In response to the design of a new City Hall in Fargo, North Dakota, I intend to create an identity for the Red River Civic Plaza as a downtown multi-use park that serves as a year-round destination. Over the duration of my studies at North Dakota State University, I have developed two distinct passions, volunteering and design. Using this thesis, my intent is to bridge my two passions through an altruistic design of a sustainable civic park to improve the quality of life in Fargo-Moorhead. I aspire to design a socially engaging park which also serves as a model for sustainable development by improving the stormwater management on site through the implementation of low impact development. The Red River Civic Plaza will enhance social interaction through comprehensive programming, altogether strengthening the Fargo-Moorhead community.

Fargo, North Dakota

Pedestrian Circulation

Existing Hydrology Conditions:
- 17 Micro-Watersheds which make up the existing hydrology conditions on the site (see diagram on left).

Total Runoff Area:
- Impervious Surfaces: 10.60 Acres
- Pervious Surfaces: 1.65 Acres

Stormwater Runoff:
- Impervious Surfaces: 47,709 square feet
- Pervious Surfaces: 22,238 square feet

Type II - 24 Hour - 25 Year Rainfall Event

HydroCAD 4th St. N. Catchment Basin Comparison

Existing Site Stormwater Runoff Volumes

Future Site of the Red River Civic Plaza

*The Fargo Civic Center (Top Left), and the Fargo Public Library (Bottom Left) are existing buildings on the proposed site to remain.
Red River Civic Plaza Masterplan

The Red River Civic Plaza is favorably located in the downtown neighborhood of Fargo, North Dakota, directly adjacent to the Red River. This community destination is located immediately west across the Red River from Moorhead, Minnesota; and only two blocks east from historic Broadway Street. The park is also within a one-mile proximity from five of Fargo’s historic neighborhoods.

Amenities Include: 92’ diameter green space which functions as an ice rink in the winter months; ADA accessible ramp, overhead glass shade structure, wooden benches, concrete ledge seating, urban prairie walk, direct adjacent access to boutique shops, grocery store, fresh produce market, underground parking, and City Hall.

This 22,700 SF lawn overlooks and slopes down towards the performance stage to the north east which is located adjacent to an interactive and educational rain garden. The lawn can be accessed by stairs from the west, or ADA accessible entrances to the north and east. To the south of the multi-purpose lawn, on the north side of the Fargo Public Library is a year-round cafe, which offers outdoor seating and is cantilevered over a rain garden.

Underground parking access is available off of 2nd Street North (moved ~50’ west of existing location) and multi-use building. A PEDESTRIAN BRIDGE reconstruction is proposed across 2nd Street North. The Multi-Use Building contains residential apartments, first floor which overlooks the multi-use plaza and six units from each floor overlooking the Red River.

MULTI-SEASONAL CIVIC PLAZA

The 15,700 SF lawn overlooks and slopes down towards the performance stage to the north east which is located adjacent to an interactive and educational rain garden. The lawn can be accessed by stairs from the west, or ADA accessible entrances to the north and east. To the east of the multi-purpose lawn is a year-round cafe which offers outdoor seating and is cantilevered over a rain garden.

FRESH PRODUCE MARKET

PEDESTRIAN BRIDGE

PUMP STATION

RED RIVER

MULTI-PURPOSE LAWN & PERFORMANCE STAGE

The 15,700 SF lawn overlooks and slopes down towards the performance stage to the north east which is located adjacent to an interactive and educational rain garden. The lawn can be accessed by stairs from the west, or ADA accessible entrances to the north and east. To the east of the multi-purpose lawn is a year-round cafe which offers outdoor seating and is cantilevered over a rain garden.

This 22,700 SF lawn overlooks and slopes down towards the performance stage to the north east which is located adjacent to an interactive and educational rain garden. The lawn can be accessed by stairs from the west, or ADA accessible entrances to the north and east. To the south of the multi-purpose lawn, on the north side of the Fargo Public Library is a year-round cafe, which offers outdoor seating and is cantilevered over a rain garden.

MULTI-USE BUILDING

RED RIVER CIVIC PLAZA

The Red River Civic Plaza is favorably located in the downtown neighborhood of Fargo, North Dakota, directly adjacent to the Red River. This community destination is located immediately west across the Red River from Moorhead, Minnesota; and only two blocks east from historic Broadway Street. The park is also within a one-mile proximity from five of Fargo’s historic neighborhoods.

Amenities Include: 92’ diameter green space which functions as an ice rink in the winter months; ADA accessible ramp, overhead glass shade structure, wooden benches, concrete ledge seating, urban prairie walk, direct adjacent access to boutique shops, grocery store, fresh produce market, underground parking, and City Hall.

