Ford Site Zoning Framework Study

Outline

1. Team Introductions
2. Project Purpose & Focus
3. Project Tasks and Timeline
4. Redevelopment Plan and Sustainability Review

SAINT PAUL

Metropolitan Council

Ford Site Zoning Framework Study

SEH with Cornejo Consulting and
DPZ & Company

Bob Kost, AICP, ASLA: Urban Designer & Project Manager All tasks

Dan Cornejo: Planner, Site and Area Analysis, New Zoning Parameters

Suzanne Rhees, AICP: Planner, Zoning Analysis, Case Studies & New Zoning Parameters

Tom Low, AIA: Site Analysis, Case Studies, New Zoning Parameters

SEH

Project Purpose

Ensure that the City of Saint Paul has the proper tools, including zoning to efficiently and effectively facilitate site redevelopment that reflects the comprehensive and ambitious vision and goals for the site and which may serve as a zoning model for other sites, possibly in Saint Paul, or the ‘metro'.

Primary Focus

Ford Site Zoning Framework Study will pick up where previous studies left off, to consider whether or not the City's current zoning districts can effectively provide for:

1) range and mix of uses and scale of development contemplated in the five redevelopment scenarios;

2) economic, social and environmental sustainability that relates to the surrounding neighborhood; and

3) flexibility to respond to market changes that occur over the years it takes to develop the site.

Project Tasks and Timeline

A. Initial Review and Analysis - June

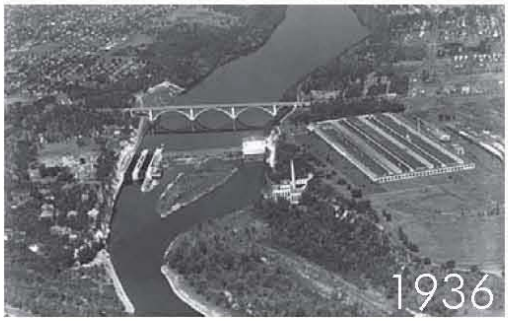
B. Draft Zoning Framework & Implementation Strategy - July/Sept.

C. Refine Zoning Framework & Implementation Strategy - October

D. Final Report & Presentation - Nov.

Redevelopment of the Ford Motor Company Site

Prepared for The City of Saint Paul, Minnesota



Phase 1 Summary Report:
5 Major Development Scenarios

Prepared by the EDAW Team
October 17, 2007

EDAW | Close Landscape Architecture | Dewar & Associates, Inc. | Elness Swenson Graham Architects, Inc. Meyer, Mohaddes Associates, Inc. | URS

2: Vision and Goals

The following Vision Statement and Goals were established with the Task Force at the onset of the project. The next phases of planning work should adhere to these important vision and goal statements.

Vision:

The redeveloped Ford Site will balance economic, social and environmental sustainability in a way that conserves and improves the qualities and characteristics of the unique Highland Park neighborhood and Mississippi River Valley Corridor in which it sits, while advancing the City's economic wealth and community goals, resulting in a forward-thinking 21st Century development.

Goals:

Character and Built Form

- Redevelop the site to be integrated with the physical neighborhood and fabric of the community.
- Balance built and natural systems, and implement through zoning, standards and/or guidelines that assure that the form, massing and location of different uses and intensities complements the surrounding neighborhood.
- Create a street system of tree lined streets and sidewalks, with some boulevards, to complement the surrounding block and street patterns within the Highland Neighborhood.
- Provide opportunities for public art and cultural amenities, some of which reflect the heritage of Ford and the Highland neighborhood.

Community Amenities and Open Space

- Redevelop the site to exhibit a high level of compatibility with the surrounding natural systems, retaining the distinct character of the Mississippi River Corridor and providing additional natural, active and passive open space to support both natural systems and residents' recreational needs.

- Re-establish an urban tree canopy and green space within the site with street trees and private and public green spaces, with an emphasis on integrating native plant materials.

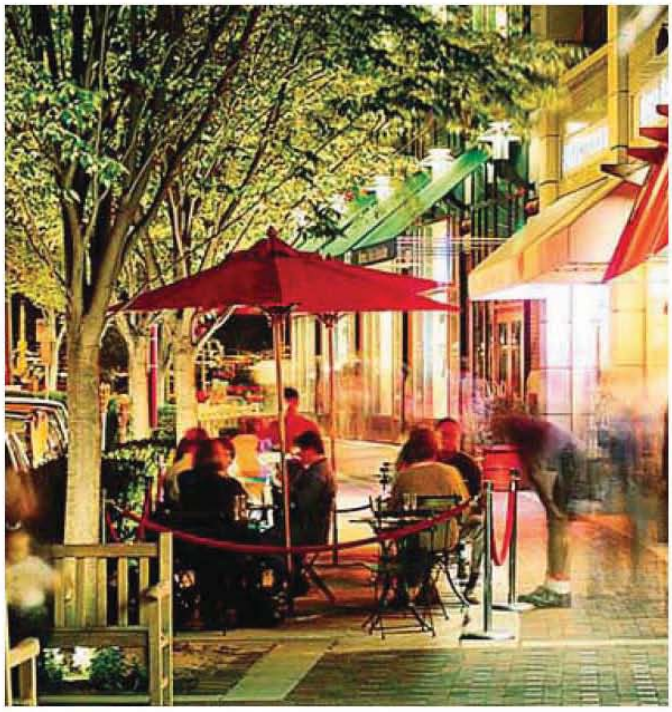
Economic Viability

- The redevelopment of the Ford Site must have long term economic viability.

- Provide an increase in the tax base and improve surrounding property values.

- Provide a strong and innovative business base with an emphasis on family sustaining jobs.

- Recognize and highlight the unique location of the site along the scenic Mississippi River, in the heart of a healthy and vibrant neighborhood, centrally located in the greater Metropolitan area, and 10 minutes from the region's international airport.



- Retain opportunities for continuing education, training and other educational opportunities on the site.

Land Use

- Provide a mix and pattern of land uses that keeps traffic impacts manageable and encourages walking, biking, and transit use.

- The proposed mix of land uses within the site shall respect and complement existing abutting uses to provide an extension of the existing Highland neighborhood.

Policy

- The final Preferred Development Scenario shall be consistent with the policies and goals relating to land use, transportation, housing and economic development outlined in the City's Comprehensive Plan.

- The Final Development Scenario shall complement the goals of the Highland Park Neighborhood Plan and the Highland Village Plan.

Sustainability

- Redevelopment of the Ford site shall exhibit the highest examples of environmental sustainability, becoming a local, state, national, and global model for sustainable planning, design, and day-to-day living.

- To the extent possible, capitalize on the hydropower and steam plant as ongoing energy sources for the site.

- Recognize the opportunities and constraints, both short and long term, of economic, social and environmental sustainability to develop the site as a model for balanced sustainability.

- Consider retention or adaptive reuse of existing site facilities and amenities.

Transport and Infrastructure Connectivity

- Establish a new street pattern through the site to provide multiple choices, interest and to reflect the surrounding street patterns.

