

The Sustainability Summary

Aspirational Goals for the Sustainable Community at UMore Park

UMore Development LLC
A company of the University of Minnesota

March 2012



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The 10 *One Planet* principles cover logo is courtesy of BioRegional, the UMore Park partner in the process to craft aspirational goals for sustainability outlined in this plan. BioRegional is an international nonprofit organization that coordinates the *One Planet Community* program, a network of sustainable master-planned communities that have been designed, built, and are operated according to the 10 *One Planet* principles. The framework is internationally recognized for helping projects strive towards the highest achievements in sustainable design and operation.

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PREFACE

We are in the midst of creating the future. The “we” is expansive.

The University of Minnesota is the owner of the 5,000-acre property in Dakota County referred to as UMore Park – the University of Minnesota Outreach, Research and Education (UMore) Park. The University envisions creation of a unique, sustainable, University-founded community at UMore Park, a 25- to 30-year endeavor. But an undertaking of this size and scope cannot be accomplished alone. It is the work of many: Local governmental units, citizen organizations, local businesses and the broader private sector, nonprofit organizations that address the needs and elements that make communities vibrant, the range of educational institutions from early learning through a top-tier research university, state and federal agencies, and the University’s faculty, students and staff members, among others.

Through the expertise and efforts of many, a community will emerge that is economically, environmentally and socially sustainable – a community of innovation that can be a model for others.

From the day in December 2006 that the University’s Board of Regents affirmed the vision to create a University-founded sustainable community, public engagement has been core to planning. The University has benefitted from the ideas, comments and questions offered by citizens and organizational representatives during the initial years of listening sessions, public forums, discussion sessions and special projects. Our approach to more fully defining sustainability – and more important, outlining an action plan for sustainability – required the same. We needed the best thinking of many, especially given the multiple dimensions of sustainability. We were fortunate to have engaged 80 individuals for two days of intensive discussion in Rosemount, Minnesota, in April 2011 – followed by a public forum that expanded input and ideas from another 150 citizens. Volunteers continued to help draft and review the contents of the plan to bring it to its present form.

This brief *Sustainability Summary* provides a glimpse of what a safe, comfortable and intentional sustainable community of the future has to offer.

The aspirational goals in the companion technical document, the UMore Park *Sustainability Action Plan* are right for the time. But they will need to be periodically updated based on changes in the region; advances in technology and new knowledge; and the local and regional collective vision for economic, social and environmental sustainability. It is difficult in this day of rapid global change to predict what the future may bring. To envision the details of planning, change and development for the UMore Park property and the region over the next 30 years or more is impossible.

We have the information and the citizen expertise now, however, that has contributed to the development of aspirational sustainability goals and set a trajectory for attaining these goals.

Look back 30 years (if you are of a certain age). How has the world changed? How have your community, your personal goals, your vision for the future changed? Now, look forward 30 years. A new sustainable community at UMore Park can be a contribution toward innovation and quality of life that serves our children and grandchildren – a hallmark of optimism for the future.



Carla Carlson
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CONTENTS

Introduction	6
I. Health and Happiness	10
II. Equity and the Local Economy.....	12
III. Culture and Community	14
IV. Local and Sustainable Food	16
V. Sustainable Water	18
VI. Land Use and Wildlife	20
VII. Sustainable Materials	22
VIII. Zero Waste	24
IX. Zero Carbon	26
X. Sustainable Transport	28
Acknowledgements	20
References	33

INTRODUCTION

The University of Minnesota Outreach, Research and Education (UMore) Park is the University of Minnesota's 5,000-acre property located 25 miles southeast of the Twin Cities in Dakota County, Minnesota. The vision to develop a unique, sustainable community for 20,000 to 30,000 people over 25 to 30 years was affirmed by the University of Minnesota Board of Regents in December 2006. A concept master plan for development of the UMore Park property was completed in December 2008. Plans for UMore Park follow guiding principles established by the University's Board of Regents in February 2006 and align with the Regents Policy on Sustainability and Energy Efficiency.¹

A Unique, University-founded Community

The University's vision for creation of a sustainable, University-founded community at UMore Park is guided by the following Board of Regents principles, established in February 2006:

- Protect and enhance the value of UMore Park through timely planning and action.
- Advance the University's research, education, and engagement mission through the physical and financial resources that UMore Park will provide over the long term.
- Improve the long-term financial health of the University through application of sound fiscal principles and stewardship, including investing the income generated through UMore Park in ways that support academic priorities to complement, supplement and leverage state and private
- Retain oversight of UMore Park's planning and

development and remain accountable for the master plan.

- Plan in such a way so as to optimize the value of UMore Park utilizing short-term strategies without restricting options for long-term strategies.
- Utilize market value as a benchmark in assessing alternative development strategies.
- Ensure that all planning and development activities are conducted with the highest standards of fairness, integrity and sound business practice.
- Respect the needs of neighboring communities and local, regional and state governments.

The Board of Regents established the UMore Development Limited Liability Company (LLC) in October 2009 to manage real estate and commercial development activities on the property. In December 2009, the Board of Regents appointed nine individuals to the Board of Governors to direct the LLC. The Board of Governors members bring private sector and University expertise in planning, finance, real estate and land use to the planning and development process. The Office for UMore Park Academic Initiatives was created in July 2010 to complement the work of the LLC and to help ensure that the University's academic mission—research, teaching and outreach—remains core to the project.

The UMore Park leadership team incorporates both academic and development goals to manage a multifaceted portfolio of dynamic, integrated plans and activities to prepare the UMore Park property for development of a community that is sustainable in every way—environmentally, socially and economically.

The Sustainability Summary

Importantly, the time to describe what sustainability means for a community—this community—and its residents, is now, before development begins.

To best explore potential goals and actions for sustainability, the UMore Development LLC engaged international nonprofit BioRegional to help the UMore Park team and its public and private sector colleagues identify goals and performance targets for sustainability at UMore Park and create a plan to achieve them. This planning process included a facilitated two-day workshop in April 2011, bringing together a diverse group of more than 80 participants to help shape sustainability goals and best practices. Participants were from local units of government, state and federal agencies, private sector and nonprofit organizations, citizens, and the University of Minnesota. Following the workshop, more than 150 citizens attended a public forum to share their ideas and input to further hone the goals and opportunities for the planned sustainable community.

Twelve individuals who participated in the two-day workshop contributed their time, insights and expertise to capture ideas from the workshop discussion and assist in transforming them into the chapters of the plan. Two publications have resulted: the UMore Park *Sustainability Action Plan* and this *Sustainability Summary*. The *UMore Park Sustainability Action Plan*, based on BioRegional principles, addresses the following 10 broad areas of sustainability for the planned community: zero carbon, zero waste, sustainable transport, sustainable materials, local and sustainable food, sustainable water, land use and wildlife, culture and community, equity and local economy, and health and happiness.

