REPORT / RECOMMENDATION

To: MAYOR AND COUNCIL

Agenda Item #: VI.B.

From: Cary Teague, Community Development Director

Action ☒
Discussion ☒
Information ☐

Date: June 17, 2014

Subject: PUBLIC HEARING – Comprehensive Plan Amendment regarding residential density for mixed use areas, building height floor area ratio and land use; Resolution No. 2014-68.

Action Requested:
Adopt Resolution No. 2014-68, approving the Comprehensive Plan Amendment.

Planning Commission Recommendation: On June 11, 2014 the Planning Commission recommended approval of the Comprehensive Plan Amendment; Vote: 7 Ayes, 0 Nays. (See attached Planning Commission minutes.)

Information / Background:
As a result of the recent Comprehensive Plan Amendment for the Lennar project at 6725 York Avenue, the Metropolitan Council has requested that the City of Edina establish new residential density ranges within the City's Comprehensive Plan to better align with the description of the uses allowed within each District.

As demonstrated in the attached pages A1 – A6 from the Planning Commission Staff Report, the residential density ranges in the Comprehensive Plan for Office Residential (OR), Mixed Use Center (MXC), Community Activity Center (CAC), (NC), Neighborhood Commercial and Regional Medical (RM) are from 1-2 and 2-3 units per acre. These densities are less than the City's Low Density Residential (LDR) district, which allows up to 5 units per acre.

Densities from 1-3 units per acre are not feasible for the intended mixed-use character or opportunity in these areas.

The descriptions of these districts on pages A3 – A6, include "multifamily residential; vertical mixed use; serving areas larger than one neighborhood; the most intense district in terms of uses, height and coverage." Requiring densities less than the Low Density Residential (LDR) range does not encourage redevelopment with mixed uses in these areas; or reflect the types of redevelopment occurring in Edina and the Twin Cities. The Lennar project is located within the CAC district.

By establishing new density ranges for these areas, the city would create the feasibility for mixed use projects. Changes to these density ranges would be accommodating growth that has been anticipated and planned for in the City's future population projections.

In general, the proposed density ranges are based on the City's existing, approved and proposed development within each land use district; and staying consistent with existing residential density ranges already established within the Comprehensive Plan.

ATTACHMENTS:

- Resolution No. 2014 - 68
- Planning Commission Minutes: May 28 and June 11, 2014.
- Planning Commission Staff Report dated June 11, 2014

RESOLUTION NO. 2014-68
APPROVING COMPREHENSIVE PLAN AMENDMENTS REGARDING RESIDENTIAL DENSITY FOR MIXED USE AREAS, BUILDING HEIGHT, FLOOR AREA RATIO AND LAND USE

Section 1. BACKGROUND.

1.01 The Metropolitan Council has requested that the City of Edina establish new residential density ranges within the City's Comprehensive Plan to better align with the description of the uses allowed within each District. Floor area ratio alone cannot be used to determine densities within mixed use areas as suggested in the text of the Comprehensive Plan.

1.02 Lennar Corporation is proposing to tear down the existing retail building at 6725 York Avenue, and single family homes at 6712, 6708, 6704, 6700 and 6628 Xerxes Avenue, and build a six-story, 240 unit upscale apartment building with 11,000 square feet of retail on the first level. To accommodate the request, three amendments to the Comprehensive Plan were approved by the City Council:

1. Building Height – from 4 stories and 48 feet to 6 stories and 70 feet.
2. Floor Area Ratio – to exceed 1.0 in some instances.
3. Re-guiding the Land Use Plan for the five single-family homes on Xerxes from Low Density Residential to Community Activity Center.

1.03 On June 11, 2014, the Planning Commission recommended approval of the Comprehensive Plan Amendment. Vote: 7 Ayes and 0 Nays.

Section 2. FINDINGS

2.01 The Edina Comprehensive Plan is a guide for development and redevelopment in the city that establishes density ranges for the purposes of managing growth. Density in mixed use and planned commercial districts are primarily regulated by Floor Area Ratio within the existing Edina Zoning Ordinance.

2.02 Residential density ranges within the City's mixed use areas including CAC, Community Activity Center; MXC, Mixed Use Center; OR, Office Residential; and NC, Neighborhood Commercial District are between 1-2 and 2-3 units per acre, which are not feasible for the intended mixed-use character or opportunity in these areas. The City's LDR, Low Density Residential District allows up to 5 units per acre, which is a higher density than the above mixed use districts. The RM, Regional Medical District does not have a residential density range and senior housing is a permitted use.

2.03 By establishing new residential density ranges for these areas, the city would create the feasibility for mixed use projects. Changes to these residential density ranges would be accommodating growth that had already been anticipated and planned for in the City's future population projections.

Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~

2.04. The Comprehensive Plan recognizes the Southdale area and the CAC as the most intense district in terms of uses, height and coverage. The City allows a floor area ratio of up to 1.5 in other parts of the City, such as 50th France. The floor area ratio maximum in the CAC is 1.0. The suggested density of 2-3 units per acre would result in less density than the City's Low Density Residential area; which allows up to 5 units per acre, would not encourage a mixture of land uses. A density range of 12-75 units per acre in this area is reasonable given the description of this area is the city's most intense district in terms of uses, height and coverage. Floor area ratio would continue to impact densities based on the Zoning Ordinance regulations.

2.05. The OR, Office Residential District guides density at a range of 2-3 units per acre in the current Comprehensive Plan. An OR density of 12-30 units per acre would be consistent with High Density Residential District and reasonable to encourage mixed use development.

2.06. The MXC, Mixed Use Center district guides density at a range of 1-2 units per acre. These areas include 50th & France, Grandview and Centennial Lakes/Greater Southdale area. A Mixed Use Center density of 12-30 units would be consistent with High Density Residential district and reasonable to encourage mixed use development. This density range is consistent with existing densities in all three of these areas, including 50th and France Condos (23 units per acre) and 71 France in the Centennial Lakes area (24 units per acre), and Grandview Square (29 units per acre.)

2.07 The NC, Neighborhood Commercial District guides density at a range of 1-2 units per acre. A density of 5-12 units would be consistent with Medium Density Residential district and reasonable to encourage mixed use development.

2.08 The RM, Regional Medical District is an area that is proposed for senior housing, and does not have a specific range for density. A Comprehensive Plan amendment was approved for the senior housing project at 6500 France. Senior Housing creates a lesser impact on traffic; therefore, higher densities can be supported in this area. Density for senior housing shall also be based on proximity to hospitals, proximity to low density uses, utilities capacity, level of transit service available, and impact on adjacent roads. Other desired items to allow greater density would include: Below grade parking, provision of park or open space, affordable housing, sustainable design principles, and provision of public art. A density range of 12-80 units per acre is reasonable to encourage that use in the district.

2.09. Establishing higher residential density ranges within mixed use areas, align with other elements of the Comprehensive Plan, including growth that had been forecasted by the Metropolitan Council.

2.10. The proposed densities using unit per acre are consistent with the existing descriptions of each land use category in the Comprehensive Plan; are consistent with existing development in Edina; and are consistent with the existing Edina Zoning Ordinance.

2.11. There is adequate roadway capacity and sewer capacity to support the proposed residential density ranges proposed in these mixed use areas.

Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~

2.12. The proposed land use change of the single family homes on Xerxes Avenue are consistent with existing and proposed land uses in this area. The City of Richfield has guided the single family homes on the east side of Xerxes as medium density residential, and the property to the north west and south in Edina are guided CAC, Community Activity Center; therefore, the long term vision of both Edina and Richfield in this area is for higher densities.

2.13. Podium height is proposed on both Xerxes and York as recommended in the Comprehensive Plan. The six story portion of the building is stepped back into the site to minimize impact on adjacent property.

2.14. The Comprehensive Plan recognizes the Southdale area and the CAC as the most intense district in terms of uses, height and coverage. The City allows a floor area ratio of up to 1.5 in other parts of the City, such as 50th France; therefore, the floor area ratio of the proposed use at 1.27, which is predominantly residential, is appropriate for the area.

2.15. The traffic and parking study done by WSB concludes that the existing roadways can support the proposed project, and there would be adequate parking provided.

NOW THEREFORE, be it resolved by City Council of the City of Edina, Minnesota as follows:

3.01 Resolution 2014-51 is rescinded.

3.02 The following Comprehensive Plan Amendments are approved subject to review by the Metropolitan Council pursuant to Minnesota Statutes §473.864:

A. Future Land Use Categories. The categories in the table below apply to the Future Land Use Plan. It is important to note that land use categories are not zoning districts – they are broader and more long-term in scope. The land use plan and the zoning ordinance should be consistent with one another, but are not identical. Each land use category may be implemented through more than one zoning district, allowing for important differences in building height, bulk and coverage in different areas of the city. Some revisions to existing zoning districts or creation of new districts may ultimately be needed as part of the implementation of the land use plan.

Land uses are characterized primarily by range of densities or intensities. For residential uses, density is defined in terms of dwelling units per net acre (exclusive of road rights-of-way and public lands). For nonresidential and mixed uses, intensity is typically defined in terms of floor-to-area ratio, or FAR, which refers to the ratio of a building's floor area to the size of its lot. A density unit per acre range is listed below, however, in practice FAR limits the density in the Edina Zoning Ordinance based on site size. Thus, a maximum FAR of 1.0 could allow for a two-story building covering 50% of the lot; a 3-story building on one-third of the lot, and so on. Building heights are not specified in the table, because height will vary within and between categories, based on neighborhood context, infrastructure, and community design goals. (See the discussion later in this section.)

Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~

The "Development Guidelines" in the table below are intended to highlight important design considerations for each land use category, but are not regulatory in nature. When residential development is proposed in a mixed use district, the residential density range shall apply, in addition to the FAR requirement. Residential development is not required in mixed use areas.

Residential Categories	Description, Land Uses	Development Guidelines	Density Range
LDR Low Density Residential	Applies to largely single-family residential neighborhoods, encompassing a variety of lot sizes and street patterns (see "Character Districts" for more detail). Typically includes small institutional uses such as schools, churches, neighborhood parks, etc.	Massing standards (under development) and impervious coverage limitations would apply to ensure compatibility of infill construction.	**1 - 5 units/acre** Floor to Area Ratio: per current Zoning Code*
LDA Low-Density Attached Residential	Applies to two-family and attached dwellings of low densities and moderate heights. This category recognizes the historical role of these housing types as transitional districts between single-family residential areas and major thoroughfares or commercial districts. May include single-family detached dwellings.	Introduction of more contemporary housing types, such as low-density townhouses, may be an appropriate replacement for two-family dwellings in some locations, provided that adequate transitions to and buffering of adjacent dwellings can be achieved.	**4 - 8 units/acre** Floor to Area Ratio: per current Zoning Code*
MDR Medium-Density Residential	Applies to attached housing (townhouses, quads, etc.) and multi-family complexes of moderate density. May also include small institutional uses, parks and open space	In new development or redevelopment, improve integration of multi-family housing into an interconnected street network and work to create an attractive, pedestrian-friendly street edge.	**5 - 12 units/acre** Floor to Area Ratio: per current Zoning Code*
HDR High-Density Residential	Existing "high-rise" and other concentrated multi-family residential, some of which may contain a mixed use component. May also include limited office, service or institutional uses primarily to serve residents' needs, parks and open space	Provide incentives for updating older multifamily buildings. Work to create an attractive, pedestrian-friendly street edge and provide convenient access to transit, schools, parks, and other community	**12 – 30 units/acre** Density for senior housing may be increased to over 30 units per acre, based on proximity to hospitals, proximity to low density uses, utilities capacity, level of transit service available, and impact on adjacent roads. Other desired items to allow

Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~

		destinations.	greater density for senior housing would include: Below grade parking, provision of park or open space, affordable housing, sustainable design principles, and provision of public art. Floor to Area Ratio: per current Zoning Code*
Nonresidential and Mixed Use Categories	**Description, Land Uses**	**Development Guidelines**	**Density Guidelines**
NC **Neighborhood Commercial** Current examples: • Morningside commercial core • Valley View and Wooddale • 70th & Cahill	Small- to moderate-scale commercial, serving primarily the adjacent neighborhood(s). Generally a 'node' rather than a 'corridor.' Primary uses are retail and services, offices, studios, institutional uses. Residential uses permitted. Existing and potential neighborhood commercial districts are identified for further study.	Building footprints generally less than 20,000 sq. ft. (or less for individual storefronts). Parking is less prominent than pedestrian features. Encourage structured parking and open space linkages where feasible; emphasize enhancement of the pedestrian environment.	~~2–3~~ 5-12 residential dwelling units/acre **Floor to Area Ratio-Per current Zoning Code: maximum of 1.0***
OR **Office-Residential** No current examples in City. Potential examples include Pentagon Park area and other I-494 corridor locations	Transitional areas along major thoroughfares or between higher-intensity districts and residential districts. Many existing highway-oriented commercial areas are anticipated to transition to this more mixed-use character. Primary uses are offices, attached or multifamily housing. Secondary uses: Limited retail and service uses (not including "big box" retail), limited industrial (fully enclosed), institutional uses, parks and open space. Vertical mixed use should be encouraged, and may be required on larger sites.	Upgrade existing streetscape and building appearance, improve pedestrian and transit environment. Encourage structured parking and open space linkages where feasible; emphasize the enhancement of the pedestrian environment.	~~2–3~~ 12-30 residential dwelling units/acre **Floor to Area Ratio-Per current Zoning Code: maximum of 0.5 to 1.0***
O **Office** Current examples include the office	This designation allows for professional and business offices, generally where retail services do not occur within the development	Provide buffer/transition to adjacent residential uses. Use high quality	**Floor to Area Ratio – Per Zoning Code:** **Maximum of 0.5**

Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~

buildings on the west side of TH 100 between 70th and 77th Streets.	unless they are accessory uses that serve the needs of office building tenants. Vehicle access requirements for office uses are high; however, traffic generation from office buildings is limited to morning and evening peak hours during weekdays. Office uses should be located generally along arterial and collector streets.	permanent building materials and on-site landscaping. Encourage structured parking.	
Nonresidential and Mixed Use Categories	**Description, Land Uses**	**Development Guidelines**	**Density Guidelines**
MXC **Mixed-Use Center** Current examples: • 50th and France • Grandview	Established or emerging mixed use districts serving areas larger than one neighborhood (and beyond city boundaries). Primary uses: Retail, office, service, multifamily residential, institutional uses, parks and open space. Vertical mixed use should be encouraged, and may be required on larger sites.	Maintain existing, or create new, pedestrian and streetscape amenities; encourage or require structured parking. Buildings "step down" in height from intersections. 4 stories at 50th & France; 3-6 stories at Grandview	~~1–2~~ 12-30 residential dwelling units/acre **Floor to Area Ratio-Per current Zoning Code: maximum of 1.5**
CAC **Community Activity Center** Example: Greater Southdale area (not including large multi-family residential neighborhoods such as Centennial Lakes)	The most intense district in terms of uses, height and coverage. Primary uses: Retail, office, lodging, entertainment and residential uses, combined or in separate buildings. Secondary uses: Institutional, recreational uses. Mixed use should be encouraged, and may be required on larger sites.	Form-based design standards for building placement, massing and street-level treatment. Buildings should be placed in appropriate proximity to streets to create pedestrian scale. Buildings "step down" at boundaries with lower-density districts and upper stories "step back" from street. More stringent design standards for buildings > 5 stories. Emphasize pedestrian circulation; re-introduce finer-grained circulation patterns where feasible.	~~2–3~~ 12-75 residential dwelling units/acre **Floor to Area Ratio-Per current Zoning Code: maximum of 0.5 to 1.0*** Floor to Area Ratio may exceed 1.0 on a case by case basis, subject to proximity to utilities capacity, level of transit service available, and impact on adjacent roads. Other desired items to allow greater density or density on the high end of the residential housing range above, would include: Below grade parking, provision of park or open space, affordable housing, sustainable design principles, provision of public art, pedestrian circulation, and podium height.

Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~

I **Industrial**	Applies to existing predominantly industrial areas within the City. Primary uses: industrial, manufacturing. Secondary uses: limited retail and service uses.	Performance standards to ensure compatibility with adjacent uses; screening of outdoor activities.	**Floor to Area Ratio: Per Zoning Code: 0.5***
Nonresidential and Mixed Use Categories	**Description, Land Uses**	**Development Guidelines**	**Density Guidelines**
RM **Regional Medical**	Hospitals, senior housing*, medical and dental offices and clinics, and laboratories for performing medical or dental research, diagnostic testing, analytical or clinical work, having a direct relationship to the providing of health services. General office uses are permitted. * Senior housing may include: independent living, assisted living, memory care, and skilled nursing.	Form-based design standards for building placement, massing and street-level treatment. Pedestrian circulation and open space amenities should be provided for larger sites.	12-80 senior residential dwelling units/acre **Floor to Area Ratio – Per current Zoning Code: maximum of 1.0 For medical office uses.** Density for senior housing shall be based on proximity to hospitals, proximity to low density uses, utilities capacity, level of transit service available, and impact on adjacent roads. Other desired items to allow greater density would include: Below grade parking, provision of park or open space, affordable housing, sustainable design principles, and provision of public art.
OSP **Open Space and Parks**	Applies to major parks and protected open space that is publicly owned. May not include all small parks, since some are included in residential land use districts.	Performance and buffering standards for intensive outdoor recreation, parking.	**N/A**
PSP **Public/Semi-Public**	Applies to schools, large institutional uses (churches, cemeteries) and semi-public uses such as country clubs. Some small uses of these types may be integrated into other land use districts.	Performance and buffering standards for intensive outdoor recreation, parking.	**To be determined** – may require review of large-scale development or institutional expansion

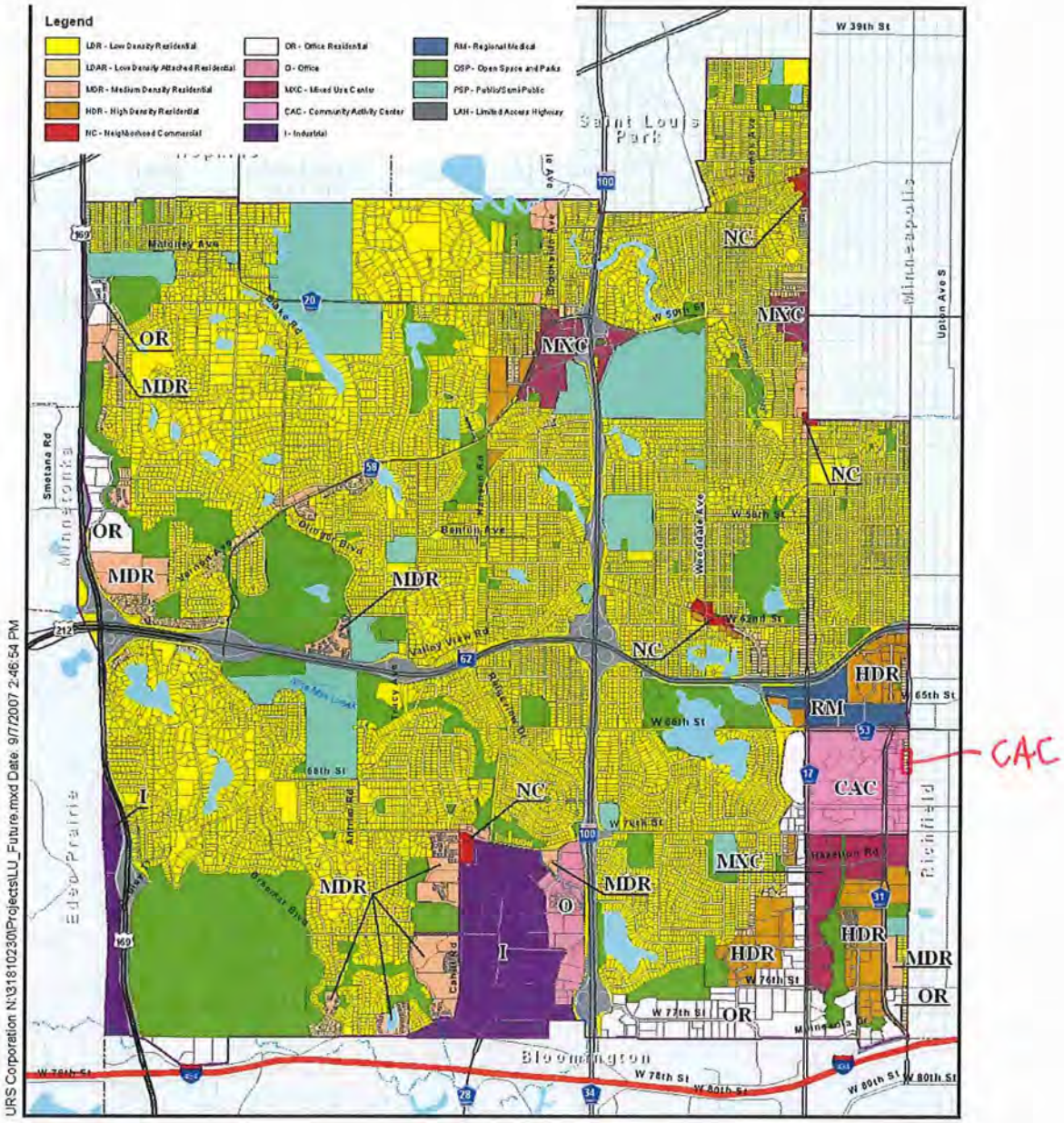
Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~

LAH **Limited Access Highway**	Expressways and access ramps for two regional arterial highways (TH 62 and TH 100) occupy land within the City to serve local and regional travel needs.	NA	NA

*Floor-to-area ratio, or FAR, refers to the ratio of a building's floor area to the size of its lot. Thus, an FAR of 1.0 could mean a two-story building covering 50% of the lot; a 3-story building on one-third of the lot, etc.

Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~

B. Figure 4.3 is amended as follows:



URS Corporation N:\31810230\Projects\LU_Future.mxd Date: 9/7/2007 2:46:54 PM

City of Edina
2008 Comprehensive Plan Update

Data Source: URS

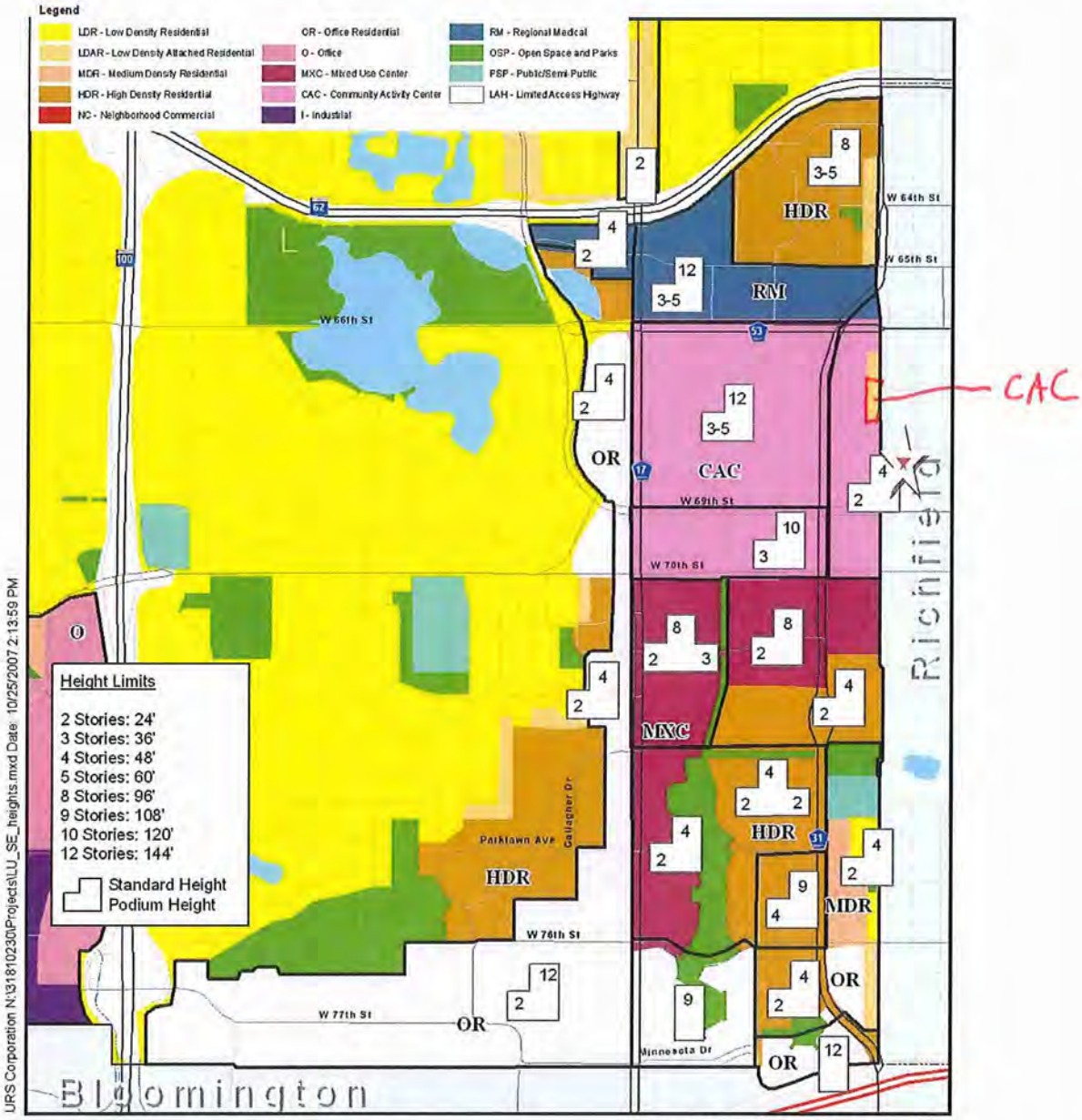
Figure 4.3

Future Land Use Plan

0 0.5 Miles

Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~

C. Figure 4.6B is amended as follows:



City of Edina
2008 Comprehensive Plan Update

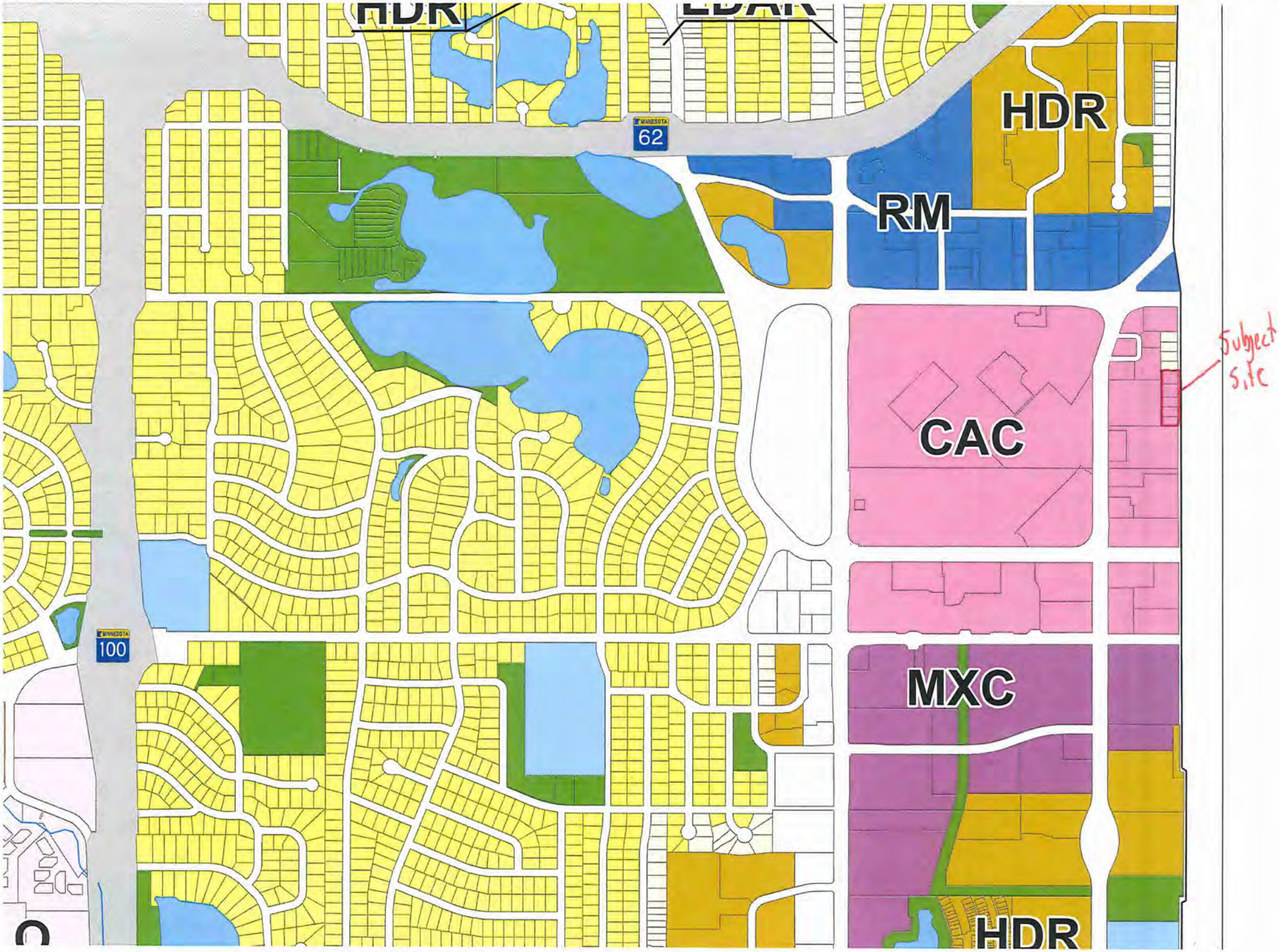
Future Land Use Plan with Building Heights
Southeast Quadrant
Figure 4.6B

Data Source: URS

0 0.5 Miles

**** Height may be increased to six stories & 70 feet if podium height is utilized on York and Xerxes subject to review and approval of the City Council.***

Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~


HDR
LDAR
MINNESOTA
62
HDR
RM
CAC
Subject site
MINNESOTA
100
MXC
HDR

3.03 The City Planner is directed to forward this resolution to the Metropolitan Council for review.

ATTEST:_____ _____
Debra A. Mangen, City Clerk James B. Hovland, Mayor

STATE OF MINNESOTA)
COUNTY OF HENNEPIN)SS
CITY OF EDINA)

CERTIFICATE OF CITY CLERK

I, the undersigned duly appointed and acting City Clerk for the City of Edina do hereby certify that the attached and foregoing Resolution was duly adopted by the Edina City Council at its Regular Meeting of June 17, 2014, and as recorded in the Minutes of said Regular Meeting.

WITNESS my hand and seal of said City this ____ day of _____, 2014.

_____
City Clerk

Existing language xxxx
Language recommended xxxx
Language stricken ~~xxxx~~

PC Minutes
6/11/2014

C. Comprehensive Plan Amendment-Residential Density for Mixed Use Areas

Planner Presentation

Planner Teague reported that as a result of the recent Comprehensive Plan Amendment for the Lennar project, the Metropolitan Council requested that the City establish new residential density ranges within the City's Comprehensive Plan to better align with the description of the uses allowed within each District.

Teague explained that Floor Area Ratio (FAR) alone cannot be used to determine densities. Teague presented a Resolution approving Comprehensive Plan Amendments regarding residential density for mixed use areas and asked the Commissioners for their comments.

Concluding, Teague reported that the Metropolitan Council is aware of the inconsistencies in the density ranges in Edina's Comprehensive Plan and that the City is actively working on a solution to amend the Plan to better reflect the intent.

Discussion

A discussion ensued acknowledging the need to amend the density ranges; noting currently in the City's most intense districts the density guidelines are less than that of the low density residential category. It was further discussed as the density guidelines are reviewed and amended there may be impact on current projects (Byerly's) and future projects (Grandview).

Commissioners raised the following issues:

- Are the proposed changes in the density guidelines for OR, MXC, RM and CAC high enough; or should they be increased
- Consider not having a minimum instead of 12-75 require 0-75, etc.; noting that in some cities 0 is the starting point or there is no limit. Continuing it was observed in some of Edina's small commercial nodes where redevelopment could happen a proposal may work better with less residential units than the minimum would allow. It was also noted that having a minimum would encourage the development of housing.
- It was suggested that a sentence be added above the Future Land Use Categories table that indicates "when residential development is proposed in a mixed use district, the residential density range shall apply, in addition to the FAR requirement. Residential development is not required in mixed use areas.

Chair Staunton referred to correspondence from Scott Takenoff, Pentagon Revival and asked if anyone was present to speak to the issue, being none Commissioner Platteter moved to close the public hearing. Commissioner Scherer seconded the motion. All voted aye; motion to close public hearing carried.

The discussion continued with Commissioners noting that in 2015 the City will begin the Comprehensive Plan revision process and at that time more thought and time could be put into the decision making process on density guidelines. A number of Commissioners felt that amending the ranges at this time without more discussion wouldn't be prudent; acknowledging that any changes to the density ranges would have major development consequences. It was further suggested that the Commission consider acting on what was presented by staff.

Chair Staunton commented after further thought he would agree that more discussion and thought is warranted in making density decisions and asked Planner Teague how he arrived at the density ranges proposed in the resolution. Planner Teague responded that he arrived at those numbers staying consistent with the City's already established high density residential range, and incorporating density ranges that are consistent with existing development within those districts.

Commissioner Platteter said in his opinion that the suggested changes to increase density guidelines this evening are reasonable; however, he understands the feelings of other Commissioners that more thought and discussion on these changes needs to take place.

Motion

Commissioner Platteter moved to recommend approval of the proposed Resolution approving Comprehensive Plan Amendments regarding residential density for mixed use areas, building height, floor area ratio and land use in its entirety as presented by staff. Commissioner Scherer seconded the motion.

Commissioner Forrest asked for an amendment to the motion to be placed before the Future Land Use Categories table to read "when residential development is proposed in a mixed use district, the residential density range shall apply, in addition to the FAR requirement. Residential development is not required in mixed use areas.

Commissioners Platteter and Scherer accepted that amendment.

All voted aye; motion carried.

PLANNING COMMISSION STAFF REPORT

Originator	Meeting Date	Agenda #
Cary Teague **Community Development Director**	**June 11, 2014**	**VI.B.**

INFORMATION/BACKGROUND

Project Description

As a result of the recent Comprehensive Plan Amendment for the Lennar project at 6725 York Avenue, the Metropolitan Council has requested that the City of Edina establish new residential density ranges within the City's Comprehensive Plan to better align with the description of the uses allowed within each District.

The text below is the description of Land Use Categories within the existing Edina Comprehensive Plan. Please note the highlighted areas in regard to density. Staff has incorrectly interpreted this so that FAR could determine density for mixed use areas. Met Council staff has informed city staff that specific density ranges must be used, and that the City of Edina's densities should be revised to reflect the existing descriptions for its districts. Floor area ratio alone cannot be used to determine densities within mixed use areas as suggested in the text of the Comprehensive Plan, and used in the City's Zoning Ordinance.

A. Future Land Use Categories. Land uses are characterized primarily by range of densities or intensities. For residential uses, density is defined in terms of <u>dwelling units per net acre</u> (exclusive of road rights-of-way and public lands). **For nonresidential and mixed uses, intensity is typically defined in terms of <u>floor-to-area ratio</u>, or FAR, which refers to the ratio of a building's floor area to the size of its lot.** Thus, a maximum FAR of 1.0 could allow for a two-story building covering 50% of the lot; a 3-story building on one-third of the lot, and so on. Building heights are not specified in the table, because height will vary within and between categories, based on neighborhood context, infrastructure, and community design goals. (See the discussion later in this section.)

As demonstrated in the attached pages A1 – A6, from the Comprehensive Plan, the residential density ranges for Office Residential (OR), Mixed Use Center (MXC), Community Activity Center (CAC), (NC), Neighborhood Commercial and Regional Medical (RM) are from 1-2 and 2-3 units per acre. These densities are less than the City's Low Density Residential (LDR) district, which allows up to 5 units per acre.

Densities from 1-3 units per acre are not feasible for the intended mixed-use character or opportunity in these areas.

The descriptions of these districts on pages A3 – A6, include "multifamily residential; vertical mixed use; serving areas larger than one neighborhood; the most intense district in terms of uses, height and coverage." Requiring densities less than the Low Density Residential (LDR) range does not encourage redevelopment with mixed uses in these areas; or reflect the types of redevelopment occurring in Edina and the Twin Cities. The Lennar project is located within the CAC district.

By establishing new density ranges for these areas, the city would create the feasibility for mixed use projects. Changes to these density ranges would be accommodating growth that has been anticipated and planned for in the City's future population projections.

The Met Council projection within the Comprehensive Plan was for 22,500 households in Edina by the year 2030. That would be an increase from the 2000 census number of households that was 20,996.

Studies from traffic consultant WSB, and Barr Engineering on the attached pages A25-A59 demonstrate that there is adequate sewer and roadway capacity to support the cities anticipated growth projections. Additionally, as with all redevelopment projects, these issues are also examined with each project individually to ensure adequate capacity.

Floor area ratio would continue to limit density through the existing zoning ordinance requirements. Edina is a fully developed community; therefore, new development would be in the form of redevelopment, or in some instances additional structures within existing parking lots.

Example Residential Density Ranges in Surrounding City's Comprehensive Plans

The attached pages A7- A24 provide information on the residential density ranges used by our surrounding cities. Please note that in general, these density ranges are higher than Edina. The City of Minnetonka does not have a residential density range established for its Mixed Use area. A summary is as follows:

City	Range – Per Acre
Bloomington	
Medium Density Residential	5-10
High Density Residential	No limit
General Business	0-83
Commercial (Community & Regional)	0-83
High Intense mix use	0-60
Airport South mix use	30-131
Richfield	
Medium Density Residential	7-12
High Density Residential	Minimum of 24
High Density Res./Office	Minimum of 24
Mixed Use	50+
St. Louis Park	
Medium Density Residential	6-30
High Density Residential	20-75 (PUD for high end)
Mixed Use	20-75 (PUD for high end)
Commercial	20-50
Minnetonka	
Medium Density Residential	4-12
High Density Residential	12+
Mixed Use	No range established (density based on site location and site conditions See page A18.)
Minneapolis	
Medium Density (mixed use)	20-50
High Density (mixed use)	50-120
Very High Density(mixed use)	120+

Districts for Consideration in Edina

Suggested residential density ranges are demonstrated in the attached draft resolution, and discussed below.

NC, Neighborhood Commercial. The Neighborhood Commercial district guides density at a range of 2-3 units per acre. A density in that range would not encourage mixed use. The Planning Commission recommended a density range of 5-12 units per acre, to be consistent with the Medium Density Residential district and reasonable to encourage mixed use development.

OR, Office Residential. The Office Residential district guides density at a range of 2-3 units per acre in the current Comprehensive Plan. A suggested Office Residential density of 12-30 units per acre would be consistent with the High Density Residential district and reasonable to encourage mixed use development. Pentagon Park is located within the OR district, therefore, if housing is desired within that area, this density range would have to be expanded to realize housing in that development.

MXC, Mixed Use Center. The MXC, Mixed Use Center district guides density at a range of 1-2 units per acre. These areas include 50th & France, Grandview and Centennial Lakes/Greater Southdale Area. A Mixed Use Center density of 12-30 units would be consistent with High Density Residential district and reasonable to encourage mixed use development. This density range is consistent with existing densities in these areas, including 50th and France (23 units per acre) and 71 France in the Centennial Lakes/Greater Southdale area (24 units per acre).
At the May 28 meeting, the Planning Commission recommended a new MXC-1 District be proposed for both of these areas with the 12-30 units per acre range. The Grandview area would then be divided off separately into an MXC-2 district, and continue with the 1-2 units per acre. Densities in this new MXC-2 district would then be studied furthered as part of the Grandview planning process.

However, the Met Council has informed staff that creating a new district would be considered a major Comprehensive Plan amendment, and not be deemed administrative. Therefore, the Commission is asked to proceed with a recommendation in one of two ways. First, leave the MXC as is in its current range of 1-2 units per acre and indicate to the Met Council that the City is still examining these areas in will come forward with a separate Comprehensive Plan Amendment; or second, amend the density to 12-30 units per acre, and consider a separate amendment for just the Grandview District.

CAC, Community Activity Center, The Comprehensive Plan recognizes the Southdale area and the CAC as the most intense district in terms of uses, height and coverage. The floor area ratio maximum in the CAC is 1.0. The existing density suggested in the Comprehensive Plan of 2-3 units per acre would result in less density than the City's Low Density Residential area; which allows up to 5 units per acre. Density in that range would not encourage a mixture of land uses. A density range of 12-75 units per acre in this area is reasonable given the description of this area is the city's most intense district in terms of uses, height and coverage. Floor area ratio would continue to impact densities based on the Zoning Ordinance regulations. As compared to adjacent cities the maximum suggested for this district would still be less than surrounding cities and their most intense districts. The density proposed for the Lennar project is 52 units per acre.

RM, Regional Medical. Regional Medical is an area that allows senior housing, but does not have a specific range for density. This district was amended specifically for the senior housing project at 6500 France. That project would have a density of 76 units per acre. The current density is described as follows: Floor to Area Ratio – Per current Zoning Code: maximum of 1.0 for medical office uses. Density for senior housing shall be based on proximity to hospitals, proximity to low density uses, utilities capacity, level of transit service available, and impact on adjacent roads. Other desired items to allow greater density would include: Below grade parking, provision of park or open space, affordable housing, sustainable design principles, and provision of public art. Based on the project at 6500 France, a density range of 12-80 units/acre is recommended.

The proposed densities using unit per acre are consistent with the existing descriptions of each land use category in the Comprehensive Plan; are consistent with existing development in Edina; and are consistent with the existing Edina Zoning Ordinance. The table on the following page demonstrates the densities of multi-family residential project in the City of Edina.

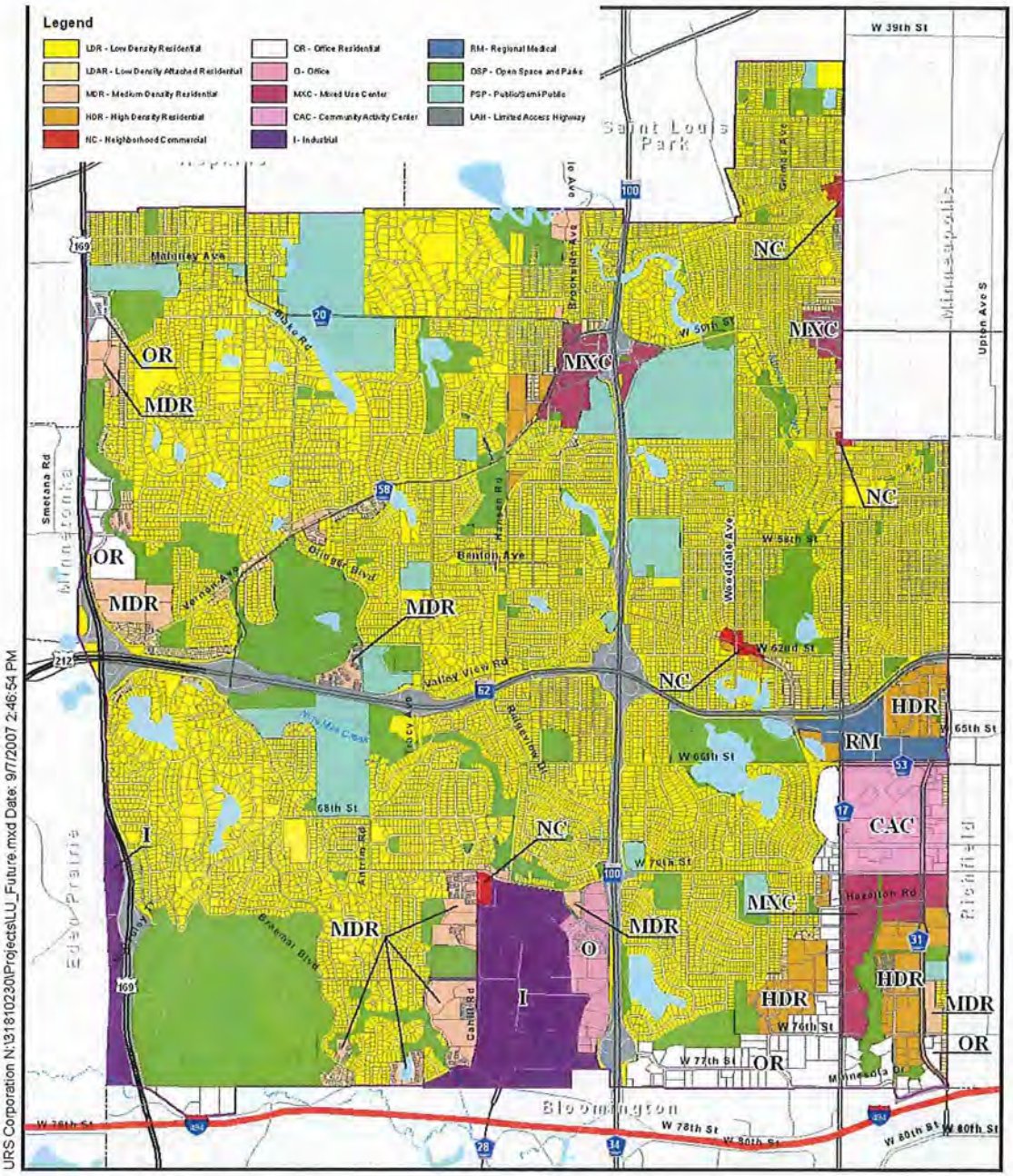
High Density Development in Edina

Development	Address	Units	Units Per Acre
Yorktown Continental	7151 York	264	45
The Durham	7201 York	264	46
6500 France (Senior Housing)	6500 France	179	76
York Plaza Condos	7200-20 York	260	34
York Plaza Apartments	7240-60 York	260	29
Edina Place Apartments	7300-50 York	139	15
Walker Elder Suites	7400 York	72	40
7500 York Cooperative	7500 York	416	36
Edinborough Condos	76xx York	392	36
South Haven	3400 Parklawn	100	42
69th & York Apartments	3121 69th Street	114	30
The Waters	Colonial Drive	139	22

Staff Recommendation

The Planning Commission is asked to hold a public hearing on June 11, and forward a recommendation to the City Council, as they will hold a public hearing on June 17.

