Red River Civic Plaza

An Urban Park Destination for Fargo-Moorhead Community

Existing Site Photos

"The current City Hall was built in the 1950's and is cramped and deteriorating"

EXISTING CITY HALL BUILDING TO BE DEMOLISHED

The Need for a New Fargo City Hall

The existing 24,600 square foot existing City Hall building was considered for expansion in the year 2000.

"City leaders expanded City Hall into the adjacent Civic Center in 2003, adding 10,400 square feet and figuring it would buy them five to 10 years."

"The break room does triple duty as a supply closet and work space for a part-time staff member who sits at what appears to be a kitchen table."

"The main hallway also does multiduty with filing cabinets full of blueprints, a coffee machine and a big paper cutter that should be in the plotter room around the corner. There's no room for the cutter there because the space is taken up by a desk shared by two part-timers who work opposite shifts so they don't get in each other's way."

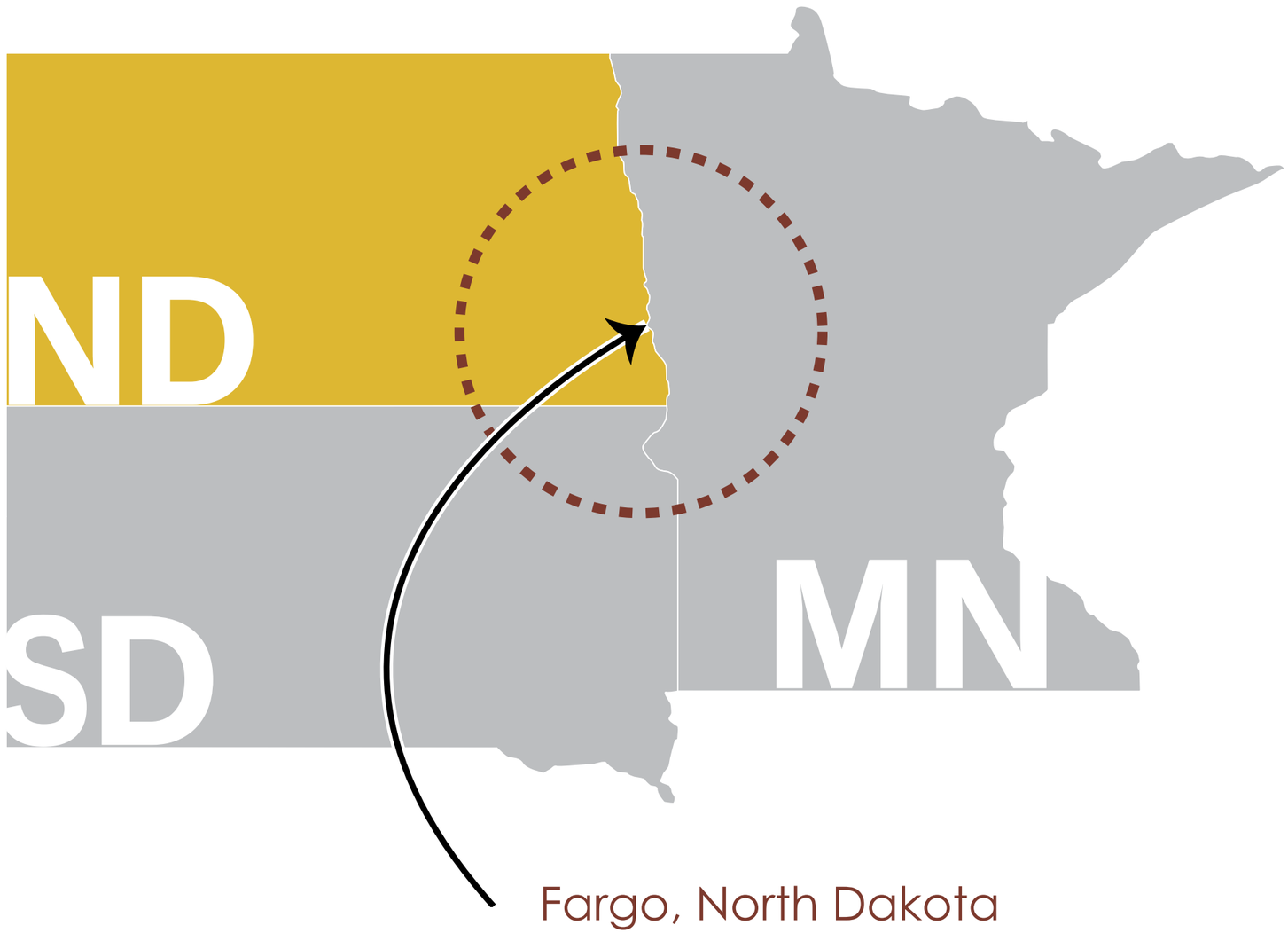
- Tu-Uyen Tran interview with Fargo City Engineer April Walker (03/29/2015)

"I would like to see us utilize this space redesign for different uses"

- Former Fargo Mayor Dennis Walaker (01/22/14)

EXISTING PARK BETWEEN THE FARGO CIVIC CENTER, THE PUBLIC LIBRARY, AND THE FARGO CITY HALL

Site Location



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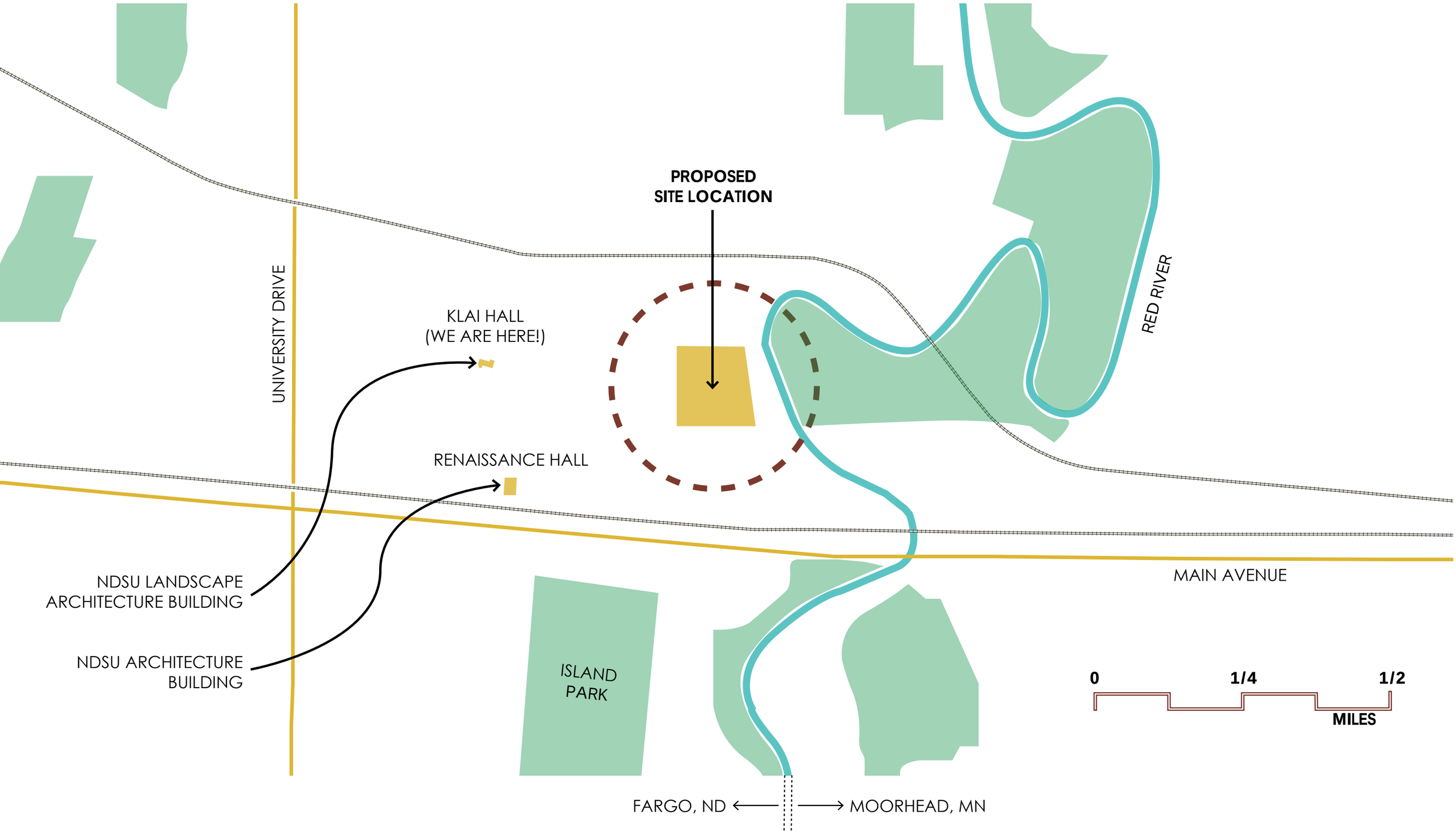

Site Location

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Thesis Statement

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.

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Research Questions

Watershed Analysis:
What is the predevelopment volume of stormwater runoff for a 5-year, 25-year, and 100-year, 24 hour rainfall event on the existing site?

Circulation:
From which direction will the majority of pedestrians, cyclists & vehicles be travelling from to access the Red River Civic Plaza?

Winter Attractions:
What outdoor amenities will help encourage and accommodate community members to use the park during the winter season?

Watershed Analysis

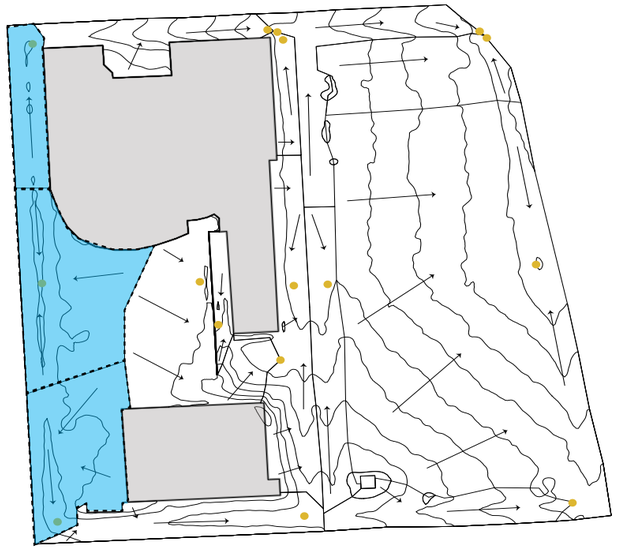
17 MICRO-WATERSHEDS MAKE UP THE EXISTING HYDROLOGY ON THE SITE

TOTAL RUNOFF AREA: 12.25 ACRES
IMPERVIOUS SURFACES: 10.60 ACRES
PERVIOUS SURFACES 1.65 ACRES

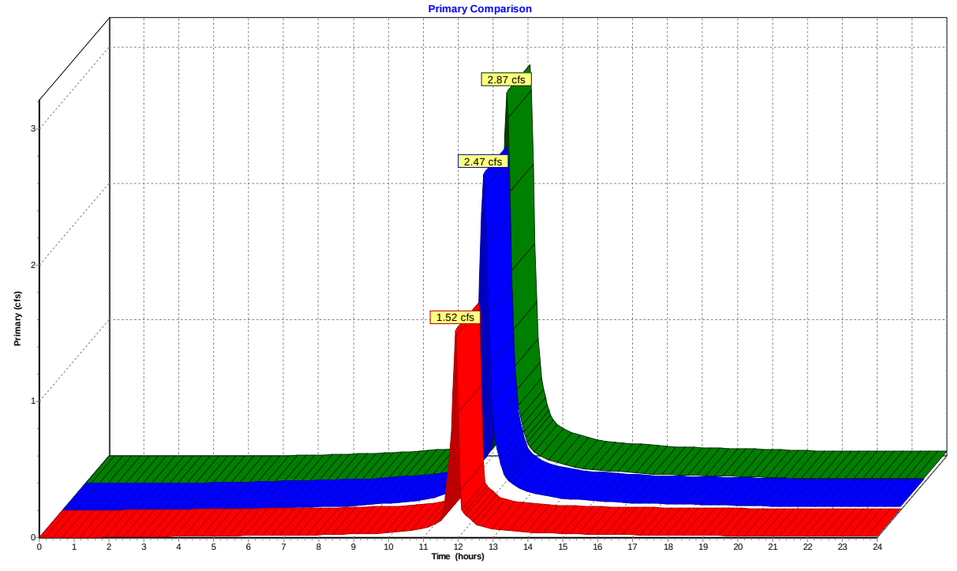
Watershed Analysis

Type II - 24 Hour - 25 Year Rainfall Event

Stormwater Runoff: 6.86 cubic feet
Impervious Surfaces: 47,709 square feet
Pervious Surfaces: 22,238 square feet