This *Sustainability Summary*, based on the more detailed, technical plan, reflects the collective thinking of workshop participants, citizens and the UMore Development LLC and BioRegional teams, as they discussed and identified a spectrum of ideas to support aspirational sustainability goals and the steps that could be taken to achieve them.

The BioRegional Approach

BioRegional is an international nonprofit organization that maintains the One Planet Community program, an independent endorsement and internationally recognized sign of the highest achievement in sustainable design and operation.

The One Planet Community

The concept behind the *One Planet Community* is that individuals and communities should consume only as much as the planet can renew or absorb. Globally, communities and individuals consume resources and pollute the planet at a level fifty percent higher than the Earth can renew or absorb. If everyone in the world consumed as many natural resources as the average person in North America, more than five planets would be required to support the Earth's people. The *One Planet Community* approach pairs an efficient, well-planned built environment with lifestyle choices to achieve sustainable use of the resources on the planet.

The *One Planet Community* initiative uses 10 guiding principles as a framework to help participating projects examine the sustainability challenges they face and develop appropriate solutions:

1. Zero Carbon—making buildings more energy efficient and delivering all energy with renewable technologies.
2. Zero Waste—reducing waste, reusing where possible and ultimately zero waste to landfill.
3. Sustainable Transport—encouraging low carbon modes of transport to reduce emissions.
4. Sustainable Materials—using sustainable and healthy products, such as those with low embodied energy, sourced locally and made from renewable resources.
5. Local and Sustainable Food—choosing low impact, local and seasonal diets and reducing food waste.
6. Sustainable Water—using water more efficiently in buildings and in everyday products; tackling local flooding and water course pollution.
7. Land Use and Wildlife—protecting and restoring existing biodiversity and natural habitats through appropriate land use and integration into the built environment.
8. Culture and Community—reviving local identity and wisdom, supporting and participating in the arts.
9. Equity and Local Economy—creating bioregional economies that support fair employment, inclusive communities and international fair trade.
10. Health and Happiness—encouraging active, sociable and meaningful lives to promote good health and well-being.

Each of the following summaries explores one of the 10 guiding principles for the community at UMore Park, highlighting key aspirational goals, context and a vision for the new community, the region and all who will live there.

The Approach for the UMore Park Community

The plan strives to establish a framework for advancing sustainable practices in the development and life of the community at UMore Park. It acknowledges the neighboring communities and the regional context for the UMore Park property as well as significant planning to date. The plan identifies a series of goals to guide community design and development decisions, and explores a variety of mechanisms that could be integrated into planning and the life of the community over time. It also identifies areas and key issues requiring additional research and broader understanding of the regional context and opportunities.

It is important to emphasize that the plan requires periodic updates and revisions to ensure that goals and strategies can meet changing needs in the region, incorporate emerging technologies and best practices and adapt to unforeseen circumstances that could occur over the next 30 years.

The UMore Park property presents challenges to the approach that BioRegional has applied to its five designated *One Planet Communities* worldwide, and to five others that are pursuing its *One Planet Community* highest sustainability certification. The UMore Park planning and development project is differentiated by three key characteristics:

1. Size of the property. At 5,000 acres, the UMore Park property is significantly larger than any other designated One Planet Community in the world. The size of the property offers potential for a variety of simultaneous activities and residential, commercial and retail development. Size also enables design options such as maximizing green space and activities that could be launched in advance of development. Definitive commitments to performance standards and action steps for the 5,000 acres are a challenge at this time, in the absence of the essential private sector developer partner(s), and without a specific phasing strategy for development. Phased development will be contingent on the joint decisions of the University, the developer partner(s) and others, including local governmental units. Steps toward the aspirational goals stated in the 2012 version of the plan must be enhanced and refined periodically as development proceeds through multiple phases.
2. Time line for development. The time line for development goes hand-in-hand with the size of the property. The plan, based on the ideas of many individuals with local experience and expertise, lays the foundation and mechanisms that could support attainment of goals over time. It is difficult now, however, to anticipate the changing environment and needs over the next 30 years or more. A flexible plan will be refreshed periodically to accommodate demographic changes, state and local policy changes, advances in technology and other innovation, and ways that the University of Minnesota could add value through publicly-engaged research, education and outreach.
3. Ownership by a public research University. The UMore Park property is among the largest contiguous properties in the United States that is owned by a land-grant, first-tier research university. The University's vision to develop the property as a sustainable community founded on the institution's academic mission is unique. To date, endorsed *One Planet Communities* are significantly smaller in acreage and have been developed on notably shorter time lines. Importantly, the land for these communities has been purchased and developed by private real estate development entities. As a public institution, the University has an abiding commitment to proceed with planning and development through publicly-engaged, transparent processes. It will continue to seek the ideas and partnerships of many in both the public and private sectors, including University faculty, staff and students, and benefit from active citizen participation. Given the critical public nature of this endeavor, it is a challenge to now make long-term action commitments through the plan that will need the benefit of open public discussion and partnership over time.

Despite these three challenges to the BioRegional process, UMore Park offers a unique and unprecedented opportunity for the University to transport its land grant mission into the future. UMore Park is an asset that can generate a wealth of economic, environmental, social and academic benefits, not only for the region and the University but for the State of Minnesota and beyond.

HEALTH AND HAPPINESS

Provide the means for all residents in the community at UMore Park to live safe, happy, healthy lives marked by active minds and bodies, community engagement and social connectedness.

Imagine living in a safe community where health and happiness components are built in to daily life. Imagine a community where commutes are healthier because individuals could safely walk or bicycle to work or shopping, where people know their neighbors. Imagine a place where there is access to year-round indoor and outdoor recreational opportunities for all mobility levels and where it is easier to eat healthy local foods, from restaurants and grocery shopping to prepared take-home meals. Consider a place where making a meaningful contribution to the community is easy because there are plenty of opportunities to volunteer and care about the well-being of community members. Consider that living in such a remarkable place is also healthy for the planet and creates a national model for conserving resources for future generations.

Wellness declines as individuals become more inactive, isolated and poorly nourished. The future community at UMore Park seeks to revive community values and healthy living. The vision for UMore Park is for safe, happy neighborhoods, where individuals enjoy more time with loved ones, live active lifestyles, eat well and connect with neighbors in the local community.

Research shows that to be healthy and happy, individuals have a few basic needs:

- High-quality relationships with loved ones and the broader community.
- Participation in meaningful community activities, groups or volunteerism.
- Fresh air and time outdoors in nature.
- Plenty of exercise, especially walking; less time spent inactive or sitting still.
- A diet rich in fruits and vegetables and low in red meat and processed foods.