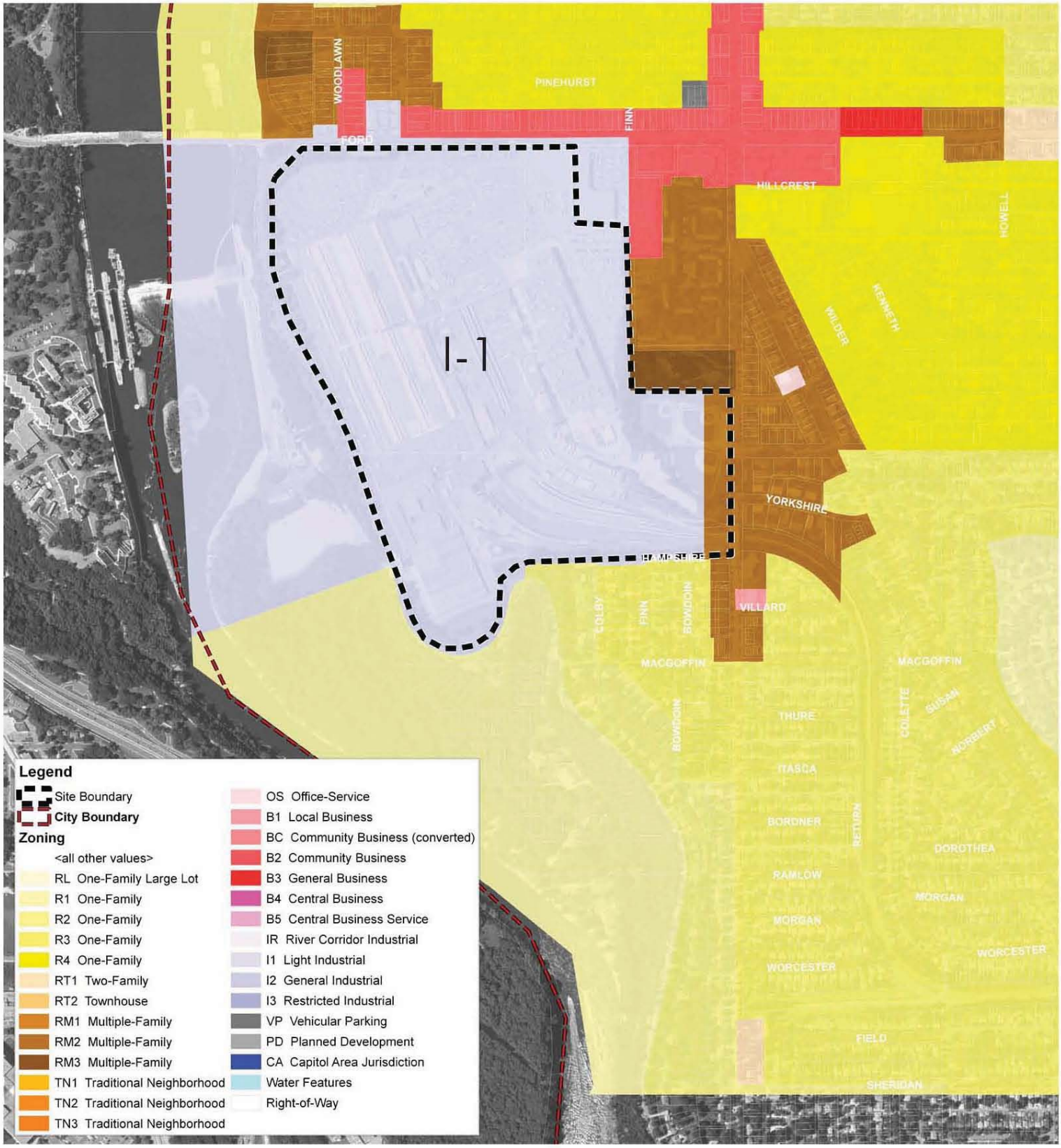
- Provide for multi-modal transport alternatives to and throughout the Site, including pedestrian, bicycle, transit, and vehicular .

- Integrate/reuse the Canadian Pacific Railway right-of-way to maximize multi-modal opportunities.

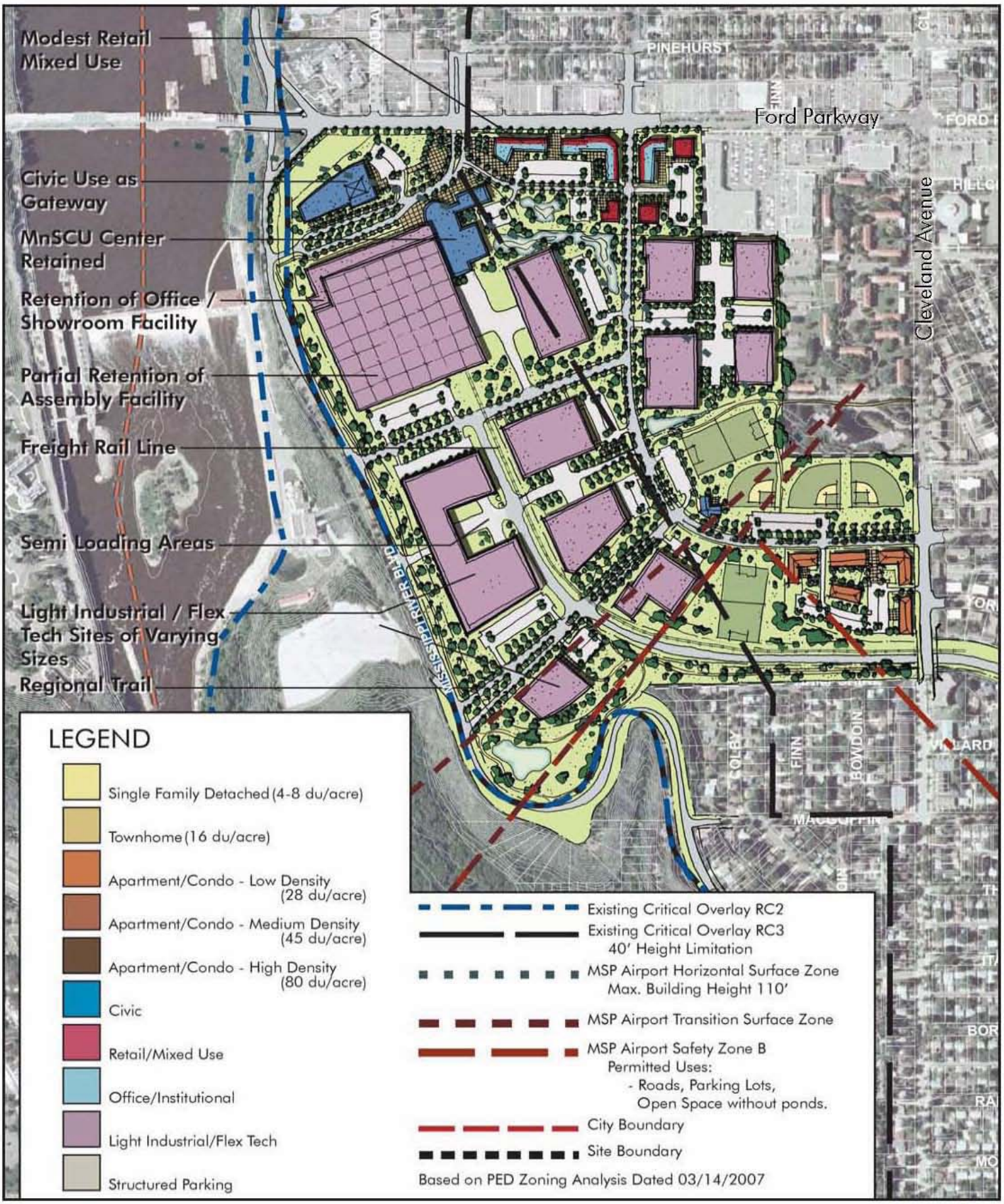
- Integrate the site with existing infrastructure systems and utilize existing renewable energy sources wherever feasible.

Current Site Zoning

The Ford site is currently designated in the City's land use code as Zone I1, permitting light industrial uses on the site. The land surrounding the site is zoned for business along Ford Parkway and otherwise for a variety of residential uses.



Scenario 1. AUAR Baseline - Primary Reuse for Industry



Scenario 1 Program Elements

Scale (Intensity)

- Industrial Buildings: 1- and 2-story buildings
- Ancillary Uses: Civic/Training 2 to 3 stories
- Mixed Use Retail: 2 to 3 stories

Form (block/lot)

- The basic infrastructure and block layouts are characterized by a green transport spine along the freight line, with a paralleling boulevard to parkway (Cretin to Cleveland Connection).
- Large flexible industrial single or multiple user blocks are provided.

Development Program

(All areas are conceptual estimates)

Open Space

- 10 acres active open space
- 21 acres passive open space

31 Total Acres Open Space

Civic:

- MnSCU Training Facility: The 40,000 sq. ft. training facility as it is today would remain.
- New civic building and plaza: 60,800 sq. ft.

Residential:

- Apartment/Condo-Low Density: 168 units

Retail:

- 7 acres
- 90,000 sq. ft.

