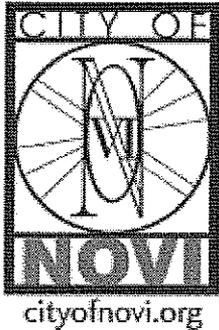


# MEMORANDUM



**TO:** MASTER PLAN & ZONING COMMITTEE  
**FROM:** MARK SPENCER, AICP, PLANNER *Mark Spencer*  
**SUBJECT:** 2009 MASTER PLAN REVIEW INDUSTRIAL AND OFFICE  
SPACE DEMAND FORECAST  
**DATE:** MARCH 30, 2009

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Providing space within a community for future industrial and office uses is an important part of all municipal future land use plans. Many factors need to be reviewed to produce a plan that supplies enough land for reasonable office and industrial growth. Without an adequate supply of land for office or industrial space, new or expanding businesses will not have the opportunity to locate in the City. In order to estimate how much land should be designated for office or industrial activities it is important to assess the size, strength and character of each sector of the market. An assessment of the market can be used to identify potential economic opportunities and help forecast future office and industrial growth. It should be kept in mind that providing actual office and industrial space is a private sector function. Municipal government's role is to provide areas of the municipality for a mix of economic uses and to make sure those uses are compatible with the built and natural environment.

As part of the City's 2007 Master Plan Review, The Chesapeake Group (a nationally recognized market analysis, urban planning, and economic development consulting firm) produced a Market Assessment of the City of Novi that included a quantitative analysis to identify future economic opportunities in the City through 2015. This Market Assessment included a demand forecast for retail, office and industrial floor space. Projected residential housing growth in the City was a major component of the demand forecasts. Since the market for residential dwellings has decreased considerably in the last year, projected housing growth figures used for the forecast are high and a new forecast was developed by the City's planning staff its 2009 Master Plan Review Retail Space Demand Forecast of March 3, 2009.

The forecasts for future office and industrial floor space demand included in the 2007 Assessment were based on capturing all of the City of Novi workforce growth due to housing growth and do not account for demand based on County household growth or regional relocations. Thus, the forecast does not reflect all demand.

In addition to updating the demand forecast to reflect the City's revised housing trends, adding a portion of Oakland County's employment growth outside of the City of Novi to the forecasted demand makes the forecast more realistic. The workforce in southeastern Michigan is highly mobile reflected by the fact that the average person in the region spends 26.5 minutes commuting to work. The City of Novi historically has capture a large portion of the regional workforce and will most likely continue to do so into the future.

It should be noted that if additional areas are planned for residential development, or if the permitted residential densities are increased, the number of dwelling units forecasted at build-out will increase and this will increase the forecasted demand for office and industrial space. In

addition, major demographic shifts could also change the housing forecast. These forecasts are generated using average worker to floor space demanded and actual conditions could vary considerably depending on the utilization of the floor space by individual businesses. As with any forecast, the facts used to develop the forecast should be monitored and adjustments made to keep it current.

### Methodology

The Chesapeake Group's Market Assessment estimated workforce growth based on dwelling unit growth and computer modeling derived from data collected from numerous trade journals and federal government surveys and reports. The models also generated forecasts for office and industrial employment growth and floor space demand based on the workforce growth. These forecasts used existing types of employment ratios for the "Low 2015" forecasts and a ratio based on national employment type trends for the "High 2015" forecast. The Assessment's industrial floor space demand forecast included a low floor space demand forecast based on a typical manufacturing plant needing 500 square feet of space per employee and a high forecast

**Table 1 - City of Novi Office and Industrial Employment and Floor Space Demand Forecasts Based on City of Novi Household Growth**