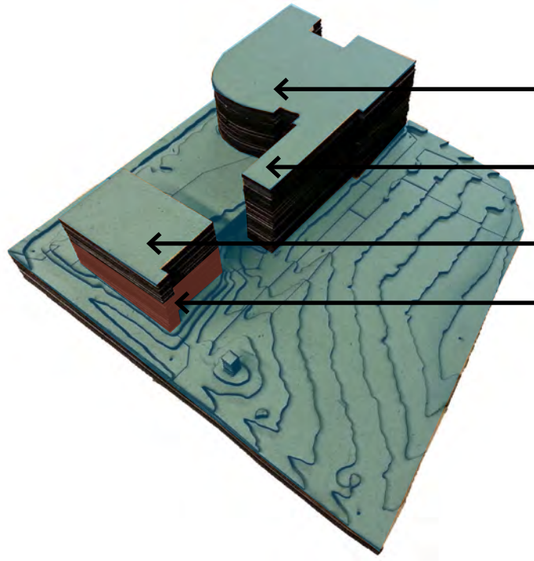
WATERSHED LOCATION MAP

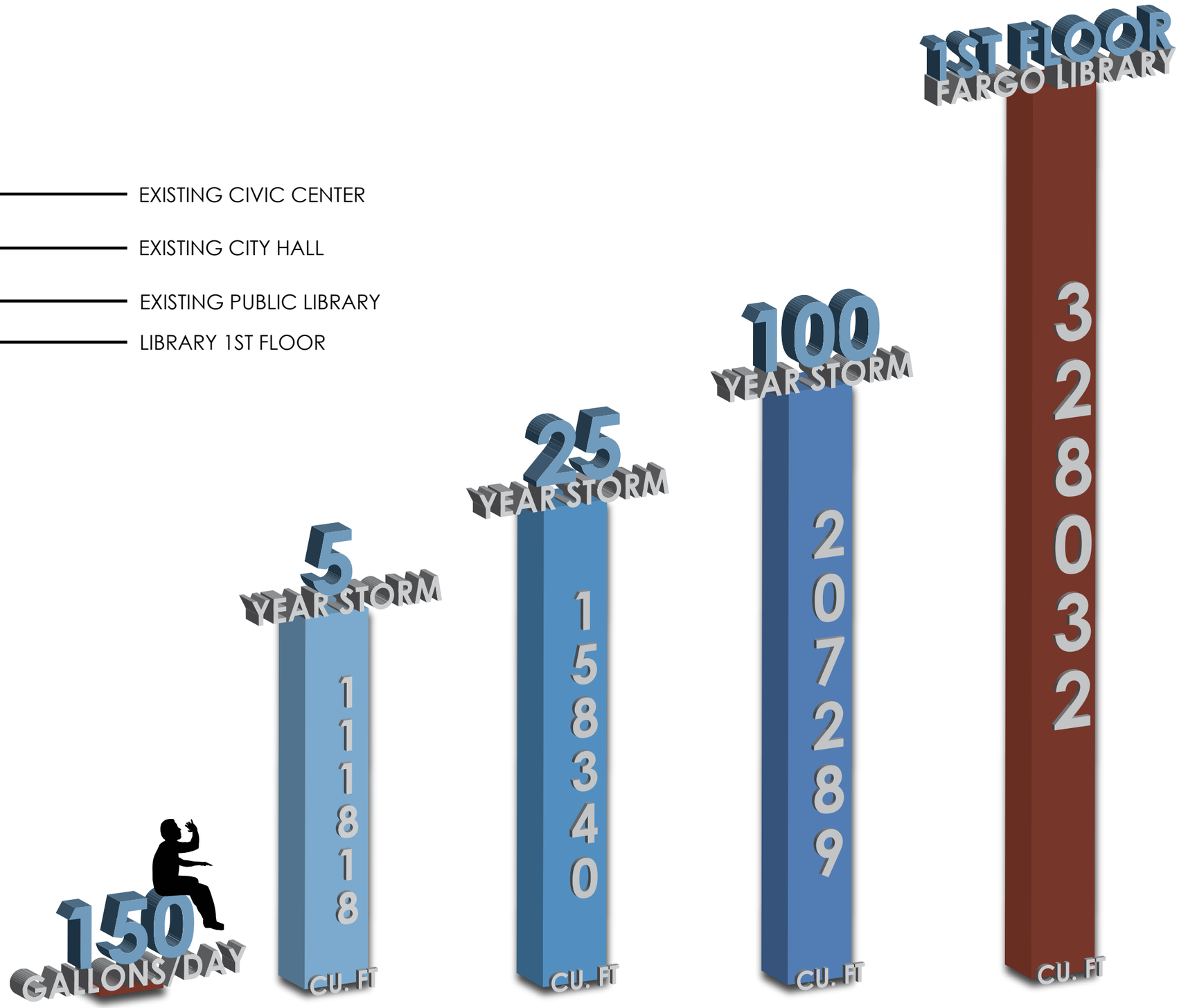


HYDROCAD 4TH STREET NORTH, CATCHMENT BASIN COMPARISON

WATERSHED	AREA (SF)	Concrete/Asphalt	Turf Cover	Shrub Cover	Longest Time of Concentration (TOC)
1	14,684	14,349	0	335	32' C @ 3%; 295' C @ 2.3%
2	10,839	10,839	0	0	227' C @ 1.5%
3	32,713	17,333	13,771	1,609	88' T @1.5%; 131' C @ 1%
4	33,487	8,887	24,600	0	222' T @ 1%; 109' C @ 5%
5	4,215	427	3,788	0	77' T @ 4.3%
6	26,395	19,553	4,842	2,000	70' T @ 1%; 228' C @ 1.25%
7	18,228	13,368	1,258	3,602	27' T @ 8%; 313' C @ 1%
8	26,278	21,864	341	4,073	32' S @ 6%; 290' C @ 1.3%
9	17,651	16,562	489	600	14' S @ 4.5%; 319' C @ 1.4%
10	15,723	15,187	100	436	57' C @ 4%; 10' T @ 3.3%; 148' C @ 2.3% 33' T @ 2.2%; 32' C @ 2.2%
11	167,789	160,666	4,891	2,232	394' C @ 2.1%; 22' T @ 2.1%; 40' C @ 3.3%
12	5,735	5,455	0	280	188' C @ 1%
13	20,688	19,630	458	600	284' C @ 1%; 244' C @ 1.8%
14	24,748	23,255	1,343	150	10' T @ 1%; 177' C @ 1.5%; 25' T @ 5%; 22' C @ 3%
15	87,894	87,894			
16	25,809	25,809			
17	348	348			

Watershed Analysis

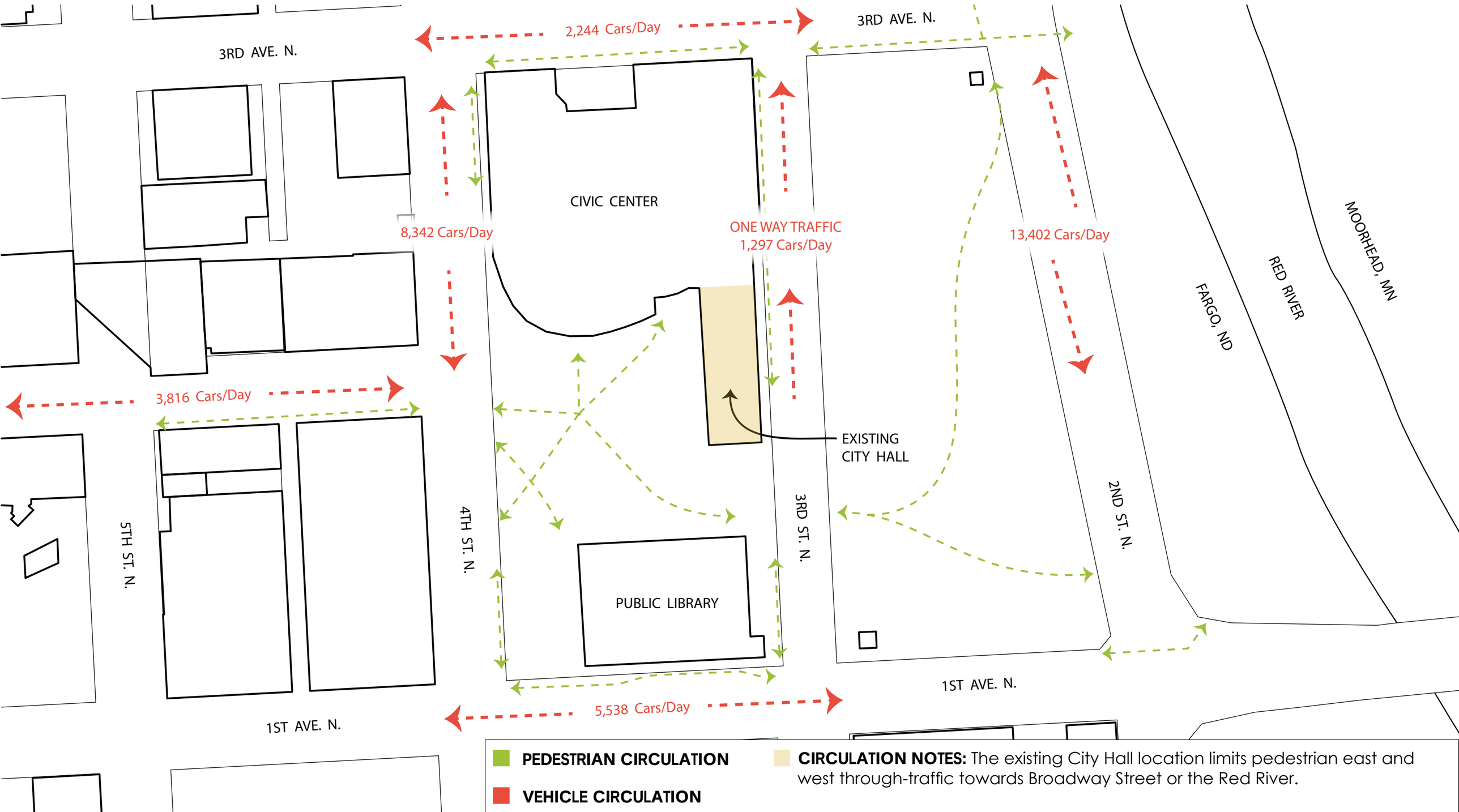




EXISTING SITE STORMWATER RUNOFF VOLUMES

Circulation

Circulation

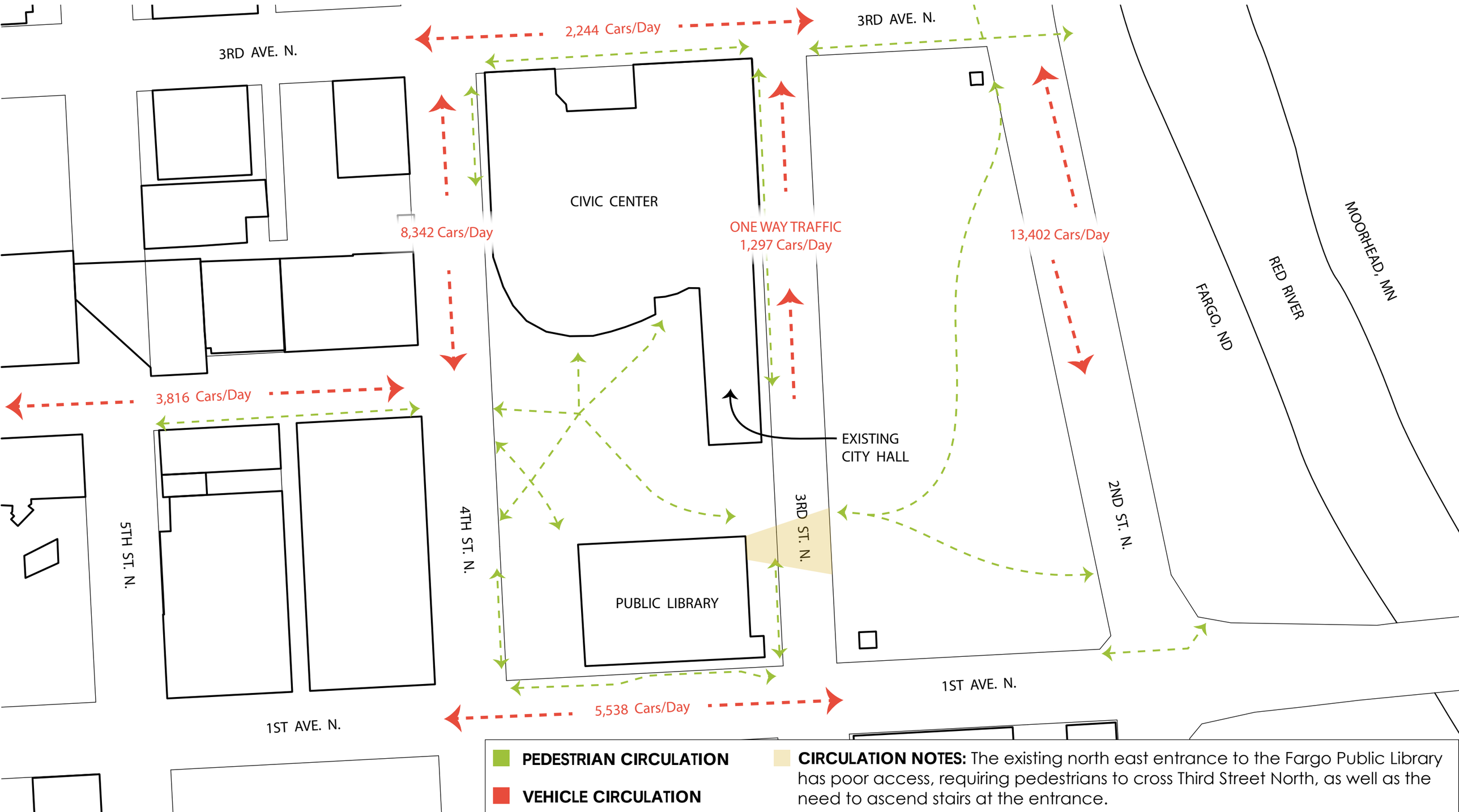


PEDESTRIAN CIRCULATION

VEHICLE CIRCULATION

CIRCULATION NOTES: The existing City Hall location limits pedestrian east and west through-traffic towards Broadway Street or the Red River.