Office/Institutional:

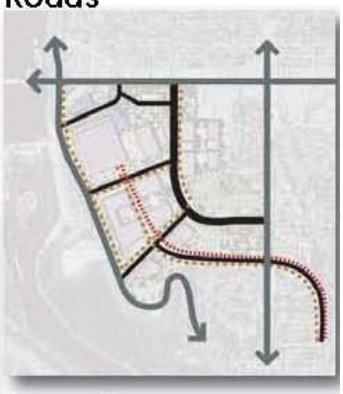
- 7 acres
- 140,000 sq. ft. mixed over retail

Industrial: Multiple Industrial Users

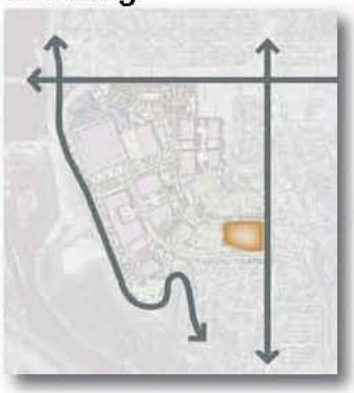
- Total Land Area 80 Acres ±

Scenario 1 Framework

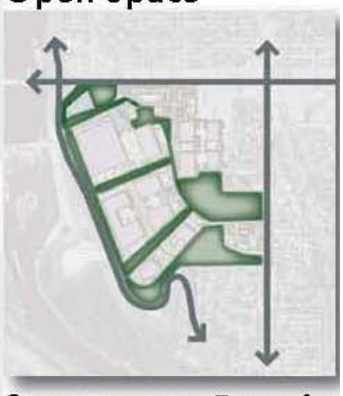
Roads



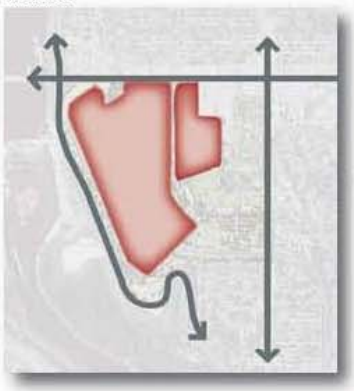
Housing



Open Space



Jobs



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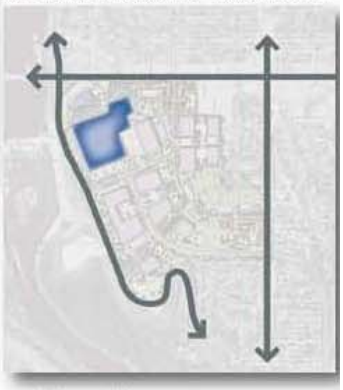
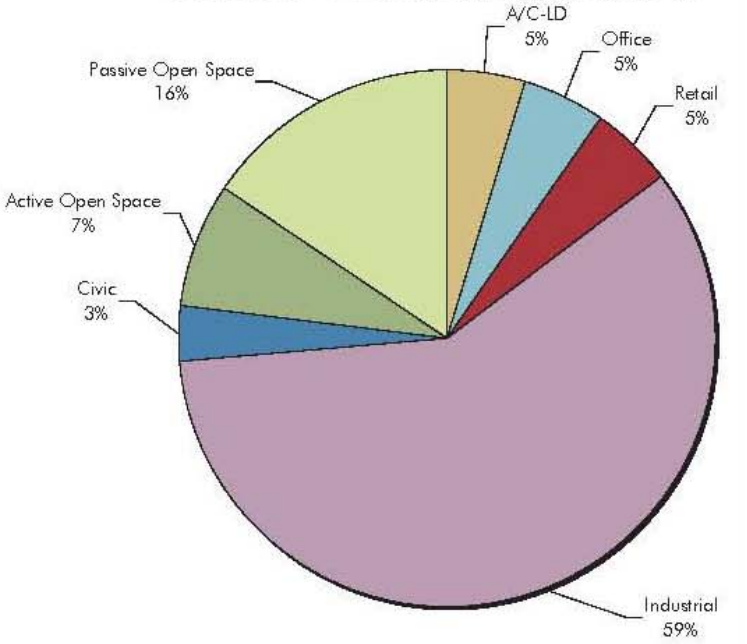
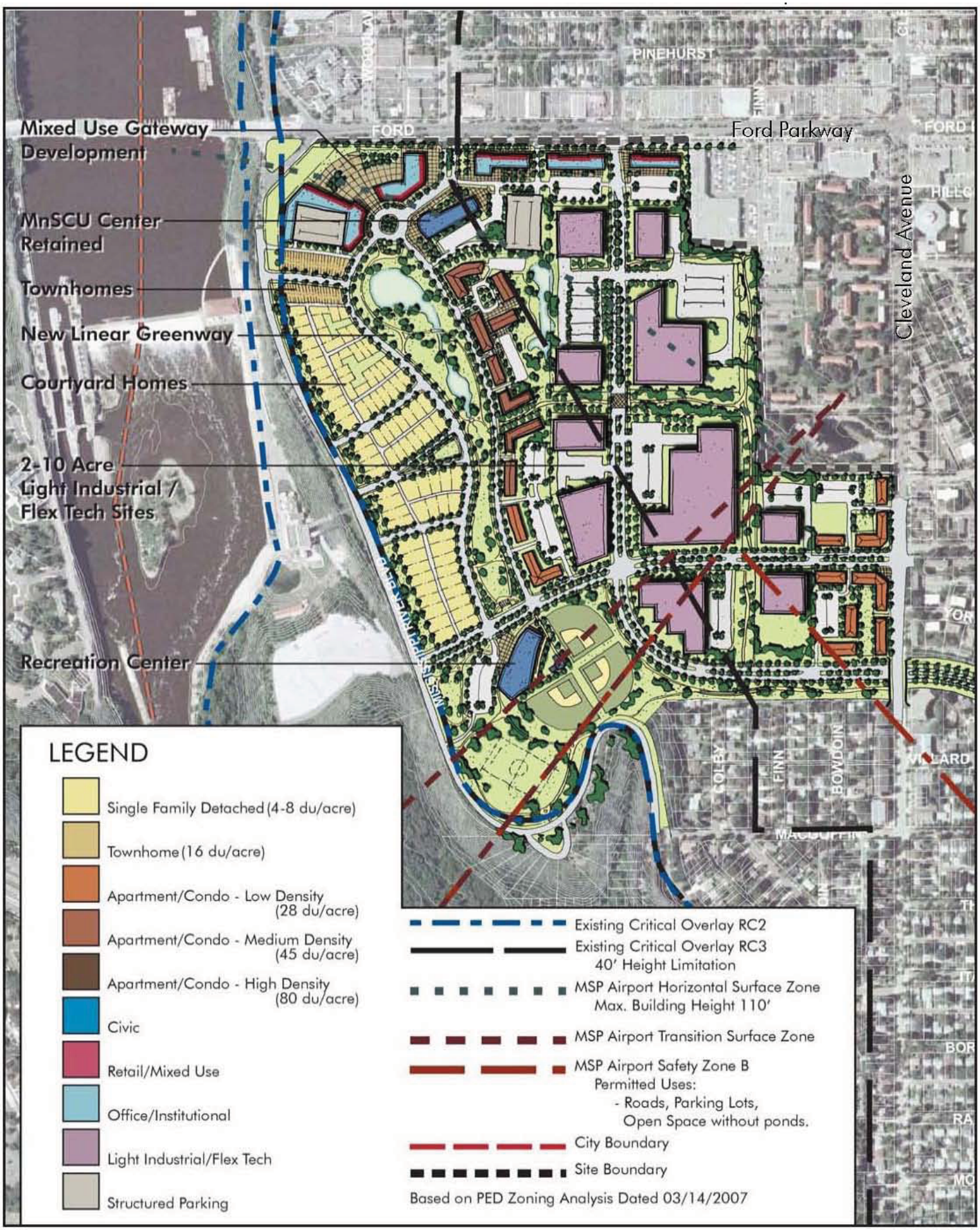


Scenario 1 Land Use Distribution



Scenario 2. Mixed Use - Light Industrial/Flex Tech



Scenario 2 Program Elements

Scale (Intensity)

- 2-3 story mixed use retail buildings along Ford Parkway
- 1-3 story industrial/flex tech buildings
- 2-2.5 story single family detached homes
- 2-3 townhomes
- 3-5 story condominiums / apartments / senior housing

Form (block/lot)

- Larger blocks for retail uses
- Significant blocks/parcels of 2-10 acres for light industrial/flex tech uses
- Medium scaled parcels for attached residential product
- Smaller scale blocks appropriate for lower density product that is similar to the existing surrounding block sizes.

Development Program

(All areas are conceptual estimates)

Open Space:

- 10 acres active open space
- 22 acres passive open space

32 Acres Total Open Space

Civic:

- MnSCU Training Facility: The 40,000 sq. ft. training facility as it is today would remain.
- New civic building: 52,500 sq. ft.

Residential:

- Single Family Detached: 87 units
- Townhome: 36 units
- Apartment/Condo - Low Density: 250 units
- Apartment/Condo - Med. Density: 251 units

651 Total Units

Retail:

- 7.6 acres
- 135,000 sq. ft.