Staff recommends approval of the attached resolution approving the Comprehensive Plan Amendment.



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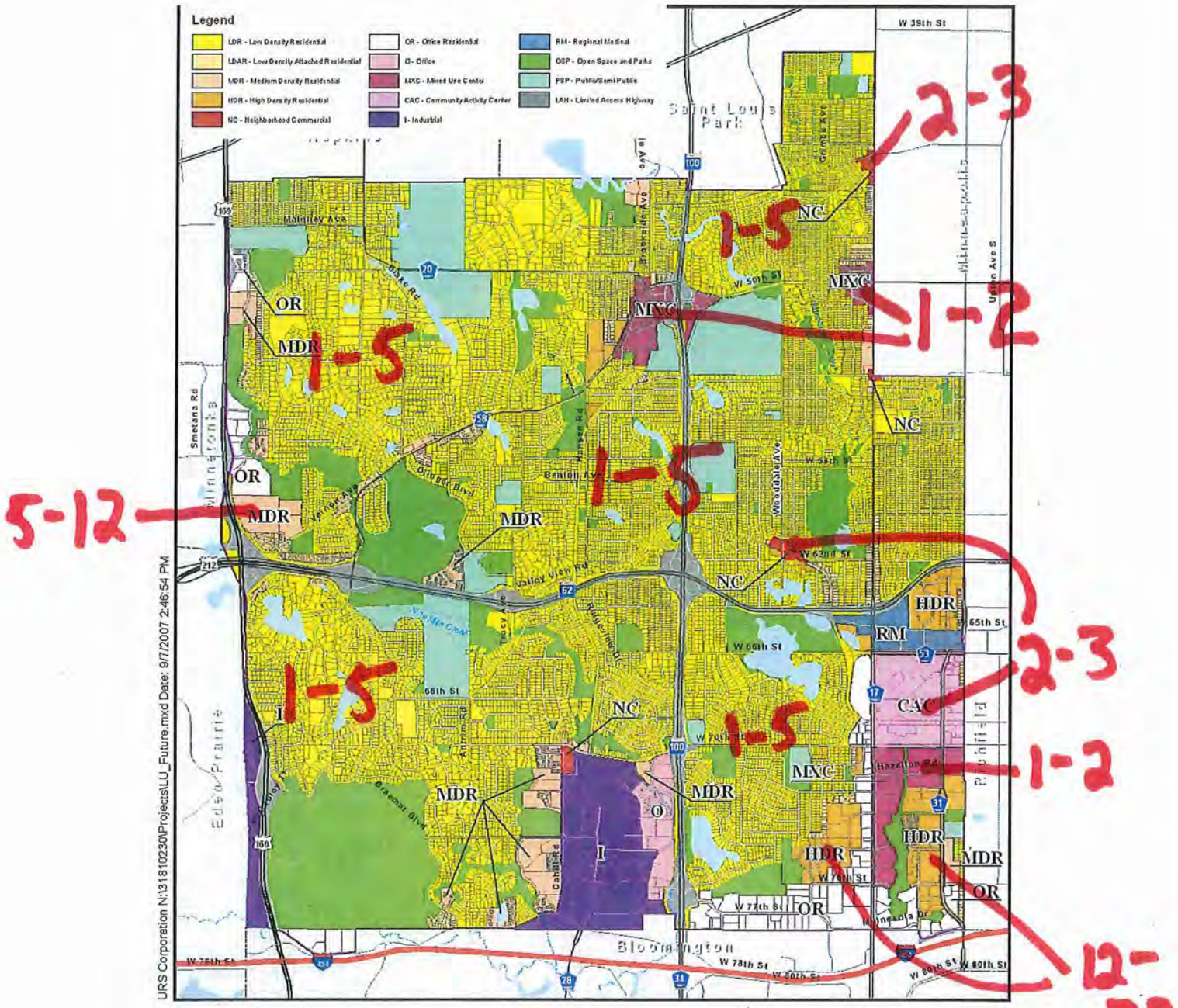
City of Edina
2008 Comprehensive Plan Update

Data Source: URS

Figure 4.3

Future Land Use Plan

0 0.5 Miles



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City of Edina
2008 Comprehensive Plan Update

Data Source: URS

Figure 4.3

Future Land Use Plan

0 0.5 Miles

Future Land Use Categories. The categories in the table below apply to the Future Land Use Plan. It is important to note that land use categories are not zoning districts – they are broader and more long-term in scope. The land use plan and the zoning ordinance should be consistent with one another, but are not identical. Each land use category may be implemented through more than one zoning district, allowing for important differences in building height, bulk and coverage in different areas of the city. Some revisions to existing zoning districts or creation of new districts may ultimately be needed as part of the implementation of the land use plan.

Land uses are characterized primarily by range of densities or intensities. For residential uses, density is defined in terms of dwelling units per net acre (exclusive of road rights-of-way and public lands). For nonresidential and mixed uses, intensity is typically defined in terms of floor-to-area ratio, or FAR, which refers to the ratio of a building's floor area to the size of its lot. Thus, a maximum FAR of 1.0 could allow for a two-story building covering 50% of the lot; a 3-story building on one-third of the lot, and so on. Building heights are not specified in the table, because height will vary within and between categories, based on neighborhood context, infrastructure, and community design goals. (See the discussion later in this section.)

The "Development Guidelines" in the table below are intended to highlight important design considerations for each land use category, but are not regulatory in nature.

Table 4.3. Future Land Use Categories

Residential Categories	Description, Land Uses	Development Guidelines	Density Range
LDR Low Density Residential	Applies to largely single-family residential neighborhoods, encompassing a variety of lot sizes and street patterns (see "Character Districts" for more detail). Typically includes small institutional uses such as schools, churches, neighborhood parks, etc.	Massing standards (under development) and impervious coverage limitations would apply to ensure compatibility of infill construction.	**1 - 5 units/acre** Floor to Area Ratio: per current Zoning Code*
LDA Low-Density Attached Residential	Applies to two-family and attached dwellings of low densities and moderate heights. This category recognizes the historical role of these housing types as transitional districts between single-family residential areas and major thoroughfares or commercial districts. May include single-family detached dwellings.	Introduction of more contemporary housing types, such as low-density townhouses, may be an appropriate replacement for two-family dwellings in some locations, provided that adequate transitions to and buffering of adjacent dwellings can be achieved.	**4 - 8 units/acre** Floor to Area Ratio: per current Zoning Code*
MDR Medium-Density Residential	Applies to attached housing (townhouses, quads, etc.) and multi-family complexes of moderate density. May also include small institutional uses, parks and open space	In new development or redevelopment, improve integration of multi-family housing into an interconnected street network and work to create an attractive, pedestrian-friendly street edge.	**5 - 12 units/acre** Floor to Area Ratio: per current Zoning Code*
HDR High-Density Residential	Existing "high-rise" and other concentrated multi-family residential, some of which may contain a mixed use component. May also include limited office, service or institutional uses primarily to serve residents' needs, parks and open space	Provide incentives for updating older multifamily buildings. Work to create an attractive, pedestrian-friendly street edge and provide convenient access to transit, schools, parks, and other community destinations.	**12 - 30 units/acre** Floor to Area Ratio: per current Zoning Code*

Nonresidential and Mixed Use Categories	Description, Land Uses	Development Guidelines	Density Guidelines
NC **Neighborhood Commercial** Current examples: • Morningside commercial core • Valley View and Wooddale • 70th & Cahill	Small- to moderate-scale commercial, serving primarily the adjacent neighborhood(s). Generally a 'node' rather than a 'corridor.' Primary uses are retail and services, offices, studios, institutional uses. Residential uses permitted. Existing and potential neighborhood commercial districts are identified for further study.	Building footprints generally less than 20,000 sq. ft. (or less for individual storefronts). Parking is less prominent than pedestrian features. Encourage structured parking and open space linkages where feasible; emphasize enhancement of the pedestrian environment.	**Floor to Area Ratio-Per current Zoning Code: maximum of 1.0*** 2 - 3 units/acre
OR **Office-Residential** No current examples in City. Potential examples include Pentagon Park area and other I-494 corridor locations	Transitional areas along major thoroughfares or between higher-intensity districts and residential districts. Many existing highway-oriented commercial areas are anticipated to transition to this more mixed-use character. Primary uses are offices, attached or multifamily housing. Secondary uses: Limited retail and service uses (not including "big box" retail), limited industrial (fully enclosed), institutional uses, parks and open space. Vertical mixed use should be encouraged, and may be required on larger sites.	Upgrade existing streetscape and building appearance, improve pedestrian and transit environment. Encourage structured parking and open space linkages where feasible; emphasize the enhancement of the pedestrian environment.	**Floor to Area Ratio-Per current Zoning Code: maximum of 0.5 to 1.0*** 2 - 3 units/acre
O **Office** Current examples include the office buildings on the west side of TH 100 between 70th and 77th Streets.	This designation allows for professional and business offices, generally where retail services do not occur within the development unless they are accessory uses that serve the needs of office building tenants. Vehicle access requirements for office uses are high; however, traffic generation from office buildings is limited to morning and evening peak hours during weekdays. Office uses should be located generally along arterial and collector streets.	Provide buffer/transition to adjacent residential uses. Use high quality permanent building materials and on-site landscaping. Encourage structured parking.	**Floor to Area Ratio - Per Zoning Code:** **Maximum of 0.5**

Nonresidential and Mixed Use Categories	Description, Land Uses	Development Guidelines	Density Guidelines
MXC **Mixed-Use Center** Current examples: • 50th and France • Grandview	Established or emerging mixed use districts serving areas larger than one neighborhood (and beyond city boundaries). Primary uses: Retail, office, service, multifamily residential, institutional uses, parks and open space. Vertical mixed use should be encouraged, and may be required on larger sites.	Maintain existing, or create new, pedestrian and streetscape amenities; encourage or require structured parking. Buildings "step down" in height from intersections. 4 stories at 50th & France; 3-6 stories at Grandview	**Floor to Area Ratio-Per current Zoning Code: maximum of 1.5** 1 - 2 units/acre
CAC **Community Activity Center** Example: Greater Southdale area (not including large multi-family residential neighborhoods such as Centennial Lakes)	The most intense district in terms of uses, height and coverage. Primary uses: Retail, office, lodging, entertainment and residential uses, combined or in separate buildings. Secondary uses: Institutional, recreational uses. Mixed use should be encouraged, and may be required on larger sites.	Form-based design standards for building placement, massing and street-level treatment. Buildings should be placed in appropriate proximity to streets to create pedestrian scale. Buildings "step down" at boundaries with lower-density districts and upper stories "step back" from street. More stringent design standards for buildings > 5 stories. Emphasize pedestrian circulation; re-introduce finer-grained circulation patterns where feasible.	**Floor to Area Ratio-Per current Zoning Code: maximum of 0.5 to 1.0*** 2 - 3 units/acre
I **Industrial**	Applies to existing predominantly industrial areas within the City. Primary uses: industrial, manufacturing. Secondary uses: limited retail and service uses.	Performance standards to ensure compatibility with adjacent uses; screening of outdoor activities.	**Floor to Area Ratio: Per Zoning Code: 0.5***

Nonresidential and Mixed Use Categories	Description, Land Uses	Development Guidelines	Density Guidelines
RM Regional Medical	Hospitals, medical and dental offices and clinics, and laboratories for performing medical or dental research, diagnostic testing, analytical or clinical work, having a direct relationship to the providing of health services. General office uses are permitted.	Form-based design standards for building placement, massing and street-level treatment. Pedestrian circulation and open space amenities should be provided for larger sites.	**Floor to Area Ratio - Per current Zoning Code: maximum of 1.0**
OSP Open Space and Parks	Applies to major parks and protected open space that is publicly owned. May not include all small parks, since some are included in residential land use districts.	Performance and buffering standards for intensive outdoor recreation, parking.	N/A
PSP Public/Semi-Public	Applies to schools, large institutional uses (churches, cemeteries) and semi-public uses such as country clubs. Some small uses of these types may be integrated into other land use districts.	Performance and buffering standards for intensive outdoor recreation, parking.	**To be determined** - may require review of large-scale development or institutional expansion
LAH Limited Access Highway	Expressways and access ramps for two regional arterial highways (TH 62 and TH 100) occupy land within the City to serve local and regional travel needs.	NA	NA

*Floor-to-area ratio, or FAR, refers to the ratio of a building's floor area to the size of its lot. Thus, an FAR of 1.0 could mean a two-story building covering 50% of the lot; a 3-story building on one-third of the lot, etc.

Potential Areas of Change

Among its many purposes, the Comprehensive Plan functions as a long range tool that attempts to anticipate where change and growth will occur in the City. Identifying those potential areas of change is an initial stage in the process of guiding new construction and redevelopment when it is proposed by private property owners. It is not an attempt to stimulate change, but to acknowledge that it may occur and be proactive in shaping it. Locations identified in this section appear to be areas where change may occur during the life of this Plan. Many of these areas were identified in a group exercise at Public Meeting #2 as

Typical Airport South Mixed Use

Commercial Zoning Districts

To help implement the community's vision, Bloomington has recently adopted twenty-first century commercial zoning districts. New features within the districts include:

- Minimum intensity requirements.
- Minimum building heights.
- Maximum building setbacks.
- High density residential uses allowed when vertically or horizontally integrated with commercial uses.
- Design standards including window requirements, streetside entrance requirements, and anti-blank facade requirements.

Rezoning of land to these new districts is currently underway.

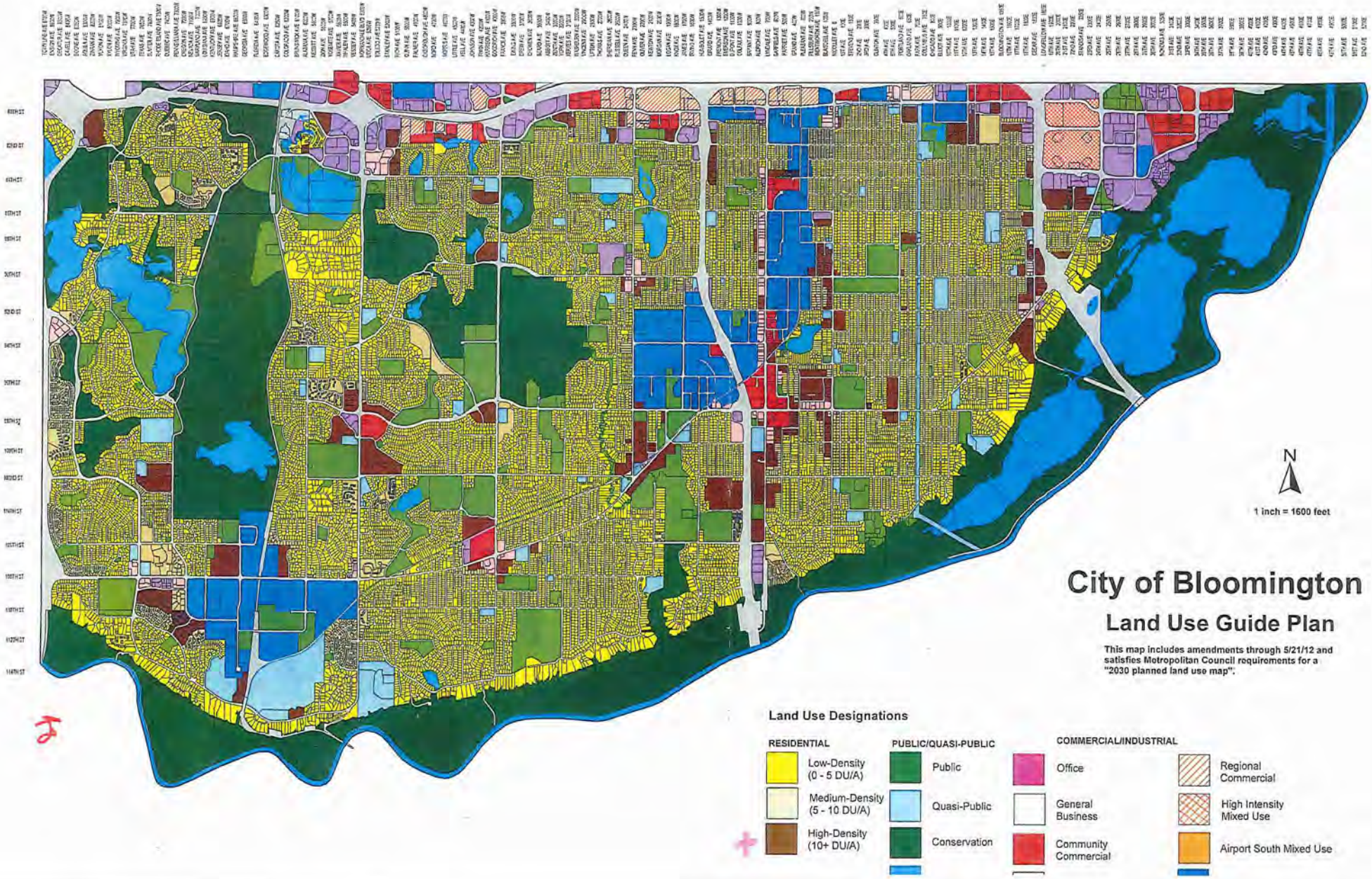
Table 2.6
Guide Plan Designations, 2008 Comprehensive Plan Update

Designation *(Estimated Employees/Acre)*	Acres	Percent	Estimated Residential		Residential Density Range in Units/Acre	
			Percent	Acres	Min	Max
Low Density Residential	7,231	29.2	100	7,231	0	5
Medium Density Residential	710	2.9	100	710	5	10
High Density Residential	856	3.4	100	848	10	No limit
Public	1,739	7.0	0	0	NA	NA
Quasi-Public	611	2.5	0	0	NA	NA
Conservation	4,746	19.2	0	0	NA	NA
Water	2,000	8.1	0	0	NA	NA
Office *(82)*	675	2.8	0	0	0	60
General Business *(33)*	167	0.7	0	0	0	83
Community Commercial *(33)*	281	1.1	0	0	0	83
Regional Commercial *(33)*	201	0.8	0	0	0	83
High Intensity Mixed Use *(100)*	123	0.5	0	0	0	60
Airport South Mixed Use *(100)*	88	0.4	3.4	3	30	131
Industrial *(30)*	1,101	4.4	0	0	NA	NA
Right-of-Way	4,219	17.0	0	0	NA	NA

Note: No guide plan designation changes are proposed from the previous *Comprehensive Plan* as part of the 2008 update.

Source: Bloomington Planning Division, 2008.

#7


N
1 inch = 1600 feet
City of Bloomington
Land Use Guide Plan
This map includes amendments through 5/21/12 and satisfies Metropolitan Council requirements for a "2030 planned land use map".
Land Use Designations
RESIDENTIAL
Low-Density (0 - 5 DU/A)
Medium-Density (5 - 10 DU/A)
High-Density (10+ DU/A)
PUBLIC/QUASI-PUBLIC
Public
Quasi-Public
Conservation
COMMERCIAL/INDUSTRIAL
Office
General Business
Community Commercial
Regional Commercial
High Intensity Mixed Use
Airport South Mixed Use

Medium Density Residential (MDR)

The Medium Density Residential land use category was derived from the Single-family Residential – High Density category (R-SFH) that was included in the City's 1999 Comprehensive Plan. The medium density residential category replaces the R-SFH category. Naming this category medium density better clarifies the intent of the residential uses within this category. Medium density residential accommodates attached housing, predominantly townhomes or condominiums ranging from 7 to 12 units per acre. Medium density residential also includes manufactured housing.

A9

Medium - High Density Residential (MHD)

Medium - High Density Residential includes multi-unit and multi-building developments. The intent is to allow for higher density housing, such as townhome developments. The allowed density would range from 12 to 24 units per acre and no greater than 4 stories tall.

High Density Residential (HDR)

High Density Residential also includes multi-unit and multi-building developments at a more intense scale. The allowed density range is a minimum of 24 units per acre. High Density Residential uses are primarily located convenient to transportation, utility, security, shopping and social services in order to support higher concentrations of people.