Circulation

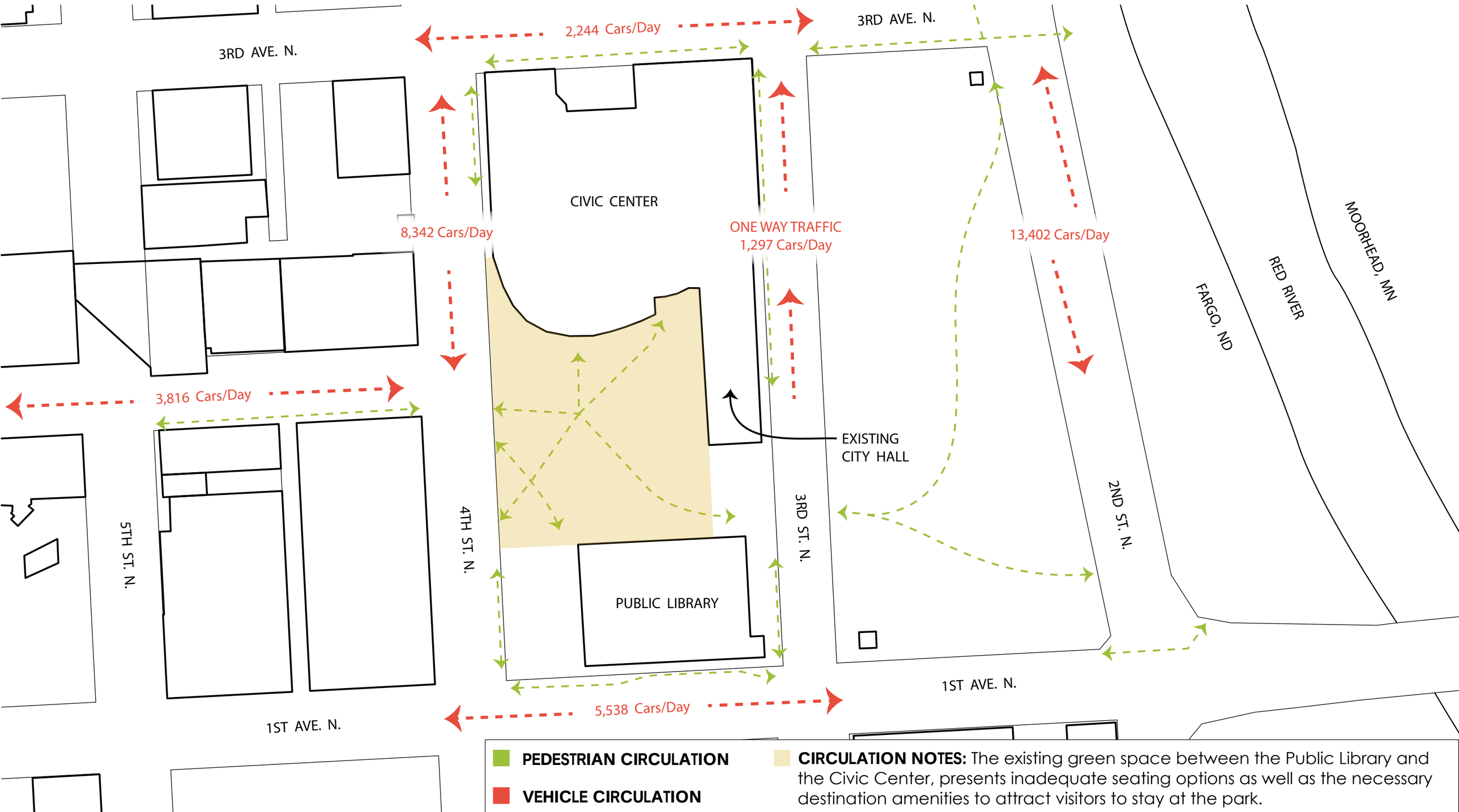


PEDESTRIAN CIRCULATION

VEHICLE CIRCULATION

CIRCULATION NOTES: The existing north east entrance to the Fargo Public Library has poor access, requiring pedestrians to cross Third Street North, as well as the need to ascend stairs at the entrance.

Circulation

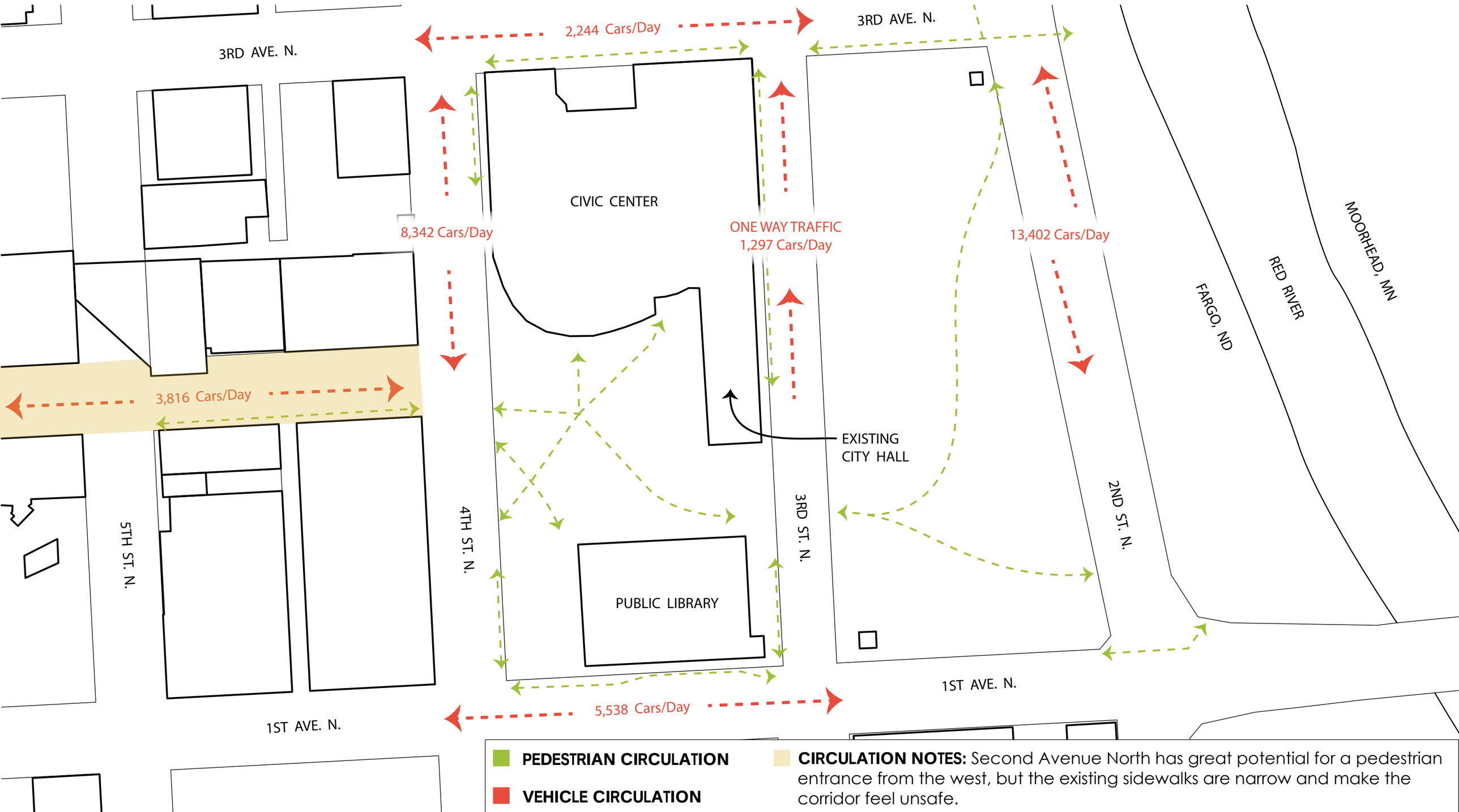


PEDESTRIAN CIRCULATION

VEHICLE CIRCULATION

CIRCULATION NOTES: The existing green space between the Public Library and the Civic Center, presents inadequate seating options as well as the necessary destination amenities to attract visitors to stay at the park.

Circulation



PEDESTRIAN CIRCULATION

VEHICLE CIRCULATION

CIRCULATION NOTES: Second Avenue North has great potential for a pedestrian entrance from the west, but the existing sidewalks are narrow and make the corridor feel unsafe.

Winter Attractions

RICE PARK
ST, PAUL, MINNESOTA

ROCKEFELLER CENTER ICE SKATING
NEW YORK CITY, NEW YORK

CHICAGO CHRISTKINDLMARKET
CHICAGO, ILLINOIS

THE BUDAPEST CHRISTMAS FAIR
BAVARIA, GERMANY

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COLOGNE, GERMANY

WINTER WONDERS
BRUSSELS, BELGIUM

Winter Attractions

INFLUENTIAL ASPECTS: PROVIDING EXTENSIVE HOLIDAY EVENT PROGRAMMING, HOLIDAY LIGHTS, ICE SKATING, HOLIDAY RETAIL, WARM REFRESHMENTS, AND PROVIDING THE OPPORTUNITY TO PEOPLE WATCH.

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Director Park

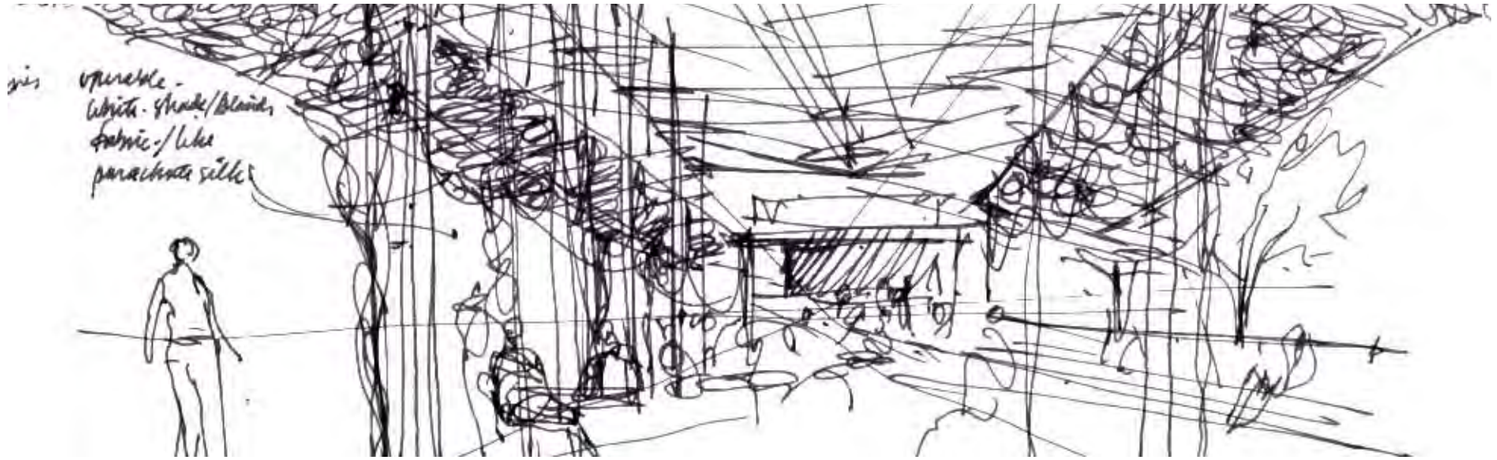
Portland, Oregon

- **9.45 million** dollar park constructed in 2009 and designed by Olin Studio for the City of Portland Parks department.

- The design of Director Park was highly influenced by the **6-level subsurface parking garage** which was constructed before the design of the park.

- Attracts an average of **1,495 people per day** during the summer months (March - October), and **376 people per day** in the winter months (November - February).

- Created **7 full-time job positions** including two on maintenance staff, and five at the park cafe.



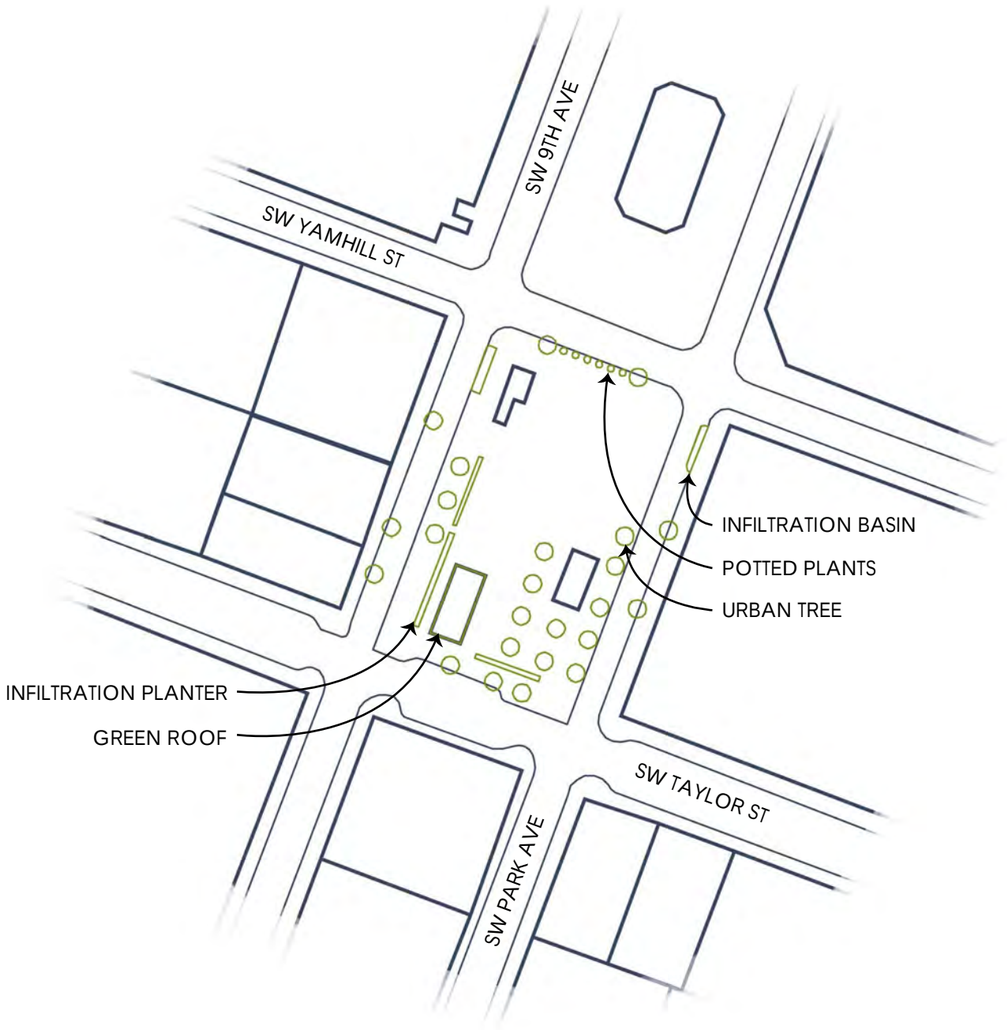
Director Park

Portland, Oregon

- **100% of the stormwater is filtered** on site before discharge into the City of Portland's stormwater system.

- Annually prevents over 990,000 gallons of stormwater from entering Portland's combined sewer overflow (CSO) utilizing bioinfiltration planters, tree wells and a green roof. These stormwater management practices only **save $200.00 annually**, but also help avoid a projected $3.9 million in future capital costs to upgrade the stormwater infrastructure.