	Low 2015 Forecast*	High 2015 Forecast*	Low 2018 Forecast**	High 2018 Forecast**	Build-Out Forecast**
<b>Forecasted Household Growth (Dwelling Units)</b>	3,200	4,800	2,700	3,700	5,700
<b>City of Novi Forecasted Employment Growth (all categories)</b>	4,364	6,067	3,682	4,677	7,205
<b>Office Employment Growth Forecast</b>	1,591	2,574	1,342	1,984	3,057
<b>Office Floor Space Demand Forecast at 250 sq. ft. / employee</b>	397,750	643,500	335,602	496,031	764,156
<b>Industrial Employment Growth Forecast</b>	1186	1639	1,001	1,263	1,946
<b>Low Industrial Floor Space Demand Forecast at 500 sq. ft. / employee</b>	593,000	819,500	500,344	631,698	973,156
<b>High Industrial Floor Space Demand Forecast at 1,000 sq. ft. per employee</b>	1,186,000	1,639,000	1,000,688	1,263,396	1,946,313
	*Source: 2007 City of Novi Market Assessment, by The Chesapeake Group		** Household growth based on 2009 Retail Demand Forecast, City of Novi Planning Division. The employment forecast in these columns is based on applying the low and high employment forecast ratios developed by the Chesapeake Group. The high ratio was also applied to the Build-Out forecast.		

based on a typical warehouse operation that needs about 1,000 square feet of floor space per employee. The Chesapeake Group's Market Assessment indicated that although all of the workforce generated by dwelling unit growth may not work in Novi it would be reasonable to plan for this since all of these new employees could find work in Novi. It should also be noted that over the past ten years, the City of Novi has captured much more than its population share of Southeastern Michigan's industrial and office development.

The revised forecast uses a revised housing (residential growth) forecast from the 2009 Master Plan Review Retail Space Demand Forecast calculates future floor space demand using the same employment and floor space ratios depicted in the Chesapeake Group's 2007 Market Assessment including the Assessment's use of a low and high range of industrial floor space demand per industrial employee.

The second and third column in Table 1 depicts the Chesapeake Group's 2007 Market Assessment's estimated low and high housing, employment, office employment, office floor space demand, industrial employment and industrial floor space demand based on 500 and 1,000 square feet of industrial space per industrial employee forecast through 2015. The last three columns depict a low and high housing, employment, office employment, office floor space demand, industrial employment and industrial floor space demand based on 500 and 1,000 square feet of industrial space per industrial employee forecast through 2018 and at residential build-out.

**Table 2 - City of Novi Office and Industrial Floor Space and Area Demand Forecast Based on City of Novi Household Growth**

	<b>Low 2018 Forecast (2,700 new dwelling units)</b>	<b>High 2018 Forecast (3,700 new dwelling units)</b>	<b>Build-Out Forecast (5,700 new dwelling units)</b>
<b>Office Floor Space (sq. ft.) Demand Forecast at 250 sq. ft. / employee</b>	335,602	496,031	764,156
<b>Office Acreage Demand Forecast at 8,000 sq. ft./acre</b>	42	62	96
<b>Low Industrial Floor Space (sq. ft.) Demand Forecast at 500 sq. ft. / employee</b>	500,344	631,698	973,156
<b>Low Industrial Acreage Demand Forecast at 10,000 sq. ft./acre</b>	50	63	97
<b>High Industrial Floor Space (sq. ft.) Demand Forecast at 1,000 sq. ft. per employee</b>	1,000,688	1,263,396	1,946,313
<b>High Industrial Acreage Demand Forecast at 10,000 sq. ft./acre</b>	100	126	195
<b>Combined Office and Industrial Low 2018, High 2018 and Build-Out Acreage Demand Forecast</b>	<b>92 (42+50)</b>	<b>188 (62+126)</b>	<b>291 (96+195)</b>

The amount of land area needed to satisfy the demand generated by employment growth for office and industrial floor space can be calculated by multiplying the updated floor space demand forecast by a floor space per acre factor for office and industrial developments. A factor of 8,000 square feet per acre was used for office uses and 10,000 square feet per acre for industrial uses (see Table 2).