Being in nature

Research indicates that direct contact with nature is important for healthy childhood development and for the physical and emotional health of children and adults, leading to the conclusion that “land conservation can now be viewed as a public health strategy.”² At UMore Park, residential units could be designed to have views of green space and access to personal or community gardening. Residents could experience acres of nearby natural spaces via walking and bicycling trails. The design for the community at UMore Park could also seek to utilize solar orientation to maximize the penetration of sunlight into buildings, especially during the winter months.

Active living and fitness

The Dakota County adult obesity rate is 26 percent; the rise in obesity is linked both to major health risks and to an increasingly

sedentary lifestyle.³ At UMore Park, walking and biking could be designed into everyday life, and the project could connect and add significantly to the paved trails in the county. In addition to hundreds of acres of recreational areas on-site, the nearby Vermilion Highlands: A Research, Recreation and Wildlife Management Area consists of 2,822 acres of natural space for recreation and hunting, set aside by legislation in perpetuity. Residents of all ages could enjoy varied sport and fitness programs, resources and wellness support, and both indoor and outdoor recreation facilities. The community at UMore Park could strive to increase active participation among community members in health and wellness initiatives including exercise and fitness programs, nutrition and wellness education and disease prevention activities.

The social neighborhood

While the average paycheck in the U.S. had risen over the past 30 years, a drop in the quality of relationships has led to a decline in “social capital.”⁴ A community like UMore Park that prioritizes neighborliness could actually help make residents healthier. The community at UMore Park could foster a sense of purpose and well-being among residents by promoting civic engagement and participation in the neighborhood and in the region. Community gardens, safe and well-lit streets, welcoming public places, walkable neighborhoods, and regularly scheduled community events are just a few examples of the many ways that UMore Park could foster wellness and happiness through neighborliness. Designs for community centers, play areas, cafes, open spaces for informal meetings, and libraries could encourage social interaction.

Healthier schools, offices and homes

Since 2001, the number of individuals in the U.S. with asthma has increased by 4.3 million – and the cost of treating asthma is on the rise.⁵ Asthma and other environmental sensitivities are often linked to indoor air pollution resulting from chemicals that could be included in common building materials such as synthetic carpeting, paints, adhesives, kitchen cabinets and wall paneling. Homes, schools and workplaces at UMore Park could include healthy building materials that support indoor air quality wherever possible. Moreover, buildings could be designed to maintain healthy indoor air quality by incorporating operable windows and improved ventilation. Lighting could be achieved with natural daylight wherever possible. Combined, these measures could improve human health as well as office productivity and school learning rates.^{6,7}

Safety and smart design

UMore Park could be designed to maximize safety for all residents and workers. For example, traffic-calmed streets increase safety for children, with special attention to intersections and crossings. The design ensures features like open and visible public spaces, cold-hardy and edible landscaping, water features for play and aesthetics, and appropriate lighting, promote safety and community engagement. Creating a tight-knit community at UMore Park could also contribute to safety. New research indicates that increased social capital reduces traffic accidents and related injury and death.⁸

EQUITY AND LOCAL ECONOMY

Provide a diverse range of places to live, work and play in a manner that achieves social, environmental and economic equity in the community at UMore Park.

Imagine a community where people could afford to live close to good jobs that provide a living wage and where local shopping helps to create jobs for neighbors in the community. Imagine a wide range of housing where diverse residents take active roles in the management of neighborhoods in the community. Consider the impact of an influx of new green jobs in a neighborhood where people are well informed about community choices, comfort, energy efficiency and waste reduction.

The community at UMore Park could boost the local economy with affordable housing through a range of housing types and prices, shopping and activities in Dakota County, while also promoting locally-made, sustainable products. An eco-industrial business park is just one of the potential strategies to create new jobs close to home.

New jobs, green jobs

UMore Park could grow to provide a wide range of new jobs on-site. An eco-industrial park could foster a new generation of businesses that recycle or repurpose community and eco-industrial waste streams as raw materials for creating new locally-made products. In conjunction with the local jurisdictions, the community at UMore Park could foster economic development strategies that attract established businesses and start-ups alike with an innovative range of opportunities for R&D, clean technology, high-tech, biosciences and others. As a model for sustainable communities and 21st-century lifestyles, UMore Park's business districts could attract entrepreneurs and companies with an appetite for innovation—companies interested in offering employees a unique work environment linked to excellent housing, lifelong learning in the community and a higher quality of life. As UMore Park develops, construction materials and maintenance supplies could be sought from local businesses wherever possible, provided they are also sustainable and healthy for residents.

A range of employment opportunities

The community at UMore Park could strive to foster living wage employment opportunities and a range of local jobs to help ensure that residents are able to live and work in the community. Aspirational goals for the community highlight growth in on-site commercial job opportunities so one job could be available for every home at UMore Park.

Local products and services

Aspirational goals for the community include having at least 25 percent of all goods sold on-site from local or environmentally-friendly sources, and ensuring that residents have access to a convenient selection of sustainable and fair trade goods. A locally-made brand or label to identify products produced in the region as well as locally-based services could boost the economy, pride and participation of local entrepreneurs. Local, environmentally-friendly and fair trade products offer choice, convenience and community engagement to residents as they shop, dine and participate in local activities.

Thriving businesses

The community at UMore Park could foster a thriving local commercial sector that sets the example for fair commerce practices and values locally-owned commercial and retail operations. Innovative approaches to support entrepreneurs and small businesses such as flexible work spaces could be incorporated into neighborhood community and commercial centers. Community communication mechanisms could promote local businesses and services to foster business growth and new business development.

Diversity and resilience

The community at UMore Park is envisioned to be diverse in every way—in age, gender, ethnicity, race, culture, income, housing, work and recreation opportunities and lifestyles. UMore Park is planned to grow into a diverse community with a range of jobs, entrepreneurial opportunities and the conveniences that support a work-life balance. This diversity could bring new businesses, jobs and skills to Dakota County, strengthening the local economy and employment opportunities.

The housing mix

Nearly half of all renters in Dakota County spent more than 30 percent of the household income on housing.⁹ The Metropolitan Council anticipates that Rosemount needs to create at least 1,000 new affordable housing units between 2011 and 2020.¹⁰ UMore Park could help to meet the need for housing with both quality affordable and market-rate housing units in an integrated setting. At least 15 percent of the total supply of housing could be affordable to low-to-moderate income households (those earning up to 120 percent of area median income). A wide range of housing types is envisioned for the community at UMore Park, allowing grandparents to live just down the street from grandchildren. It is also envisioned that residents will be able to “age in place,” transitioning from apartment living to family homes to homes accommodating those with reduced mobility.