- Utilizes rainwater harvesting technologies and repurposes the stormwater for irrigation of drought tolerant plants, **saving approximately $300.00 annually.**



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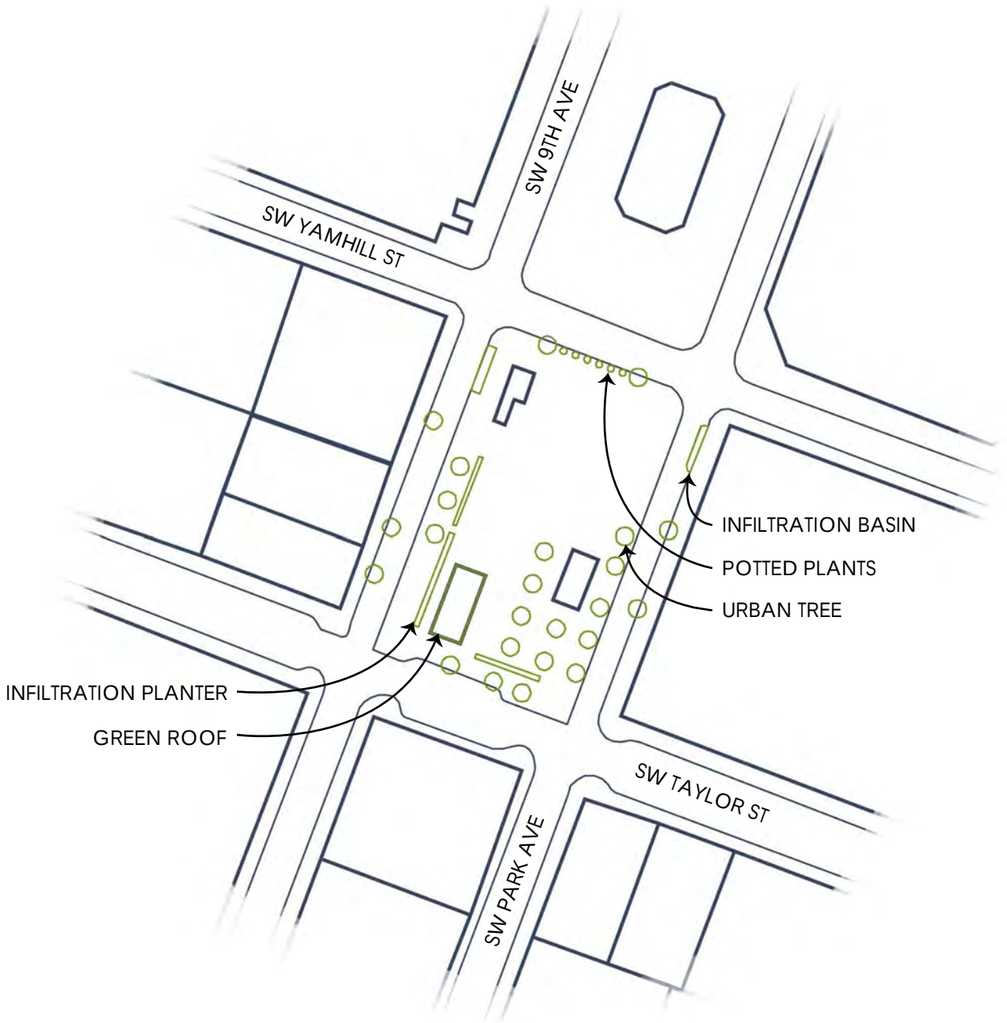


Influential Aspects

for the Red River Civic Plaza

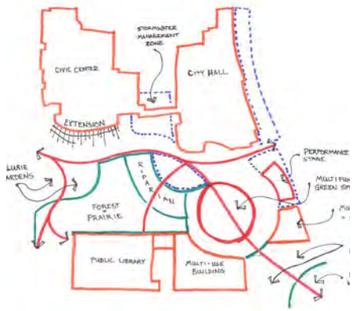
- Director Park is built upon a **sub-surface parking garage** which influenced the design development.

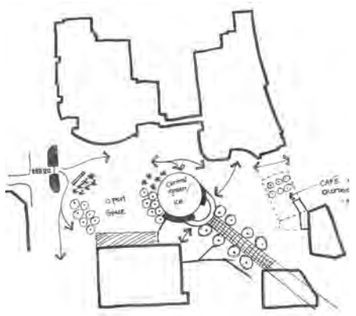
- 100% of **stormwater is filtered** using low impact development strategies before leaving the park.

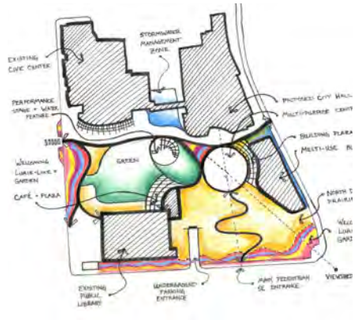
- Director Park has **extensive programming**, attracting locals to the park throughout the year.

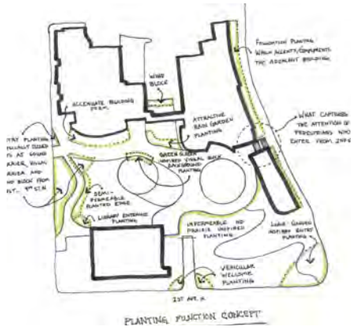
- Director Park is a great location for people watching - with **plenty of seating options** and multi-use space for various activities.