High Density Residential/Office (HDRO)

The High Density Residential/Office category is similar to the High Density Residential category. The HDRO includes multi-unit and multi-building developments with the presence of office uses. Like the HDR category, a minimum density of 24 units per acre is required.

Regional Commercial/Office (RCO)

In addition to the retail and service uses allowed in the Regional Commercial land use category, Regional Commercial/Office allows for the presence of offices. Within this category, office uses are to be integrated into the overall development with buildings exceeding 150,000 square feet in size. Office uses would preferably be located above retail uses or situated in stand-alone building developments.

Mixed Use (MU)

Mixed Use is a new land use category that is being used to better clarify planned land use patterns near 66th Street & Lyndale Avenue and the Penn Avenue corridor from 68th Street to Highway 62.

Lyndale & 66th Street: The intent of the mixed use category is to focus on creating a city center in Richfield that would serve as a "downtown." The city center is expected to include a mix of residential, shopping, recreational and businesses uses. The area at 66th Street and Lyndale has been developing for the past decade as Richfield's city center. The intent is to continue the expansion of the city center area by incorporating residential housing at 50+ units per acre and providing commercial, office and recreational opportunities.

Penn Avenue Corridor: The intent of the mixed use category is to create a traditional neighborhood center that is a vibrant, pedestrian-oriented district. The district

would accommodate residential, shopping, recreational and businesses uses in a flexible arrangement that captures the spirit and intent of the Penn Avenue Revitalization Master Plan.

Office (O)

Office uses are accommodated in several of the residential and commercial land use categories. However, the office land use category is intended to provide stand-alone office development. These stand-alone developments may include such uses as office-showrooms, research and development facilities, real estate offices or banks. A floor area ratio (FAR) of 0.20 should be achieved for stand-alone office building development.

A10b

Public and Quasi-Public

Public and Quasi-public uses include all civic, county and state facilities (excluding parks); religious facilities, schools and other similar non-profit uses.

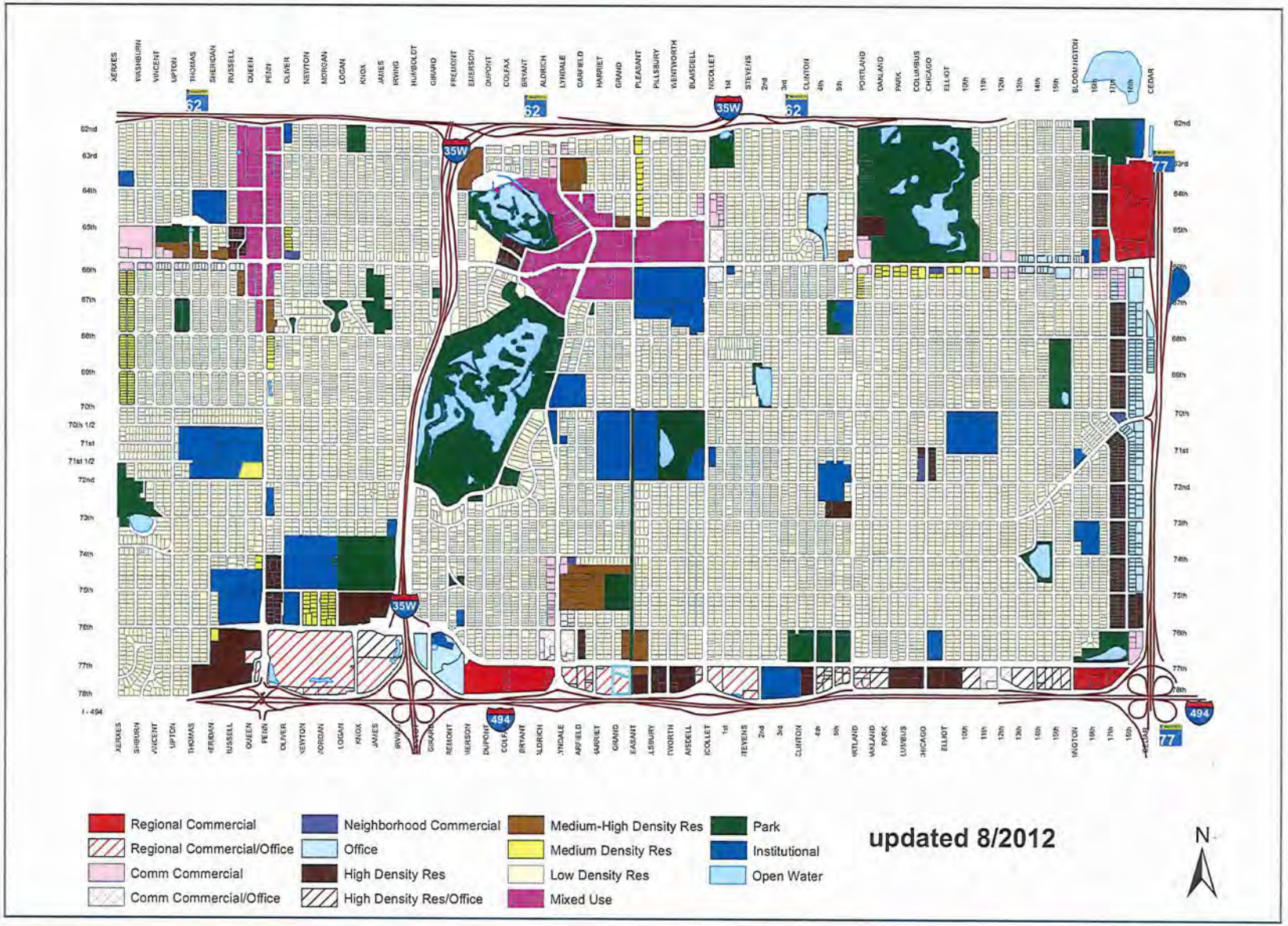
Park

The park designation includes all public parks, public playgrounds and trail corridors.

Right-of-Way

Right-of-way includes all public land that is under the jurisdiction of the City of Richfield, Hennepin County or the State of Minnesota that is generally devoted to transportation and/or utilities.

Figure 4.8 2030 Future Land Use Plan



A11

Public Land

It is estimated that public land comprises more than 40% of the land within the city's boundaries. Publicly owned land includes streets, sidewalks, alleys, parks, playgrounds, trails, public institutions (e.g. City Hall, schools, and the community centers), public facilities, and some natural open spaces. These publicly owned spaces are used in a multitude of ways. The City's goal is to facilitate the best use of public land to enhance the amenities available to residents, access to public land and buildings, and mobility.

Public land can be categorized into the following use types:

- Public right-of-way, which includes streets, sidewalks, boulevards, trails, and alleys;
- Parks, playgrounds, and open spaces;
- Park Commons "town center" and other public places that define the community's identity;
- Public and quasi-public institutions, which includes city buildings, schools, churches, and community centers;
- Public facilities.

Where We Are Headed

This section of the Land Use chapter establishes the City's official land use categories and the 2030 Comprehensive Plan Land Use Map, which is intended to guide current and future land use planning and development through the year 2030. The land use plan categories are fully defined below. The 2030 map is the official land use designation map for the City. The land use designations are intended to shape the character, type and density of future development according to sound planning principles. Any new development, redevelopment, change in land use, or change in zoning is required to be consistent with the land use guiding for each parcel.

Comprehensive Plan Land Use Categories

There are 12 land use categories that guide the City's 2030 Comprehensive Plan Land Use Map, which are described below. In general, the categories reflect a movement towards greater mixing of uses.

I. RL - Low Density Residential

The Low Density Residential category is intended primarily for single-family detached housing. This category allows net residential densities from three (3) to seven (7) units per acre.

II. RM - Medium Density Residential

The Medium Density Residential category allows net residential densities from six (6) to 30 units per acre. This category allows for a variety of housing types including single-family detached, duplexes, townhomes, and small two- and three-story apartment buildings.

III. RH - High Density Residential

The High Density Residential land use category is intended for higher density, compact urban residential development, including high-rise apartment buildings. This category allows for a net residential density range of 20 to 75 units per acre; however zoning will allow only up to 50 units per acre except by utilizing the PUD process. Under a PUD, 75 units per acre may be developed if within 1,000 feet of a park. The appropriate building height will vary by development and

depend upon the characteristics of the development and its surroundings. Pedestrian-scale, three- to four-story buildings will be appropriate in some areas, while six- to eight-story buildings and even taller high-rises will be acceptable in others. In addition to residential development, a small proportion of supportive retail and service is also appropriate. Retail, service and office beyond those supporting the residential development would only be permitted as part of a mixed-use PUD.

IV. C - Commercial

The Commercial land use category is intended to accommodate a wide range and scale of commercial uses, such as retail, service, entertainment, and office. Commercial uses can range from small neighborhood convenience nodes, to community retail areas along major roadways, to large shopping centers, to auto-related commercial uses along freeways. Residential uses are also appropriate as part of a mixed-use commercial development, with a net residential density range of 20 to 50 units per acre allowed.

V. MX – Mixed-Use

In the Mixed Use land use category, a mixing of uses including commercial is required for every development parcel. The goal of this category is to create pedestrian-scale mixed-use buildings, typically with a portion of retail, service or other commercial uses on the ground floor and residential or office uses on upper floors. Mixed use buildings typically have approximately 75 to 85 percent of the building for residential use and 20 to 25 percent for commerical or office uses. Taller buildings may be appropriate in some areas and net residential densities between 20 and 75 units per acre are allowed. The MX designation is intended to facilitate an integrated town center atmosphere in Park Commons and a diversity of uses in certain other areas of the community.

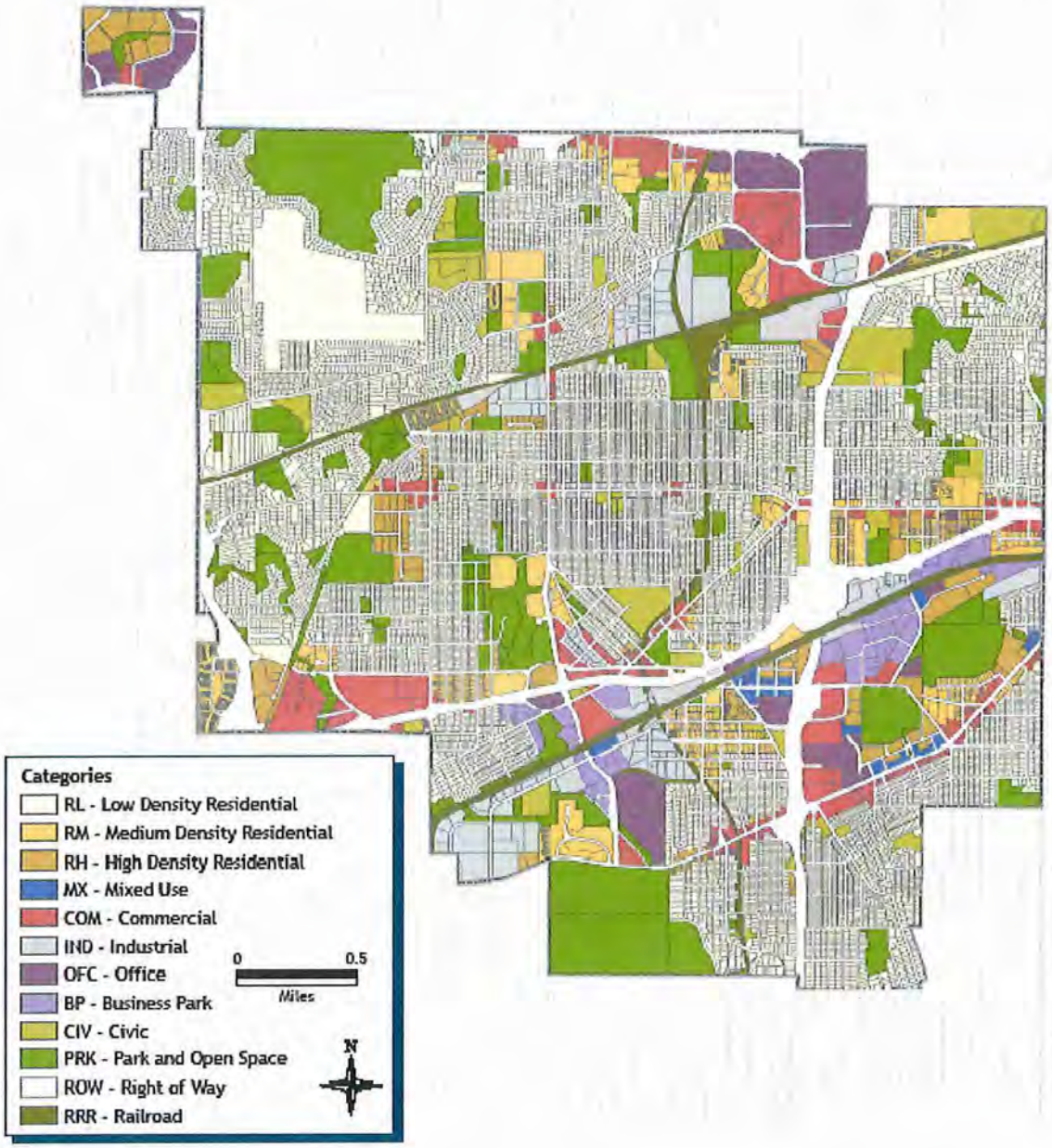
VI. I - Industrial

The Industrial land use category covers all industrial uses from manufacturing, assembly, processing, warehousing, storage, laboratory, distribution, and related offices. Industrial areas consist of both lighter industrial uses, which tend to have higher appearance standards and fewer impacts on surrounding properties, and general industrial uses which are typically set off from other uses. Current industrial uses tend to be concentrated around the City's railroads, where industrial uses first developed in the community. Future industrial uses should primarily be located in close proximity to either a railroad line or regional roadway system with limited traffic circulation through residential and pedestrian-oriented areas.

VII. O - Office

The Office land use category is primarily intended for employment centers of fairly intensive office and mixed use development with high floor area ratios (FARs) and building heights. Business, professional, administrative, scientific, technical, research, and development services are typical uses appropriate for the Office land use category. The Office category also allows other limited uses such as hotels, parking ramps, residential, day care, retail and restaurants when part of a larger development.

2030 Comprehensive Plan Land Use Map



Section F Land Use Plan Implementation

The following land use implementation section describes the methods that the City of Minnetonka will utilize to initiate the implementation of the Minnetonka 2030 Vision according to the planning strategies for the growth strategy themes listed in Section B of this chapter. The implementation methods also consider the conditions and policies established in the other chapters of the 2030 Comprehensive Guide Plan.

This section establishes the land use categories and review criteria to guide private and public decisions regarding development and redevelopment in accordance with the targeted planning areas (residential neighborhoods, villages, regional areas/corridors, and transportation/natural area corridors) within the city. The implementation methods include:

* the 2030 land use definitions;
* the 2030 land use plan map;
* the 2030 population, household and employment forecasts;
* the overall development review criteria, including those established in Sections C and D of this chapter, to determine consistency of development and redevelopment projects with the land use plan; and
* implementation procedures that include city regulations (the zoning and subdivision ordinances) and specific 2030 Comprehensive Guide Plan amendment criteria that pertain primarily to the land use chapter text and 2030 land use map.

2030 Land Use Definitions

The land use districts should not be confused with the zoning designations of property. The land use districts describe general land uses and may include other criteria to be considered when development and redevelopment projects are reviewed by the city to ensure that the project meets the 2030 Comprehensive Guide Plan policies and the appropriate policies and strategies of other chapters of the plan. The corresponding zoning designation and associated performance standards describe specific criteria that must be met before development can occur on property.

The city's land use definitions follow, according to the general land use category. Appendix IV-A of this chapter provides illustrative examples of the specific types of uses found within each land use category.

1. Residential Land Use Districts

Prior to 1979, the medium- and high-density residential definitions restricted densities to five to eight, and nine to 12 units per acre, respectively. The definitions were changed, as part of a comprehensive planning effort, to allow a greater density to provide more opportunities for housing choice (variety and cost), recognition of the rising cost of land in Minnetonka, and to bring the density standards more in conformance with other metropolitan area communities and Metropolitan Council policies.

The density definitions are expressed in terms of ranges to allow for development flexibility and compatibility with natural resource and other site specific characteristics of property. Therefore, an appropriate density for a particular use may be at the lower end of the density range rather than the higher end.

Further, the density definitions do not specify the type of housing; rather, the zoning ordinance specifies the type of housing and specific standards that must be met by a particular development. The decision regarding the specific density for a particular property is made during the development review process, where the following conditions are considered by the city:

- The existing environmental conditions of the property including wetlands, floodplains, steep slopes and the quality of existing vegetation;
- the specific site plan including the type of housing units proposed and requirements for development facilities such as stormwater ponding, municipal sewer and water, etc.;
- the existing and requested zoning classification for the property; and
- the surrounding neighborhood characteristics.

A. Low-density residential: development that ranges in density from two to four dwelling units per acre.

   Most residential neighborhoods that contain existing single-family homes in the city are designated for low-density residential uses. Although low-density uses include detached single family housing types other residential housing types such as duplexes and attached townhomes are included provided that the overall density does not exceed four units per acre. This land use district is established to recognize the primary residential development pattern in the city and accommodate housing goals, including affordable and mid-priced housing.

B. Medium-density residential: residential density ranges from more than four to 12 units per acre.

   Typically, this land use district includes attached housing types such as small-lot single family developments ("zero lot line"), duplexes, townhouses, "quads," and low-rise multiple family buildings. This land use designation is used to:

   - Encourage and allow the opportunity for residential project design techniques that incorporate natural resource protection and open space preservation techniques such as "clustering".
   - Create appropriate transitions between different and more intense land uses and low-density areas.
   - Encourage opportunities for residential development near and within village and regional centers, employment centers or major transportation corridors.
   - Broaden housing choice, especially with an increasingly aging population and accommodate housing goals, including affordable and mid-priced housing

   Development within medium-density residential areas should incorporate:

   1. Design techniques that facilitate natural resource protection and open space preservation; and
   2. Buffers and/or transitions between more intense land uses and low-density areas.

Environmental features such as wetlands, floodplains, steep slopes, and heavily vegetated areas should be used, as available, as buffers. Developments should incorporate appropriate transitions, such as landscaping and other land use or design features between non-residential and residential uses of a lower density.

C. High-density residential: residential developments with densities above 12 units per acre.

Typical high density residential development consists of apartment or condominium units in multistory buildings. The intent of this district is to provide the opportunities for residential developments that:

- serve a wide range of income group and changing lifestyles;
- are in close proximity to services, employment centers and transportation corridors, especially transit routes; and
- broaden housing choice, especially with an increasingly aging population and accommodate housing goals, including affordable and mid-priced housing.

As is the case with medium-density residential development, development within high-density residential areas should incorporate:

1. Design techniques that facilitate natural resource protection and open space preservation, and buffers and/or transitions between more intense land uses and low-density areas.
2. Buffers and/or transitions between more intense land uses and lower density areas. Environmental features such as wetlands, floodplains, steep slopes, and heavily vegetated areas should be incorporated, as available, within buffers. Developments should incorporate appropriate transitions, such as landscaping and other land use or design features between non-residential and lower density residential uses.

High-density residential development projects should occur in a planned manner, with specific consideration given to all uses within an area and also to impacts on adjacent developments, services and transportation. Development will not be encouraged to occur until appropriate services and infrastructure are available or programmed.

2. Business Land Use Districts

Business land uses typically include categories of uses that are measured by the intensity of development and off-site impacts. These uses are found in the village areas, regional areas and corridors of the city. Additionally, business land use districts apply to several planned corporate campuses such as the Cargill and Welsch developments in the city.

The following describe the categories of business uses in the city.

A. Office

The office land use district provides locations for administrative, executive, professional or other offices and related service uses, such as financial institutions, lodging, day care and similar uses. It is not intended for retail uses that serve the general public. The office designation can be used, if designed appropriately, as a transitional use between residential and more intense commercial districts.

B. Service commercial

The service commercial land use district is a land use district used in the I-394 Corridor and other specific areas. It is considered a tool that increases flexibility in siting uses that

are typically associated with regional centers and within business concentration areas. Typical developments include hotels, health clubs, religious institutions and similar service uses.

Uses are typically characterized by lower peak hour traffic generation characteristics, making them suitable for high-volume interchange areas. Certain service commercial areas serve as transitions between residential areas and retail uses.

C. Commercial

The commercial district is broad and includes retail, entertainment, service and office uses that typically occur in the village and regional areas.

D. Industrial

A range of "light" industrial uses including warehouse, showroom, manufacturing and limited office, retail and service uses fall within the industrial district. Many other industrial uses are part of mixed-use areas. These include business parks, where master plans govern more specific uses and development criteria, such as Opus and Carlson Center, as well as other areas close to TH 62 and I-494.

3. Mixed Use Areas

Areas include locations where one or more uses can be accommodated within a single building or within a planned multi-building area. This designation has been established to allow flexibility in land use and creative site design, especially in the village and regional areas. Generally, most mixed use areas should be designed to allow the incorporation of appropriate natural resource protection and/or enhancement techniques.

The general land uses determined appropriate for the mixed land use area are shown on the 2030 land use plan map. For most mixed-use areas or buildings, the use and design of property is governed by a master plan that defines specific land uses, relationships between uses and overall design.

The following describes the mixed use areas in the city:

A. Mixed Use Areas with Residential

Areas planned for a mix of residential and commercial/retail uses should be designed to include a residential character, within specific mixed use buildings or within a compact village area. Buffering and transitions, as well as careful consideration of noise and light impacts, are important to the viability of such mixed use areas, since they include higher density and more activity than exclusive medium or high density neighborhoods.

Site design and access to pedestrian friendly open space and parks is important in mixed use areas that include a residential component. Accessibility and convenient parking as well as streetscape enhancements in public and private areas are valued features for residents choosing to live in mixed use areas. A range of densities and building heights is anticipated, depending on the specific location and site conditions.

B. Non-Residential Mixed Use Areas

Areas with a mix of commercial (office, service commercial, or retail) and industrial uses rely on mobility and access to transportation systems as key to business operations (e.g., loading and deliveries). Other urban design treatments should be included in the overall site design such as cohesive signage and landscaping that contribute to the character of the area.