Neighborhood involvement

The community at UMore Park seeks to provide opportunities for all residents to actively participate in the management of neighborhoods. Neighborhood-based social gatherings, beautification projects and other activities foster social fabric. The hiring of maintenance and grounds staff for community associations could prioritize jobs for residents within the community, neighboring community residents and members of under-represented groups.

Tracking successes

An annual survey could investigate resident living satisfaction and recognition rates of social, economic and environmental equity – and make possible informed adjustments to programs or planning.

CULTURE AND COMMUNITY

Enhance, expand and enrich the cultural life of the community by actively engaging citizens, fostering a strong sense of place based on history and unique attributes of the landscape, utilizing regional resources and reflecting the increasing diversity of its residents.

Imagine attending social gatherings and neighborhood events made lively by dozens of neighbors who contribute to the management and maintenance of the community. Imagine a community where everyone has a sense of belonging and a sense of responsibility as a contributor. Imagine neighborhood venues and events where musicians, artists and performers share their creativity with the community. Imagine a diverse community, where individuals could learn from and teach others. Imagine a community that celebrates its history of having strong connections with the land and water as it develops a new community culture.

Life in the 21st century is increasingly digitally connected, yet isolated. Family dinners have dropped by 43 percent over the last 25 years, and today 71 percent of people in the U.S. do not know their neighbors.¹¹ The design, daily activities and social events in the community at UMore Park could create a closely-knit social life reminiscent of small towns. The culture of the neighborhoods could reflect the region's rich heritage and celebrate individual responsibility to live in ways that conserve resources for the future while enjoying comfort, safety, recreation and lifelong learning.

A sense of place

The Rosemount and Empire Township areas were initially developed and cultivated by family farmers. Area residents continue to express a strong commitment to maintaining a small town feel as the community continues to grow. The community at UMore Park could be designed to create a strong sense of place based on the history of the landscape, the values of knowing others and being known, participation in the evolution of the community, access to local livelihood and enrichment, and safety and security. The rich heritage of the land could play a role in daily life, from hiking and bicycling trails along natural and green spaces to the presence of personal and community gardens and a farmers' market. Art could be featured prominently in public places where residents are encouraged to spend time and socialize. In consultation with residents and neighbors, names for neighborhoods, streets and buildings could reflect the culture, history and traditions of the area.

Community engagement

Aspirational goals for UMore Park suggest that residents know more than 50 percent of their neighbors, and that 70 percent of residents are active participants in the community, including participation in neighborhood councils and/or other community entities. Regular community festivals and events could bring people together. The community could feature many child-friendly spaces where children of all ages interact and play together. Gath-

ering places and public spaces throughout the community encourage residents, performers and artists to share their art and engage with others. Community centers in each neighborhood could engage residents and visitors in the culture, history and sustainable future of the community, and give residents a place to socialize and organize events. Creating a community-driven governance structure, such as a homeowners association, could encourage residents' participation in the life of the community. Volunteer opportunities and support for a system of citizen groups, programs and community entities require the active participation of community members.

Pace of life

Today, individuals work faster, travel faster and communicate faster. But when people get busy, rituals are often overlooked, from eating together, to vacations, to attending family and community functions. By providing residents with social events and the opportunity to walk to jobs, schools and shopping, the community at UMore Park could be a place that runs at a pace that offers lifestyle, wellness and social benefits to residents.

Volunteers and contributors

A recent report found that those who prioritize family, friends, altruistic goals and exercise are happier.¹² Research indicates that one of the cornerstones of a happy, fulfilled life is contributing regularly to a local community or church, and participating in activities that make a difference. Making a meaningful contribution at UMore Park can be easy because of the many opportunities to volunteer or participate in community groups, and

also because choosing to live in an environmentally-responsible, sustainable community represents an active investment in the future.

Welcoming to all

The famous Welcome Wagon company has not greeted newcomers to neighborhoods by knocking on their doors since 1998, but a similar community-organized greeting service is envisioned for UMore Park. Welcoming is a part of a broader sustainability concierge program to help introduce residents to the community and to a range of social activities. New neighbors are introduced to events and picnics, community gardening and bicycle clubs, connections to the landscape, its rich history and one another. The community at UMore Park seeks to be among the most diverse communities in Dakota County, welcoming residents from a broad range of backgrounds, interests and lifestyles.

Regional achievements

The surrounding neighborhoods have demonstrated a commitment to nurturing arts and cultural programs and organizations. The Rosemount Area Arts Council, established in 2007, provides opportunities for residents to experience and participate in a variety of events and programs celebrating music, theater and the visual arts.¹³ UMore Park could integrate thoughtfully and seamlessly with existing adjacent neighborhoods, and encourage residents to participate in the local communities while finding ways to include nearby neighbors in the array of activities and amenities at UMore Park.

LOCAL AND SUSTAINABLE FOOD

Promote consumer education and healthful diets high in local, seasonal and low-environmental impact foods while addressing local economic development and social interactions in the community at UMore Park.

Imagine a community where local food is the norm rather than the exception. Think about a community where residents have the opportunity to grow their own food in personal or community gardens, or buy fresh produce at the local farmers' market. Imagine fewer greenhouse gas emissions from food transport and less use of petroleum-based fertilizers and pesticides. Imagine a strong local economy built around food-based entrepreneurial businesses, cafes and restaurants, groceries and farmers' market.

Changes in diet could save up to 1.5 tons of greenhouse gases each year per person and protect against heart disease, cancer and obesity.^{14,15} Residents at UMore Park could find it convenient to enjoy fresher, healthier diets that strengthen the local economy. Every household could grow food in community gardens. Gardening activities could bring community members together and offer information about nutrition, growing and cooking through life-long learning programs.

Local gardening

The average distance fresh produce has travelled in North America is 1,500 miles, using significant volumes of fuel to transport foods that could be purchased locally.¹⁶ To decrease transportation miles for food, the community at UMore Park could provide resources and opportunities for local and at-home gardening and food preparation. Every household at UMore Park could have access to a dedicated garden space and related education and support. In addition, food-producing plants and trees could create an edible landscape in residential and public areas. Local food-growing could make use of resources that would otherwise have been wasted, such as rainwater to irrigate crops, or compost from kitchen food scraps to enrich the soil on-site. Information guidelines for procuring locally grown food for grocery stores, markets, restaurants and neighborhood community kitchens could increase the availability of locally-grown foods, create partnerships with regional farmers and enrich menus with local and seasonal produce and nutritional information. Greenhouses and related facilities can help to make local foods available year-round and potentially foster job creation.

Community gardening

Aspirational goals for the community at UMore Park include increasing participation in community gardening programs as neighborhoods develop, with benefits to participants. Gardening and landscaping in the community could involve residents in

active work and recreation. Gardening could help bring families and communities together around a common interest with multiple benefits to individuals and the region.