Office/Institutional:

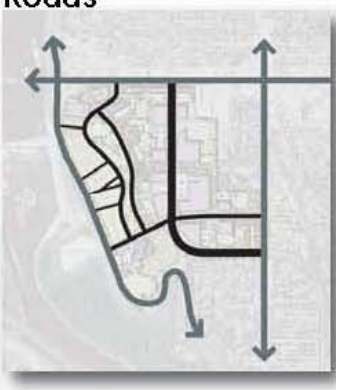
- 8 acres
- 250,000 sq. ft. mixed over retail

Industrial/Flex Tech:

- 45 acres

Scenario 2 Framework

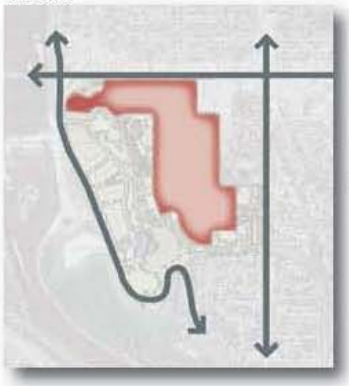
Roads



Housing

Open Space

Jobs



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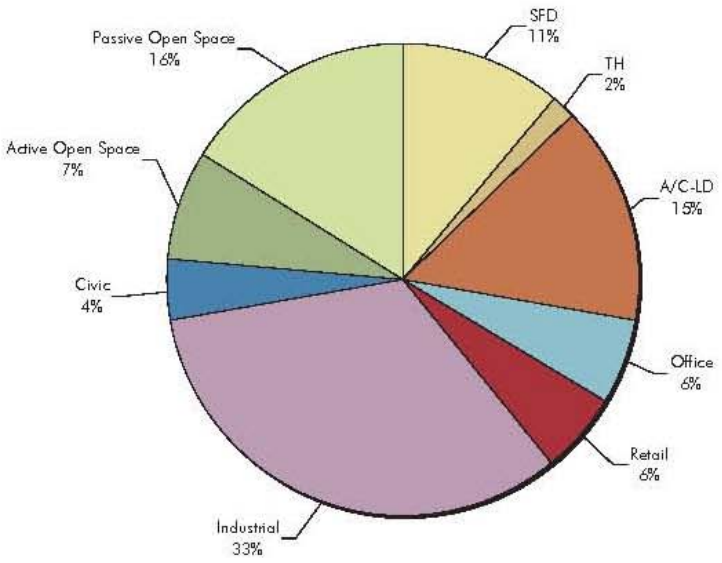
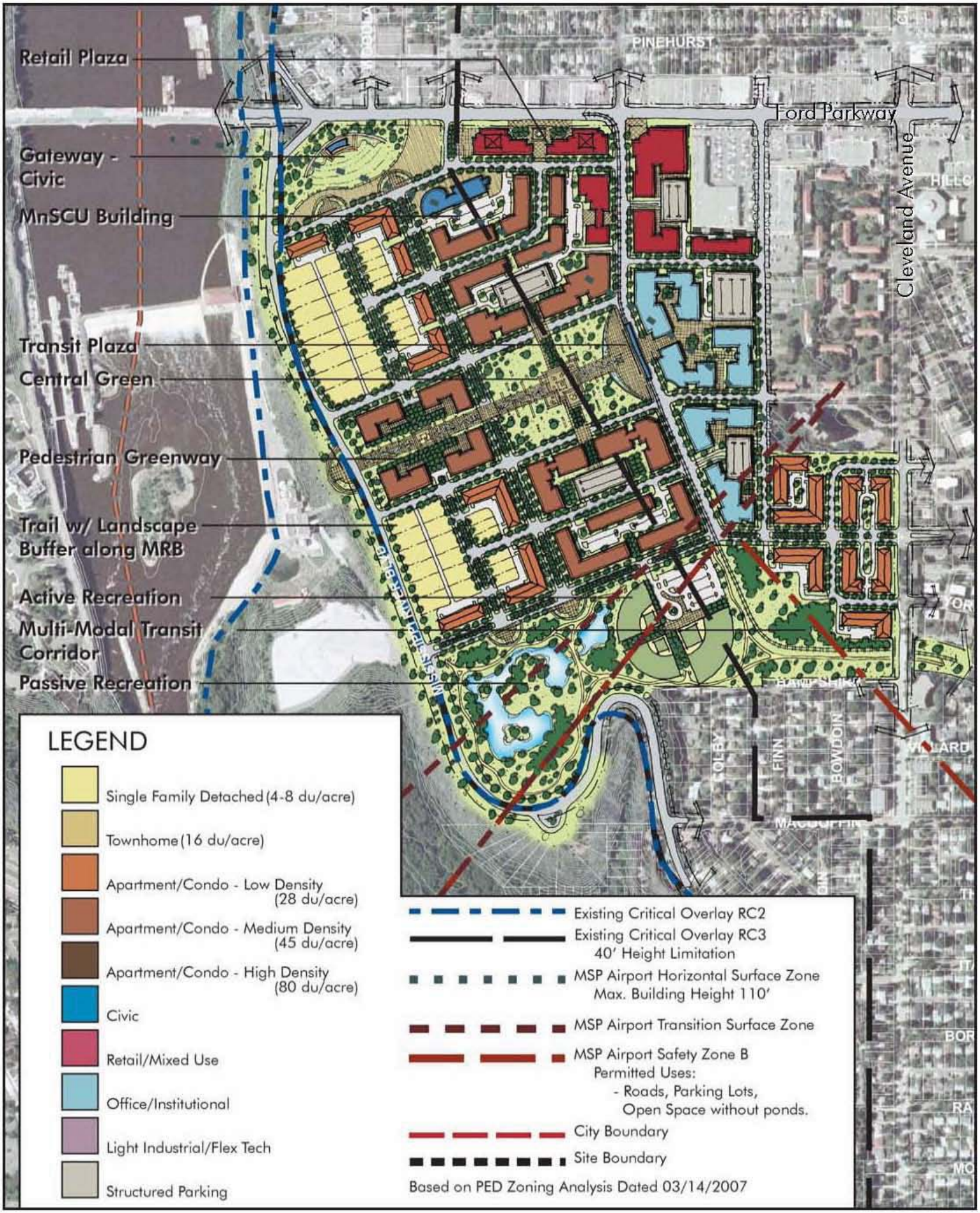
Scenario 2 Land Use Distribution



Scenario 3. Mixed Use - Office/Institutional



Scenario 3 Program Elements

Scale (Intensity)

- 2-3 story Mixed Use buildings with ground floor retail along Ford Parkway and extending into the site along Cretin for one block.
- 3-8 story campus buildings
- 2 story single family detached homes
- 2-3 story townhomes
- 3-6 story condominiums / apartments / senior housing

Form (block/lot)

- Larger blocks appropriate for retail uses
- Larger blocks appropriate for campus uses
- Medium scaled blocks appropriate for attached residential product of a higher intensity
- Smaller scale blocks appropriate for lower density attached and single family detached residential product that is similar to the existing surrounding block sizes.

Development Program

(All areas are conceptual estimates)

Open Space

- 14.4 acres active open space
- 30.2 acres passive open space

44.6 Acres Total Open Space

Civic:

- MnSCU Training Facility: The 40,000 sq. ft. training facility as it is today would remain.
- New civic park/amphitheater as gateway

Residential:

- Single Family Detached: 44 units
- Townhome: 74 units
- Apartment/Condo - Low Density: 404 units
- Apartment/Condo - Med. Density: 723 units

1245 Total Units

Retail:

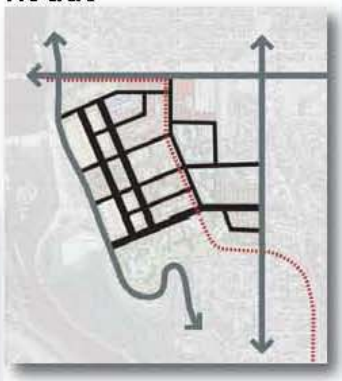
- 11.8 acres
- 200,000 sq. ft.

Office/Institutional:

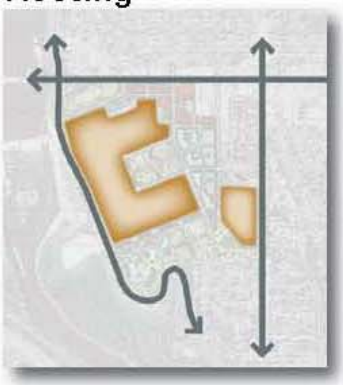
- 13.8 acres
- 750,000 sq. ft.