This 22,700 SF lawn overlooks and slopes down towards the performance stage to the north east which is located adjacent to an interactive and educational rain garden. The lawn can be accessed by stairs from the west, or ADA accessible entrances to the north and east. To the south of the multi-purpose lawn, on the north side of the Fargo Public Library is a year-round cafe, which offers outdoor seating and is cantilevered over a rain garden.

The Red River Civic Plaza is favorably located in the downtown neighborhood of Fargo, North Dakota, directly adjacent to the Red River. This community destination is located immediately west across the Red River from Moorhead, Minnesota; and only two blocks east from historic Broadway Street. The park is also within a one-mile proximity from five of Fargo’s historic neighborhoods.
Glass Canopy Directs Stormwater Into Planter
The stormwater technologies present at the Red River Civic Plaza exhibit many ways of improving the methods at which we manage our stormwater runoff here in Fargo, North Dakota. The Red River Civic Plaza is intended to serve as a local sustainable model for our Fargo-Moorhead community on how we can reduce our urban runoff and naturally filter stormwater contaminants.

- **Dry Well Field**: Designed to capture, hold, and slowly infiltrate the stormwater which would typically run off the site. Stacked three rings high, these dry wells will be interconnected to keep water levels relatively even across the field.

- **Stormwater Rain Gardens**: Capture and hold runoff from across the site.

- **Rain Barrels**: Intended to capture and store stormwater runoff from the roof of the Fargo Public Library.

- **Green Roof**: Utilizes artistic metal runnels and rain chains which extend over the market entrance to disperse excess stormwater into adjacent rain gardens and provide public educational opportunities.

- **Trench Drains**: Installed along the edges of the green lawn to assist in draining stormwater by directing runoff into the performance stage rain garden.

- **Cisterns**: Installed below grade to hold stormwater and to be re-purposed for irrigation in the summer months and for the ice rink in the winter months.

- **Biofiltration Planters**: With curb cuts installed along the street allow stormwater runoff to filter through plant material and soils before discharging off site.

- **Trench Inlets Along North Side Curb of 1st Avenue North**: Will direct stormwater by way of perforated pipes underneath the proposed sidewalk.
Plant Selection Bloom Time

- Heliopsis helianthoides, Early Sunflower
- Carex vulpinoidea, Brown Fox Sedge
- Asclepias incarnata, Swamp Milkweed
- Panicum virgatum, Switch Grass
- Lobelia siphilitica, Great Blue Lobelia
- Physostegia virginiana, Obedient Plant
- Iris versicolor, Northern Blue Flag
- Helenium autumnale, Sneezeweed
- Carex comosa, Bristly Sedge
- Bromus cilatus, Fringed Sedge
- Betula papyrifera, Paper Birch
- Pycnanthemum virginianum, Mountain Mint
- Anemone canadensis, Canada Anemone
- Rudbeckia subtomentosa, Sweet Black-Eyed Susan
- Hairy Golden Alexander
- Purple Meadow Rue
- Culver's Root
- Common Arrowhead
- Golden Alexanders
- Swamp Milkweed
- Prairie Blazing Star
- Red River Civic Plaza
- Bronze Lettering Embedded Flush in Decomposed Granite Performance Stage
- Civic Lawn Stormwater Discharge into Rain Garden
- Trench Grate
- Interactive Terraced Seating
- Flush Bronze Stormwater Educational Sign
- Plant Selection Bloom Time

Performance Stage Rain Garden Planting Plan
A high quality functional relationship between Civic Plaza and available parking is especially important to the Red River Civic Plaza's success of drawing visitors to the site all year long.

**Civic Plaza & Parking**

- EMPLOYEE ACCESS TO 80 STALL CITY HALL UNDERGROUND PARKING
- 128 STALL PUBLIC PARKING GARAGE WITH STRUCTURAL COLUMNS AT 20' ON CENTER
- STAIRS AND ELEVATOR ACCESS TO THE RED RIVER CIVIC PLAZA AND THE PUBLIC LIBRARY
- ELEVATOR ACCESS TO RED RIVER CIVIC PLAZA AND MULTI-USE BUILDING

**Adjacent Parking**

- PARALLEL PARKING
- UNDERGROUND PARKING ENTRANCE

**Red River Civic Plaza**

- PERFORMANCE STAGE
- RAIN GARDEN
- DESCENDING INTERACTIVE TERRACED SEATING
- PEDESTRIAN ENTRANCE FOR CITY HALL ACCESS
- PEDIMENT ENTRANCE FOR CITY HALL ACCESS
- 128 STALL PUBLIC PARKING GARAGE WITH STRUCTURAL COLUMNS AT 20' ON CENTER

**Central Green**


**Paving & Paths**

- 18" (H) WOOD SEATING INTEGRATED ALONG THE CENTRAL GREEN EDGES. THE WOOD BENCH INSERTS ADDS A WARM AND COMFORTABLE SEATING OPTION TO THE CONCRETE STEP PERIMETER.
- SMALLER ELONGATED PAVERS TO ENCOURAGE MOVEMENT AROUND THE PLAZA.
- DECOMPOSED GRANITE PATHWAYS INSTALLED FLUSH WITH ADJACENT PAVING AND PLANTING BEDS ON THE OUTER LIMITS OF THE PLAZA SERVES AS A TRANSITIONAL FEATURE CONNECTING THE CONTRASTING NATIVE PRAIRIE TO THE URBAN PLAZA.

