Ford Site Zoning Framework Study

Outline

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Ford Site Zoning Framework Study

SEH with Cornejo Consulting and DPZ & Company

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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


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
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 11, 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 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 2. Mixed Use - Light Industrial/Flex Tech

Legend:
- Single Family Detached (4-8 du/acre)
- Townhome (16 du/acre)
- Apartment/Condo - Low Density (28 du/acre)
- Apartment/Condo - Medium Density (45 du/acre)
- Apartment/Condo - High Density (80 du/acre)
- Civic
- Retail/Mixed Use
- Office/Institutional
- Light Industrial/Flex Tech
- Structured Parking

- Existing Critical Overlay RC2
- Existing Critical Overlay RC3
- MSP Airport Horizontal Surface Zone
- MSP Airport Transition Surface Zone
- MSP Airport Safety Zone B
- Permitted Uses:
  - Roads, Parking Lots,
  - Open Space without ponds.
- City Boundary
- Site Boundary

Based on PED Zoning Analysis Dated 03/14/2007
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

Structures to Remain

Scenario 2 Land Use Distribution
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 4. Mixed Use - Urban Village

- Retail Mixed Use
- Office
- Courtyard Homes
- Neighborhood Park
- Linear Park along MRB
- Park / Civic Use
- New Boulevard Connection
- Realigned Mississippi Boulevard

**LEGEND**

- Single Family Detached (4-8 du/acre)
- Townhome (16 du/acre)
- Apartment/Condo - Low Density (28 du/acre)
- Apartment/Condo - Medium Density (45 du/acre)
- Apartment/Condo - High Density (80 du/acre)
- Civic
- Retail/Mixed Use
- Office/Institutional
- Light Industrial/Flex Tech
- Structured Parking

- Existing Critical Overlay RC2
- Existing Critical Overlay RC3
- 40’ Height Limitation
- MSP Airport Horizontal Surface Zone
- Max. Building Height 110’
- MSP Airport Transition Surface Zone
- MSP Airport Safety Zone B
  Permitted Uses:
  - Roads, Parking Lots,
  - Open Space without ponds.
- City Boundary
- Site Boundary

Based on PED Zoning Analysis Dated 03/14/2007
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.

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 5. Mixed Use - High Density Urban Transit Village

Gateway - Civic Park
Office - Height 3 Stories
Linear Park Along MRB
Central Park
Multi-Modal Transit Corridor
Expand Hidden Falls Overlook

Legend:
- Single Family Detached (4-8 du/acre)
- Townhome (16 du/acre)
- Apartment/Condo - Low Density (28 du/acre)
- Apartment/Condo - Medium Density (45 du/acre)
- Apartment/Condo - High Density (80 du/acre)
- Civic
- Retail/Mixed Use
- Office/Institutional
- Light Industrial/Flex Tech
- Structured Parking

Based on PED Zoning Analysis Dated 03/14/2007
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 Density: 320 units
- 1350 Total Units

Retail
- 5.4 acres
- 46,775 sq. ft.

Office/Workplace
- 11.50 acres
- 194,000 sq. ft.
The ultimate goal of the Ford Site Sustainable Redevelopment Report is to establish performance thresholds for site redevelopment ... inspired policy makers and developers to make this site a national model for sustainable brownfield 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, employees, 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 and maintaining an ecosystem, and providing an infrastructure system that reduces vehicle trips and encourages walking, biking, and walking.

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:

1.0 Building Energy
2.0 Transportation & Public Realm Network
3.0 Materials
4.0 Water & Wastewater
5.0 Solid Waste
6.0 Stormwater & Groundwater
7.0 Soil
8.0 Vegetation & Habitat
9.0 Recreation & Public Space
10.0 Night Sky Radiation
11.0 Urban Heat Island

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, Benchmarking & 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

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 impacts (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 pleasant 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 conceptual method outlined NPD Credit 2).

2.3 Minimum Non-Residential floor area ratio (FAR) greater than 1.0 (Note: FAR is to be calculated using LEED-ND conceptual 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 Transportation Context Sensitive Approaches - 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 dedicated bike lanes on streets at least every 1/4 mile.

2.9 50% of all residential and non-residential building entries within 1/4 mile of vehicle sharing site or transit services.

Ultimate Condition
  - Increase 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 embedded 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 50 percent of the total value of materials used in the building infrastructure are composed of green 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 of the 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 the building infrastructure are composed of green 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

4.2 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 input 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.
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 percent (70%) of total construction waste must be recycled (consistent with Saint Paul Green Building Policy).
5.2 Fifty percent (50%) of total waste, including commercial and industrial solid waste, leaving the site.

Ultimate Condition
- Zero construction, commercial, and industrial solid waste leaving the site.

6.0 Stormwater and 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 surface 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), St. Paul River Basin, Watershed District (SWCD), State of Minnesota SWCD guidelines).
6.2 Reduce runoff volume by at least 75% by a natural 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 sensitive to less than 10% less than levels identified in Total Maximum Daily Load (TMDL) study for that portion of the Mississippi River.
6.4 Maintain minimum cover (e.g., >30% above bedrock and follow Minnesota Pollution Control Agency (MPCA) Guidelines on infiltrating.
6.5 Produce and implement a Stormwater Pollution Prevention Plan per MPCA guidelines for site design and post-construction.

Ultimate Condition
- Zero discharge of untreated stormwater from site.
- Redistribute flow on adjacent properties away from untreated storm sewers and onto the site for treatment in the 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 minimize onsite removal of existing soils.
- To address impaired 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 >3% by dry weight.
- Bulk density < 1.5 g/cm3.
- Aerobic porosity [%large pore volume] >2%.
- Infiltration rate >0.25 inch/hr at site wide, >1 inch/hr in stormwater treatment areas.

9.0 Recreation & Public Space

Sustainability Goals
- To improve personal health through increased physical activity, by providing on-site facilities for active and passive exercise and recreational choices such as recreational walking and biking, informal play, or participation in organized sports activities.
- To encourage the development of and connections to biking and walking trails within, to, from, and through the site.
- To encourage visitors to and 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 programed 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 1/2 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 environment of predators and prey.

Minimum Performance Threshold
10.1 The average photometric luminance for the entire site shall be 40,000 lumens per net acre using full-cutoff (FC) lighting, with no one individual area of the site exceeding 30,000 lumens/acre.

Ultimate Condition
- The average photometric luminance for the entire site shall be 10,000 lumens per net acre using full-cutoff (FC) lighting with no one area of the site exceeding 10,000 lumens/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.