Scenario 3 Framework

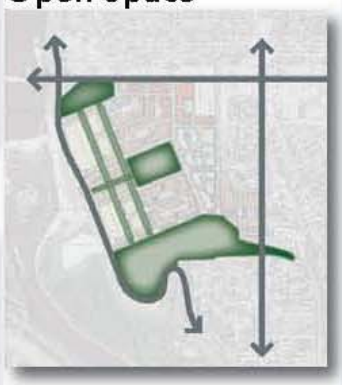
Roads



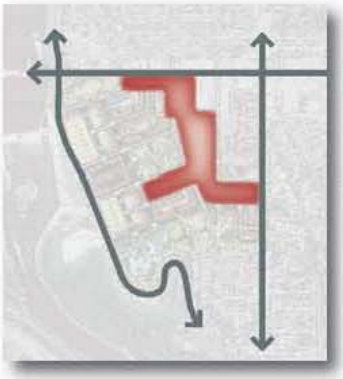
Housing



Open Space



Jobs



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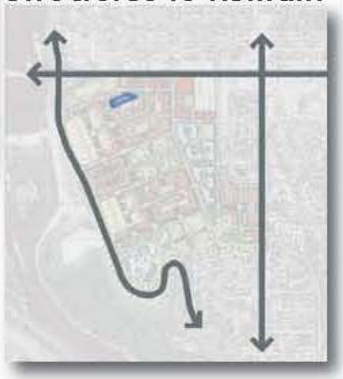
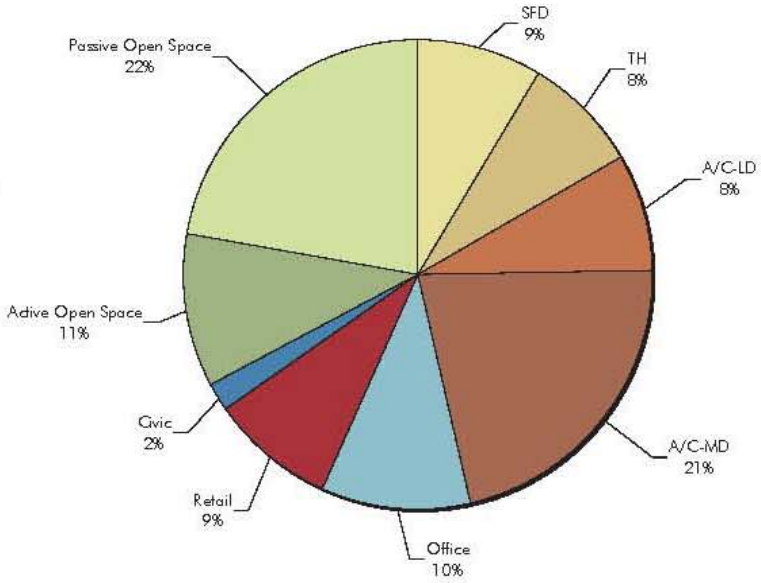
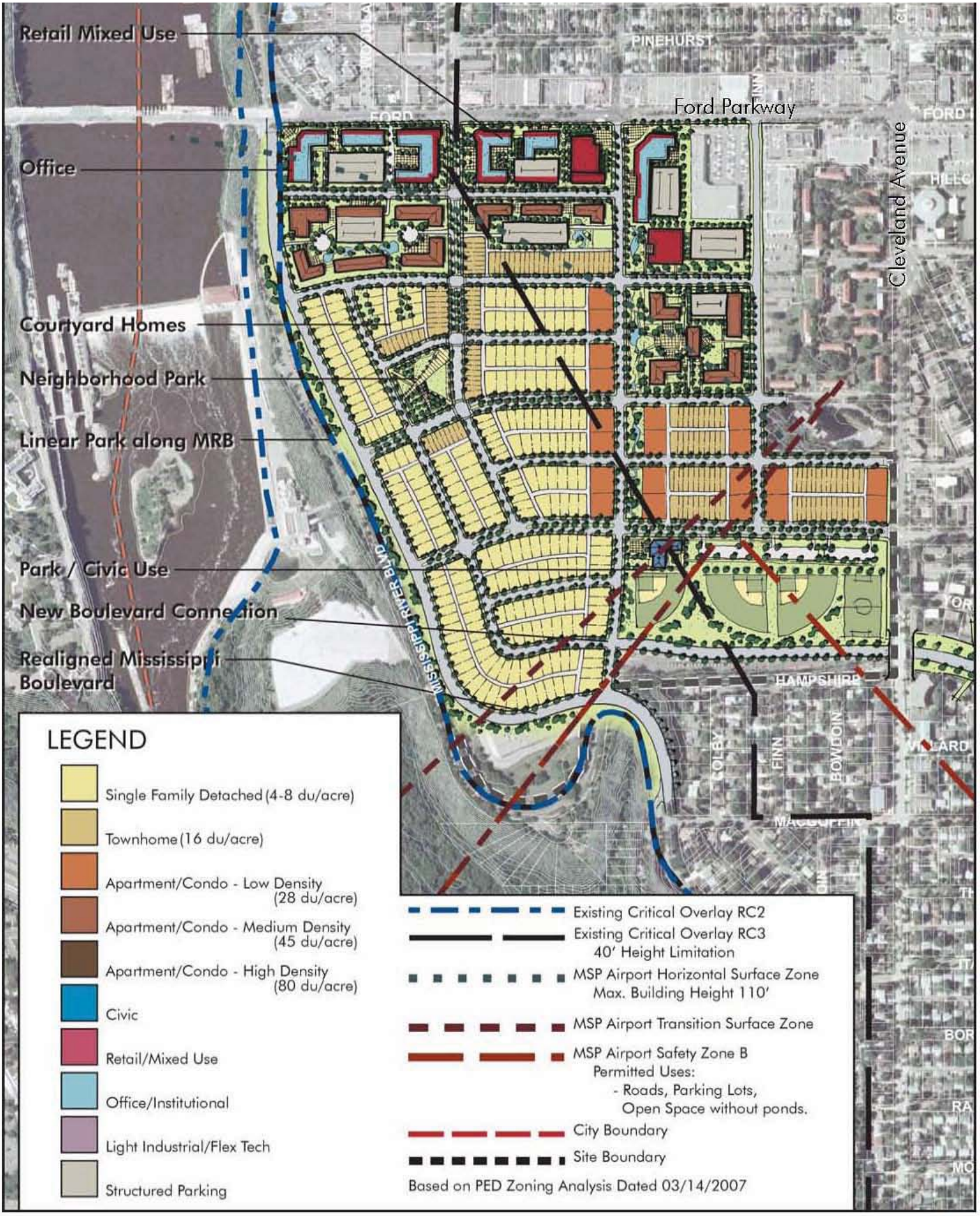


Scenario 3 Land Use Distribtution



Scenario 4. Mixed Use - Urban Village



Scenario 4 Program Elements

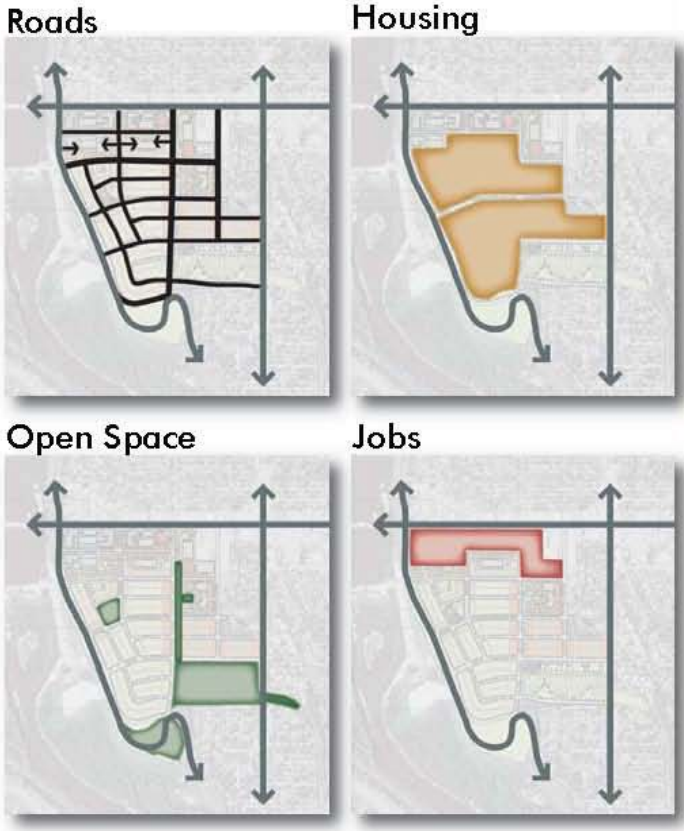
Scale (Intensity)

- 2-3 story Mixed Use buildings along Ford Parkway
- 2-2.5 story single family detached homes, primarily closer to MRB
- 2-3 story townhomes
- 3-6 story condominiums / apartments / senior housing

Form (block/lot)

- Larger blocks appropriate for retail-mixed use along Ford Parkway.
- Larger residential blocks for higher intensity development.
- Smaller scale blocks appropriate for lower density attached and single family detached residential product that is similar to the existing surrounding block sizes.