**Proposed Features**

- PROPOSED EAST LIBRARY ENTRANCE & ATTACHED CAFE WITH GREEN ROOF FEATURE
- PERFORMANCE STAGE OVER ADA RAMP
- GLASS SHADE STRUCTURE OVER ADA RAMP
- SMALLER ELONGATED PAVERS TO ENCOURAGE MOVEMENT AROUND THE PLAZA.
- DECOMPOSED GRANITE PAVER IS INSTALLED FLUSH WITH ADJACENT PAVING AND PLANTING BEDS ON THE OUTER LIMITS OF THE PLAZA SERVES AS A TRANSITIONAL FEATURE CONNECTING THE CONTRASTING NATIVE PRAIRIE TO THE URBAN PLAZA.
- PROPOSED EAST LIBRARY ENTRANCE & ATTACHED CAFE WITH GREEN ROOF FEATURE

**For Reference:**

- MULTI-USE BUILDING AND THE FRESH PRODUCE BUILDING SHOWN ON THE SITE PLAN TO THE RIGHT.
Civic Plaza Site Relationships

PLAZA TREE: Gleditsia triacanthos var. inermis, THORNLESS HONEY LOCUST. ALL PLAZA TREES DIRECTLY ABOVE THE PARKING GARAGE ARE PROVIDED A 10' (W) X 6' (H) X 10' (D) TREE PIT TO ENSURE THE SAME OPPORTUNITY TO FLOURISH.

1ST FLOOR: ELEVATORS FOR UNDERGROUND PARKING ACCESS, A WARMING HOUSE WITH PUBLIC RESTROOMS, THREE LOCAL BOUTIQUE RETAIL STORES, A GROCERY STORE WHICH HAS A CONNECTED FRESH PRODUCE MARKET.

2ND-4TH FLOORS: RESIDENTIAL UNITS, 4 UNITS ON EACH FLOOR FACE WEST & OVERLOOK THE PLAZA, 6 UNITS ON EACH FLOOR FACE EAST AND OVERLOOK 2ND STREET NORTH; ALL UNITS HAVE UNOBSTRUCTED ACCESS TO THE RED RIVER BY WAY OF A PUBLIC PEDESTRIAN BRIDGE.

RED RIVER PRODUCE MARKET WITH A PRODUCE GREEN ROOF, AND STORMWATER RUNNELS WITH RAIN CHAINS THAT DIRECT STORMWATER TO RAIN GARDENS, CREATING AN INTERACTIVE AND EDUCATIONAL ENTRANCE.

RED RIVER CIVIC PLAZA ENTRY SIGN AND ENTRANCE PLANTING PROVIDING YEAR-ROUND INTEREST TO ONE OF THE MAIN PEDESTRIAN ENTRANCES, ATTRACTING VISITORS FROM MOORHEAD, MINNESOTA AND THE RED RIVER RECREATIONAL CORRIDOR AT THE INTERSECTION OF 1ST AVENUE NORTH, AND 2ND STREET NORTH.

PROPOSED CITY HALL BUILDING

NORTH DAKOTA URBAN PRAIRIE STYLE PLANTING WITHIN THE PLAZA MIXES GRASSES WITH WILDFLOWERS WHICH BRINGS A NATURAL & COLORFUL AMBIANCE TO THE PLAZA

CENTRAL GREEN WITH ENGINEERED INFILTRATION SOILS, AND PERFORATED PIPES WHICH DIRECT CAPTURED STORMWATER TO RAIN GARDENS AND DRY WELLS TO THE SOUTH

HANDICAP ACCESSIBLE RAMP WITH AN OVERHEAD GLASS SHADE STRUCTURE

ALL PLAZA PAVERS SHALL UTILIZE CU STRUCTURAL SOIL; STORMWATER RUNOFF IS DIRECTED INWARDS TOWARDS CENTRAL GREEN

128 STALL UNDERGROUND PARKING GARAGE

MULTI-SEASONAL USE: ICE RINK FOR SKATING DURING WINTER MONTHS

2' DIAMETER STRUCTURAL COLUMNS PLACED 20' ON CENTER

STAIRS DESCENDING TO CENTRAL GREEN

NORTH DAKOTA NATIVE PRAIRIE PLANTING WHICH EMPHASIZES THE N.D. CULTURAL CONNECTION TO THE PRAIRIE

Civic Plaza Site Relationships
Civic Plaza Winter Attractions