Fresher food

According to the U.S. Department of Agriculture, individuals in the United States eat 30 percent more grain and 20 percent more meat than recommended. Meanwhile, people are consuming only 80 percent of the vegetables and 40 percent of the fruit recommended by the U.S. Department of Agriculture/Department of Health and Human Services Dietary Guidelines for Americans.^{17,18,19} The community at UMore Park could support and encourage a healthy school lunch program that incorporates local foods. Other programs could do much to educate residents on the environmental impacts of food production, on diet and nutrition, and on gardening and preparation of meals that include local foods. Residents could learn how eating less processed foods can contribute to improved health. Families could also take advantage of prepared meals and fare in restaurants and cafes in the community at UMore Park that use local, environmentally-friendly ingredients.

Household savings

Community and residential gardening saves household food dollars, promotes nutrition and allows money to be available for non-garden foods and other items.²⁰ The vision for the community at UMore Park is for residents to know where their food comes from, economically manage household food budgets, and buy food from local farmers with the assurance that they are investing money in the community. Community resources and lifelong learning could help residents learn how to grow, prepare and preserve foods to support at-home preparation of meals all year long.

Local jobs

The community at UMore Park could create food-based entrepreneurial businesses and green-collar jobs related to local food, such as coordinators for a farmers' markets, edible landscapes and schoolyards, and community gardens. Aspirational goals for UMore Park also envision jobs in local-foods restaurants, cafes, grocery stores, markets, commercial processing, school and hospital kitchens, and small business start-ups. The development of a community at UMore Park could strive to stimulate economic development via training and certification programs for green-collar jobs, and offer education for entrepreneurs. A year-round farmers' market could be established on-site, providing sustainably-produced foods and contributing to local job creation.

SUSTAINABLE WATER

Conserve water in the community at UMore Park by taking advantage of natural hydrology, integrating water into public areas, and minimizing pollutants and the energy used to treat, cycle and recycle water, based on the recognition of the essential value of water to all human and ecological activity.

Imagine a community with an inherent focus on water—as an integral feature of the unique landscape and as a necessary component of daily life. Imagine water in creeks and ponds teeming with local wildlife. Imagine living in a home that monitors water consumption, allowing residents to lower water and energy bills. Instead of directing water into sewers, imagine creating ponds and wetlands to naturally filter the water and beautify the neighborhood. Consider a place where water serves combined goals: for heating and cooling as well as for beautification and a feature in public spaces.

The community at UMore Park by recognizes the essential value of water to all human and ecological activity. Conserving and managing water resources is an overarching goal. Smarter water use means residents could have lower water and energy bills. The water treatment strategy could be more efficient based on reduced water use, and irrigation with rainwater and recycled water. Conservation and management could help to ensure that water moves where nature intends—to ponds, wetlands and rivers.

Water use

In Minnesota, families have cherished spending time on or near water for generations, enjoying swimming, boating, fishing and relaxing at the cabin. Minnesota depends on groundwater, fresh water from lakes and the Mississippi River, and rainfall for agriculture, drinking and industrial use. As the state's population of about five million continues to grow to nearly six million by 2025,²¹ pressures on water resources are anticipated to increase. Depletion of reservoirs and groundwater could put water supplies, human health and the environment at future risk. The average resident of Rosemount uses 90 gallons of treated municipal water a day.²² Buildings in UMore Park are envisioned to use water 60 percent more efficiently to help maintain supplies at safe levels. This reduction could be accomplished through a combination of low-flow appliances, monitoring and feedback to homeowners, and consumer education. The average for water use by households in the Twin Cities Metropolitan area is 10,000 gallons per month.²³ Use of a combination of natural and/or drought-tolerant vegetation, small irrigated areas and weather-based irrigation systems, could reduce outdoor water use.

Energy use

Rosemount households spend an average of \$474 per year on water expenses.²⁴ It takes a considerable amount of energy to deliver and treat the water individuals use every day. Letting the faucet run for five minutes uses about as much energy as letting a

60-watt light bulb run for 14 hours.²⁵ UMore Park's water conservation program could save water and energy by minimizing the energy used to transport water and by extracting energy from wastewater. Water could be conserved and used efficiently through rainwater use, wastewater/greywater reuse and natural water treatment that makes use of ponds and wetlands. Water conservation could also save residents money.

Rainwater infiltration and collection

In most neighborhoods today, rainfall rushes across rooftops and paved surfaces into sewers collecting dirt and debris along the way. This water could be put to use by installing pervious surfaces such as green rooftops and porous pavements that allow water to infiltrate into the groundwater. Rainwater could be collected, filtered and used wherever possible for landscape irrigation and for toilet-flushing, among other uses.

Reusing water

Reuse is a popular approach to water conservation. In the community at UMore Park, aspirational goals include reusing 100 percent of wastewater—in some cases, multiple times. The community could be designed to achieve multiple uses of water, from reuse in irrigation or toilet-flushing to the development of natural water features such as ponds and wetlands. Water used in ground-source heating and cooling and/or energy use could be integrated through district-energy systems that employ both natural and

renewable energies to heat and cool water. To the extent possible water used for heating and cooling could be visible and integrated into public art such as cascading walls for cooling towers or human-made ponds and water features. The bottom line: Reuse reduces costs to the municipality, and savings could be passed along to consumers.

Eliminating contaminants

Pollutants that find their way into wastewater include paints, toxins, household chemicals and pharmaceuticals. Despite efforts at treatment, some of these substances are making their way into lakes and rivers. Aims for the community at UMore Park include achieving near-zero export of pollutants. An important strategy to achieve this aspirational goal is source reduction, particularly for road salt, water softener brine, food (garbage disposal) wastes, fertilizer, pesticides and unnecessary home chemicals. On-site filtration measures used for recycling of greywater or wastewater could also reduce contaminants.

Tracking residential water use

The community at UMore Park could use an adaptive water system that provides feedback to all water users and community authorities, by collecting real-time water use information. This system could provide feedback to homeowners and property managers, with the goal of continuously improving behavior-based conservation.

LAND USE AND WILDLIFE

Enhance habitat for wildlife, recreation opportunities and the provision of key ecosystem services in the community at UMore Park through efficient land use practices, and thoughtful planning of green spaces that emphasizes connectivity, restoration and multifunctionality.

Imagine living in a modern community where nature is a part of everyday life, where paths to work pass by grasslands and wetlands. Imagine green spaces with native plants that provide habitat and food for local wildlife and that individuals could explore. Consider a place where recreational trails and green corridors run through the community, safely linking individuals and families—and birds and mammals—to Vermillion Highlands and the Vermillion River. Imagine the sense of being part of a landscape of prairie, oak savanna and wetlands where wildlife species increase in diversity each year.