Scenario 4 Framework



Development Program

(All areas are conceptual estimates only)

Open Space

- 15 acres active open space
- 11 acres passive open space

26 Acres Total Open Space

Civic:

- Small civic structure at park along Cleveland

Residential:

- Single Family Detached: 242 units
- Townhome: 206 units
- Apartment/Condo - Low Density: 230 units
- Apartment/Condo - Med. Density: 250 units

928 Total Units

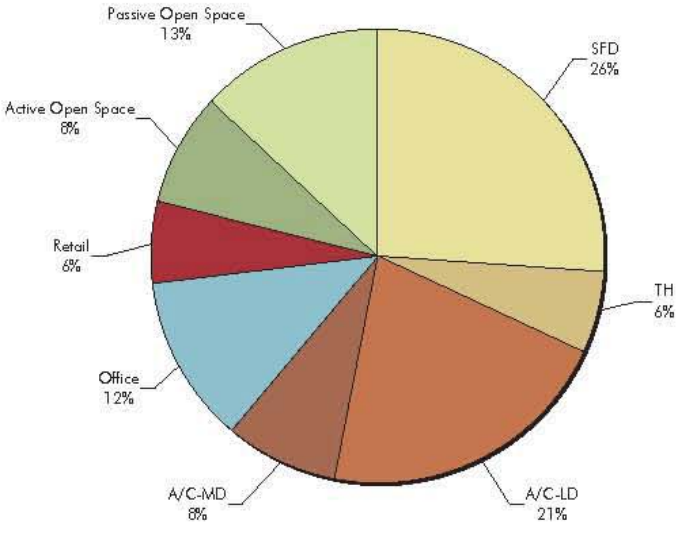
Retail:

- 9 acres
- 275,000 sq. ft.

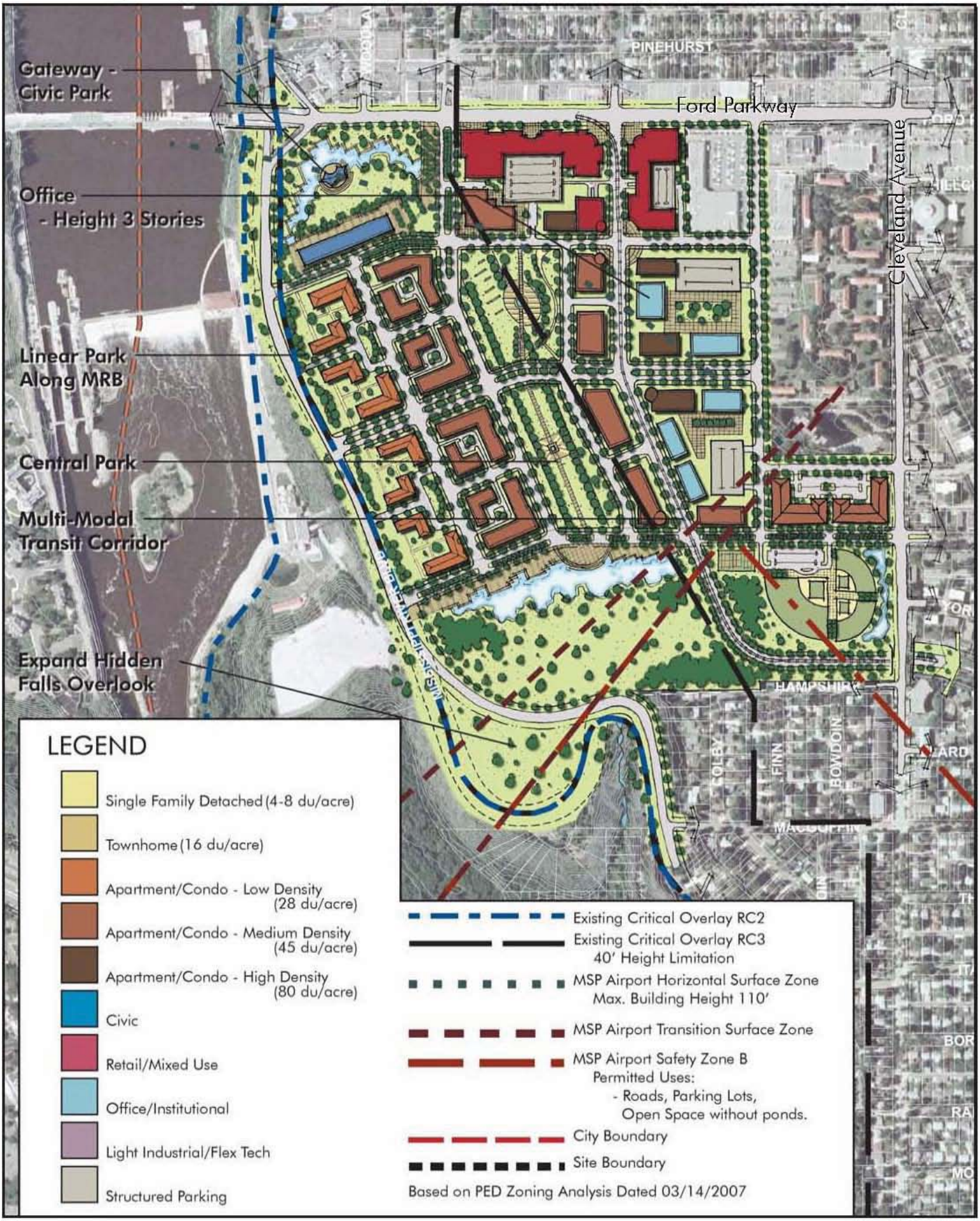
Office/Institutional:

- 12.56 acres
- 260,000 sq. ft.

Scenario 4 Land Use Distribution



Scenario 5. Mixed Use - High Density Urban Transit Village



Scenario 5 Program Elements

Scale (Intensity)

- Office: Fabric podium base – 3-4 floors;
- Residential: Fabric podium base–apartments/ condos 4-5 floors; Point Towers mid-rise–apartments/condos 8-10 floors above base; 2-3 story apartments/condos near MRB.

Form (block/lot)

- The blocks are based on a traditional dense urban model. East of the open space spine, developed blocks will contain 4-5 story podiums with narrow point towers above. West of the open space spine, a compact assemblage of 2-3 story residential housing will front onto MRB and surround a more intimate open space system.

Development Program

(All areas are conceptual estimates only)

Open Space

- 13.4 acres active open space
- 52.8 acres passive open space

66.2 Acres Total Open Space

Residential

- Apartment/Condo - Low Density : 300 units
- Apartment/Condo - Med. Density: 730 units
- Apartment/Condo - High Desnity: 320 units

1350 Total Units

Retail

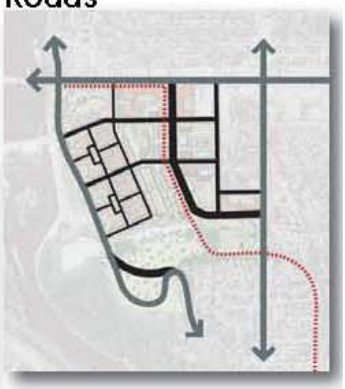
- 5.4 acres
- 46,775 sq. ft.

Office/Workplace

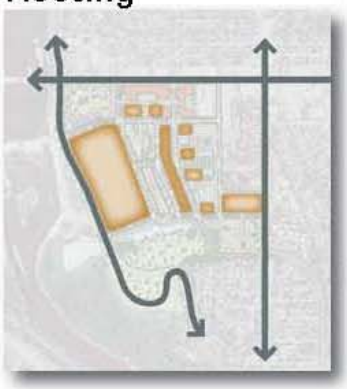
- 11.50 acres
- 194,000 sq. ft.