Design Concepts

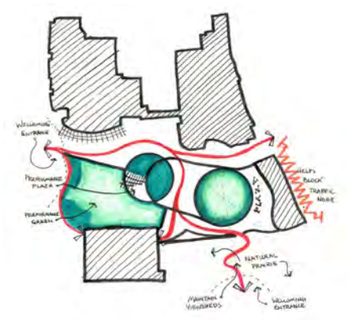


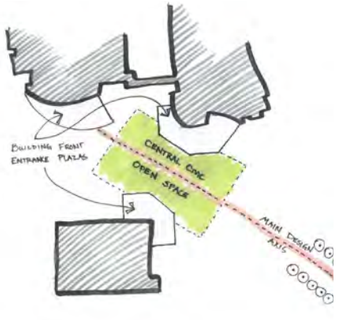


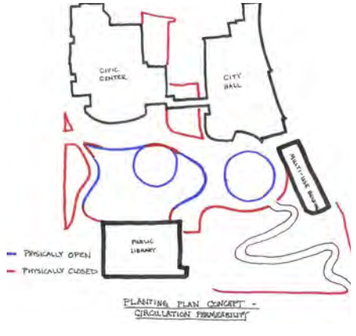




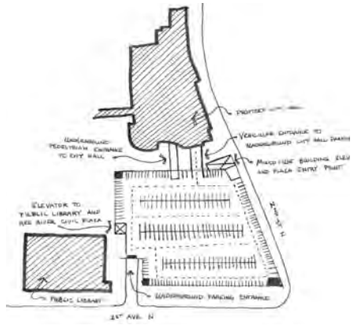
PLANTING FUNCTION CONCEPT

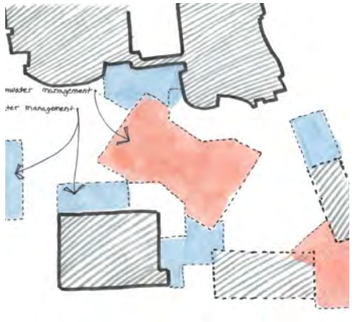




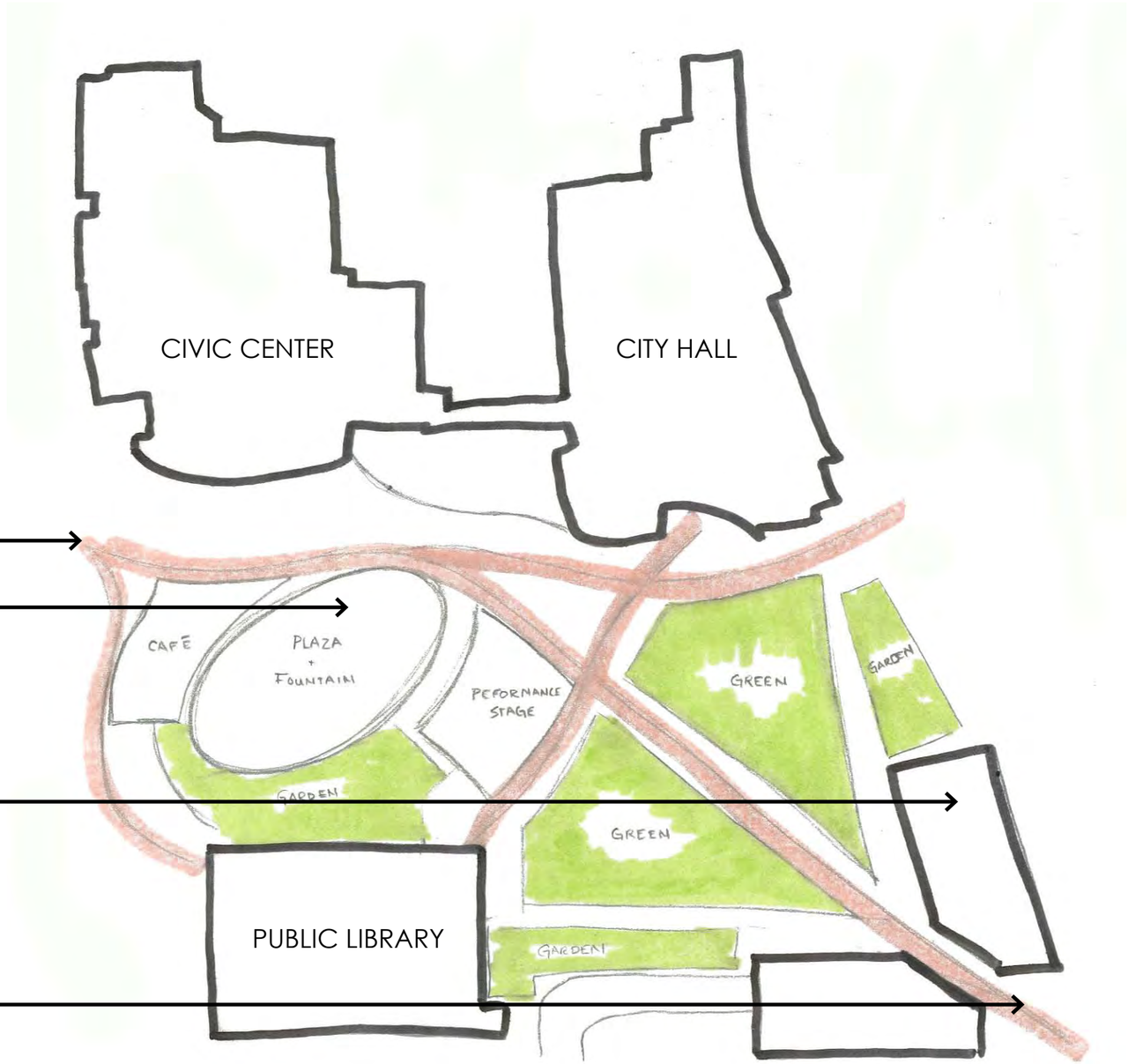


PLANTING PLAN CONCEPT - CIRCULATION PERMEABILITY





Early Design Concepts
& Important Design Development

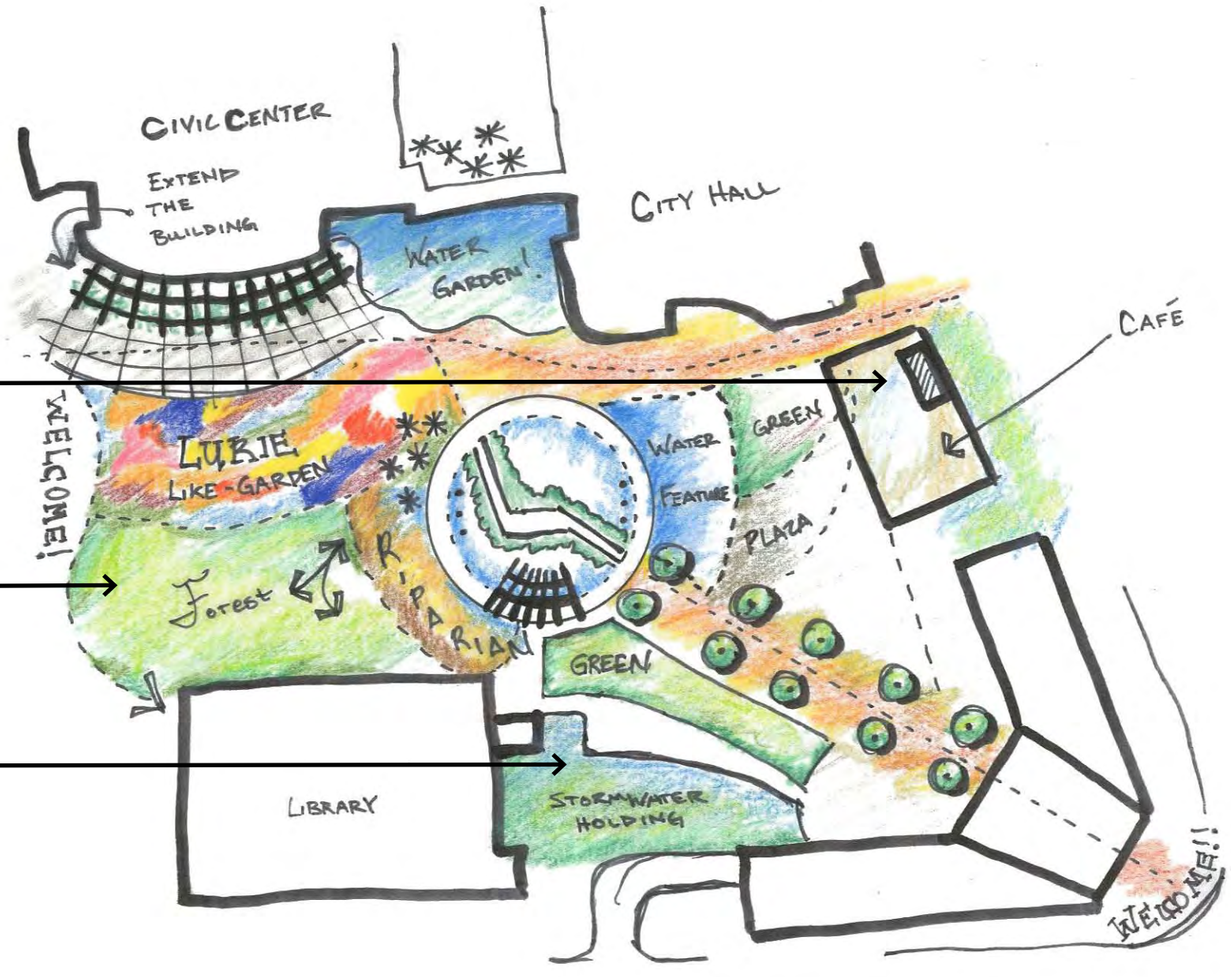


Early Design Concepts
& Important Design Development

DRAWING INSPIRATION FROM CASE-STUDIES

PLANTING CONCEPT TYPOLOGIES

DESIGNATED STORMWATER HOLDING AREAS



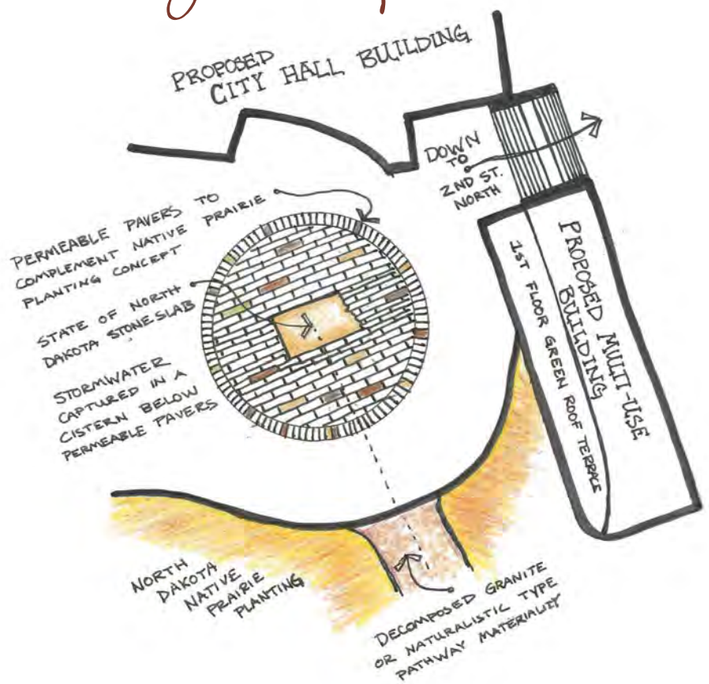
Most Influential Design Concept

for the Red River Civic Plaza

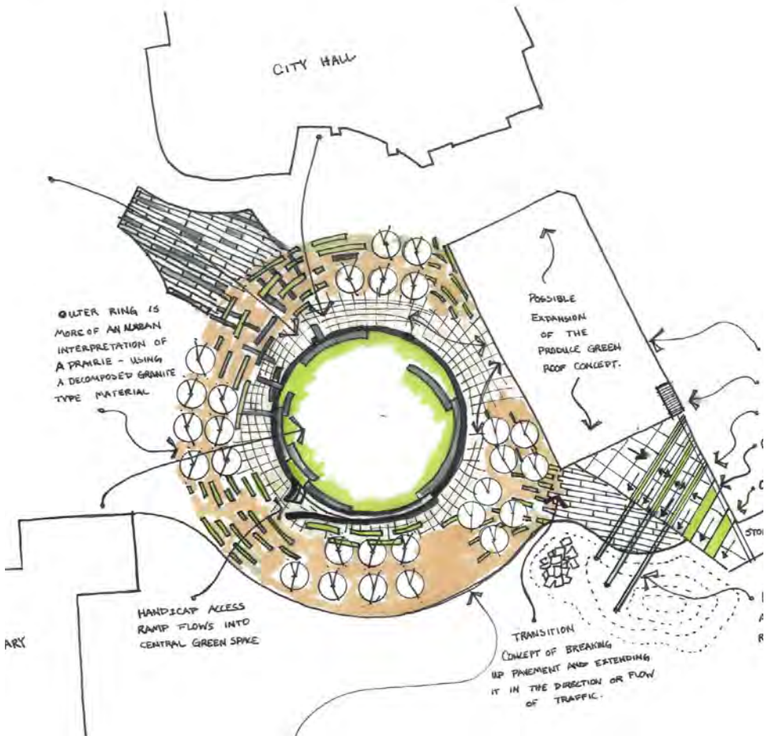
Spatial Programming Concept

for the Red River Civic Plaza

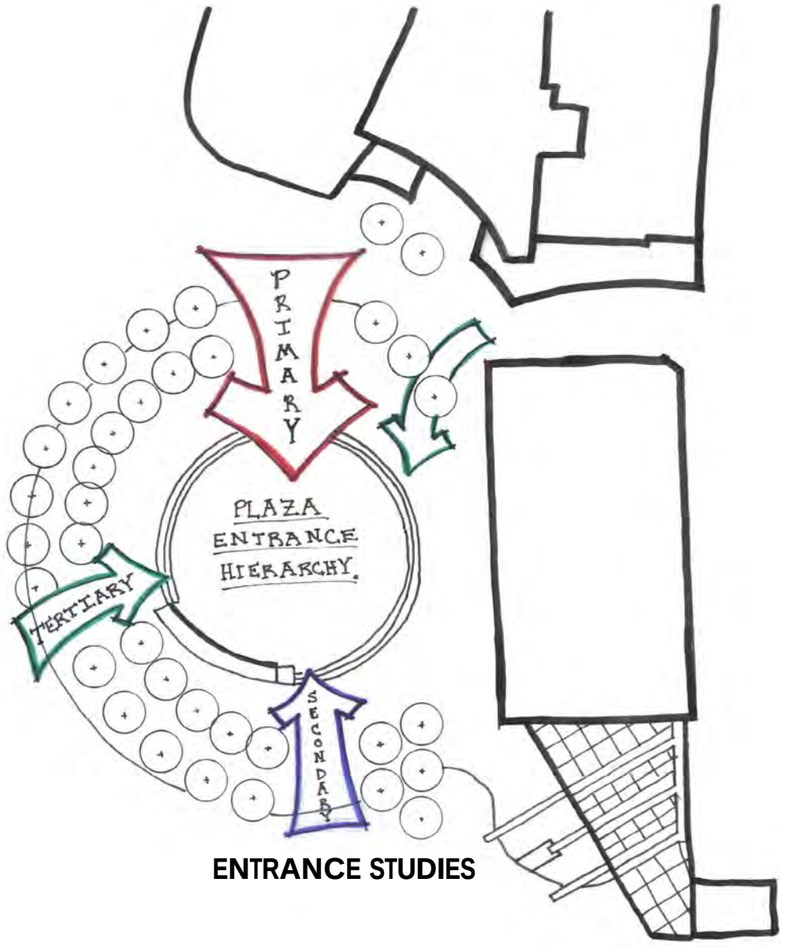
Plaza Design Development



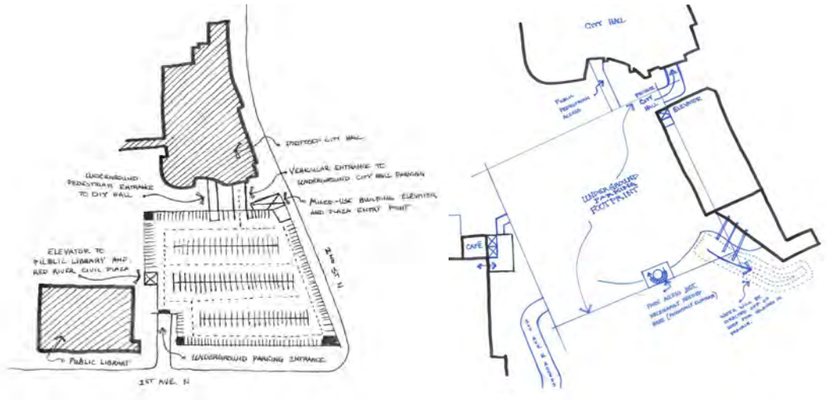
PRAIRIE CONCEPT



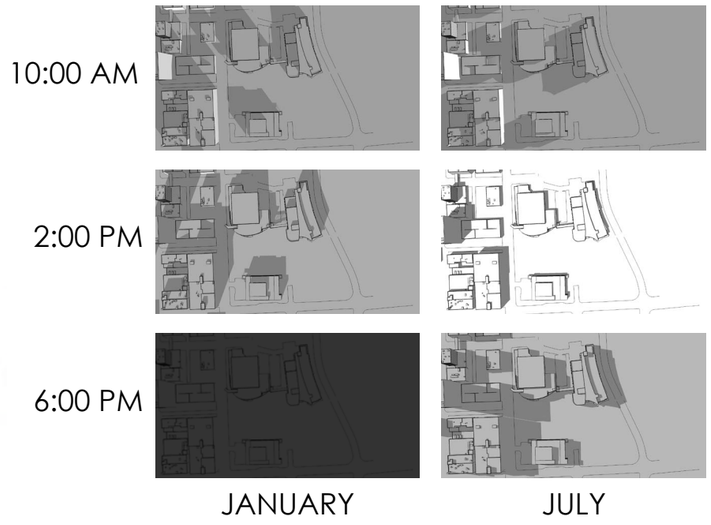
PLAZA LAYOUT & MATERIALS