The ecological region surrounding UMore Park is oak savannah that has been transformed over time from farming and the rise of towns and suburban development. The landscape around UMore Park could be restored, providing habitat for local wildlife and creating experiences outdoors for citizens. Natural green spaces and trails could run through the community, contributing to active lifestyles for residents and to the beauty and value of the property.

Habitat, recreation and gardening

Development of the community at UMore Park could conserve natural, open space by increasing densities by at least 50 percent (putting more houses on less land), and with reduced percentages of paved surfaces than found in conventional suburban development. In addition, about 1,000 acres of open space are envisioned for habitat restoration, recreation and personal and community gardens. By promoting compact development and conservation design principles to preserve open space, the community at UMore Park could consist of unique neighborhoods where wildlife habitat, parks and community gardens share the landscape with homes, places of employment, schools and retail shops. Open spaces could be multifunctional to accommodate sport, play, wildlife viewing or quiet contemplation.

Habitat restoration

Aspirational goals for the community at UMore Park include restoration of native prairie, oak savanna and wetlands with a target of 200 different native tree, shrub and herbaceous plant species. Community residents could appreciate the landscape in close proximity to residences. Habitat restoration could seek to increase populations of 17 key species: Henslow's sparrow, short-eared owl, loggerhead shrike, grasshopper sparrow, upland sandpiper, bobolink, dickcissel, field sparrow, eastern meadowlark, prairie vole, western harvest mouse, Franklin's ground squirrel, American badger, plains pocket gopher, regal fritillary, pawnee skipper and gopher snake.

Outdoor recreation and learning opportunities

Residents and visitors at UMore Park could enjoy integrated green spaces and recreation trails with opportunities for wildlife viewing, cycling or walking. Trails could link to other green spaces in the community where athletic fields, parks and playgrounds and areas for companion animals could promote activity in a safe environment for children, adults and even family pets. Lifelong learning about nature could be made possible through participatory and active environmental education programs targeted at all ages.

Wildlife habitat and trail connections

By establishing new greenways and wildlife corridors, the community at UMore Park could provide an important link for wildlife, hikers and cyclists to travel to and from nearby natural areas. Greenways could also provide an important link for residents to get to outdoor recreation opportunities from home. In addition, Dakota County's priorities for the next 10 years include 52 miles of regional greenways.²⁶ Vermillion Highlands is adjacent and to the south of UMore Park and is set aside by legislation for research, recreation and wildlife management in perpetuity. Vermillion Highlands is currently managed to promote pheasant, turkey and deer populations, which are hunted seasonally throughout much of the property. There are currently more than 11 miles of trails through Vermillion Highlands that are enjoyed by hikers, horseback

riders and cross-country skiers.²⁷ Trails and corridors could also be established to the Mississippi River.

Benefits from nature

Healthy ecosystems provide us with a host of benefits. Bacteria and fungi make soil fertile and breakdown wastes. Grasslands and wetlands purify air and capture carbon, natural processes that help to mediate climate change. Insects, bats and birds pollinate flowers and make products like honey. These free benefits from nature are called "ecosystem services," and they decrease with habitat loss. Through effective natural area design and planning, the many services that healthy ecosystems provide could be restored in the community.

A 'cooler' community

Real-estate development normally increases the "heat island effect" by removing trees and vegetation that provide natural cooling effects, and by absorbing heat from the sun through asphalt shingles, parking lots and building materials. The heat island effect increases human discomfort from over-heating, and increases energy use from air conditioning. The community at UMore Park could avoid creating heat-absorbent surfaces through green rooftops, improved road and street design, alternatives to paved areas and use of porous pavement. Preserving trees and fields while creating new gardens, orchards and grasslands could help to cool the community as well.

SUSTAINABLE MATERIALS

Maximize the use of low-embodied energy, local, recycled, salvaged and shared materials in the community at UMore Park to reduce the harvest of raw materials and manage local material resources in a sustainable way; and develop new materials and products for use in the community and introduction to outside markets.

Imagine a community where homes and businesses are built from materials that are locally grown or manufactured from renewable resources. Consider a place where instead of increasing materials going to landfills, used materials are given a new, useful life. Imagine a community where it is easy to find sustainable consumer goods. Think about a place where individuals could find someone in the community who could reuse goods that are no longer needed. Imagine a community where shopping locally supports job creation and growth, and where homes and schools are built with sustainable, non-toxic materials that are more efficient and could create cost savings.

Building and construction activities worldwide consume three billion tons of raw materials each year or 40 percent of total global use.²⁸ The extraction and manufacturing of these materials, as well as their transport has the potential to impact air and water quality, climate change, human health and resource depletion, often with little benefit to the local economy. The community at UMore Park could support local manufacturing, by increasing the use of sustainable materials and practices, and investing in the local economy. Buildings could use healthy, natural, reclaimed and recycled materials to reduce energy intensive materials and waste generation, and improve indoor air quality.

Wiser use of resources

Construction at UMore Park could use fewer building materials than conventional developments through smart design of buildings and public spaces, best construction management practices and building material recovery and reuse. Use of high-quality construction techniques to produce long-lasting, durable buildings could mean less replacement in the future. With at least 50 percent of wood-based products that are Forest Stewardship Council (FSC) certified, the community at UMore Park could ensure that products are sustainably harvested. FSC certification provides a credible link between responsible production and consumption of forest products, enabling consumers and businesses to make purchasing decisions that benefit people, business and the environment.

New jobs, support for businesses

An aspirational goal for the community is that at least 20 percent of building materials could be manufactured on-site (including aggregate from gravel mining operations on the site). The UMore Park property contains one of the last remaining high-quality aggregate deposits in Minnesota. Sand and gravel will be mined on a portion of the property and ancillary operations are envisioned to provide job opportunities locally. UMore Park could help create new green-collar jobs in an eco-industrial area on-site in sustain-

able materials R&D, manufacturing and supply. The creation of a sustainable materials local business incubator is envisioned for the community. An additional 20 percent of building materials could be sourced from within 500 miles. The community could take advantage of its large size to negotiate purchase of large volumes of high-quality, sustainably-manufactured goods from nearby manufacturers, including regional companies whenever possible. Other aspirational goals for the community include establishing a sustainable, local brand that identifies products produced in UMore Park as well as locally-based services.

Building material reuse

The Minnesota Materials Exchange program is a free service that links organizations that have reusable goods they no longer need to those who could use them. In the last five years, the Materials Exchange program has helped businesses save over seven million dollars and exchange over 30 million pounds of material.²⁹ The community could encourage the use of regional and community waste streams to support identification and design of new materials and products.