Scenario 5 Framework

Roads

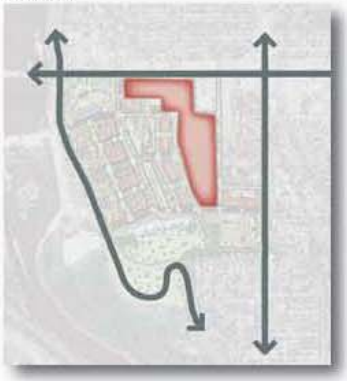


Housing



Open Space

Jobs



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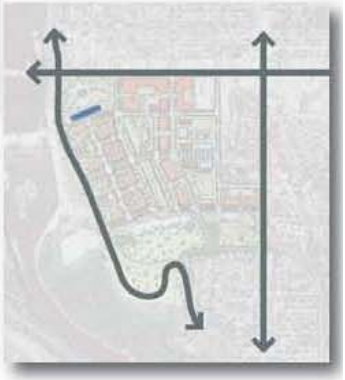
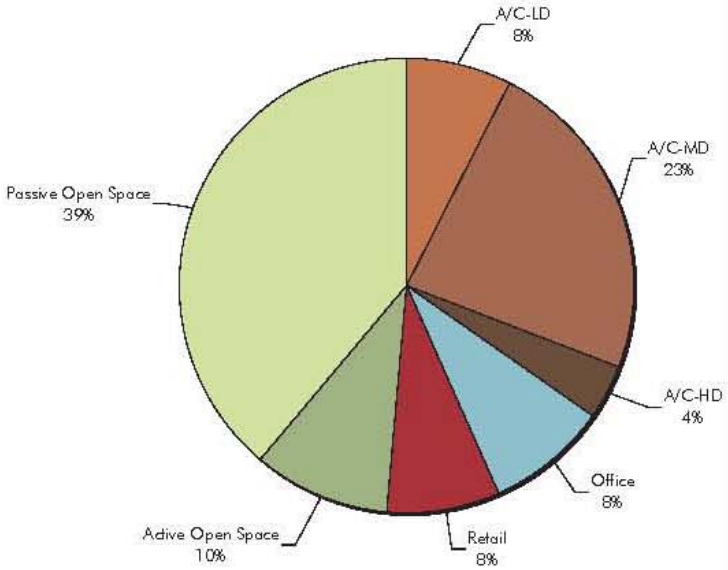


Scenario 5 Land Use Distribution



As published May 2, 2011 in the

Ford Site Sustainable Redevelopment Report:
Summary of Sustainability Goals for the Ford Site

The ultimate goal of the Ford Site Sustainable Redevelopment Report is to establish performance thresholds for site redevelopment ...

... inspiring policy makers and developers to make this site a national model for sustainable brown-field redevelopment.

Sustainable redevelopment of the 135-acre Ford site is a high priority for the City, regional and state agencies, the Ford Site Planning citizen task force, and much of the public.

A redeveloped Ford site can demonstrate that residents, employers, workers, and visitors can enjoy all the amenities and comforts of modern living while using much less energy, producing clean energy on site, reducing waste, reducing and treating storm-water runoff, restoring a natural ecosystem, and providing an infrastructure system that reduces vehicle trips and encourages walking, biking, and transit.

The report identifies key components of sustainable redevelopment for the Ford site, outlining goals, strategies and performance thresholds for each.

The District Sustainability Standards have eleven components:

The Ford Site Sustainable Redevelopment Report was produced by the City of Saint Paul with the assistance of consultants on the "Ford Site Green Team" under a grant provided by the Minnesota Pollution Control Agency.

1.0 Building Energy

Sustainability Goals

- To maximize the use of renewable energy for buildings and infrastructure.
- To reduce operating energy use in all buildings and infrastructure.
- To maximize energy self-sufficiency.

Minimum Performance Thresholds

1.1 Meet energy use and greenhouse gas (GHG) emission targets* specified in Minnesota 2030 program to be required for State buildings through Buildings, Benchmarks & Beyond (B3) Guidelines and consistent with Saint Paul's Green Building Policy:

- 60% reduction by 2010
- 70% reduction by 2015
- 80% reduction by 2020
- 90% reduction by 2025
- 100% reduction by 2030

Ultimate Condition

⇒ Zero net energy and zero greenhouse gas emissions*.

** Greenhouse gas (GHG) emissions can be calculated based on operating energy, as well as on many other contributing factors measured by the Minnesota Building Carbon Calculator, including water, wastewater, waste, embodied in materials, transportation, vegetation, and soil. Energy use can be measured per square foot, per person, per hour of operation, per product output relative to equivalent industrial process, or a combination of these.*

2.0 Transportation & Public Realm Network

Sustainability Goals

- To create a transportation infrastructure that balances modal choice between walking, biking, and vehicular movement.
- To reduce average vehicle miles driven by persons living, working and visiting the site.
- To increase average walking and biking miles per year for persons living or working on the site.
- To reduce energy use and Green House Gas (GHG) emissions) related to high vehicle miles driven (VMD).
- To reduce adverse human health affects (such as asthma) related to air pollution.
- To maximize the diverse human benefits (such as childhood obesity reduction and lower family transportation costs) of safe and pleasurable pedestrian and multi-modal access to and from (on-site & off-site) transit stops, daily services, institutions, parks and public spaces.

Minimum Performance Thresholds

2.1 Provide mix of office, industrial, residential, and commercial uses on site that complement the existing mix of uses and services in the area.

2.2 Minimum residential density (du/acre) greater than 20 du/acre (*Density to be calculated using LEED-ND computational method outlined NPD Credit 2.*).

2.3 Minimum Non-Residential floor area ratio (FAR) greater than 1.50 (*Non-Res. FAR to be calculated using LEED-ND computational method outlined NPD Credit 2.*).

2.4 Internal street connectivity (intersections/ square mile according to LEED-ND definition) equal to or greater than the highest connectivity found in adjacent neighborhoods, computed for adjoining area of same size and shape as site.

2.5 All streets and intersections to utilize design methodologies consistent with 2010 ITE Manual: Designing Walkable Urban Thoroughfares: A Context Sensitive Approach, An ITE Recommended Practice and "Complete Streets" design principles.

2.6 Zero dead ends and zero cul-de-sacs except to serve the rear of buildings.

2.7 95% of streets lined on both sides with sidewalks minimum 54" wide. (Per ADA requirements)

2.8 Provide designated bike lanes on streets at least every ½ mile.

2.9 50% of all residential and non- residential building entries within ¼ mile of vehicle sharing site or transit services.

Ultimate Condition

⇒ Decrease average vehicle miles driven to 4,000 or less per driving resident per year, a 50% reduction in carbon per mile traveled.

3.0 Materials

Sustainability Goal

- To reduce embodied energy use, GHG emissions and other environmental impacts associated with building, infrastructure, and landscape materials.

Minimum Performance Threshold

3.1 Life-cycle performance of all buildings at least 10% better than the average building using Athena EcoCalculator in six of the eight output areas, or comply with State of Minnesota B3 Guidelines, Materials and Waste, section M.1 – Life Cycle Assessment of Building Assemblies.

3.2 Comply with State of Minnesota B3 Guidelines, Materials and Waste, section M.2 – Environmentally Preferable Materials.

3.3 At least 30 percent of the total value of materials used in site infrastructure are composed of pre- and post-consumer content.

Ultimate Condition

⇒ Life-cycle performance of all buildings at least 30% better than the average building using Athena EcoCalculator in seven of the eight output areas.

⇒ Exceed required performance criteria inof Minnesota B3 Guidelines, Materials and Waste, section M.2 -- Environmentally Preferable Materials, by 10 percent.

⇒ At least 50 percent of the total value of materials used in site infrastructure are composed of pre- and post-consumer content.

4.0 Water & Wastewater

Sustainability Goals

- To reduce potable water consumption in all buildings and landscapes.
- To reduce wastewater leaving the site to treatment plants from all buildings and landscapes by increasing onsite wastewater reuse.

Minimum Performance Thresholds

4.1 Predicted potable water use must be 30% below EPA Policy Act of 1992 (consistent with Saint Paul Green Building Policy).

4.2 Predicted water use for landscaping must be at least 50% less than a traditionally irrigated site (consistent with Saint Paul Green Building Policy).

4.3 Fifty percent (50%) less black and/or gray water leaving the site than an average or typical development, during design phase and long-term operations.

Ultimate Condition

⇒ No more than five percent (5%) of the total daily water requirement/person imported to site.

⇒ Zero gray water leaving the site, and ten percent (10%) or less black water leaving the site during design phase and long-term operations.