A15

C. Mixed Uses Where a Single Land Use May Ultimately Be Developed

These locations are where more than one land use is considered appropriate and feasible, but only a single land use will ultimately be developed. Decisions regarding the ultimate land use will depend upon a specific development's ability to meet certain criteria defined in this plan. For example, an area may be designated for either office or high-density residential purposes. Ultimately, however, office uses may only be allowed if commensurate transportation improvements are made to a nearby roadway.

4. Public and Semi-Public Land Uses

A. Institutional

This district accommodates public and semi-public land uses including schools, religious institutions, government buildings, and multi-purpose complexes like the Civic Center.

B. Parks and open space

Parks and open space are designated separately to distinguish between the city's officially designated parks and those protected open space areas that are not included in them, although they may be city-owned. The open space district includes protected open space by public ownership, easement or other protection method.

C. Roadway rights-of-way

Includes public or private vehicular, transit and/or pedestrian rights-of-way. These areas may be reserved for future use as a transportation route, and thus undeveloped.

D. Utility

Includes land devoted to public or private land occupied by a substation, electric transmission line, oil or gas pipeline, water tower, municipal well, reservoir, pumping station, water treatment facility, communications tower, or similar use.

E. Railroad

Public or private freight or passenger rail activities.

5. Water Resources

A. Lakes

Includes actual water bodies greater than six feet in depth (such as Gray's Bay and smaller lakes), and creeks.

B. Wetlands

Includes areas designated by the city's wetland protection program and maps. The actual areas have been field mapped but must be delineated as part of the development review process.

C. Floodplains

Includes locations delineated on the city's and FEMA maps and sometimes overlap water bodies and wetlands. Similar to wetlands, actual field delineation is required for development projects.

2030 Land Use Map

The future land use pattern for Minnetonka over the next 20 years is presented in the city's 2030 Land Use Map as Figure IV-15 and listed in Table IV-2 below. Consistent with the city's overall concept for development, the established patterns of existing single-family neighborhoods and commercial/business areas linked by roadway corridors, such as Highway 7, I-394 and I-494, will be reinforced so they continue to reflect the patterns that have evolved in Minnetonka over the last 20 years.

Table IV-2
2030 Land Uses

Land Use Category	Gross Acres	Percentage	Net Acres	Percentage
Low Density Residential (2 to 4/units per acre)	9,039	50.0%	8,133	45.0%
Medium Density Residential (4.1 to 12 units/acre)	619	3.4%	547	3.0%
High Density Residential (over 12 units/acre)	330	1.8%	282	1.6%
Commercial	344	1.9%	292	1.6%
Service Commercial	42	0.2%	35	0.2%
Office	283	1.6%	253	1.4%
Industrial	200	1.1%	188	1.0%
Mixed	994	5.5%	974	5.4%
Institutional	763	4.2%	655	3.6%
Open Space	1017	5.6%	376	2.1%
Park	937	5.1%	587	3.3%
Right of Way (including railroads, roads and Co. LRT trail)	3,073	17.0%	3073	17.0%
Water	664	3.7%	664	3.7%
Wetlands/Floodplain			2,073	11.3%
Total	**18,066**	**100.00%**	**18,066**	**100.00%**

Source: City of Minnetonka

Specific parcels for land use change from the previous 2020 land use plan map were identified based on opportunities for growth along key corridors, at regional centers, or in some cases, at several sites with specific village areas. The principal objective of these changes is to increase housing choice and provide additional housing opportunities, vibrancy and positive business activity at locations that support additional development intensity. The areas of change are shown in the Appendix IV-B on the Land Use Change Sites map and table, which indicates primary land use changes and potential residential units from the 2020 land use map as amended through 2007. Appendix IV-B also contains the 2020 land use plan map and table of 2020 land uses. Appendix IV-E shows future planned land use in 5-year stages.

A20

Appendix IV-D

Land Use Category Comparison to Zoning Ordinance Districts

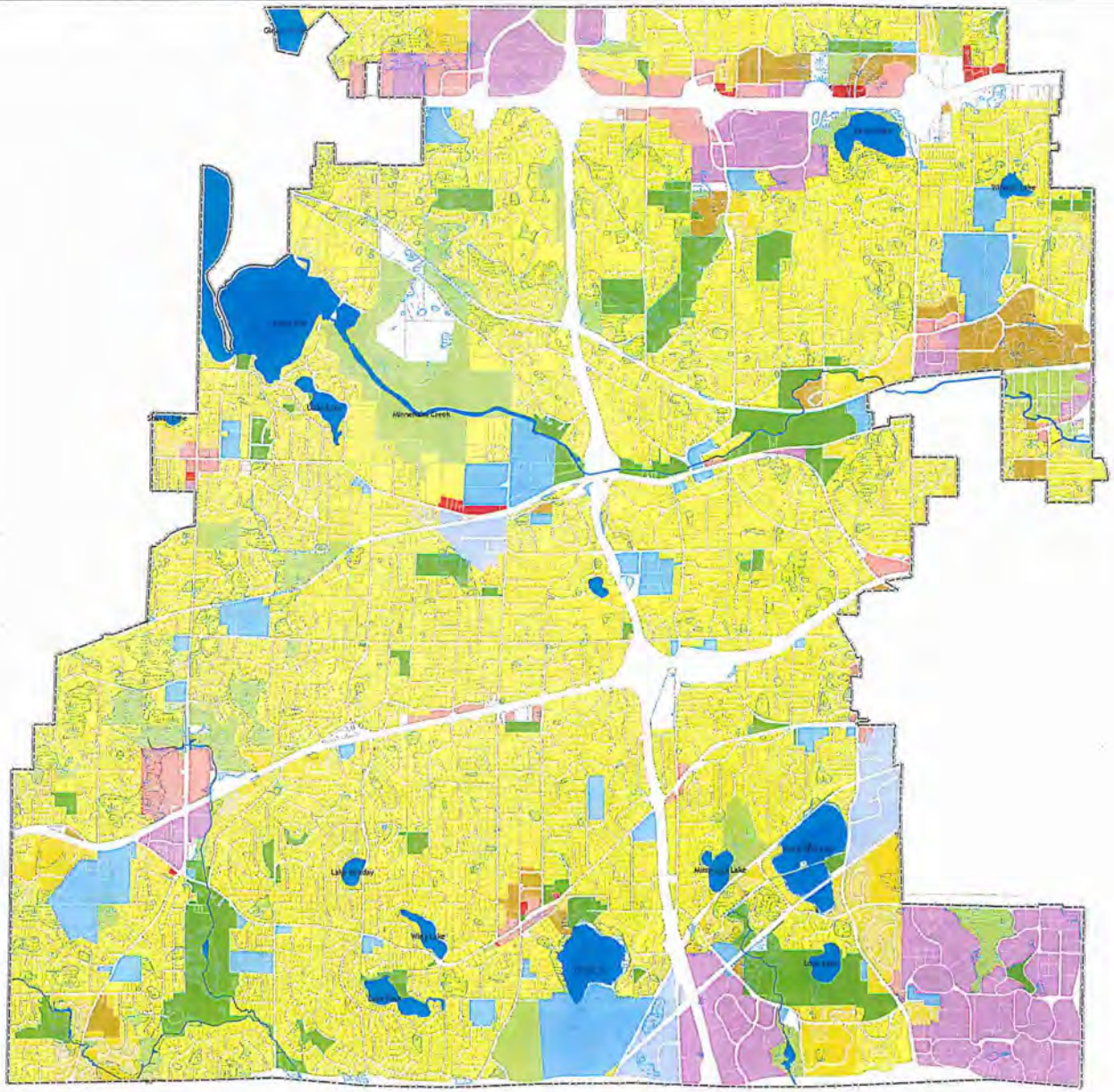
Existing Zoning Map (Please Refer to Appendix IV-D)

Existing Zoning Districts

Zoning District	Purpose	Key District Standards
R-1 Low Density Residential District	Single family detached dwellings in areas where such development is consistent with the low density residential designation of the comprehensive plan and compatible with surrounding land use characteristics. Development shall occur at densities not exceeding 4 dwelling units per acre.	Lot Area Minimum: 22,000 square feet
R-2 Low Density Residential District	Single family and two family dwellings in those areas where such development is consistent with the low density residential designation of the comprehensive plan and compatible with surrounding land uses. Development shall occur at densities not exceeding 4 dwelling units per acre.	Single family Lot Area Minimum: 15,000 square feet Two family Lot Area Minimum: 12,500 square feet
R-3 Low or Medium Density Residential District	Attached residential dwelling units in those areas where such development is consistent with the low or medium density residential designation of the comprehensive plan and compatible with the development pattern of the surrounding area. Clustering of buildings to permit more orderly development is encouraged within the district. Development densities shall not exceed 12 dwelling units per acre.	Low density lot area minimum: 10,000 square feet per dwelling Medium density lot area minimum: 3,630 square feet
R-4 Medium Density Residential District	Attached and multiple family dwellings in those areas designated for medium density residential development in the comprehensive plan. Development densities shall occur at least 4 but not exceed 12 dwelling units per acre.	Floor to Area Ratio: 0.5 max Height: regulated by the FAR
R-5 High Density Residential District	Multiple family dwellings designated for high density residential development in the comprehensive plan. Development densities shall occur at least 12 dwelling units per acre.	Floor to Area Ratio: 1.0 max Height: regulated by the FAR

B-1 **Office Business District**	Office and accessory services uses but excludes general retail and service uses.	Floor to Area Ratio: 1.0 max
B-2 **Limited Business District**	Low intensity, service oriented commercial uses in areas designated as neighborhood or community centers in the comprehensive plan.	Floor to Area Ratio: 0.8 max
B-3 **General Business District**	General commercial development in areas so designated in the comprehensive plan.	Floor to Area Ratio: 1.5 max
I-1 **Industrial District**	Low intensity, service oriented commercial uses in areas designated as neighborhood or community centers in the comprehensive plan.	Floor to Area Ratio: 0.8 max
Planned Unit Development District	Uses permitted in all districts are allowed	Floor to Area Ratios (max.): Low-Medium Density Res : 0.5 High Density Res : 1.0 Office: 1.0 Commercial neighborhood or community: 0.8 Commercial regional: 1.5 Industrial: 1.0

*



City of minnetonka
Where quality is our nature

Land Use Catagory

- Low Density Residential (2 - 4 units per acre)
- Medium Density Residential (5 to 12 units per acre)
- High Density Residential (over 12 units per acre)
- Commercial
- Service Commercial
- Office
- Mixed Use
- Industrial
- Institutional
- Open Space
- Parks
- Wetlands
- Lakes

N W E S

0 2,050 4,100 8,200 Feet

Figure IV-15
2030 Land Use Plan

Source: City of Minnetonka

A23

A GUIDE TO

Residential Densities

from The Minneapolis Plan for Sustainable Growth

This guide offers sample building types and ideal locations of urban residential densities; examples from Minneapolis are provided.

LOW

defined by The Minneapolis Plan as **<20 dwelling units per acre**

Located in:
Community Corridors and areas not designated as Land Use Features

Single Family

Total Units: 1
Units/Acre: <8
Stories: 1-2.5
Zoning: R1, R1A

Duplex

Total Units: 2
Units/Acre: 4-8
Stories: 1-2.5
Zoning: R2, R2B

HIGH

defined by The Minneapolis Plan as **50-120 dwelling units per acre**

Located in:
Community Corridors, Neighborhood Commercial Nodes, Commercial Corridors, Activity Centers, Growth Centers, Transit Station Areas

Low-Rise

Total Units: 4-40
Units/Acre: 35-62
Stories: 2-4
Zoning: R4, R5, C1, C2, OR2

Mid-Rise

Total Units: 60-200
Units/Acre: >100
Stories: 5-8
Zoning: R6, C3A

MEDIUM

defined by The Minneapolis Plan as **20-50 dwelling units per acre**

Located in:
Community Corridors, Neighborhood Commercial Nodes, Commercial Corridors

Four-Plex

Total Units: 3-5
Units/Acre: 17-35
Stories: 2-4
Zoning: R3, R4

Side-Attached Townhome

Total Units: 4-12
Units/Acre: 17-35
Stories: 2 - 4
Zoning: R3, R4

Stacked Townhome

Total Units: 8-24
Units/Acre: 35-62
Stories: 3-4
Zoning: R4, C1

VERY HIGH

defined by The Minneapolis Plan as **>120 dwelling units per acre**

Located in:
Activity Centers, Growth Centers, Transit Station Areas

High-Rise

Total Units: 150+
Units/Acre: >120
Stories 8-50+
Zoning: B4, OR3

ZONING CLASSIFICATIONS

R1, R1A: Single Family
R2, R2B: Two Family
R3, R4, R5, R6: Multiple Family
OR1: Neighborhood Office Residence
OR2: High Density Office Residence
OR3: Institutional Office Residence
C1: Neighborhood Commercial
C2: Neighborhood Corridor Commercial
C3A: Community Activity Center
C3S: Community Shopping Center
B4: Downtown Business
B4N: Downtown Neighborhood
B4S: Downtown Service
B4C: Downtown Commercial

City of Minneapolis
Community Planning & Economic Development

FOR MORE INFORMATION

Consult the **Land Use Chapter** of **The Minneapolis Plan for Sustainable Growth** online at:
http://www.minneapolismn.gov/CPED/comp_plan_2030.asp

rev 12/2011

A24

Cary Teague

From: Ross Bintner
Sent: Thursday, May 22, 2014 2:32 PM
To: Cary Teague; Chad Millner
Subject: RE: Meeting at Met Council - Mike Larson

Yes. There is plenty of capacity at the regional scale. Local scale capacity is available, but limited. We will need to enact some of the capacity increases foreseen in Chapter 8 of the comp plan in the next 5-10 years.

130727 BARR SE Edina - SAC Ava...

From: Cary Teague
Sent: Thursday, May 22, 2014 2:28 PM
To: Ross Bintner; Chad Millner
Subject: RE: Meeting at Met Council - Mike Larson

Thanks Ross...yes, could you provide the local capacity too?

I assume that this tells us there is plenty of capacity?

Cary Teague, Community Development Director
952-826-0460 | Fax 952-826-0389 | Cell 952-826-0236
4801 W. 50th St. | Edina, MN 55424
cteague@EdinaMN.gov | www.EdinaMN.gov/Planning

...For Living, Learning, Raising Families & Doing Business

From: Ross Bintner
Sent: Thursday, May 22, 2014 2:22 PM
To: Cary Teague; Chad Millner
Subject: RE: Meeting at Met Council - Mike Larson

Cary,
I have a call in to Kyle Colvin today to talk about the process to certify capacity in the 1-RF-491 and 1-RF-491(R) MCES interceptors. He has a good understanding of flow capacity and the planning that went into this area. I also have a flow and capacity question in to Anna Bessel with his staff. No reply yet.

Here's what I've been able to stitch together from City of Edina and public records:
MCES projected the need for 19.65 MGD peak capacity in 2030 for the 1-RF-491 line, and the line had existing peak flows of around 13 MGD. The 1-RF-491 line was conceived and built between 2007 and 2011, and was planned to add an additional 9 MGD to the peak flow capacity in the area.

See sections 6.C, 18 of attached EAW.
See attached map for 1-RF-491 and 1-RF-491(R) location.

A25

The EAW also describes the treatment capacity, saying that MCES has capacity to treat flow from the new line.

Would you also like information on local capacity? We have that.

<< File: 1-RF-491 Relief Interceptor EAW.pdf >> << File: MCES Richfield-Bloomington-Edina Interceptor Map.pdf >>

From: Cary Teague
Sent: Thursday, May 22, 2014 12:30 PM
To: Chad Millner
Cc: Ross Bintner
Subject: RE: Meeting at Met Council - Mike Larson

Ok...no problem...if there is anything that you can give me that talks about the sewer capacity in the area, and that we have enough capacity to support the increase in housing units in the Southdale area in exchange for less office/retail space that would be most helpful!!

Cary Teague, Community Development Director
952-826-0460 | Fax 952-826-0389 | Cell 952-826-0236
4801 W. 50th St. | Edina, MN 55424
cteague@EdinaMN.gov | www.EdinaMN.gov/Planning

...For Living, Learning, Raising Families & Doing Business

-----Original Appointment-----
From: Chad Millner
Sent: Thursday, May 22, 2014 7:36 AM
To: Cary Teague
Cc: Ross Bintner
Subject: Declined: Meeting at Met Council - Mike Larson
When: Friday, May 23, 2014 1:00 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).
Where: Met Council

Sorry Cary. I'm unavailable. Both Ross and I are out. Is there anything specific you think you need from us concerning the sanitary prior to this meeting?

resourceful. naturally.
engineering and environmental consultants

BARR

Memorandum

To: Wayne Houle
From: Brian LeMon, Dan Nesler, and Michael McKinney
Subject: Southeast Edina SAC Availability Analysis
Date: July 23, 2013
c: Ross Bintner

Purpose

The purpose of this memorandum is to provide an analysis of available sewer capacity in southeast Edina. Previous work related to the City's Comprehensive Plan completed in 2008 included the use of a computer-based sanitary sewer system model, which identified some trunk lines in this area as having limited sewer capacity remaining. The sanitary sewer model was created in 2006 as a part of an effort to reduce inflow and infiltration to the sanitary sewer. For this work the model was updated to allow for analysis of available capacity at the individual pipe scale. This information was then used (a) to determine individual pipes and pipe sections in the southeast area of Edina which may be nearing capacity; and (b) to advise a summary of future work, including where targeted metering should be conducted in the future to improve the accuracy of analysis of potential capacity issues

Project Area

The area analyzed for this project is generally bounded on the south and east by the city limits, on the north by Crosstown, and on the west by Valley View Road extended south to 494. Pipes outside this area are also known to have limited capacity; however, they are not the focus of this effort. The trunk sewers in this area carry over half of the total sanitary flow for the City.

Background

Since the completion of the City's Comprehensive Plan, the City has regularly asked Barr to look at requests by developers and manufacturers to add flow to the sanitary sewer system. At times the added flow has come as a result of expanded manufacturing, and at other times it has been a result of redevelopment where an existing site-use is modified and results in a higher-density development and added flow to the sanitary system, such as the Westin next to the Galleria. For each of these cases, a new flow is projected for the sanitary sewer and added to the model at the proposed location. Pipe capacities downstream of that location are then checked to see if the added flow can be handled by the system. Most

of the development has occurred in the southern part of Edina where the existing sanitary sewer system is known to be at or very near capacity. Some of the proposed developments were built while others remain in planning stages. Accordingly, not all of the flows from the proposed developments that were checked have been left in the model, as some were not constructed.

As redevelopment pressure continues to rise for this part of Edina, the City is interested in a more comprehensive review of the remaining sanitary sewer capacity which addresses multiple redevelopment requests in a systematic, cumulative manner, rather than one at a time. This memo is part of the more comprehensive review and provides the City with a simple tool to help estimate if a proposed development will exceed remaining sanitary sewer capacity. Each time a new development is proposed, a quick look at the tables in this memo will provide an estimated amount of remaining capacity in the sewers downstream of the site. It is recommended that the model be updated and the tables be regenerated each time a major new development is approved and on a regular basis after smaller developments are approved. This will result in new tables that, again, can be quickly referenced when the next development is proposed.

New developments are often characterized as generating a certain number of SAC (sewer availability charge) units of flow. This is a unit used by the Metropolitan Council Environmental Services (MCES). One SAC unit equals 274 gallons per day of sewer flow. This unit of flow, along with gallons per minute will be the main units used in the following analysis.

Modeling

The existing City of Edina XP-SWMM sanitary sewer model (model) was used as a base for the updated analysis of SAC availability in Southeast Edina. The existing model, developed in 2006, accounts for all inflows into the sanitary sewer based on 2005 winter quarter water sales. Sewer infiltration, determined from city-wide metering efforts during model construction in 2006, was also accounted for by incorporating pipe infiltration rates into the post-modeling results. Since the creation of the existing model, Barr has analyzed a number of developments. At the direction of the City, four have been included in the model so that their projected flows are accounted for in the analysis of remaining sewer capacity. These include:

- The Westin (now constructed and in use)
- Byerly's proposed redevelopment (in planning stages)
- The Southdale Apartments (in planning stages)
- Edina Medical Plaza (in planning stages)

Estimated sanitary sewer flow from each of the four developments, shown in Table 1, was added to the model for this updated analysis. It should be noted that this additional flow makes up much of the future flow assumed in Scenario 1 of the 2008 Comprehensive Plan. Sanitary sewer flow estimates for the Westin were based on water billing data from the development over a 3-year period. The flows are lower than those originally evaluated. The occupancy of this Westin over this period was not known, so it is possible that flow from this development could change based on future occupancy trends.

To determine available pipe capacity at the individual-pipe scale, the theoretical capacity of each pipe in question was calculated using the pipe materials, slope, and dimensions. This capacity was then compared to the estimated expected **peak** flow at each pipe under current model conditions with the four added properties. The current model conditions represent base flow conditions using winter quarter water use from 2005 and infiltration rates estimated from the metering work done at the time of model creation in 2006. Note that this does not account for known flow reductions that have occurred since 2006 as a result of the changing business climate and addition of flow reducing water fixtures. It also does not account for the reduction in infiltration that may have occurred as the City improves its sanitary sewer collection system and repairs known leaky pipes. This means that calculations of available capacity should be conservative unless some water use has increased since the model was created.

Mean flow in each pipe was then calculated using the model. Infiltration for each pipe was also estimated based on meter results from the time the model was constructed. With the infiltration and mean sanitary flow rate at each pipe segment calculated, individual pipe capacity was determined using the following equation:

$$Pipe\ Capacity\ (\%) = 100\% \left[\frac{Infiltration\ Rate + Mean\ Flow * Peaking\ Factor}{Theoretical\ Maximum\ Pipe\ Capacity} \right]$$

Where *Infiltration Rate* is the cumulative upstream infiltration flow rate at a pipe segment, *Mean Flow* is the average flow rate predicted by the model at a pipe segment, *Peaking Factor* is the MCES Flow Variation Factor based on the value of mean flow which includes an allowance for inflow, and *Theoretical Maximum Pipe Capacity* is the maximum pipe capacity predicted by the Manning's equation. Percent pipe capacity and all related variables are summarized in Table 2.

SAC availability was determined as the difference between total peak pipe flow (*Infiltration Rate + Mean Flow * Peaking Factor*) and the theoretical maximum pipe capacity. SAC availability at each pipe segment is shown in Table 3.