Healthy building materials

The indoor environment can have a direct and indirect effect on health, comfort and productivity. The Materials Red List of the Living Building Challenge helps building designers identify and eliminate the chemicals and unsustainable materials from the built environment.³⁰ This approach encourages builders to avoid building materials that are potentially harmful to human health at various stages of the product's lifecycle. Alternative and healthier products are available as substitutes for these materials, although a few are more difficult to replace or avoid than others. Plans for the

community strive to avoid use of materials on the Red List wherever possible, ensuring that residents and visitors to the community are able to enjoy the healthiest, highest quality indoor air possible.

Educational programs and resources

The community could establish educational programs and initiatives to inform and enhance consumer behavior around sustainable, healthy materials and products for inside and outside the home. Residents could find convenient access to cleaning and household products that are biodegradable and safe for children and pets, and to local stores that offer safe, healthy alternatives for clothing, furniture, efficient appliances, light bulbs and other aspects of a healthy lifestyle. A "think local" campaign could inform shoppers about local sustainable community-branded products and services, and promote sustainable and local goods from across the broader region. Programs could encourage use of recyclable, compostable products and promote sharing, reuse and swapping programs for consumer goods and products.

Develop materials guidelines

Plans for the community could include creation of design and construction guidelines for materials using cost-benefit and lifecycle analyses, and establish a regular revision timeline to ensure they are up-to-date. Guidelines could encourage use of materials with recycled content, promote reusability and ease of disassembly and deconstruction, and foster selection of materials produced or manufactured in proximity to the site. In addition, guidelines could help to avoid products that contain materials or chemicals on the Living Building Challenge Material Red List including volatile organic compounds.

ZERO WASTE

Eliminate waste in the community at UMore Park to the extent practical through prevention, reuse, recycling and recovery, and employ education and programs to promote efficient and effective consumer behavior.

Imagine parks and plazas where children enjoy playgrounds, grandparents sit on park benches, and passersby stop to admire public art—all made from reclaimed and reused materials. Imagine a home that is part of a district energy system that turns the neighborhood's organic waste into clean, efficient biogas and then into heat and electricity and is free of fossil fuel-based power. Imagine shopping at grocery and retail stores that go out of the way to reduce unnecessary, wasteful packaging. Think about living in a community where safe disposal of toxic substances, batteries or electronics is as easy as recycling paper or bottles. Imagine working for a company that takes the byproduct from a neighboring company to create new, useful and sustainable products for sale in regional and local businesses and shops.

The community at UMore Park could revive a tradition of recycling and reusing waste material in homes and businesses, so that ultimately five percent or less waste goes to landfills. Innovative waste programs could create a model for waste management in Minnesota, create new jobs, generate energy and fertilizer from organic waste, and make it more convenient to reduce the amount of household waste that goes to landfills.

A waste management model

The current recycling rate in Dakota County is 54 percent. The rate is slightly higher than the metropolitan Twin Cities area but is surpassed by some other Minnesota counties.³¹ The community at UMore Park could help Dakota County achieve its 2030 target for sending just nine percent of its waste to landfills – and 24 percent to waste-to-energy – by creating neighborhoods where innovative approaches, ranging from technology (including waste-to-energy) to behavior change, could be tested and evaluated for broader implementation. Waste-to-energy is the process of incinerating waste to generate electricity or heat for use in buildings.

New jobs from waste innovation

Dakota County hosts two sanitary landfills and is home to several companies already working in the waste management field, making it a net importer of waste.³² The community could build on this regional legacy with the aspirational goal to bring green jobs to the community through energy generation and new products from waste materials. A materials recovery, eco-industrial area is envisioned that could draw a new generation of businesses that recycle community and other waste streams. Wastes could be used as raw materials for creating new locally-made products, encouraging a closed-loop system wherever possible, and creating jobs on-site as well.

Energy from organic waste

Yard waste and kitchen scraps that might be composted or converted to biogas make up almost one-sixth of Dakota County's trash.³³ Innovative solutions and emerging technologies could be explored for the community to generate and extract energy from waste and reduce greenhouse gas emissions. Generating biogas from agricultural and community organic waste is a proven technology that could also generate a profit. Biogas is a renewable energy that could create jobs and contribute to technological development and the broader R&D goals of the community. A byproduct of the anaerobic digestion process could be used as a fertilizer.

Fertilizer from organic waste

Composting is nature's process of recycling decomposed organic materials into a soil amendment that is used in gardening and landscaping. By composting organic waste, residents of the community could return nutrients back to the soil. Composting is an excellent low-tech approach that enriches soils, protects plants and is safer than using commercial fertilizers and pesticides. A local composting facility located in close proximity to the UMore Park property makes recycling possible for organics such as food waste, non-recyclable paper waste and yard waste by collecting and processing these materials into a valuable soil amendment.³⁴

A zero-waste culture

On average, every resident of Dakota County generates about 1.2 tons of garbage each year.³⁵ Waste prevention and reduction could be accomplished by fostering a community zero-waste culture that encourages use of recyclable, compostable products and emphasizes sharing, reuse and swapping initiatives and programs. Aspirational goals for the community strive to make it easy and convenient to access smart waste infrastructure at the individual and community level, including single-sort recycling and reuse exchanges. A community hub in the neighborhood community centers could enable residents to share and reuse products like tools, lawnmowers and recreation equipment such as skis and roller blades. Service positions and businesses in the community could support product repair such as shoe repair, tailors and mechanics. The community could also promote policies for commercial, industrial and retail businesses in the community to support packaging reduction, increased bulk transport and other policies designed to minimize waste.

Construction waste reuse

Aspirational goals for the community include reducing and managing construction waste through design specifications, on-site separation, reuse and recycling efforts. Space could be established for material separation to promote reclamation and reuse.

ZERO CARBON

Design and maintain the UMore Park community to achieve carbon neutrality by combining high-performance, energy-efficient building design; efficient distribution of innovative renewable energy sourced from within the community; and on-site carbon sequestration.

Imagine living in a comfortable home—warm in the winter, cool in the summer—without any concern about high energy costs. Imagine knowing that making homes comfortable on the inside is also maintaining clean air on the outside. Consider a place where waste, instead of being sent to landfills, is used to provide safe, clean heat and power to homes and buildings in the community.

Climate change, due to the human-induced build-up of carbon dioxide (CO₂) in the atmosphere, has negative environmental consequences, including reduced air quality. Rising energy costs burden the economy and citizens. The strategy to eliminate carbon emissions from buildings in the community at UMore Park could mean lower utility bills, reduced environmental impacts and the opportunity to explore renewable-energy options and reduce dependence on oil.

Local district energy

The development of clean, local power in the community could provide efficient generation and transport of heated or chilled water to a network of homes and commercial buildings, reducing greenhouse gas emissions. This network could use waste heat from a wide variety of sources, including biogas, energy-from-waste, industrial or retail waste heat generation, solar thermal, heat pumps and biomass boilers, among others. Such a district energy approach could increase fuel efficiency through use of combined heat and power to both generate electricity and produce hot water. In addition to the provision of hot water, many of these systems could also provide electricity to homes. Eventually 100 percent of the energy provided at UMore Park could be generated from clean, local and renewable power.