For updated reports, http://www.stpaul.gov/index.aspx?NID=1314

5.0 Solid Waste

Sustainability Goals

- To reduce solid waste from construction in all buildings and landscapes.
- To reduce solid waste from operation of all buildings and landscapes.

Minimum Performance Thresholds

5.1 Seventy five percent (75%) of all construction waste must be recycled (consistent with Saint Paul Green Building Policy).

5.2 Fifty percent (50%) less household, commercial and industrial solid waste leaving the site than an average or typical development.

Ultimate Condition

⇒ Zero construction, residential, commercial and industry solid waste leaving the site.

6.0 Stormwater & Groundwater

Sustainability Goals

- To minimize surface and ground water pollution.
- To minimize negative impacts of development on the hydrological cycle by treating stormwater close to where it falls and recharging groundwater through infiltration as local soils and subsurface conditions allow.
- To not exceed natural erosion and sedimentation levels in streams and lakes.
- To protect plant, invertebrate, and animal life in lakes and streams.
- To utilize stormwater runoff as a resource rather than as a waste product.
- To pre-treat all water flowing to Hidden Falls and maintain a more constant flow volume.

Minimum Performance Thresholds

6.1 Comply with current local regulations for stormwater runoff volume and rate control (City of St. Paul, Minnesota Pollution Control Agency (MPCA), Capitol Region Watershed District (CRWD), State of Minnesota B3 guidelines).

6.2 Reduce runoff volume by at least 90% on an annual basis by infiltration (50%) and evaporation or re-use (40%) or provide a corresponding water quality benefit.

6.3 Reduce pollutants for which the water is impaired to 10% less than levels identified in Total Maximum Daily Load (TDML) study for that portion of the Mississippi River.

6.4 Maintain minimum cover (e.g. >3') above bedrock and follow Minnesota Pollution Control Agency (MPCA) Guidelines on infiltrating.

6.5 Produce and implement a Stormwater Pollution Protection Plan per MPCA guidelines for use pre, during and post construction.

Ultimate Condition

⇒ Zero discharge of untreated stormwater from site.

⇒ Re-direct low flows on adjacent properties away from untreated storm sewers and onto the Ford site for treatment in site's comprehensive stormwater management system.

7.0 Soil

Sustainability Goals

- To protect and restore soil structure, stability, and biological health to optimize plant health and species richness and optimize water infiltration and filtration.
- To reduce soil loss and minimize disturbance of existing quality soil.
- To maximize on-site reuse of existing soils.
- To address impacted soil conditions on site.

Minimum Performance Thresholds

7.1 Meet MPCA soil cleanup criteria with land use restrictions.

7.2 Meet State of Minnesota B3 Guidelines for soil management:

- **Organic matter** >1.5% by dry weight
- **Bulk density** < than 1.5 mg/m3
- **Aeration porosity** (% large pore volume) >2%
- **Infiltration rate** > 0.25 in/hr site wide, >1 in/hr in stormwater treatment areas
- **Soil pH** 6-8.5
- **Cation exchange capacity** > 5 meg/100g
- **Potassium** > than 124 lbs/acre
- **Phosphorus** > than 44 lbs/acre
- **Mycorrhizae** — Minimum 2 species in soil that are naturally found in Minnesota
- **Soluble salt content** < 600 ppm
- **Stormwater Pollution Prevention Plan** (SWPPP) - create and implement
- **Hydric and mesic soils profile** >10% of open space
- **Organic horizon** > 4 inches throughout

Ultimate Condition

⇒ Meet thresholds 7.1 & 7.2, and in addition;

⇒ Meet Minnesota Pollution Control Agency (MPCA) soil cleanup criteria with no land use restrictions.

⇒ Provide on-site composting location and provide composted material for on-site public and private gardening, landscaping and soil restoration.

⇒ Hydric and mesic soils—profile > 20% of proposed open space.

⇒ Organic horizon > 6 inches.

⇒ Minimum 4 species of mycorrhizae in soil that are naturally found in Minnesota.

8.0 Vegetation & Habitat

Sustainability Goals

- To maximize biodiversity of the site and provide maximum possible contribution to local landscape ecology.
- To reduce destruction and removal of existing vegetation.
- To increase vegetation on site with new plantings.
- To provide wildlife habitat.
- To maximize ecological services on site and for the surrounding area.

Minimum Performance Thresholds

8.1 Comply with applicable codes, regulations and standards, including B3 guidelines, St. Paul zoning and land use regulations, and City of St Paul River Corridor Overlay District.

8.2 Greater than fifty percent (50%) aerial tree cover over all impervious surfaces on-site except roofs.

8.3 Greater than fifty percent (30%) of buildings include vegetated roofs.

8.4 Greater than twenty percent (20%) of site open space covered with vegetation.

8.5 Greater than seventy five percent (75%) native species in new landscaping, including keystone species; (at minimum) Burr Oak, Hickory/Walnut & Big Blue Stem.

8.6 Minimum plant species diversity greater than eighty percent (80%) species of native vascular flora – herbaceous perennials. No invasive species on the site. Use ten percent (10%) or less species of native Deciduous Trees and > 3 species of native Coniferous Trees, but not greater than ten percent (10%) of any one tree genus, so as to avoid catastrophic tree loss e.g. Dutch Elm Disease, Emerald Ash Borer.

8.7 Do not disturb habitat or natural resources determined significant by Minnesota DNR Natural Heritage Program or by local, state or federal government; maintain or install appropriate buffer width around significant habitats that comprise part of a development.

Ultimate Condition

⇒ 70% aerial tree cover over non-roof impervious surfaces, and 50% of buildings include vegetated roofs.

⇒ 100% native tree, shrub, perennial and vine plantings compositions.

⇒ A species-rich, resilient, urban forest with ≥ 50% of tree population exceeding 20 inch Diameter Breast Height (DBH) and 20% exceeding 30 inch DBH.

⇒ Diverse ecosystem that supports at least the presence of key species as follows:

Amphibians (3 species); interior forest birds (10 species); interior grassland birds (3 species); bats (2 species); reptile (2 species).

9.0 Recreation & Public Space

Sustainability Goals

- To improve personal health through increased physical activity, by providing on site facilities for a variety of active and passive exercise and recreational choices such as recreational walking and biking, informal play, or participation in organized sport activities.
- To encourage the development of (and connections to) biking and walking trails within, to, from and through the site.
- To encourage provision of and/or access to a comprehensive set of public gathering spaces for a full range of civic and community events.
- To provide space for community gardens, local agriculture, and the sale of locally-grown food.

Minimum Performance Thresholds

9.1 Comprehensive network of ADA accessible off-road trails for walking and biking throughout the site, connecting the site's major uses and services and public spaces.

9.2 Four programmed sports fields on site.

9.3 One, large outdoor public gathering space for events, picnics, farm market, etc.

9.4 Twice weekly farmers' market on or within one half (1/2) mile of site.

9.5 Three or more indoor public spaces (or private spaces accessible to public use) for community meetings, clubs, parties, etc.

Ultimate Condition

⇒ Each resident shall have potential to receive 60% of their produce from on site food production facilities or gardens during the local growing season, and 20% during the winter months.

⇒ 1/2 acre civic or passive public space within ¼ mile of 90% of dwellings, and non-residential building entries.

⇒ Create community center for public gathering, civic events, and sports & recreational programming for all ages.

10.0 Night Sky Radiation

Sustainability Goals

- To reduce light emitted from site to the sky at night.
- To protect the environments of predator & prey.

Minimum Performance Threshold

10.1 The average phototropic lumens for the entire site shall be 40,000 lumens per net acre using full-cutoff (fco) lighting, with no one individual area of the site exceeding 70,000 lumens/net acre.

Ultimate Condition

⇒ The average phototropic lumens for the entire site shall be 10-20,000 lumens per net acre using full-cutoff (fco) lighting with no one individual area of the site exceeding 40,000 lumens/net acre.

11.0 Urban Heat Island

Sustainability Goals

- To reduce urban heat island effects on site by reducing the heat absorption of materials used in buildings, landscaping and infrastructure.
- To increase vegetative cover to help keep the site and buildings cool in the summer.
- To reduce the need for air conditioning and irrigation in the summer.

Minimum Performance Threshold

11.1 Average surface albedo for the entire site greater than 0.1.

Ultimate Condition

⇒ Average surface albedo for the entire site between 0.15-0.3.

Browse to the complete Ford Site Sustainable Redevelopment Report at the link below to see complete information about the categories, strategies for sustainable design, general findings, resources, and next steps to achieve this ambitious vision.

Minnesota Pollution Control Agency