Results

Figure 1 shows the capacity of all pipe segments in the Southeast Edina sanitary sewer. Under current modeling conditions, there are 11 individual pipe segments that are predicted to be over 100-percent capacity during a peak inflow event. Figure 2 and Figure 3 show the pipe identification numbers (Pipe IDs) corresponding to the Pipe IDs referenced in Table 2 and Table 3. Without additional data these pipes should already be considered to be at full capacity. As can be seen, all of the pipe segments at capacity are along the trunk sanitary sewer line heading east along 72nd St. W. towards France Ave S. Once this east-west trunk joins with the trunk going south along France Ave. S., the pipe is no longer over capacity but remains very close to full capacity. Percent capacity along this sewer line remains high until the terminal connection with the Metropolitan Council Environmental Services (MCES) Interceptor, MCES-129. Because the majority of sanitary flows from developments in Edina ultimately reach the MCES-129 interceptor via these trunk lines, requests for additional SAC units flowing to these pipes should be carefully planned to make sure there is sufficient available capacity.

2012 Sanitary Flow Metering Efforts

As part of the FilmTec Flow Analysis Study, completed by Barr Engineering Co. for the City of Edina in December of 2012, sanitary flow data was collected at several locations throughout the city, including the MCES-129 Interceptor. As described in the modeling section of this memorandum, the model used in this analysis was developed and calibrated based on 2005 winter quarter water sales and city-wide metering efforts conducted in 2006. Included in the attached addendum is a comparison of modeled flow and observed flow form the 2006 and 2012 studies. As can be seen, the model accurately predicts observed flow in the 2006 study, but appears to over-predict flow based on metering efforts in 2012.

There are many factors which may be responsible for the model over-predicting flow during the metered period in December of 2012. Infiltration and Inflow rates used in the model are based on the metering efforts conducted in 2006. Since then, the City of Edina has taken efforts to reduce I&I by replacing manhole covers and lining some pipes. From work done recently in other areas of the city we also know that it is likely that base-line sewer flows have decreased to some extent. Additionally, the fall season of 2012 was exceptionally dry, potentially leading to lower than expected infiltration when metering efforts were conducted in December of that year. One, all, or a combination of these factors could have led to the over-prediction of total sanitary flow in 2012.

Conclusions and Recommendations

The sanitary sewer trunkline from 72nd St, W, to France Ave, S,, currently modeled as being over capacity, drains a relatively small portion of the project area. Most of the flow contributing to it is pumped in from Lift Station 6 (LS-6) and comes from southwest Edina. Once it joins to trunk lines draining with flow from southeast Edina it is no longer over capacity, however, it remains at over 80% capacity. For this reason, it is possible for development to continue in most areas of southeast Edina. However, because the major trunk lines leading to MCES-129 are nearing capacity, it is recommended that the City evaluate requests for additional SAC units on a case-by-case basis.

With most of the major trunk lines immediately upstream of MCES-129 being close to capacity, it is recommended that the City also start looking into reliever trunk lines to accommodate proposed development in this area. New trunk lines running down York Ave. S. and a reliever line carrying flow from LS-6 all the way to the MCES interceptor could free up significant capacity to support additional development.

Before any major trunk line upgrade decisions are made, it is recommended that updated field metering data be collected and compared to the data collected in 2006 for the creation of the model. Due to I&I reduction efforts completed since 2006 and potential decreases in base-line sewer flow, it is possible that capacity issues could be less severe than indicated by current modeling results. Even without fully updating the model with new water use data, updated metering data will allow us to determine if baseline flows have changed since the model was created. If baseline flows are shown to have decreased, there may be additional capacity in the pipes not accounted for in this analysis. If flows have remained the same or increased, there may be even less capacity in the trunk lines than this analysis shows. If updated metering efforts are to be conducted, it is additionally recommended that extra metering efforts be taken along the trunk line spanning from 72nd St. W. to the terminal MCES-129 interceptor, where pipe capacity is the most limited.

Attachments

Addendum

Barr Footer: ArcGIS 10.1, 2013-06-05 12:48 File: C:\Users\nbm\Desktop\Edina Sanitary Sewer\Sanitary053113.mxd User: mbm

Pipe Capacity Filled (%)

- 0-60
- 60-80
- 80-90
- 90-95
- 95-100
- >100
- Sanitary Sewer Not Included in Analysis
- Meter Location

N

Feet
0 600 1,200 1,800

Meters
0 250 500 750

1 inch = 1,200 feet

BARR

Figure 1

SOUTH EAST EDINA
SANITARY SEWER CAPACITY
SE Edina SAC Availability Study
City of Edina, MN

A32

Barr Footer: ArcGIS 10.1, 2013-07-25 14:32 File: I:\Projects\23\27\G13 Maps\SAC Availability\SE Edina\Figures\Figure4_11x17.mxd User: mbm

Pipe capacity Filled (%)

- 0-60
- 60-80
- 80-90
- 90-95
- 95-100
- >100
- Sanitary Sewer Not Included in Analysis
- Meter Location

Feet: 0 200 400 600

Meters: 0 50 100 150

1 inch = 400 feet

Label Legend:

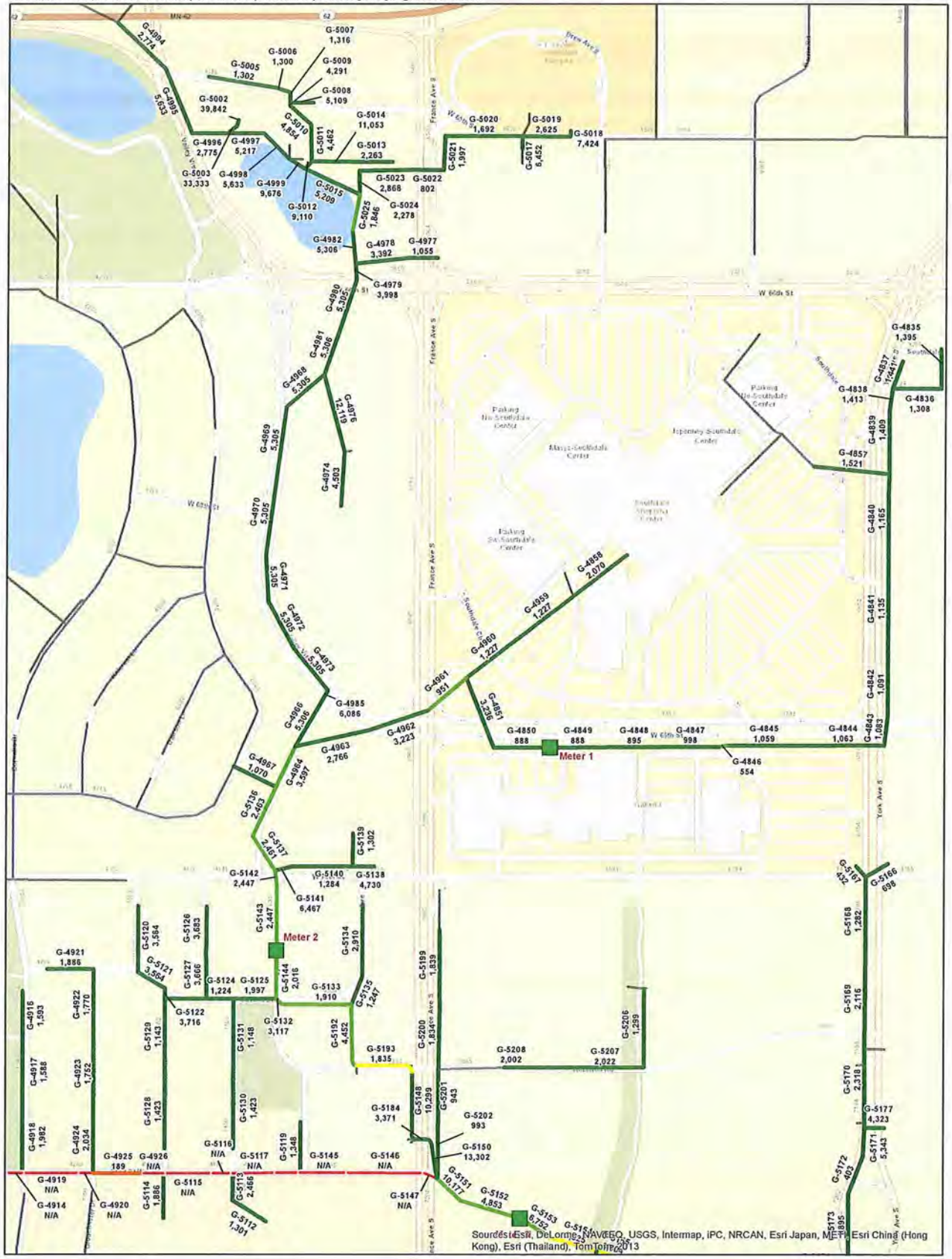
G-5249 — Pipe ID
2,759 — Available SAC Units

BARR

Figure 2

SOUTH EAST EDINA SANITARY SEWER SAC CAPACITY (SOUTH)
SE Edina SAC Availability Study
City of Edina, MN

Barr Footer: ArcGIS 10.1, 2013-07-25 14:32 File: I:\Projects\23\27\G13\Maps\SAC Availability\SE Edina\Figures\Figure4_11x17.mxd User: mbm



Pipe capacity Filled (%)

- 0-60
- 60-80
- 80-90
- 90-95
- 95-100
- >100
- Sanitary Sewer Not Included in Analysis
- Meter Location

Feet: 0 200 400 600

Meters: 0 50 100 150

1 inch = 400 feet

Label Legend:

G-5249 — Pipe ID
2,759 — Available SAC Units

BARR

Figure 3

SOUTH EAST EDINA SANITARY SEWER SAC CAPACITY (NORTH)
SE Edina SAC Availability Study
City of Edina, MN

A34

Table 1. Sanitary flows from post-2005 major developments

Development	Address	Metered or Projected Flow?	Flow SAC Units	Location flow added
Byerly's	7171 France Ave.	Projected	210.8	Hazelton & France
Southdale Apartments	W 69th & York Ave S	Projected	190.5	69th & York
Westin	3201 Galleria	Metered	10.9	(2/3) 69th & York, (1/3) 69th and York
Edina Medical Plaza	6500 France Ave	Assumed	109.5	W 65th & France

Table 2. Pipe capacity

Pipe Segment	Estimated Infiltration (gpm)	Mean Flow (gpm)	Peaking Factor	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Pipe Capacity (% Full)
G-839	0.6	7.4	4.0	30.0	356.1	8.4
G-840	1.2	7.4	4.0	30.7	368.3	8.3
G-841	2.0	7.4	4.0	31.4	391.6	8.0
G-842	5.1	7.4	4.0	34.5	1,384.8	2.5
G-843	0.2	0.0	4.0	0.2	427.6	0.0
G-844	1.2	0.1	4.0	1.7	368.3	0.5
G-845	2.6	11.0	4.0	46.6	380.1	12.3
G-846	10.8	18.4	4.0	84.3	1,692.2	5.0
G-848	1.4	0.0	4.0	1.4	722.5	0.2
G-849	0.8	0.0	4.0	0.8	364.3	0.2
G-850	3.2	0.2	4.0	3.9	376.2	1.0
G-851	4.3	0.2	4.0	5.0	413.6	1.2
G-852	4.9	0.2	4.0	5.6	589.4	1.0
G-853	6.9	0.2	4.0	7.7	629.0	1.2
G-854	9.8	4.7	4.0	28.5	1,242.5	2.3
G-856	10.3	4.7	4.0	29.0	572.8	5.1
G-857	11.3	4.7	4.0	30.0	572.8	5.2
G-858	12.3	4.7	4.0	30.9	572.8	5.4
G-859	13.2	4.7	4.0	31.9	2,978.6	1.1
G-860	0.2	0.0	4.0	0.2	1,753.8	0.0
G-861	2.4	0.0	4.0	2.4	1,011.3	0.2
G-862	0.7	0.0	4.0	0.7	339.1	0.2
G-863	1.1	3.6	4.0	15.6	339.1	4.6
G-864	1.6	3.6	4.0	16.1	343.5	4.7

Table 2. Pipe capacity

Pipe Segment	Estimated Infiltration (gpm)	Mean Flow (gpm)	Peaking Factor	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Pipe Capacity (% Full)
G-865	0.8	0.0	4.0	0.8	343.5	0.2
G-866	2.6	21.3	4.0	87.7	343.5	25.5
G-867	3.4	21.3	4.0	88.5	343.5	25.8
G-868	3.8	21.3	4.0	88.9	2,261.3	3.9
G-869	7.8	21.3	4.0	92.9	1,011.3	9.2
G-4827	1,042.6	1,987.4	2.7	6,408.7	7,505.8	85.4
G-4828	3.2	1.3	4.0	8.2	469.6	1.8
G-4829	3.4	1.3	4.0	8.4	570.3	1.5
G-4830	3.4	1.3	4.0	8.4	3,931.6	0.2
G-4831	74.6	57.1	4.0	302.9	1,420.3	21.3
G-4832	74.7	57.4	4.0	304.1	9,848.6	3.1
G-4833	1,117.8	2,044.9	2.6	6,434.4	15,198.2	42.3
G-4834	1,122.0	2,046.1	2.6	6,441.8	35,682.4	18.1
G-4835	0.6	0.0	4.0	0.7	503.6	0.1
G-4836	1.2	2.1	4.0	9.6	481.2	2.0
G-4837	0.4	0.0	4.0	0.6	519.8	0.1
G-4838	2.0	2.2	4.0	10.6	519.8	2.0
G-4839	3.0	2.3	4.0	12.1	519.8	2.3
G-4840	5.4	23.6	4.0	99.9	519.8	19.2
G-4841	6.8	26.0	4.0	110.8	519.8	21.3
G-4842	7.8	29.7	4.0	126.4	519.8	24.3
G-4843	8.2	30.3	4.0	129.4	519.8	24.9
G-4844	9.5	31.8	4.0	136.8	519.8	26.3
G-4845	10.7	31.8	4.0	138.0	519.8	26.5
G-4846	10.8	77.3	4.0	320.0	519.8	61.6
G-4847	11.7	77.3	4.0	320.9	680.5	47.1
G-4848	12.6	88.6	3.9	358.1	680.5	52.6
G-4849	13.5	89.0	3.9	360.4	680.5	53.0
G-4850	13.6	89.0	3.9	360.5	680.4	53.0
G-4851	13.8	105.9	3.9	426.7	1,592.9	26.8
G-4857	1.1	0.4	4.0	2.5	550.6	0.5
G-4858	0.2	69.4	4.0	277.9	1,023.8	27.1
G-4914	676.3	1,043.6	2.9	3,702.7	3,517.1	105.3

Table 2. Pipe capacity

Pipe Segment	Estimated Infiltration (gpm)	Mean Flow (gpm)	Peaking Factor	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Pipe Capacity (% Full)
G-4916	0.9	0.0	4.0	0.9	575.1	0.2
G-4917	2.3	0.1	4.0	2.8	575.1	0.5
G-4918	3.6	0.4	4.0	5.4	719.8	0.7
G-4919	682.9	1,044.4	2.9	3,711.6	3,517.1	105.5
G-4920	683.8	1,044.3	2.9	3,712.4	3,517.1	105.6
G-4921	0.9	0.0	4.0	0.9	680.5	0.1
G-4922	2.3	0.7	4.0	5.0	643.0	0.8
G-4923	3.6	2.0	4.0	11.5	643.0	1.8
G-4924	4.9	3.0	4.0	17.0	749.9	2.3
G-4925	691.3	1,048.1	2.9	3,730.9	3,798.9	98.2
G-4926	692.4	1,048.4	2.9	3,732.8	3,660.7	102.0
G-4959	0.4	152.9	3.8	581.5	1,023.8	56.8
G-4960	0.5	152.9	3.8	581.6	1,023.8	56.8
G-4961	14.5	258.9	3.6	946.5	1,289.0	73.4
G-4962	14.7	258.8	3.6	946.5	2,108.2	44.9
G-4963	15.0	258.9	3.6	947.2	1,943.9	48.7
G-4964	177.7	683.3	3.2	2,364.4	3,660.7	64.6
G-4965	162.1	424.3	3.4	1,604.8	3,798.9	42.2
G-4966	162.4	424.2	3.4	1,604.8	3,517.0	45.6
G-4967	18.4	101.4	3.9	413.8	799.4	51.8
G-4968	160.4	425.0	3.4	1,605.3	3,517.0	45.6
G-4969	160.7	424.9	3.4	1,605.3	3,517.0	45.6
G-4970	161.2	424.7	3.4	1,605.2	3,517.0	45.6
G-4971	161.4	424.6	3.4	1,605.1	3,517.0	45.6
G-4972	161.8	424.5	3.4	1,605.1	3,517.0	45.6
G-4973	162.1	424.4	3.4	1,605.1	3,517.0	45.6
G-4974	0.1	0.0	4.0	0.1	1,623.0	0.0
G-4976	0.4	0.0	4.0	0.4	4,368.0	0.0
G-4977	0.0	0.0	4.0	0.0	380.2	0.0
G-4978	0.2	0.0	4.0	0.2	1,222.6	0.0
G-4979	159.1	425.3	3.4	1,605.0	3,045.8	52.7
G-4980	159.3	425.2	3.4	1,605.1	3,517.0	45.6
G-4981	159.6	425.1	3.4	1,605.0	3,517.0	45.6

Table 2. Pipe capacity

Pipe Segment	Estimated Infiltration (gpm)	Mean Flow (gpm)	Peaking Factor	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Pipe Capacity (% Full)
G-4982	158.8	425.3	3.4	1,604.8	3,517.0	45.6
G-4994	155.3	391.7	3.4	1,487.2	2,487.0	59.8
G-4995	155.6	391.6	3.4	1,487.0	3,517.0	42.3
G-4996	156.0	391.5	3.4	1,487.0	2,487.0	59.8
G-4997	156.3	391.4	3.4	1,487.0	3,367.1	44.2
G-4998	156.6	391.3	3.4	1,486.9	3,517.0	42.3
G-4999	156.6	391.2	3.4	1,486.9	4,973.9	29.9
G-5002	0.0	0.0	4.0	0.0	14,358.6	0.0
G-5003	0.1	0.0	4.0	0.1	12,013.0	0.0
G-5005	0.1	0.0	4.0	0.1	469.5	0.0
G-5006	0.2	0.2	4.0	1.1	469.5	0.2
G-5007	0.2	0.2	4.0	1.1	475.3	0.2
G-5008	0.0	0.0	4.0	0.0	1,841.1	0.0
G-5009	0.3	0.4	4.0	1.7	1,548.0	0.1
G-5010	0.3	0.4	4.0	1.8	1,750.9	0.1
G-5011	0.4	0.4	4.0	2.0	1,610.0	0.1
G-5012	0.7	0.7	4.0	3.5	3,286.8	0.1
G-5013	0.1	0.0	4.0	0.1	815.5	0.0
G-5014	0.2	0.3	4.0	1.5	3,984.7	0.0
G-5015	157.7	391.8	3.4	1,489.9	3,367.1	44.2
G-5017	0.0	5.9	4.0	23.7	2,348.7	1.0
G-5018	0.0	0.0	4.0	0.0	2,675.5	0.0
G-5019	0.1	0.0	4.0	0.1	946.1	0.0
G-5020	0.4	7.3	4.0	29.7	639.6	4.6
G-5021	0.4	7.5	4.0	30.3	750.0	4.0
G-5022	0.5	7.6	4.0	30.9	320.0	9.7
G-5023	0.7	33.7	4.0	135.5	1,169.2	11.6
G-5024	0.8	33.7	4.0	135.6	956.5	14.2
G-5025	158.7	425.4	3.4	1,604.9	2,270.2	70.7
G-5112	0.8	0.0	4.0	0.8	469.6	0.2
G-5113	1.3	1.0	4.0	5.4	894.0	0.6
G-5114	0.9	0.0	4.0	0.9	680.5	0.1
G-5115	695.8	1,049.3	2.9	3,738.7	3,517.1	106.3

Table 2. Pipe capacity

Pipe Segment	Estimated Infiltration (gpm)	Mean Flow (gpm)	Peaking Factor	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Pipe Capacity (% Full)
G-5116	696.8	1,049.5	2.9	3,740.2	3,660.7	102.2
G-5117	700.6	1,050.5	2.9	3,747.2	3,517.1	106.5
G-5118	701.9	1,050.7	2.9	3,748.9	3,517.1	106.6
G-5119	1.0	0.0	4.0	1.0	486.9	0.2
G-5120	1.4	0.0	4.0	1.4	1,286.0	0.1
G-5121	2.1	0.4	4.0	3.9	1,288.1	0.3
G-5122	2.3	0.8	4.0	5.5	1,344.7	0.4
G-5123	6.0	3.2	4.0	18.8	469.6	4.0
G-5124	8.5	5.0	4.0	28.5	469.6	6.1
G-5125	12.3	6.3	4.0	37.7	757.2	5.0
G-5126	1.0	0.0	4.0	1.0	1,328.2	0.1
G-5127	2.0	1.2	4.0	6.8	1,328.2	0.5
G-5128	1.5	0.0	4.0	1.5	514.4	0.3
G-5129	2.9	1.3	4.0	8.1	420.0	1.9
G-5130	1.5	0.0	4.0	1.5	514.4	0.3
G-5131	2.9	0.8	4.0	6.2	420.0	1.5
G-5132	212.8	794.4	3.1	2,675.4	3,798.9	70.4
G-5133	216.7	794.3	3.1	2,679.0	3,367.4	79.6
G-5134	1.4	0.0	4.0	1.4	1,050.0	0.1
G-5135	2.1	4.5	4.0	20.3	469.6	4.3
G-5136	196.4	784.9	3.1	2,629.5	3,517.0	74.8
G-5137	196.6	785.0	3.1	2,630.2	3,517.0	74.8
G-5138	0.0	0.0	4.0	0.0	1,704.7	0.0
G-5139	0.1	0.0	4.0	0.1	469.5	0.0
G-5140	0.2	1.6	4.0	6.7	469.5	1.4
G-5141	0.3	1.6	4.0	6.7	2,337.5	0.3
G-5142	197.0	786.5	3.1	2,635.2	3,517.0	74.9
G-5143	197.4	786.4	3.1	2,635.2	3,517.0	74.9
G-5144	200.1	787.3	3.1	2,640.9	3,367.4	78.4
G-5145	705.4	1,051.2	2.9	3,753.8	3,517.1	106.7
G-5146	709.4	1,051.4	2.9	3,758.4	3,517.1	106.9
G-5147	710.1	1,051.2	2.9	3,758.6	3,367.4	111.6
G-5148	229.2	800.1	3.1	2,709.5	6,421.3	42.2

