardwalks and to allow a comfortable seating option for people to enjoy.

LIGHT DESIGN

The light design follows the modern aesthetic that is carried over from the Prairie Meadows District into the park. The light pole will be made out of steel and will contain LED lights. Light poles will only be used in high traffic areas such as plazas, as to not have too many vertical elements that take away from the horizontal prairie character of the park. Instead lighting will be incorporated into lower level lighting such as in bollards or along handrails.

SIGNAGE DESIGN

Signage will use the same materials found in the lighting and benches; steel, stone, and wood. Maps and text will be etched into the steel panel on the front side of the signage piece.
IN CONCLUSION

By creating a neighborhood that has appropriately planned building, street, and open space systems, south Fargo can have an urban center that is able to better serve the community. By following the 5 C’s of neighborhood planning (complete, compact, connected, complex, and convivial) Urban Plains can become a great regionally known neighborhood.
RETROFITTING SUBURBAN PLAINS

THANK YOU!
QUESTIONS?