Lower utility costs

Residential and commercial buildings account for almost 39 percent of total U.S. energy consumption and 38 percent of U.S. carbon dioxide (CO₂) emissions.³⁶ Aspirational goals for the community at UMore Park include eliminating carbon emissions from buildings by establishing energy-efficiency guidelines for the community, even as the community generates its own supply of energy. Compared with standard homes, residences at UMore Park could use substantially less energy for heating, cooling and water heating, delivering significant annual savings based on design, solar orientation and insulation. Over the average number of years

that individuals live in their homes, savings on utility bills could add up to thousands of dollars. Additional savings on maintenance could also be substantial.

High-performance homes

By choosing an environmentally-friendly home in a recognized sustainable community, residents could be confident that the house increases in value when the time comes to sell. The high-performance buildings envisioned for the community could deliver better protection against cold, heat, drafts, moisture, pollution and noise. Energy-efficient homes could help to ensure consistent temperatures between and across rooms, improved indoor air quality and greater durability.

Natural energy flows

Buildings at UMore Park could be designed and built to capture natural flows of energy including solar and wind energy, natural ventilation, shading and roof slopes for photovoltaic and solar thermal panels. Passive solar heating systems could make use of various building components to collect, store and distribute solar heat gains to reduce the demand for space heating as a natural companion to mechanical heating.

Consumer engagement

Buildings at UMore Park could provide control systems and metering to allow for maximum control, balance and accountability of energy use by residents

and businesses, and employ smart grid technology so that energy could be used far more efficiently throughout the community. Energy meters could be placed in highly visible locations in each dwelling unit, providing data to consumers in easy-to-read and comprehensible formats that make it easy to adjust their habits to conserve resources. Furthermore, residents could learn through educational programs how to monitor and reduce their energy use, generate energy on a micro scale and participate in community-based energy generation.

Carbon capture

The average Minnesotan emits about 30 metric tons of CO₂ equivalent emissions, compared to the national per capita average of about 24 tons of CO₂. The primary sources of emissions for Minnesotans include electricity use, transportation and residential, commercial and industrial heating and cooling.³⁷ Despite the extraordinary measures that could be taken to eliminate building emissions and reduce emissions from transport and other categories, the community may still generate more greenhouse gas emissions than are sustainable, such as the embodied carbon of materials and in home construction, or transport emissions from air transportation. To assist with these unavoidable emissions, the community could employ methods to capture and store (sequester) carbon to offset at least some of the carbon produced throughout development and in the community over time.

SUSTAINABLE TRANSPORT

Promote innovative, appealing and low-carbon transportation and transit choices for residents of the community at UMore Park and develop related initiatives focused on reductions in transportation-related emissions, through research, creation and evaluation of alternative transportation options.

Imagine strolling along bicycle-friendly, child-safe streets, past community gardens and wildlife habitat. Imagine the convenience of the nearby neighborhood center bustling with cafes and shops selling locally-made goods and food. Imagine morning commutes to the office that are based on a walk through the town center and a stop at a favorite establishment for coffee.

The length of time required by daily commuting could affect quality of life. The aspirational goal for the community at UMore Park is the ability to enjoy employment and recreation opportunities in close proximity to residences. Plans are for houses that are close to jobs, shops, and schools and with more available transportation choices.

Walkable neighborhoods

The community at UMore Park could feature compact neighborhoods that allow residents to conveniently meet their daily needs on foot or bicycle, and foster a variety of on-site employment opportunities within a five-minute walk of most homes. A walkable neighborhood is not just more sustainable—it is worth more. A study by CEOs for Cities found that “houses with above average levels of walkability command a premium of \$4,000 to \$34,000” and that such high values “are greatest when people have real alternatives to living without an automobile.”³⁸

Connections to town and regional centers

The average person in Dakota County spends 47 minutes a day commuting, which adds up to 429 days spent in a vehicle over a lifetime.³⁹ Residents of UMore Park could spend less time driving, and more time walking or bicycling to nearby town centers and nature trails, helping to create a healthier community. A community bus service is envisioned with convenient stops located within and around UMore Park. The community could also be connected to regional transit authorities to facilitate regional connections, emphasizing alternate fuel vehicle transit service to St. Paul, Minneapolis and the Minneapolis/St. Paul International Airport.

A healthier lifestyle

Vehicle-based commuting reduces opportunities for walking throughout the day. Experts suggest that people should walk each day to maintain wellness.⁴⁰ Reduced commuting time translates as

increased quality time for residents. Regular exercise like walking or biking pays dividends, such as improving mood, building stronger bones and reducing risk of disease. In the community at UMore Park, walking and biking could be designed into everyday life, and the community could add significantly to the paved trails in the county, and groom trails on-site for cross-country skiing in the winter.

Reduced transportation costs

According to the American Automobile Association, the average annual cost to own and operate a medium-sized car has risen 3.4 percent since last year to 58.5 cents a mile, or \$8,776 a year.⁴¹ Gasoline prices have skyrocketed six times in the last 40 years, peaking in 2008 at \$4.11 per gallon.^{42,43} In addition to the cost savings from being able to walk, bike or take transit to meet daily needs, car-sharing programs at UMore Park could provide a popular alternative to owning a vehicle or second vehicle. Various options for short- or long-term vehicle rentals could be made easy and are less expensive than owning and maintaining a personal vehicle.

Safer streets

Streets have many social and recreational functions that are impaired by fast vehicle traffic. Safer streets in the community at UMore Park could be narrower to calm traffic and designed to accommodate pedestrians, children, bicyclists and low-speed motor vehicles. Among other benefits, more people walking on the streets at UMore Park could help create a neighborhood that stands out as healthy, safe and inviting.⁴⁴

Transportation options

An investment in future transportation infrastructure in the community at UMore Park and the region with a strong focus on transit (bus rapid transit, light rail or emerging options), could offer significant benefits to residents and to economic development. Both cost to the consumer and the contributions to greenhouse gas emissions could be reduced. In 2005, the average Minnesotan emitted 7.3 metric tons of greenhouse gases from transportation.⁴⁵ Residents at UMore Park could reduce their greenhouse gas emissions through improved transportation and transit.

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This initial plan reflects a collective, thoughtful, optimistic approach toward economic, social and environmental sustainability that will be updated periodically. Crafting aspirations for the future – particularly for the development of a sustainable community of 20,000 to 30,000 people that will unfold over 30 or more years – is a challenge. The UMore Park team is grateful to all who helped to fashion this template for the future.

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The Champions

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