Table 2. Pipe capacity

Pipe Segment	Estimated Infiltration (gpm)	Mean Flow (gpm)	Peaking Factor	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Pipe Capacity (% Full)
G-5149	230.7	799.8	3.1	2,710.1	6,279.8	43.2
G-5150	233.2	799.6	3.1	2,712.1	7,505.8	36.1
G-5151	956.3	1,912.1	2.7	6,118.8	9,786.4	62.5
G-5152	960.9	1,911.9	2.7	6,123.1	7,872.2	77.8
G-5153	963.3	1,911.6	2.7	6,124.6	8,558.0	71.6
G-5154	966.7	1,911.3	2.7	6,127.3	7,505.8	81.6
G-5155	971.4	1,912.4	2.7	6,135.0	7,505.8	81.7
G-5156	977.5	1,912.1	2.7	6,140.1	7,120.7	86.2
G-5157	984.6	1,927.2	2.7	6,188.2	7,505.8	82.4
G-5158	988.3	1,927.0	2.7	6,191.1	7,505.8	82.5
G-5159	994.2	1,932.6	2.7	6,212.1	7,505.8	82.8
G-5160	996.5	1,932.3	2.7	6,213.7	7,505.8	82.8
G-5161	1,014.9	1,975.3	2.7	6,348.2	7,505.8	84.6
G-5162	1,021.0	1,974.9	2.7	6,353.3	7,505.8	84.6
G-5163	1,026.4	1,974.4	2.7	6,357.3	7,505.8	84.7
G-5164	1,032.2	1,988.0	2.7	6,399.9	7,505.8	85.3
G-5165	1,037.4	1,987.5	2.7	6,403.6	7,120.7	89.9
G-5166	0.4	0.0	4.0	0.4	251.8	0.1
G-5167	0.2	0.9	4.0	3.6	159.3	2.3
G-5168	2.4	1.3	4.0	7.6	469.6	1.6
G-5169	3.8	1.3	4.0	9.0	771.6	1.2
G-5170	5.8	1.3	4.0	11.0	846.5	1.3
G-5171	7.2	1.5	4.0	13.1	1,938.7	0.7
G-5172	8.3	1.6	4.0	14.8	159.9	9.2
G-5173	10.1	14.3	4.0	67.2	750.0	9.0
G-5174	10.6	14.3	4.0	67.7	783.3	8.6
G-5175	12.7	43.4	4.0	186.3	2,974.3	6.3
G-5176	0.9	0.0	4.0	0.9	1,607.0	0.1
G-5177	0.6	0.0	4.0	0.6	1,558.5	0.0
G-5181	1.4	6.0	4.0	25.5	753.5	3.4
G-5182	0.2	0.0	4.0	0.2	274.7	0.1
G-5183	1.0	2.5	4.0	10.9	343.5	3.2
G-5184	1.1	4.4	4.0	18.7	1,233.6	1.5

Table 2. Pipe capacity

Pipe Segment	Estimated Infiltration (gpm)	Mean Flow (gpm)	Peaking Factor	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Pipe Capacity (% Full)
G-5185	0.8	0.0	4.0	0.8	473.6	0.2
G-5186	2.7	8.1	4.0	35.0	473.6	7.4
G-5187	3.3	10.6	4.0	45.8	468.3	9.8
G-5188	3.9	12.0	4.0	51.8	462.9	11.2
G-5189	4.5	15.1	4.0	65.0	1,044.8	6.2
G-5190	0.7	0.0	4.0	0.7	467.2	0.1
G-5191	2.2	0.3	4.0	3.2	485.7	0.7
G-5192	222.2	800.4	3.1	2,703.3	4,307.5	62.8
G-5193	225.4	800.2	3.1	2,705.9	3,367.4	80.4
G-5199	1.4	0.0	4.0	1.4	664.1	0.2
G-5200	2.8	0.1	4.0	3.3	664.1	0.5
G-5201	9.4	54.0	4.0	225.6	565.4	39.9
G-5202	10.5	54.0	4.0	226.6	584.6	38.8
G-5203	10.5	61.5	4.0	256.5	4,163.1	6.2
G-5206	1.6	0.0	4.0	1.6	469.6	0.3
G-5207	3.1	2.6	4.0	13.7	742.5	1.8
G-5208	4.3	4.1	4.0	20.8	742.5	2.8
G-5210	1.5	6.6	4.0	28.1	942.2	3.0
G-5211	2.8	6.6	4.0	29.3	870.6	3.4
G-5212	3.5	6.6	4.0	30.1	878.6	3.4
G-5213	6.8	6.6	4.0	33.4	1,328.2	2.5
G-5214	4.0	6.6	4.0	30.6	621.2	4.9
G-5216	0.9	0.0	4.0	0.9	697.6	0.1
G-5218	0.8	0.0	4.0	0.8	708.1	0.1
G-5219	2.3	0.2	4.0	3.0	766.1	0.4
G-5220	7.1	6.6	4.0	33.6	2,398.5	1.4
G-5221	29.1	23.0	4.0	121.2	2,041.5	5.9
G-5222	38.5	34.3	4.0	175.8	1,279.2	13.7
G-5223	26.6	23.0	4.0	118.7	932.4	12.7
G-5224	0.7	0.0	4.0	0.7	410.0	0.2
G-5225	0.9	0.0	4.0	0.9	343.5	0.3
G-5226	1.7	0.0	4.0	1.7	343.5	0.5
G-5227	2.1	0.0	4.0	2.3	678.3	0.3

Table 2. Pipe capacity

Pipe Segment	Estimated Infiltration (gpm)	Mean Flow (gpm)	Peaking Factor	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Pipe Capacity (% Full)
G-5228	2.5	0.0	4.0	2.7	2,261.3	0.1
G-5229	11.7	21.3	4.0	97.0	1,011.3	9.6
G-5230	13.8	21.3	4.0	98.9	1,011.3	9.8
G-5231	0.2	0.0	4.0	0.2	1,311.2	0.0
G-5233	1.2	0.0	4.0	1.2	447.8	0.3
G-5234	42.8	34.6	4.0	181.4	1,359.8	13.3
G-5235	38.9	33.4	4.0	172.6	916.8	18.8
G-5236	59.2	56.4	4.0	284.7	1,359.8	20.9
G-5237	0.4	0.0	4.0	0.4	2,261.3	0.0
G-5238	62.2	56.3	4.0	287.5	1,359.8	21.1
G-5239	1.7	0.0	4.0	1.7	1,011.3	0.2
G-5240	2.6	0.1	4.0	3.2	1,036.3	0.3
G-5241	4.7	0.2	4.0	5.4	972.6	0.6
G-5243	69.4	56.5	4.0	295.2	1,359.8	21.7
G-5244	70.2	56.5	4.0	296.1	1,449.6	20.4
G-5246	0.4	0.0	4.0	0.4	446.5	0.1
G-5247	1.7	0.2	4.0	2.6	1,102.8	0.2
G-5248	2.3	0.6	4.0	4.9	1,655.7	0.3
G-5249	74.0	57.1	4.0	302.3	1,296.5	23.3
G-5250	2.4	0.6	4.0	4.9	1,214.3	0.4
G-5251	1.5	0.0	4.0	1.5	486.9	0.3
G-5252	3.1	0.9	4.0	6.8	486.9	1.4
G-5277	1.0	0.0	4.0	1.0	446.5	0.2
G-5278	1.6	0.1	4.0	2.1	446.5	0.5
G-5320	1.9	0.1	4.0	2.4	543.1	0.4

Table 3: SAC availability

Pipe Segment	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Available Pipe Capacity (gpm)	SAC Units Available[1]
G-839	30.0	356.1	326.1	904.9
G-840	30.7	368.3	337.6	936.8
G-841	31.4	391.6	360.2	999.5
G-842	34.5	1384.8	1350.3	3746.8
G-843	0.2	427.6	427.4	1186.0
G-844	1.7	368.3	366.6	1017.2
G-845	46.6	380.1	333.5	925.4
G-846	84.3	1692.2	1607.9	4461.6
G-848	1.4	722.5	721.1	2000.9
G-849	0.8	364.3	363.5	1008.6
G-850	3.9	376.2	372.3	1033.1
G-851	5.0	413.6	408.6	1133.8
G-852	5.6	589.4	583.8	1619.9
G-853	7.7	629.0	621.3	1724.0
G-854	28.5	1242.5	1214.0	3368.6
G-856	29.0	572.8	543.8	1508.9
G-857	30.0	572.8	542.8	1506.2
G-858	30.9	572.8	541.9	1503.7
G-859	31.9	2978.6	2946.7	8176.5
G-860	0.2	1753.8	1753.6	4865.9
G-861	2.4	1011.3	1008.9	2799.5
G-862	0.7	339.1	338.4	939.0
G-863	15.6	339.1	323.5	897.6
G-864	16.1	343.5	327.4	908.5
G-865	0.8	343.5	342.7	950.9
G-866	87.7	343.5	255.8	709.8
G-867	88.5	343.5	255.0	707.6
G-868	88.9	2261.3	2172.4	6028.0
G-869	92.9	1011.3	918.4	2548.4
G-4827	6408.7	7505.8	1097.1	3044.2
G-4828	8.2	469.6	461.4	1280.3
G-4829	8.4	570.3	561.9	1559.2
G-4830	8.4	3931.6	3923.2	10886.1

Table 3: SAC availability

Pipe Segment	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Available Pipe Capacity (gpm)	SAC Units Available[1]
G-4831	302.9	1420.3	1117.4	3100.6
G-4832	304.1	9848.6	9544.5	26484.1
G-4833	6434.4	15198.2	8763.8	24317.8
G-4834	6441.8	35682.4	29240.6	81136.9
G-4835	0.7	503.6	502.9	1395.4
G-4836	9.6	481.2	471.6	1308.6
G-4837	0.6	519.8	519.2	1440.7
G-4838	10.6	519.8	509.2	1412.9
G-4839	12.1	519.8	507.7	1408.8
G-4840	99.9	519.8	419.9	1165.1
G-4841	110.8	519.8	409.0	1134.9
G-4842	126.4	519.8	393.4	1091.6
G-4843	129.4	519.8	390.4	1083.3
G-4844	136.8	519.8	383.0	1062.7
G-4845	138.0	519.8	381.8	1059.4
G-4846	320.0	519.8	199.8	554.4
G-4847	320.9	680.5	359.6	997.8
G-4848	358.1	680.5	322.4	894.6
G-4849	360.4	680.5	320.1	888.2
G-4850	360.5	680.4	319.9	887.7
G-4851	426.7	1592.9	1166.2	3236.0
G-4857	2.5	550.6	548.1	1520.9
G-4858	277.9	1023.8	745.9	2069.7
G-4914	3702.7	3517.1	0.0	0.0
G-4916	0.9	575.1	574.2	1593.3
G-4917	2.8	575.1	572.3	1588.0
G-4918	5.4	719.8	714.4	1982.3
G-4919	3711.6	3517.1	0.0	0.0
G-4920	3712.4	3517.1	0.0	0.0
G-4921	0.9	680.5	679.6	1885.8
G-4922	5.0	643.0	638.0	1770.3
G-4923	11.5	643.0	631.5	1752.3
G-4924	17.0	749.9	732.9	2033.7

Table 3: SAC availability

Pipe Segment	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Available Pipe Capacity (gpm)	SAC Units Available[1]
G-4925	3730.9	3798.9	68.0	188.7
G-4926	3732.8	3660.7	0.0	0.0
G-4959	581.5	1023.8	442.3	1227.3
G-4960	581.6	1023.8	442.2	1227.0
G-4961	946.5	1289.0	342.5	950.4
G-4962	946.5	2108.2	1161.7	3223.5
G-4963	947.2	1943.9	996.7	2765.6
G-4964	2364.4	3660.7	1296.3	3597.0
G-4965	1604.8	3798.9	2194.1	6088.2
G-4966	1604.8	3517.0	1912.2	5306.0
G-4967	413.8	799.4	385.6	1070.0
G-4968	1605.3	3517.0	1911.7	5304.6
G-4969	1605.3	3517.0	1911.7	5304.6
G-4970	1605.2	3517.0	1911.8	5304.9
G-4971	1605.1	3517.0	1911.9	5305.1
G-4972	1605.1	3517.0	1911.9	5305.1
G-4973	1605.1	3517.0	1911.9	5305.1
G-4974	0.1	1623.0	1622.9	4503.2
G-4976	0.4	4368.0	4367.6	12119.2
G-4977	0.0	380.2	380.2	1055.0
G-4978	0.2	1222.6	1222.4	3391.9
G-4979	1605.0	3045.8	1440.8	3997.9
G-4980	1605.1	3517.0	1911.9	5305.1
G-4981	1605.0	3517.0	1912.0	5305.4
G-4982	1604.8	3517.0	1912.2	5306.0
G-4994	1487.2	2487.0	999.8	2774.2
G-4995	1487.0	3517.0	2030.0	5632.8
G-4996	1487.0	2487.0	1000.0	2774.8
G-4997	1487.0	3367.1	1880.1	5216.9
G-4998	1486.9	3517.0	2030.1	5633.1
G-4999	1486.9	4973.9	3487.0	9675.7
G-5002	0.0	14358.6	14358.6	39842.3
G-5003	0.1	12013.0	12012.9	33333.4

Table 3: SAC availability

Pipe Segment	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Available Pipe Capacity (gpm)	SAC Units Available[1]
G-5005	0.1	469.5	469.4	1302.5
G-5006	1.1	469.5	468.4	1299.7
G-5007	1.1	475.3	474.2	1315.8
G-5008	0.0	1841.1	1841.1	5108.7
G-5009	1.7	1548.0	1546.3	4290.7
G-5010	1.8	1750.9	1749.1	4853.4
G-5011	2.0	1610.0	1608.0	4461.9
G-5012	3.5	3286.8	3283.3	9110.5
G-5013	0.1	815.5	815.4	2262.6
G-5014	1.5	3984.7	3983.2	11052.6
G-5015	1489.9	3367.1	1877.2	5208.9
G-5017	23.7	2348.7	2325.0	6451.4
G-5018	0.0	2675.5	2675.5	7424.0
G-5019	0.1	946.1	946.0	2625.0
G-5020	29.7	639.6	609.9	1692.4
G-5021	30.3	750.0	719.7	1997.0
G-5022	30.9	320.0	289.1	802.2
G-5023	135.5	1169.2	1033.7	2868.3
G-5024	135.6	956.5	820.9	2277.8
G-5025	1604.9	2270.2	665.3	1846.1
G-5112	0.8	469.6	468.8	1300.8
G-5113	5.4	894.0	888.6	2465.7
G-5114	0.9	680.5	679.6	1885.8
G-5115	3738.7	3517.1	0.0	0.0
G-5116	3740.2	3660.7	0.0	0.0
G-5117	3747.2	3517.1	0.0	0.0
G-5118	3748.9	3517.1	0.0	0.0
G-5119	1.0	486.9	485.9	1348.3
G-5120	1.4	1286.0	1284.6	3564.5
G-5121	3.9	1288.1	1284.2	3563.4
G-5122	5.5	1344.7	1339.2	3716.0
G-5123	18.8	469.6	450.8	1250.9
G-5124	28.5	469.6	441.1	1224.0

Table 3: SAC availability

Pipe Segment	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Available Pipe Capacity (gpm)	SAC Units Available[1]
G-5125	37.7	757.2	719.5	1996.5
G-5126	1.0	1328.2	1327.2	3682.7
G-5127	6.8	1328.2	1321.4	3666.6
G-5128	1.5	514.4	512.9	1423.2
G-5129	8.1	420.0	411.9	1142.9
G-5130	1.5	514.4	512.9	1423.2
G-5131	6.2	420.0	413.8	1148.2
G-5132	2675.4	3798.9	1123.5	3117.5
G-5133	2679.0	3367.4	688.4	1910.2
G-5134	1.4	1050.0	1048.6	2909.7
G-5135	20.3	469.6	449.3	1246.7
G-5136	2629.5	3517.0	887.5	2462.6
G-5137	2630.2	3517.0	886.8	2460.7
G-5138	0.0	1704.7	1704.7	4730.2
G-5139	0.1	469.5	469.4	1302.5
G-5140	6.7	469.5	462.8	1284.2
G-5141	6.7	2337.5	2330.8	6467.5
G-5142	2635.2	3517.0	881.8	2446.8
G-5143	2635.2	3517.0	881.8	2446.8
G-5144	2640.9	3367.4	726.5	2015.9
G-5145	3753.8	3517.1	0.0	0.0
G-5146	3758.4	3517.1	0.0	0.0
G-5147	3758.6	3367.4	0.0	0.0
G-5148	2709.5	6421.3	3711.8	10299.5
G-5149	2710.1	6279.8	3569.7	9905.2
G-5150	2712.1	7505.8	4793.7	13301.6
G-5151	6118.8	9786.4	3667.6	10176.9
G-5152	6123.1	7872.2	1749.1	4853.4
G-5153	6124.6	8558.0	2433.4	6752.2
G-5154	6127.3	7505.8	1378.5	3825.1
G-5155	6135.0	7505.8	1370.8	3803.7
G-5156	6140.1	7120.7	980.6	2721.0
G-5157	6188.2	7505.8	1317.6	3656.1

Table 3: SAC availability

Pipe Segment	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Available Pipe Capacity (gpm)	SAC Units Available[1]
G-5158	6191.1	7505.8	1314.7	3648.0
G-5159	6212.1	7505.8	1293.7	3589.8
G-5160	6213.7	7505.8	1292.1	3585.3
G-5161	6348.2	7505.8	1157.6	3212.1
G-5162	6353.3	7505.8	1152.5	3198.0
G-5163	6357.3	7505.8	1148.5	3186.9
G-5164	6399.9	7505.8	1105.9	3068.7
G-5165	6403.6	7120.7	717.1	1989.8
G-5166	0.4	251.8	251.4	697.6
G-5167	3.6	159.3	155.7	432.0
G-5168	7.6	469.6	462.0	1282.0
G-5169	9.0	771.6	762.6	2116.1
G-5170	11.0	846.5	835.5	2318.3
G-5171	13.1	1938.7	1925.6	5343.2
G-5172	14.8	159.9	145.1	402.6
G-5173	67.2	750.0	682.8	1894.6
G-5174	67.7	783.3	715.6	1985.6
G-5175	186.3	2974.3	2788.0	7736.1
G-5176	0.9	1607.0	1606.1	4456.6
G-5177	0.6	1558.5	1557.9	4322.9
G-5181	25.5	753.5	728.0	2020.1
G-5182	0.2	274.7	274.5	761.7
G-5183	10.9	343.5	332.6	922.9
G-5184	18.7	1233.6	1214.9	3371.1
G-5185	0.8	473.6	472.8	1311.9
G-5186	35.0	473.6	438.6	1217.0
G-5187	45.8	468.3	422.5	1172.4
G-5188	51.8	462.9	411.1	1140.7
G-5189	65.0	1044.8	979.8	2718.8
G-5190	0.7	467.2	466.5	1294.4
G-5191	3.2	485.7	482.5	1338.8
G-5192	2703.3	4307.5	1604.2	4451.3
G-5193	2705.9	3367.4	661.5	1835.5

Table 3: SAC availability

Pipe Segment	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Available Pipe Capacity (gpm)	SAC Units Available[1]
G-5199	1.4	664.1	662.7	1838.9
G-5200	3.3	664.1	660.8	1833.6
G-5201	225.6	565.4	339.8	942.9
G-5202	226.6	584.6	358.0	993.4
G-5203	256.5	4163.1	3906.6	10840.0
G-5206	1.6	469.6	468.0	1298.6
G-5207	13.7	742.5	728.8	2022.3
G-5208	20.8	742.5	721.7	2002.6
G-5210	28.1	942.2	914.1	2536.4
G-5211	29.3	870.6	841.3	2334.4
G-5212	30.1	878.6	848.5	2354.4
G-5213	33.4	1328.2	1294.8	3592.8
G-5214	30.6	621.2	590.6	1638.8
G-5216	0.9	697.6	696.7	1933.2
G-5218	0.8	708.1	707.3	1962.6
G-5219	3.0	766.1	763.1	2117.5
G-5220	33.6	2398.5	2364.9	6562.1
G-5221	121.2	2041.5	1920.3	5328.5
G-5222	175.8	1279.2	1103.4	3061.7
G-5223	118.7	932.4	813.7	2257.9
G-5224	0.7	410.0	409.3	1135.7
G-5225	0.9	343.5	342.6	950.6
G-5226	1.7	343.5	341.8	948.4
G-5227	2.3	678.3	676.0	1875.8
G-5228	2.7	2261.3	2258.6	6267.2
G-5229	97.0	1011.3	914.3	2537.0
G-5230	98.9	1011.3	912.4	2531.7
G-5231	0.2	1311.2	1311.0	3637.8
G-5233	1.2	447.8	446.6	1239.2
G-5234	181.4	1359.8	1178.4	3269.8
G-5235	172.6	916.8	744.2	2065.0
G-5236	284.7	1359.8	1075.1	2983.2
G-5237	0.4	2261.3	2260.9	6273.5

Table 3: SAC availability

Pipe Segment	Estimated Peak Flow (gpm)	Maximum Pipe Capacity (gpm)	Available Pipe Capacity (gpm)	SAC Units Available[1]
G-5238	287.5	1359.8	1072.3	2975.4
G-5239	1.7	1011.3	1009.6	2801.4
G-5240	3.2	1036.3	1033.1	2866.6
G-5241	5.4	972.6	967.2	2683.8
G-5243	295.2	1359.8	1064.6	2954.1
G-5244	296.1	1449.6	1153.5	3200.7
G-5246	0.4	446.5	446.1	1237.8
G-5247	2.6	1102.8	1100.2	3052.8
G-5248	4.9	1655.7	1650.8	4580.6
G-5249	302.3	1296.5	994.2	2758.7
G-5250	4.9	1214.3	1209.4	3355.8
G-5251	1.5	486.9	485.4	1346.9
G-5252	6.8	486.9	480.1	1332.2
G-5277	1.0	446.5	445.5	1236.2
G-5278	2.1	446.5	444.4	1233.1
G-5320	2.4	543.1	540.7	1500.3

[1] SAC units available adjusted to account for peak usage rate predicted by typical diurnal water usage curve.