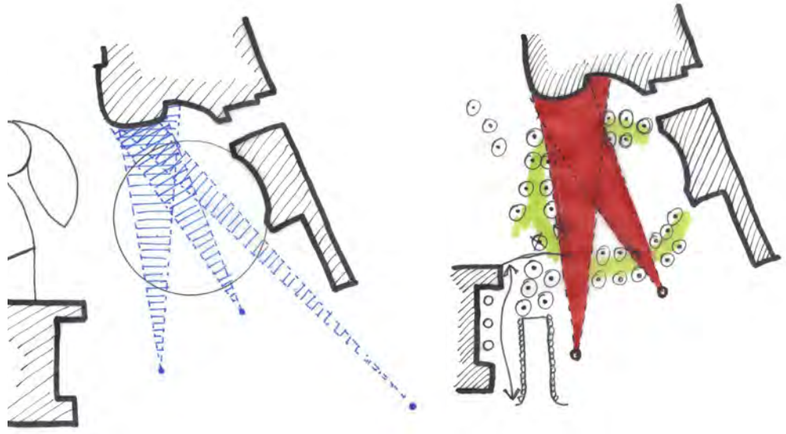
ENTRANCE STUDIES



PARKING STUDIES



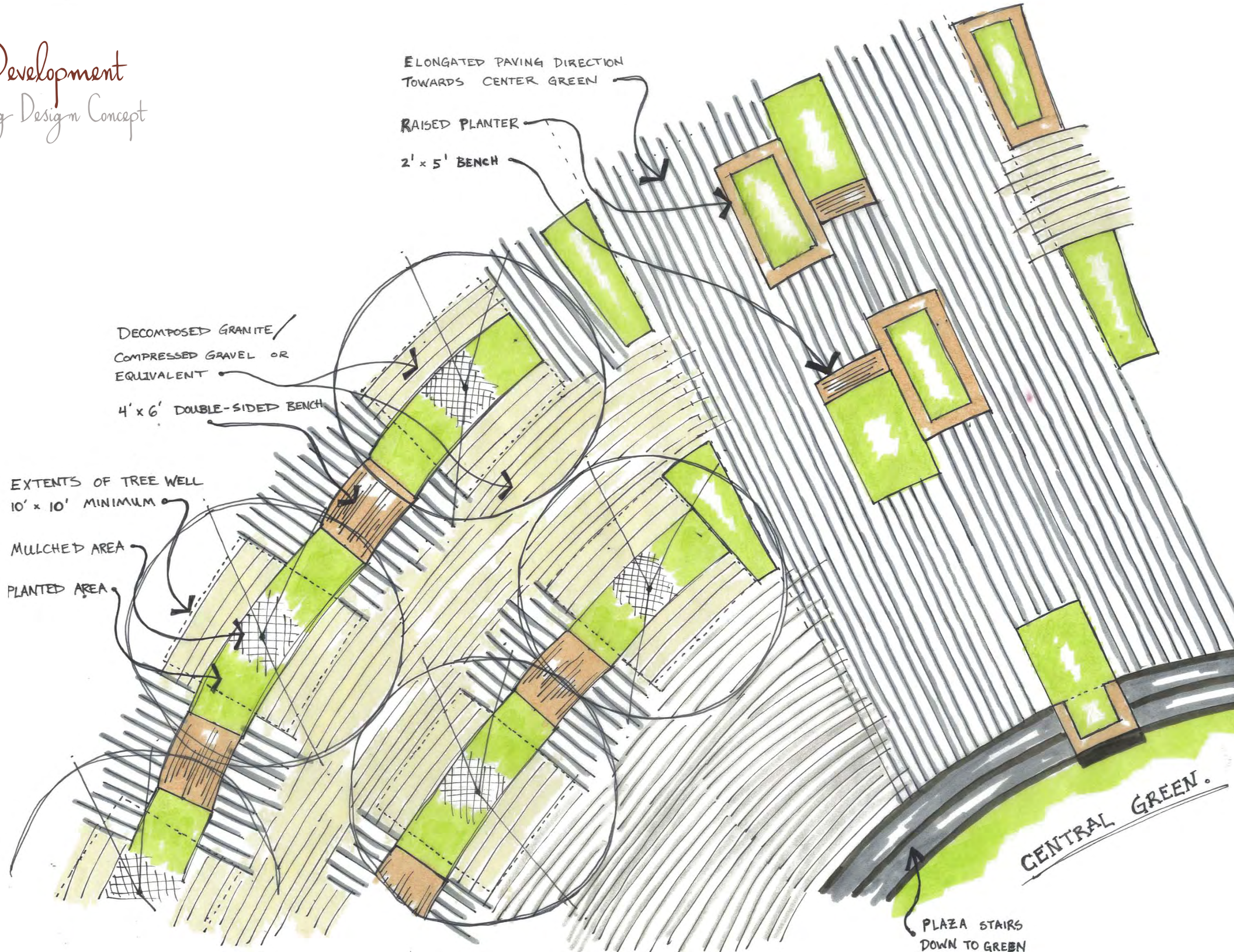
SHADE STUDIES



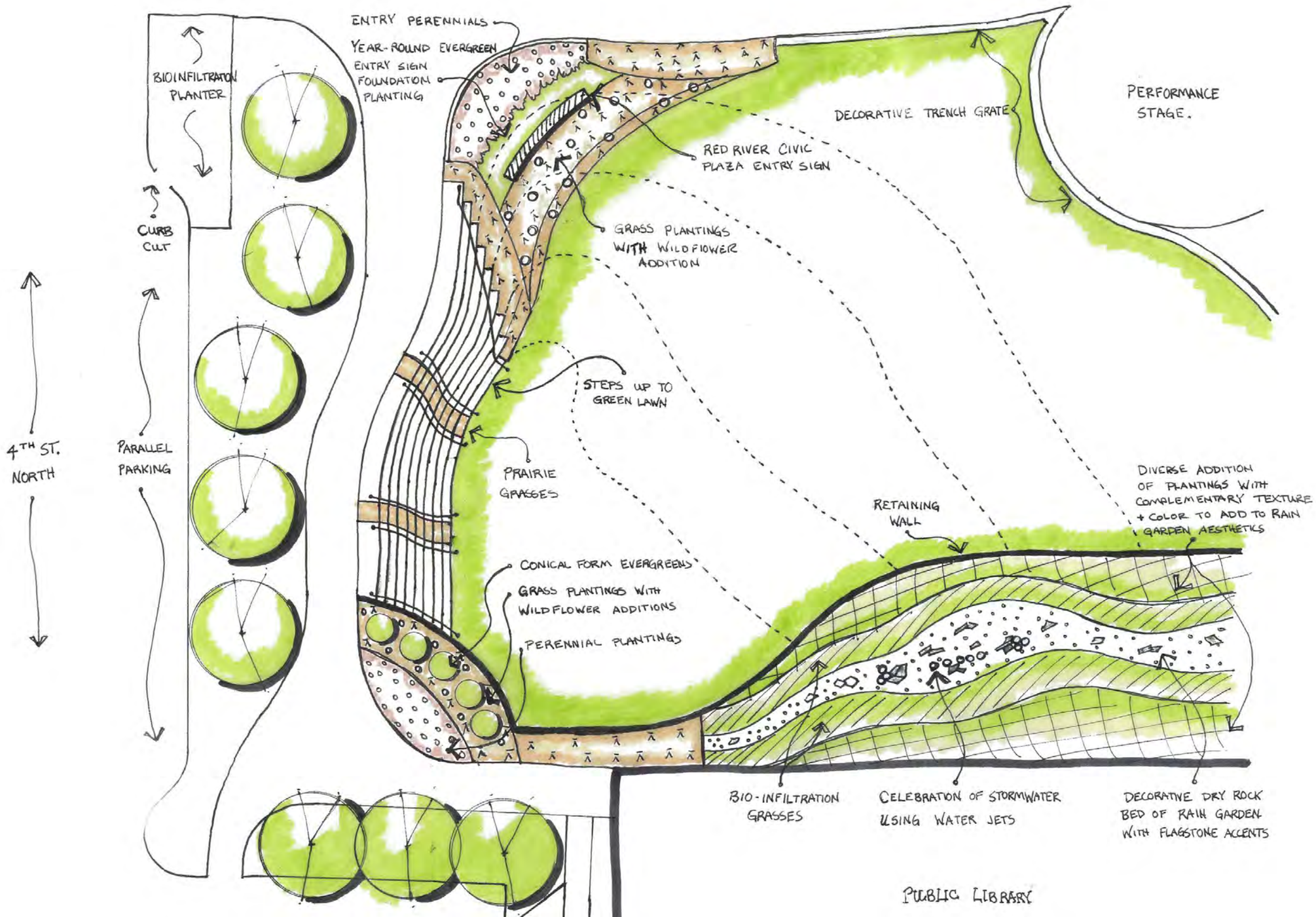
VIEWSHED STUDIES

Plaza Design Development

Paving Design Concept



West Entry Development



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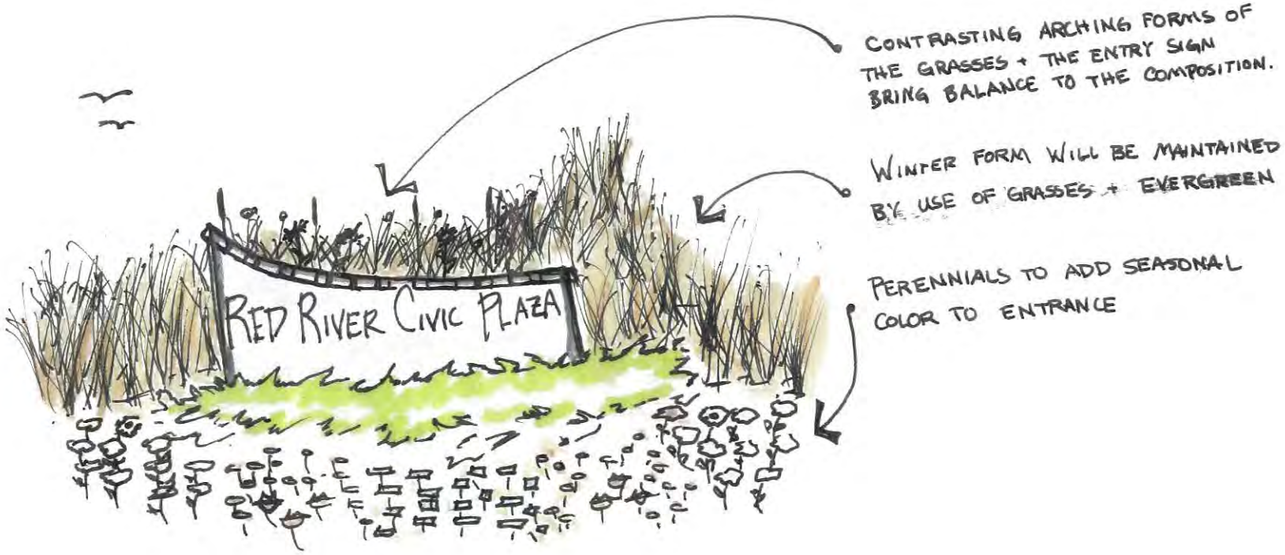
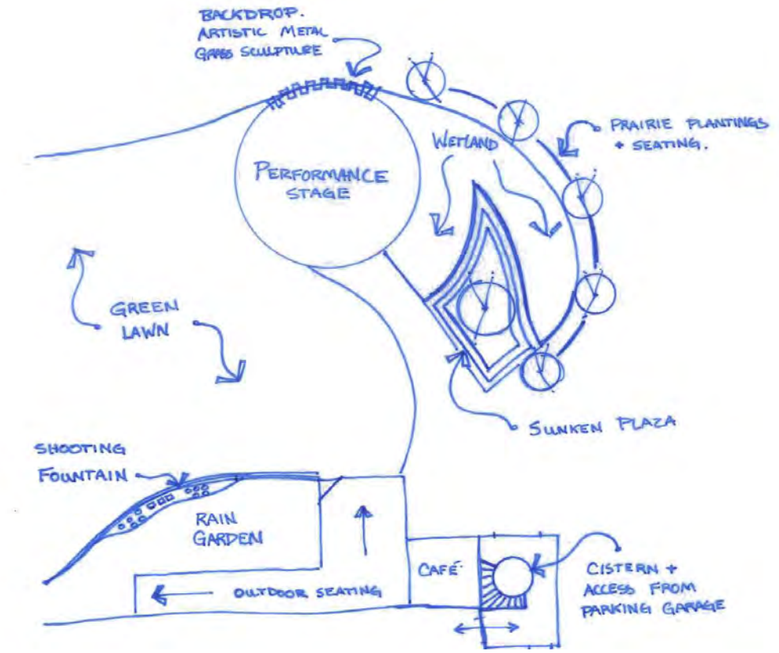
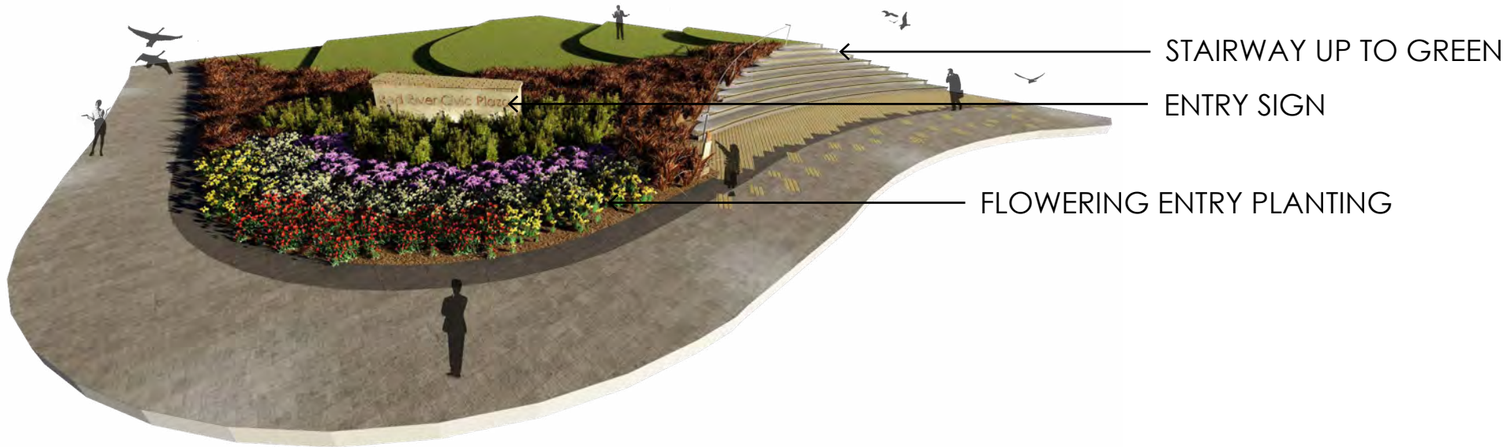


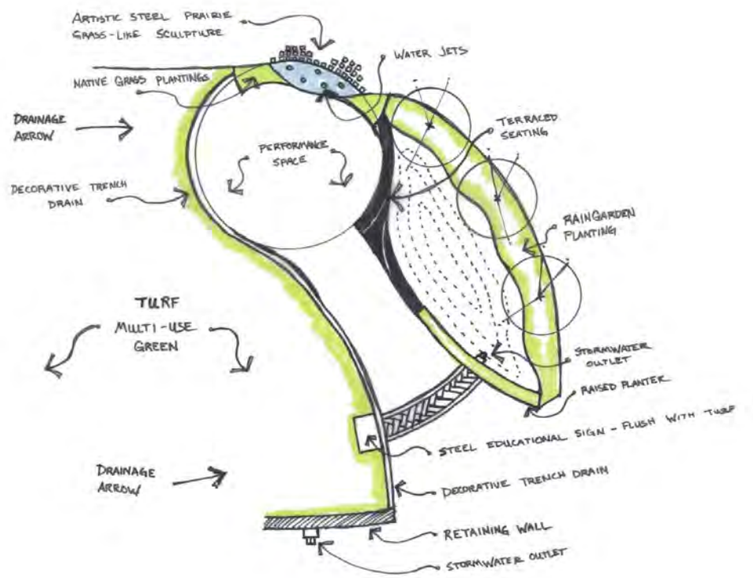
ENTRY SIGN CONCEPT



SUNKEN PLAZA CONCEPT



WEST ENTRY MODELING



PERFORMANCE STAGE

Masterplan

PROPOSED SITE ELEMENTS
(BY OTHERS)

- PUMP STATION
- FLOOD WALL
- PEDESTRIAN BRIDGE

Multi-Seasonal Civic Plaza

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

PERFORMANCE STAGE

PERFORMANCE STAGE RAIN GARDEN

DESCENDING INTERACTIVE TERRACED SEATING

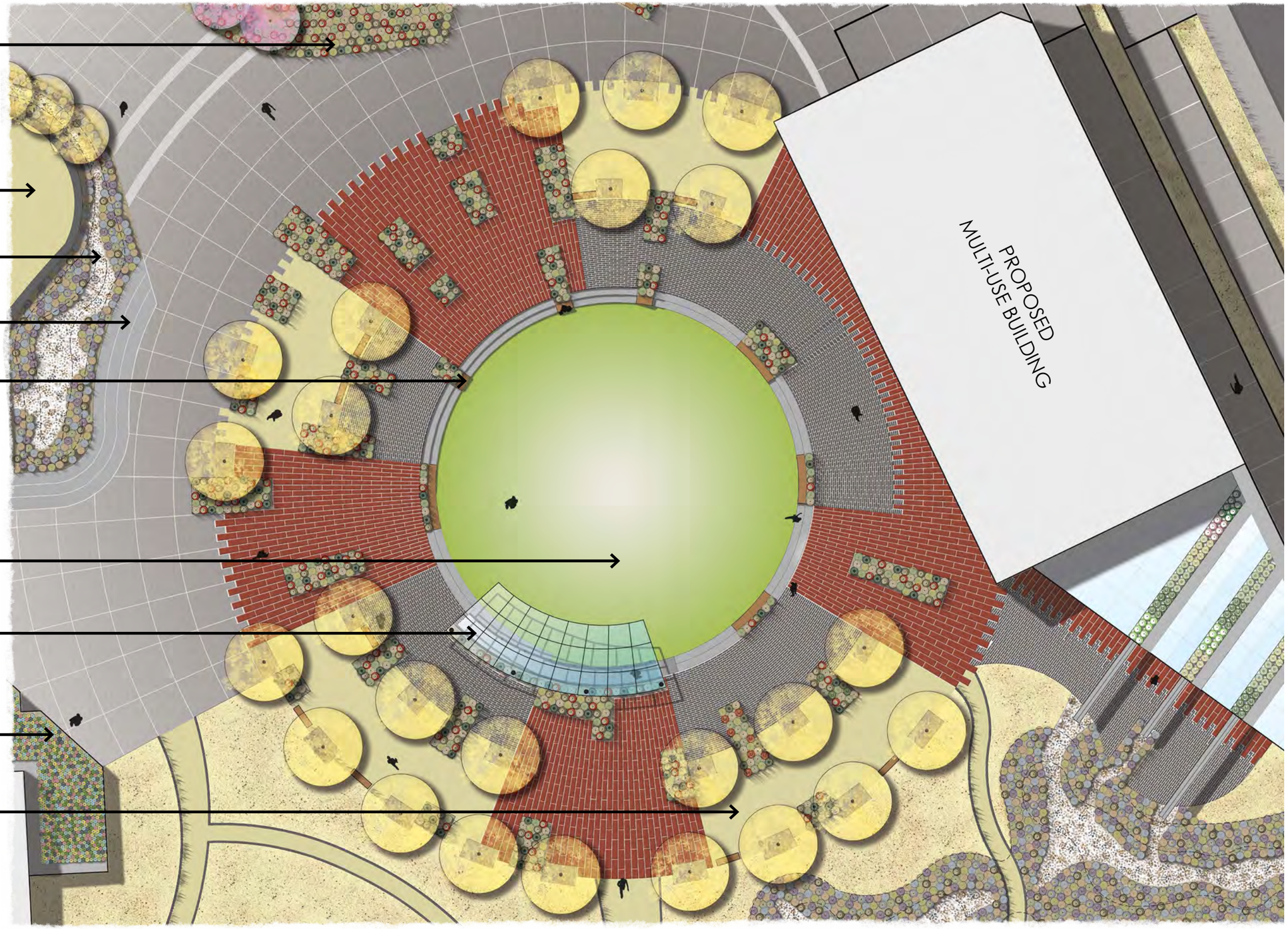
18" (H) WOOD SEATING INTEGRATED ALONG THE CENTRAL GREEN EDGES. THE WOOD BENCH INSERTS ADDS A WARM AND COMFORTABLE SEATING OPTION TO THE CONCRETE STEP PERIMETER.