Attachment

Addendum

Addendum

Infiltration and inflow (I&I) used in the City of Edina XP-SWMM sanitary sewer model (model) is based on metering efforts conducted in February and June of 2006. Base-line sewer flows used in the model are based on 2005 winter quarter water sales. Since 2006, redevelopment in the city of Edina, repairs to the sanitary sewer infrastructure, and improved water consumption efficiency have likely led to changes in expected base-line sewer flow and I&I flow.

Figure 1 shows meter data collected for model development in 2006 compared to meter data collected as part of the FilmTec Flow Analysis Study, completed for the City of Edina in December of 2012. The meter data shown was collected at the MCES-129 interceptor. As can be seen, there is a large difference in flow observed between the two studies. Some of the factors which may explain difference in flow rate observed between the 2006 and 2012 studies are outlined below:

- I&I reduction efforts conducted by the City of Edina since 2006, including replacing manhole covers and lining pipes.
- Reduction in base-line sewer flow since 2006.
- Differences in climatic conditions during the metering periods of the two studies; the fall of 2012 was exceptionally dry, potentially leading to lower than average pipe infiltration. Figure 3 shows a comparison of monthly precipitation totals in 2006 and 2012.

Figure 2 shows the 2006 and 2012 observed flow at MCES-129 compared to the flow predicted by the model. As can be seen, the 2006 data matches closely to the flow predicted by the model plus expected infiltration, whereas the 2012 matches more closely to the flow predicted by the model without the addition of infiltration. This observation could be caused by one or any combination of the factors outlined above. To better understand which factors are contributing to the decrease in observed flow and to help evaluate if updated calibration of the model is required, it is recommended that updated metering efforts be carried out, especially in areas identified as at or near capacity by current model projections. In addition to this, once the City has completed its water meter replacement program, new water use data should be added to the model to ensure more accurate calculation of base sanitary flow.

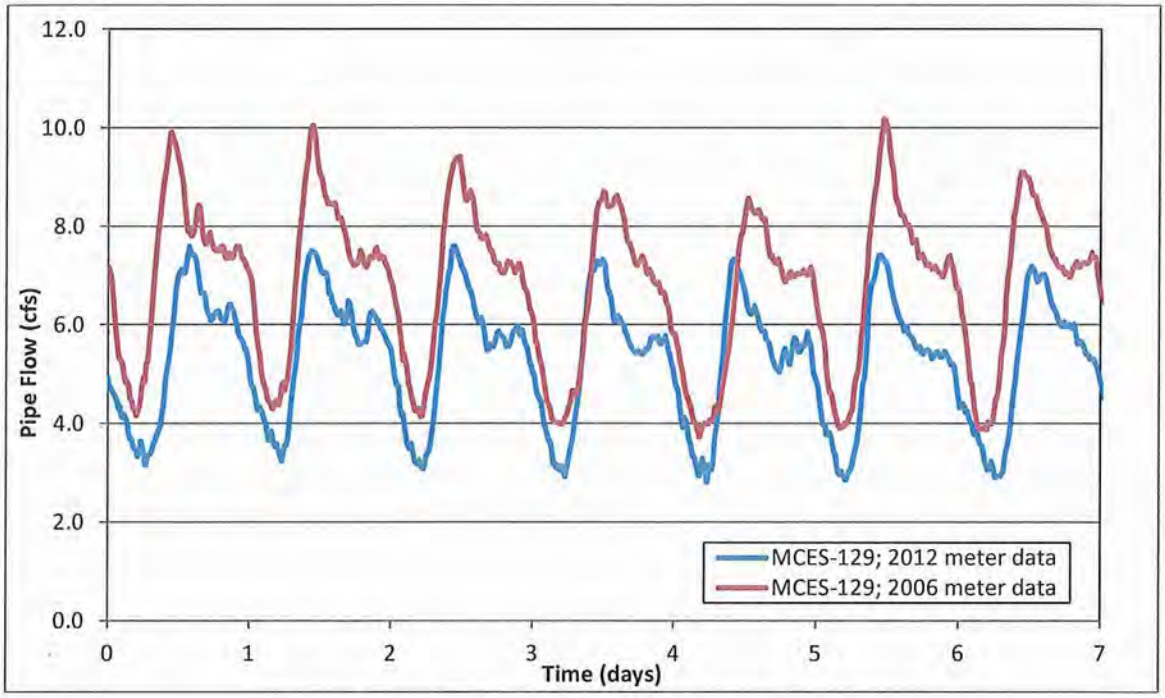


Figure 1. 2006 and 2012 MCES-129 metered flow data.

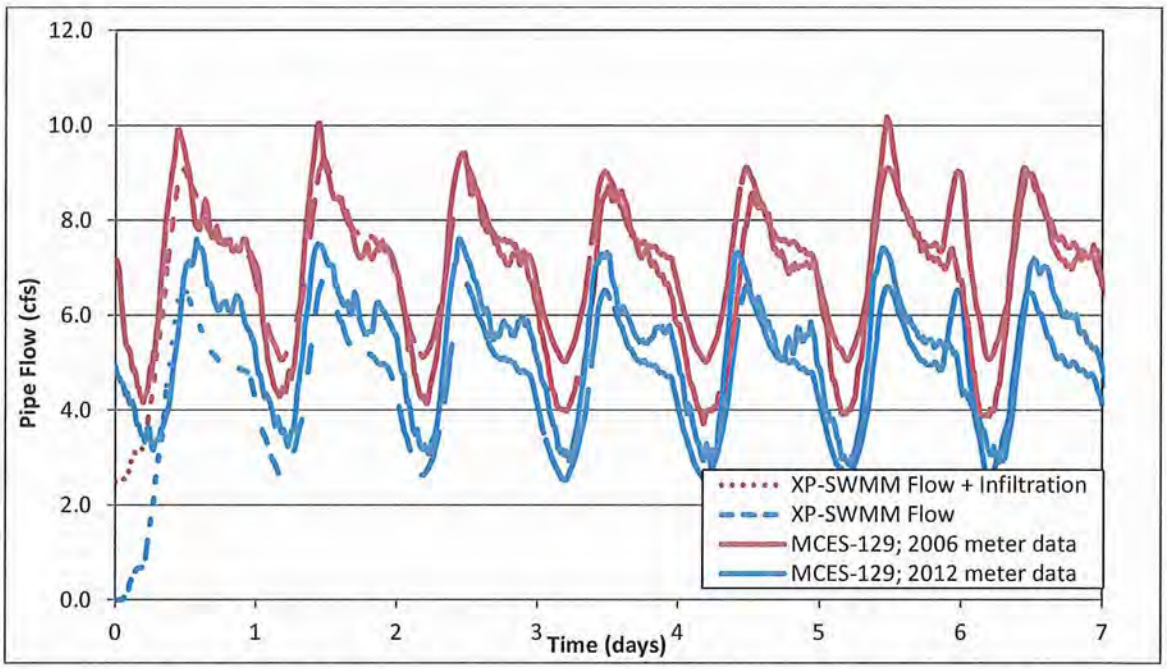


Figure 2. 2006 and 2012 MCES-129 metered flow data with XP-SWMM modeled flow.

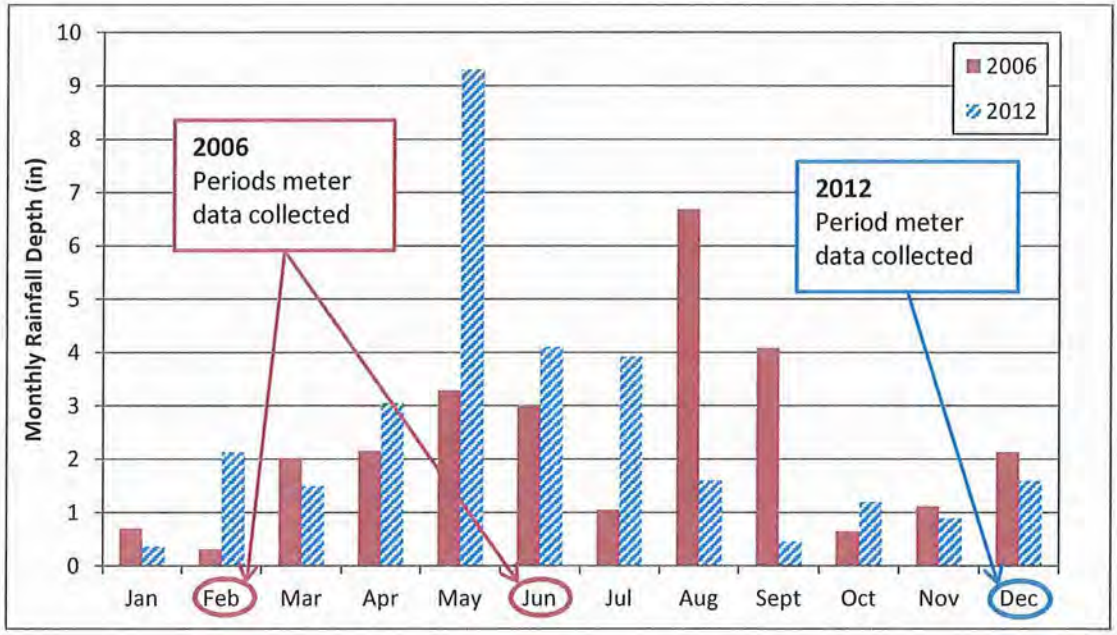


Figure 3. 2006 and 2012 monthly rainfall depth.

WSB & Associates, Inc.

Infrastructure ■ Engineering ■ Planning ■ Construction

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Memorandum

DATE: *June 6, 2014*

TO: *Mr. Cary Teague, Planning Director*
City of Edina

FROM: *Charles Rickart, P.E., PTOE*

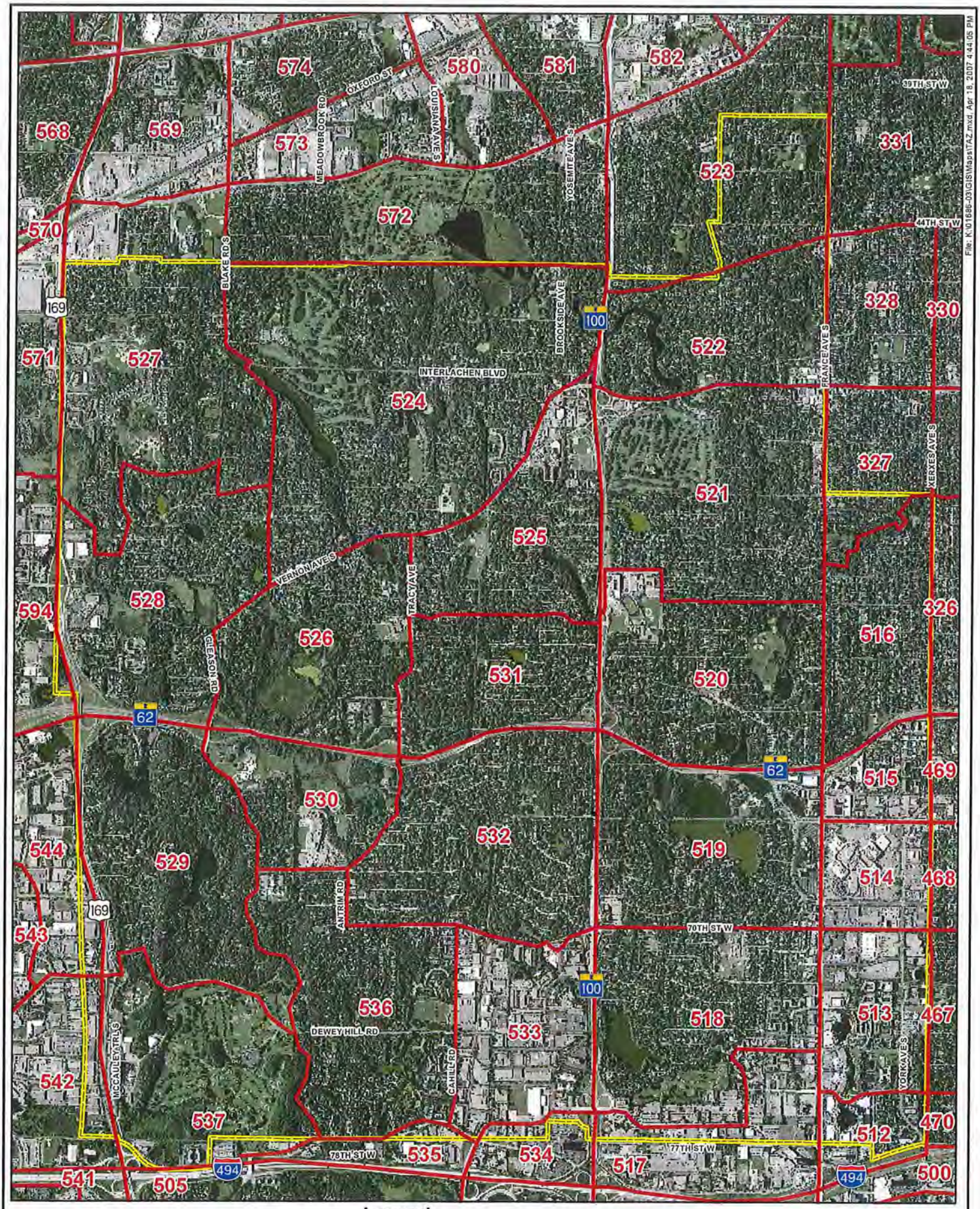
RE: *Comprehensive Plan Amendment*
Transportation Impacts
City of Edina, MN
WSB Project No. 1686-55

A Comprehensive Plan amendment was recently submitted to Metropolitan Council for the Lennar (6725 York Ave) project. During discussion with Metropolitan Council for that request they concluded that the City needed to establish new residential density ranges for the City's mixed use Districts, to better align with the description of the uses allowed within each of the Districts.

As part of the review in establishing the residential density ranges, transportation impacts need to be considered. In general it can be concluded that: **There is adequate roadway capacity to support the proposed residential density ranges in the mix use Districts.** This finding is based on the following:

1. Per City Code, with each development proposal submitted to the City a detailed Traffic Study is required to document local and regional traffic impacts. These studies include evaluating the existing and forecasted 20 year roadway capacities. They take into account approved developments adjacent to the proposed project, as well as general traffic growth in the area. The studies will recommend any existing or future roadway mitigation required to accommodate the development. The studies are coordinated with Hennepin County and MnDOT if there roadways are impacted by the development proposal.

2. The City's Comprehensive Transportation Plan included forecasts based on households, population and employment for each Traffic Analysis Zone (TAZ). The TAZ's do not align with specific land use districts and are based on anticipated developable land. In mixed use districts, although some of the household and population forecasts are low, the corresponding employment forecasts are high. Therefore if additional households are included in a specific District, the corresponding employment numbers would be reduced which would balance the traffic generation. Attached is the TAZ map from the City's Transportation Plan and a summary of the effected TAZ's with the forecasted current Transportation Plans, Households, Population and Employment compared to the 1999 Plan and that included in the current (2014) Metropolitan Council Travel Demand Model.



Transportation Analysis Zones
City of Edina, MN

Legend

Transportation Analysis Zones (TAZ)

Edina Boundary

0 1,500 3,000 Feet

N W E S

WSB & Associates, Inc.

A54

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 512	1997*	575	766	-	-	3974	1.33
	2009#	586	737	0	4056	4056	1.26
	2020*	575	765	-	-	3603	1.33
	2030^	597	764	208	1016	1224	1.28
	2030#	636	916	650	3184	3834	1.44

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 513	1997*	2000	2903	-	-	3127	1.45
	2009#	2009	2934	2576	2081	4657	1.46
	2020*	2000	2905	-	-	3191	1.45
	2030^	2039	3085	2525	2525	5050	1.51
	2030#	2059	2965	2525	2525	5050	1.44

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 514	1997*	33	38	-	-	6019	1.15
	2009#	9	29	2692	3076	5768	3.22
	2020*	65	130	-	-	7156	2.00
	2030^	310	540	2420	3630	6050	1.74
	2030#	509	733	2420	3630	6050	1.44

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 515	1997*	993	1642	-	-	6210	1.65
	2009#	1014	1595	21	2608	2629	1.57
	2020*	995	1650	-	-	6690	1.66
	2030^	1044	1646	840	3960	4800	1.58
	2030#	1064	1532	840	3960	4800	1.44

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 517	1997*	447	670	-	-	3219	1.50
	2009#	454	695	402	11448	11850	1.53
	2020*	445	675	-	-	3716	1.52
	2030^	481	741	531	4460	4991	1.54
	2030#	504	1149	1331	11201	12532	2.28

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 518	1997*	1589	3393	-	-	4506	2.14
	2009#	1617	3540	128	3350	3478	2.19
	2020*	1670	3575	-	-	4637	2.14
	2030^	1963	4278	200	4300	4500	2.18
	2030#	2192	3156	200	4300	4500	1.44

* - 1999 Edina Comprehensive Plan

- Current (as of 2014) Metropolitan Council Travel Demand Model

^ - 2008 Edina Comprehensive Plan

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 519	1997*	691	1792	-	-	3857	2.59
	2009#	713	1794	55	2615	2670	2.52
	2020*	690	1805	-	-	4658	2.62
	2030^	729	1821	400	2900	3300	2.50
	2030#	731	1667	400	2900	3300	2.28

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 521	1997*	1214	2980	-	-	1200	2.45
	2009#	1224	3200	289	940	1229	2.61
	2020*	1235	3050	-	-	1433	2.47
	2030^	1299	3327	320	960	1280	2.56
	2030#	1349	3076	320	960	1280	2.28

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 525	1997*	748	1653	-	-	1813	2.21
	2009#	623	1663	327	726	1053	2.67
	2020*	940	2170	-	-	2105	2.31
	2030^	698	1790	360	780	1140	2.56
	2030#	748	1705	360	780	1140	2.28

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 528	1997*	1159	2493	-	-	1271	2.15
	2009#	1170	2414	20	1493	1513	2.06
	2020*	1160	2510	-	-	1536	2.16
	2030^	1186	2441	50	1650	1700	2.06
	2030#	1190	2713	50	1650	1700	2.28

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 533	1997*	54	101	-	-	11532	1.87
	2009#	57	92	607	11746	12353	1.61
	2020*	55	100	-	-	13700	1.82
	2030^	358	603	1987	11263	13250	1.68
	2030#	557	802	1988	11263	13251	1.44

		HOUSEHOLDS	POPULATION	JOBS			POP / HH
				RETAIL	NON-RETAIL	TOTAL	
TAZ 534	1997*	0	0	-	-	948	-
	2009#	0	0	12	2497	2509	-
	2020*	0	0	-	-	1145	-
	2030^	30	51	13	1211	1224	1.70
	2030#	50	72	50	5066	5116	1.44

* - 1999 Edina Comprehensive Plan

\# - Current (as of 2014) Metropolitan Council Travel Demand Model

^ - 2008 Edina Comprehensive Plan

MINTUES
OF THE STUDY SESSION OF THE
EDINA CITY COUNCIL
TUESDAY, JANUARY 22, 2008
7:00 A.M

Mayor Hovland called the meeting to order at 7:00 a.m. in the Community Room of Edina City Hall. Answering rollcall were Members Bennett, Housh, Masica, Swenson and Mayor Hovland. Also present were Planning Commissioners Brown, Fischer, Risser, Schroeder, Staunton, and Chair Lonsbury. Staff present included Gordon Hughes, City Manager; Heather Worthington, Assistant City Manager, Cary Teague, Planning Director, Dan Cornejo, Comprehensive Plan Coordinator, and Debra Mangen, City Clerk.

Mayor Hovland said the purpose of the study session was to review the draft of the 2008 Comprehensive Plan. Manager Hughes briefly outlined the history of the Comprehensive Plan revision to date. Dan Cornejo presented an overview of the changes made from the 1998 Comprehensive Plan and the draft of the 2008 Comprehensive Plan Update.

The Council, Planning Commissioners and Staff reviewed and discussed the draft plan as follows:

- Improve the definitions of "step down" and "step back" in Land Use and Community Design chapter. "Step down" means that buildings should step down to the sidewalk; "step back" means that buildings should step back from nearby and adjacent lower-height residential areas. A drawing or photo will be added to help illustrate the term.
- Clarify bonus height and density - developers would need to earn either in exchange for
- 450 acres or about 5% of the city could change in terms of land use and densities. The other 95% is not recommended to change. The draft Plan does comment that within this 95%, and possibly within the other 5%, there could be proposals to make smaller zoning changes to facilitate the provision of affordable housing, lifecycle housing to accommodate seniors' needs. However, the draft Plan does not call for immediate zoning changes, nor does it specify certain areas for these changes. This point was emphasized: NO changes are recommended in the single-family areas.
- The height maps need an accompanying narrative text that details what heights are recommended for which areas.
- Change map on page 4-50, regarding the Cahill area: the OR area should be 12-16 stories, and the GMU area should be 3-5 stories.
- Develop better definition of lifecycle housing and inclusionary housing.
- Potential links between height-density-transportation.
- Mixed used development and its future potential
- What, if any zoning changes would be implied by the Housing Chapter. Plan would be a policy or visioning document.
- Receipt and review of the recently written Energy and Environment chapter

- Discussion that Plan would be a vision or give direction, and offer broader policy framework for further study and focus to achieve the city-wide goals and to guide future changes.
- Several language revisions were suggested to be incorporated on specific pages that staff will incorporate into the Plan.
- Small Area Plans were briefly discussed including how to formally remove the small area plans from the existing plan.

The Mayor and Council offered their thanks to the Planning Commissioners for their work on the update to the Plan.

Mayor Hovland declared the meeting adjourned at 9:00 a.m.

Respectfully submitted,

Debra Mangen, City Clerk