92' DIAMETER GREEN; CONVERTED TO ICE RINK IN THE WINTER

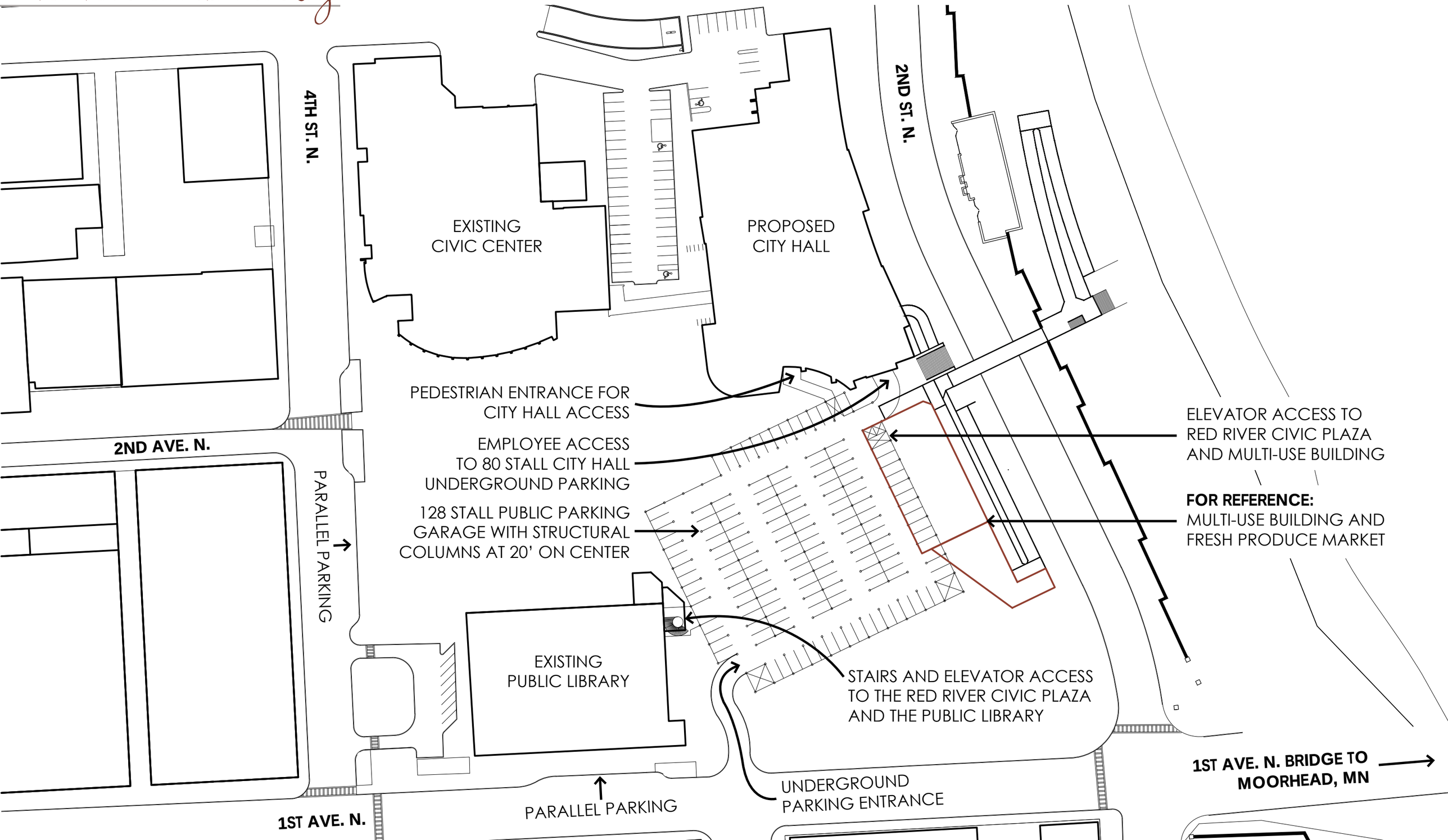
GLASS SHADE STRUCTURE OVER ADA RAMP

PROPOSED EAST LIBRARY ENTRANCE & ATTACHED CAFE WITH GREEN ROOF FEATURE

DECOMPOSED GRANITE PATHWAYS SERVES AS A TRANSITIONAL FEATURE CONNECTING THE CONTRASTING NATIVE PRAIRIE TO THE URBAN PLAZA



Red River Civic Plaza Parking



Civic Plaza Site Relationships

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

PROPOSED FARGO CITY HALL BUILDING

2' DIAMETER STRUCTURAL COLUMNS PLACED 20' ON CENTER

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

STAIRS DESCENDING TO CENTRAL GREEN

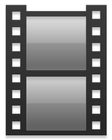
CENTRAL GREEN WITH ENGINEERED INFILTRATION SOILS, AND PERFORATED PIPES WHICH DIRECT CAPTURED STORMWATER TO RAIN GARDENS AND DRY WELLS TO THE SOUTH

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

HANDICAP ACCESSIBLE RAMP WITH AN OVERHEAD GLASS SHADE STRUCTURE

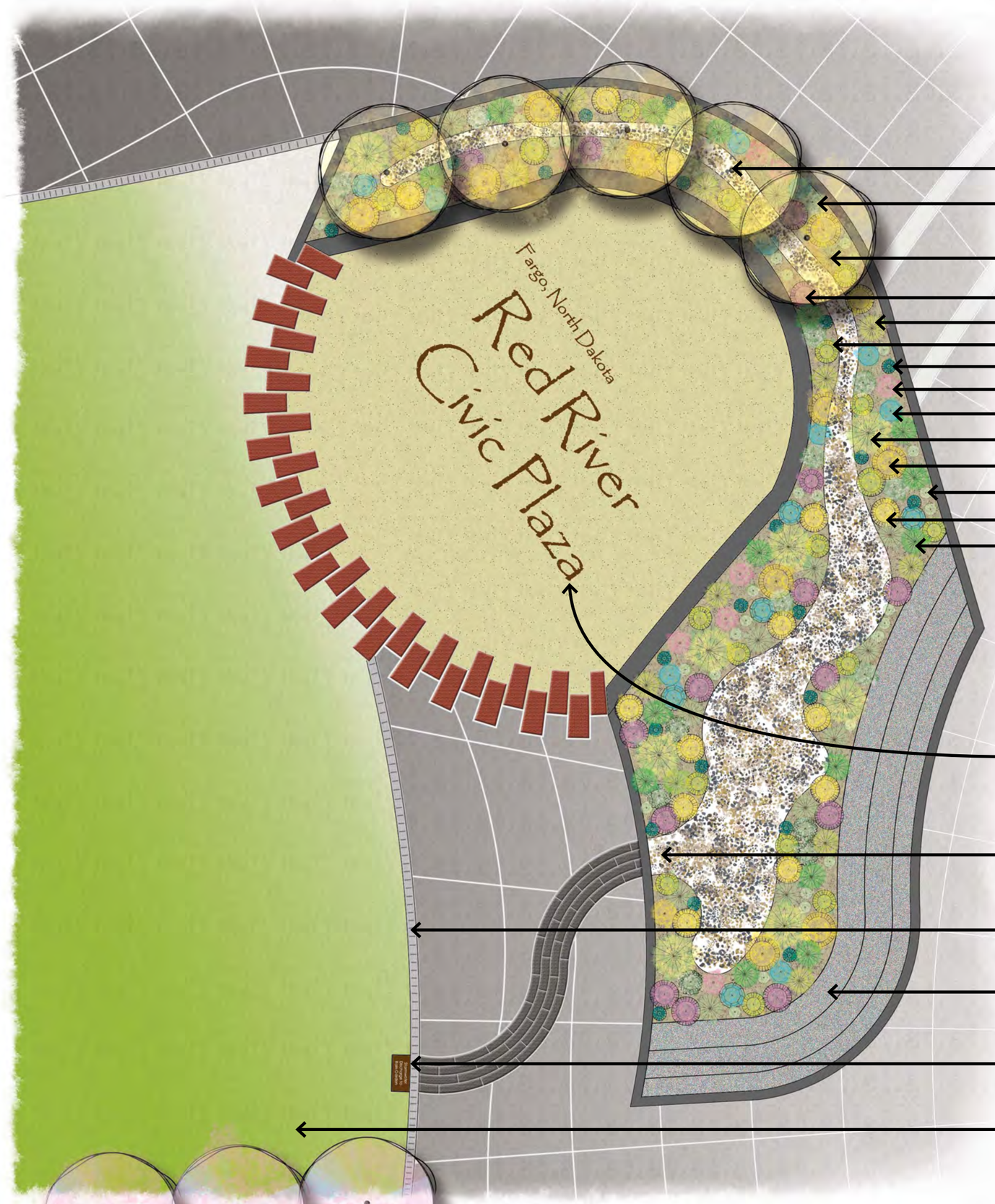
128 STALL UNDERGROUND PARKING GARAGE

STORMWATER IS DISCHARGED TO DRY WELLS AND RAIN GARDENS WITHIN THE NATIVE PRAIRIE LANDSCAPE



Civic Plaza Winter Attractions

Performance Stage Rain Garden Planting Plan



(5) Betula papyrifera, Paper Birch

(15) Pycnanthemum virginianum, Mountain Mint

(16) Bromus cilatus, Fringed Sedge

(15) Asclepias incarnata, Swamp Milkweed

(11) Carex comosa, Bristly Sedge

(19) Helenium autumnale, Sneezeweed

(23) Iris versicolor, Northern Blue Flag

(9) Physostegia virginiana, Obedient Plant

(15) Lobelia siphilitica, Great Blue Lobelia,

(10) Panicum virgatum, Switch Grass

(11) Rudbeckia subtomentosa, Sweet Black-Eyed Susan

(31) Anemone canadensis, Canada Anemone

(14) Heliopsis helianthoides, Early Sunflower

(15) Carex vulpinoidea, Brown Fox Sedge

BRONZE LETTERING EMBEDDED
FLUSH IN DECOMPOSED
GRANITE PERFORMANCE STAGE

MULTI-PURPOSE LAWN STORMWATER
DISCHARGE INTO RAIN GARDEN

TRENCH GRATE

INTERACTIVE TERRACED SEATING

FLUSH BRONZE STORMWATER
EDUCATIONAL SIGN

MULTI-PURPOSE LAWN

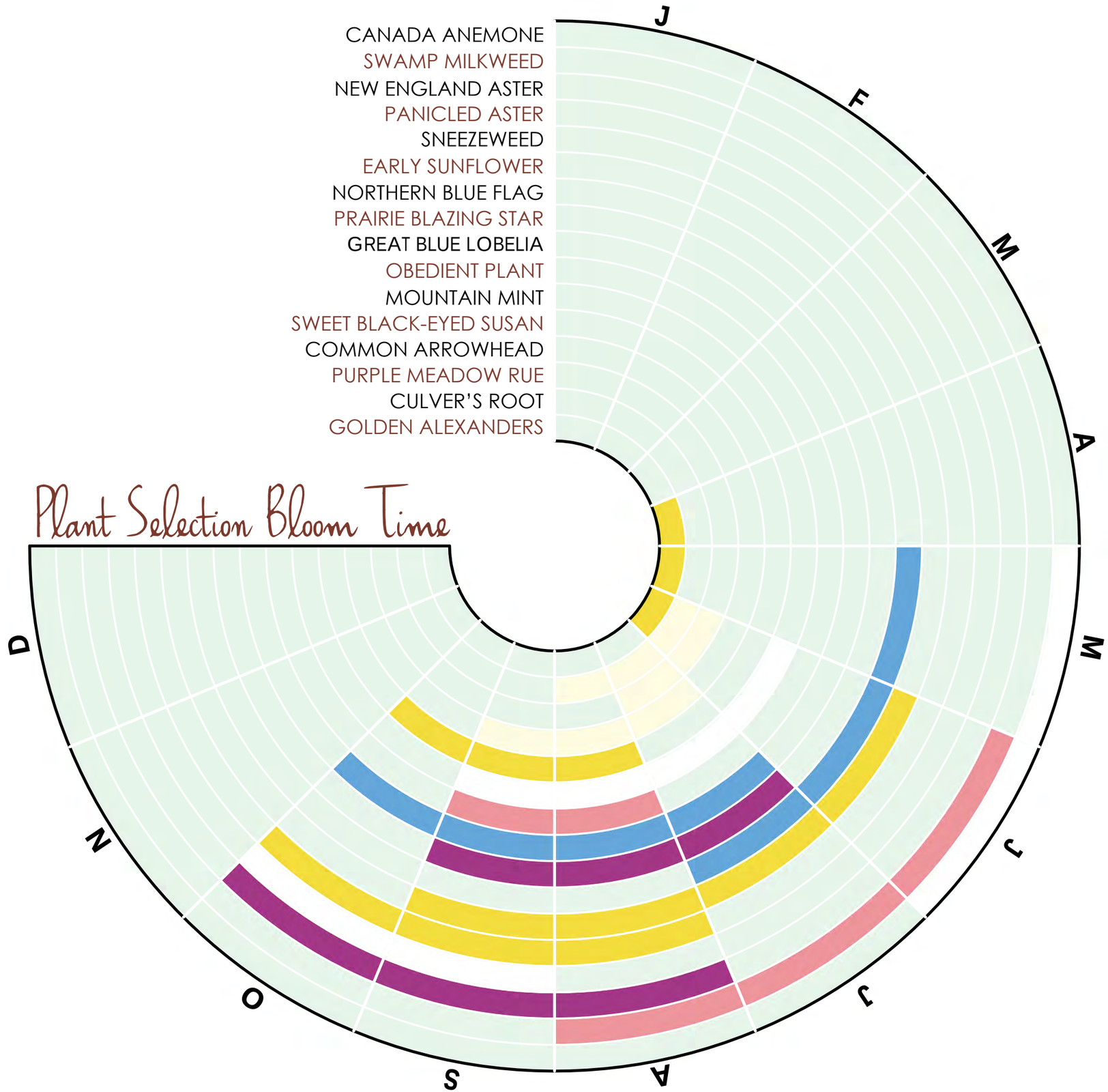
Rain Garden Bloom Schedule

WILDFLOWERS ARE INTER-PLANTED WITH THE FOLLOWING RAIN GARDEN GRASSES:

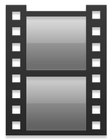
FRINGED BROME, BLUE JOINT GRASS, WATER SEDGE, BRISTLY SEDGE, FRINGED SEDGE, PORCUPINE SEDGE, COMMON LAKE SEDGE, LANCE-FRUITED OVAL SEDGE, BROWN FOX SEDGE, VIRGINIA WILD RYE, SWITCH GRASS, DARK GREEN BULRUSH, WOOL GRASS, AND GREAT BULRUSH.

Plant Selection Bloom Time

CANADA ANEMONE
SWAMP MILKWEED
NEW ENGLAND ASTER
PANICLED ASTER
SNEEZEWEED
EARLY SUNFLOWER
NORTHERN BLUE FLAG
PRAIRIE BLAZING STAR
GREAT BLUE LOBELIA
OBEDIENT PLANT
MOUNTAIN MINT
SWEET BLACK-EYED SUSAN
COMMON ARROWHEAD
PURPLE MEADOW RUE
CULVER'S ROOT
GOLDEN ALEXANDERS

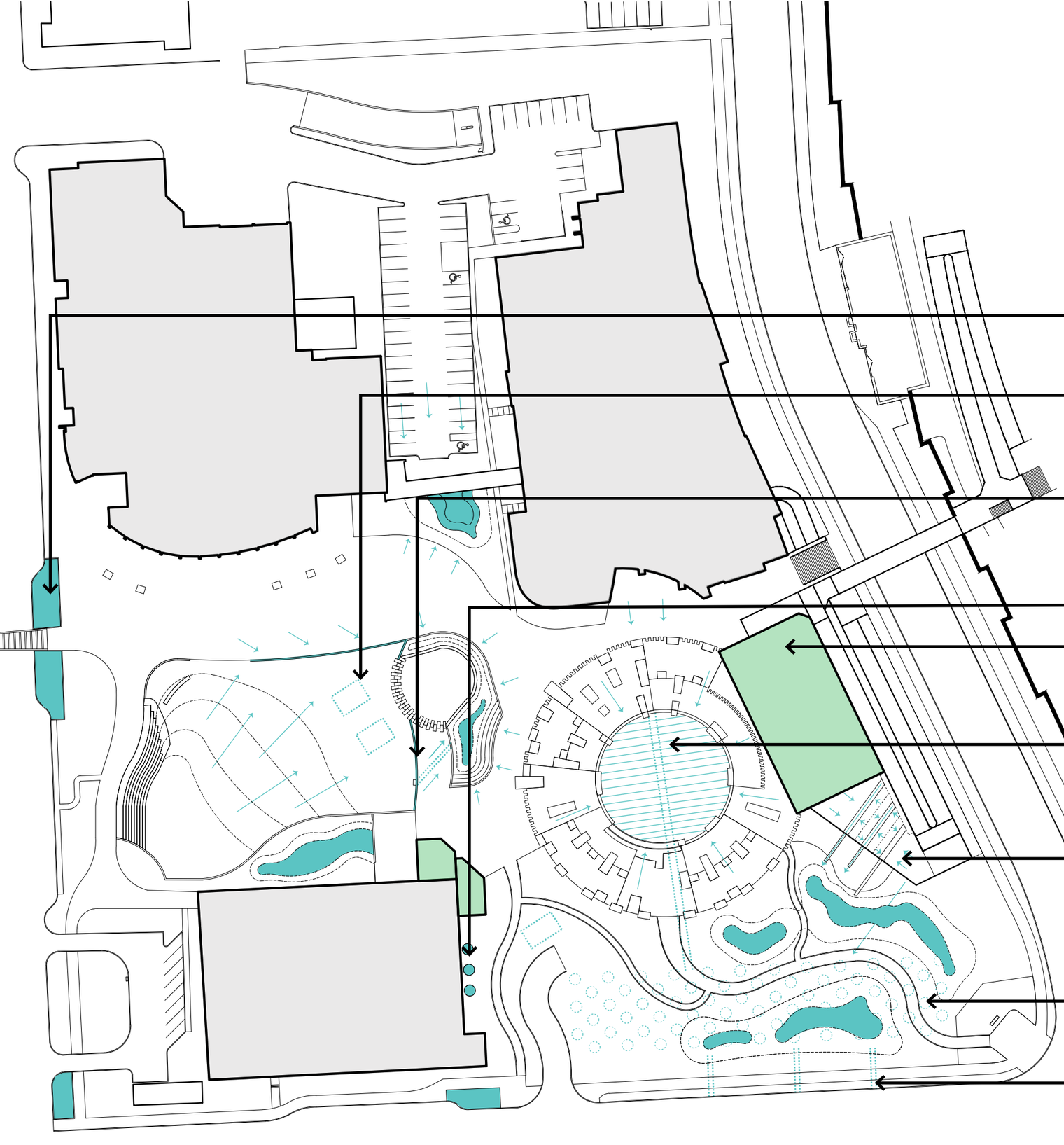


Concert at the Civic Green



Stormwater Layout & Concept Plan

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.



Biofiltration planters with curb cuts installed along the street to filter stormwater runoff.

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

Trench drains installed along the edges of the green lawn to capture surface runoff and direct it into adjacent rain gardens.

Rain Barrels to collect rooftop stormwater runoff.

Green Roof which helps reduce the heat-island effect, reduce building heating and cooling costs, as well as filter stormwater runoff.

The central green is installed with engineered **infiltration soils** to filter stormwater and perforated pipes to direct excess runoff to adjacent dry wells and rain gardens.

Produce 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.

Dry well field, to store and slowly infiltrate runoff.

Drain inlets along north side curb of 1st Avenue North will direct stormwater to rain gardens by way of perforated pipes underneath the proposed sidewalk.

Glass Canopy Directs Stormwater Into Planter

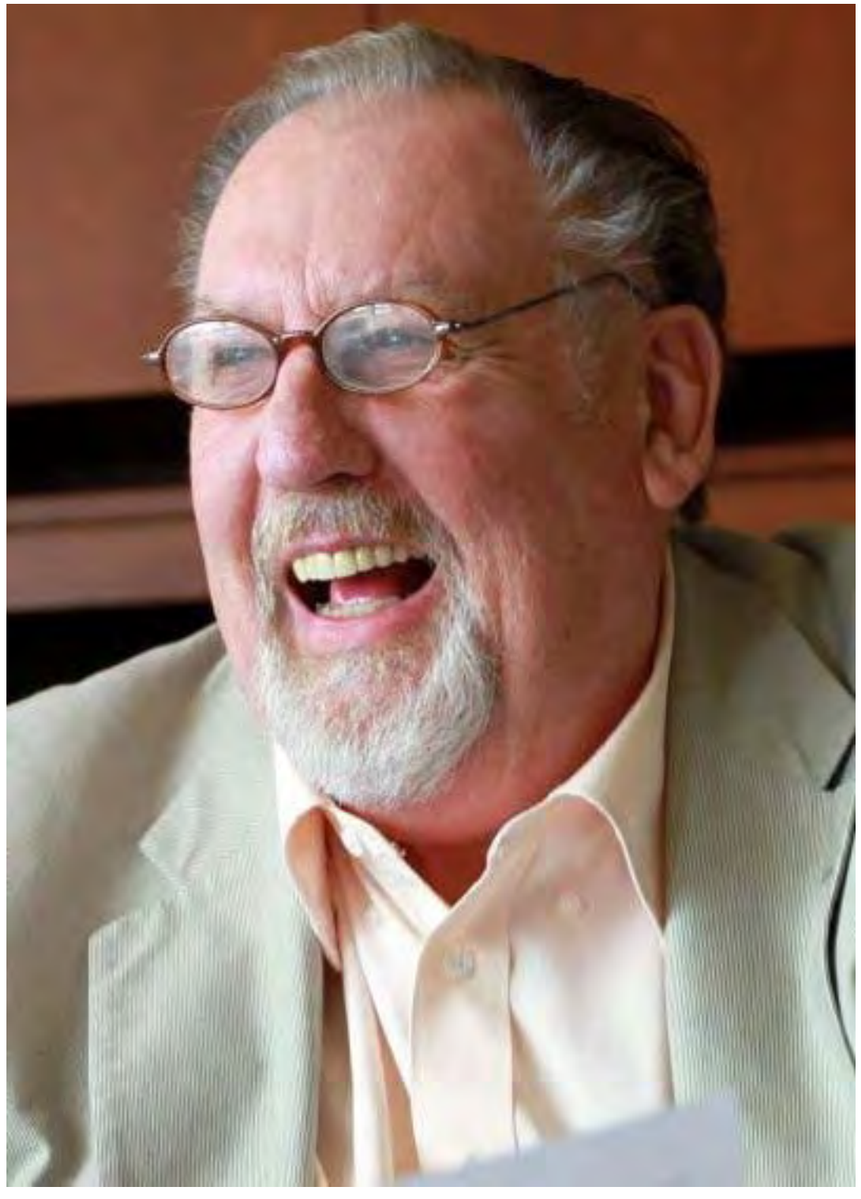
Runnels and Rain Chains

Create an Educational Entrance

Rain Barrels Capture Library Runoff

Red River Civic Plaza Cafe

Late Evening Ambiance



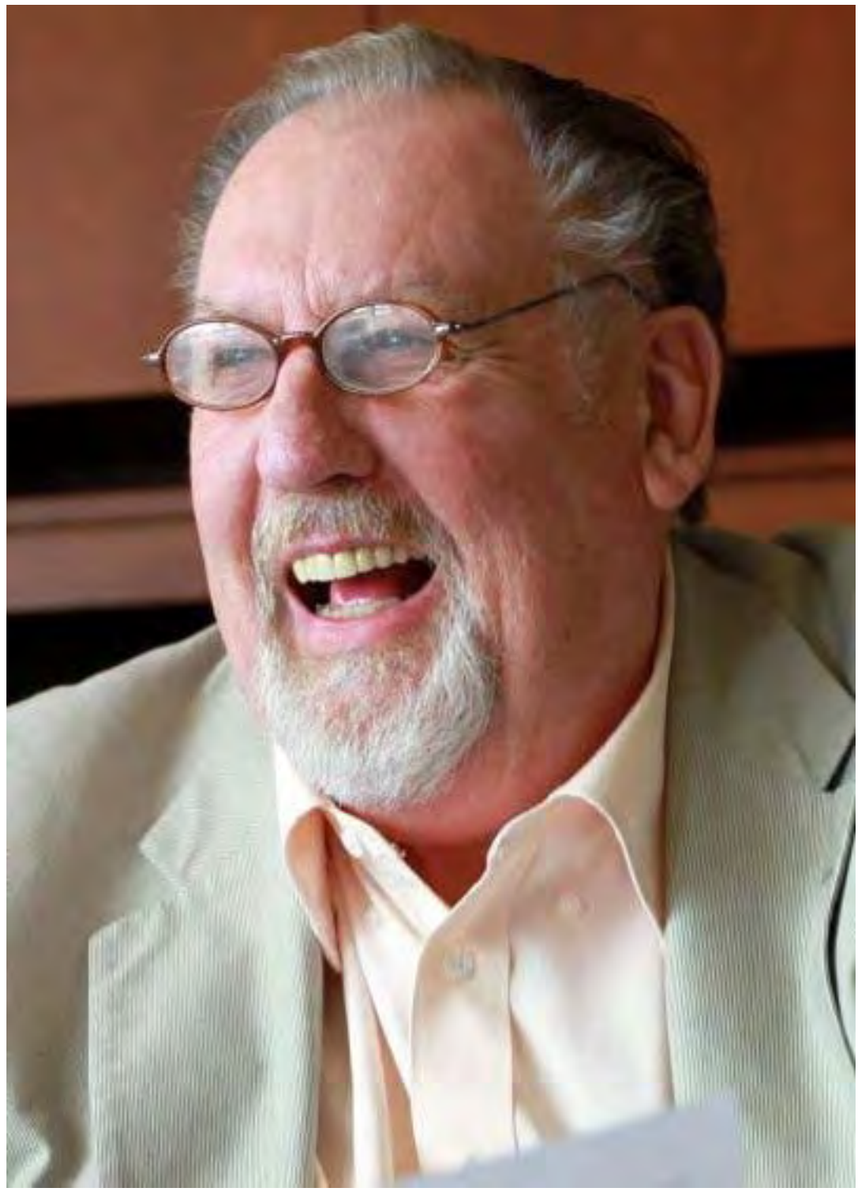
"I would like to see us utilize this space redesign for different uses"

- Former Fargo Mayor Dennis Walaker (01/22/14)

“A People’s Mayor”

“Walaker focused on what the people needed and wanted.”
- Former Mayor Mark Voxland

“Two things he loved – his city and his family.”
- City Administrator Pat Zavoral



“Walaker had an extraordinary sense of what people wanted from their city’s leader.”
- City Administrator Pat Zavoral.

“I really thought he was a people’s mayor”
- Former Mayor Mark Voxland

“Walaker also had a great sense of self-deprecating humor and had a tremendous laugh”

R.I.P. Mayor Dennis Walaker

January 10, 1941 – December 2, 2014

Red River Civic Plaza

An Urban Park Destination for **the people** of the
Fargo-Moorhead Community