**Table 3 - Oakland County (without City of Novi) Office and Industrial Employment, Floor Space Demand and Land Area Demand Forecasts**

	<b>Low 2015 Forecast</b>	<b>High 2015 Forecast</b>
<b>Estimated Household Growth (Dwelling Units)</b>	19,200	34,500
<b>Forecasted Employment</b>	25,900	46,600
<b>Office Employment Forecast</b>	9,500	17,100
<b>Office Floor Space (sq. ft.) Demand Forecast @250 sq. ft. / employee</b>	2,382,000	4,300,000
<b>Office Land Area Demand Forecast (acres) @250 sq. ft. floor area / employee and 8,000 sq. ft. per acre</b>	300	530
<b>Industrial Employment Forecast</b>	7,000	12,600
<b>Industrial Floor Space (sq. ft.) Demand Forecast @500 sq. ft. / employee</b>	3,500,000	6,300,000
<b>Industrial Land Area (acres) Demand Forecast @500 sq. ft. floor area/ employee and 10,000 sq. ft. per acre</b>	350	630
<b>Industrial Floor Space (sq. ft.) Demand Forecast @1,000 sq. ft. per employee</b>	7,000,000	12,600,000
<b>Industrial Land Area Demand Forecast (acres) @1,000 sq. ft. floor area/ employee and 10,000 sq. ft. per acre</b>	700	1260
<b>Total Low and High Office and Industrial Land Area Demand Forecast 2008-2015</b>	650 (300+350)	1,790 (530+1,260)

Source: Base data from 2007 City of Novi Market Assessment, by The Chesapeake Group.

Since office uses are permitted in the industrial districts and many forms of industrial uses are permitted in the City's OST office zoning district, the office and industrial acreage forecast was combined. This produced a Low 2018 demand forecast of an additional 92 acres of land needed for combined future office and industrial uses and a High 2018 demand of an additional 188 acres of land needed for future office and industrial uses. At residential build-out the demand climbs to a total of 291 acres needed to accommodate future office and industrial uses.

In addition to the 1,800 acres of land currently developed for office and industrial uses, there is additional land planned for office and industrial uses throughout Novi. Currently, the City of Novi has 900+ acres of vacant or underdeveloped land zoned or master planned for office uses and 300+ acres of vacant or under developed land zoned or master planned for industrial uses. Based on the Chesapeake Group's 2015 Oakland County employment forecast (without the City of Novi forecast), depicted in the 2007 Market Assessment, the County could generate a demand for between 650 to 1,800 acres of land to accommodate the additional office and industrial floor space demand based on the additional workforce (see Table 3). This equates to about an additional 80 to 220 acres per year for the whole County. Additional demand may be generated by the relocation of current businesses.

It is possible that the City of Novi could capture 20% of the County office and industrial floor space demand generated by the growth of the County workforce outside of the City of Novi. If so, office and industrial uses could occupy an additional 16 to 45 acres in the City per year. Added to the 9 to 19 acres of demand generated by City of Novi workforce growth, the average annual demand would have a range of 25 to 64 acres. With 1,200 acres of land planned or zoned for office or industrial uses in the City, the area available for office and industrial uses may be a 19 to 48 year supply (see Table 4).

**Table 4 - Estimated City of Novi Office and Industrial Land Area Demand**

	Low Forecast	High Forecast
<b>Oakland County 2015 Low and High Office and Industrial Land Area Demand Forecast Generated by Other Than Novi County Workforce Growth Per Year (8 years)</b>	81	224
<b>Low and High Potential Land Area Demand Forecast for Office and Industrial Land in Novi Generated by Other than Novi Employment Growth in Oakland County Per Year (20% of County Total)</b>	16	45
<b>City of Novi 2018 Low and High Office &amp; Industrial Land Area Demand Forecast Per Year Generated by City of Novi Workforce Growth (10 years)</b>	9	19
<b>Total City of Novi Low and High Office &amp; Industrial Land Area Demand Forecast Per Year</b>	25	64
<b>Years of Available Supply Based on a Total of 1,200 Acres of Available Office and Industrial Land In Novi</b>	48	19

It should be noted that additional residential growth beyond the estimated number of dwelling units at build-out will likely generate additional local industrial and office floor space demand and reduce the amount of land available to capture outside of the City of Novi demand generated by Oakland County employment growth. In addition, the amount of space per worker can vary greatly depending on each businesses utilization of floor space.

# City of Novi

## Potential Office & Industrial Development Parcels

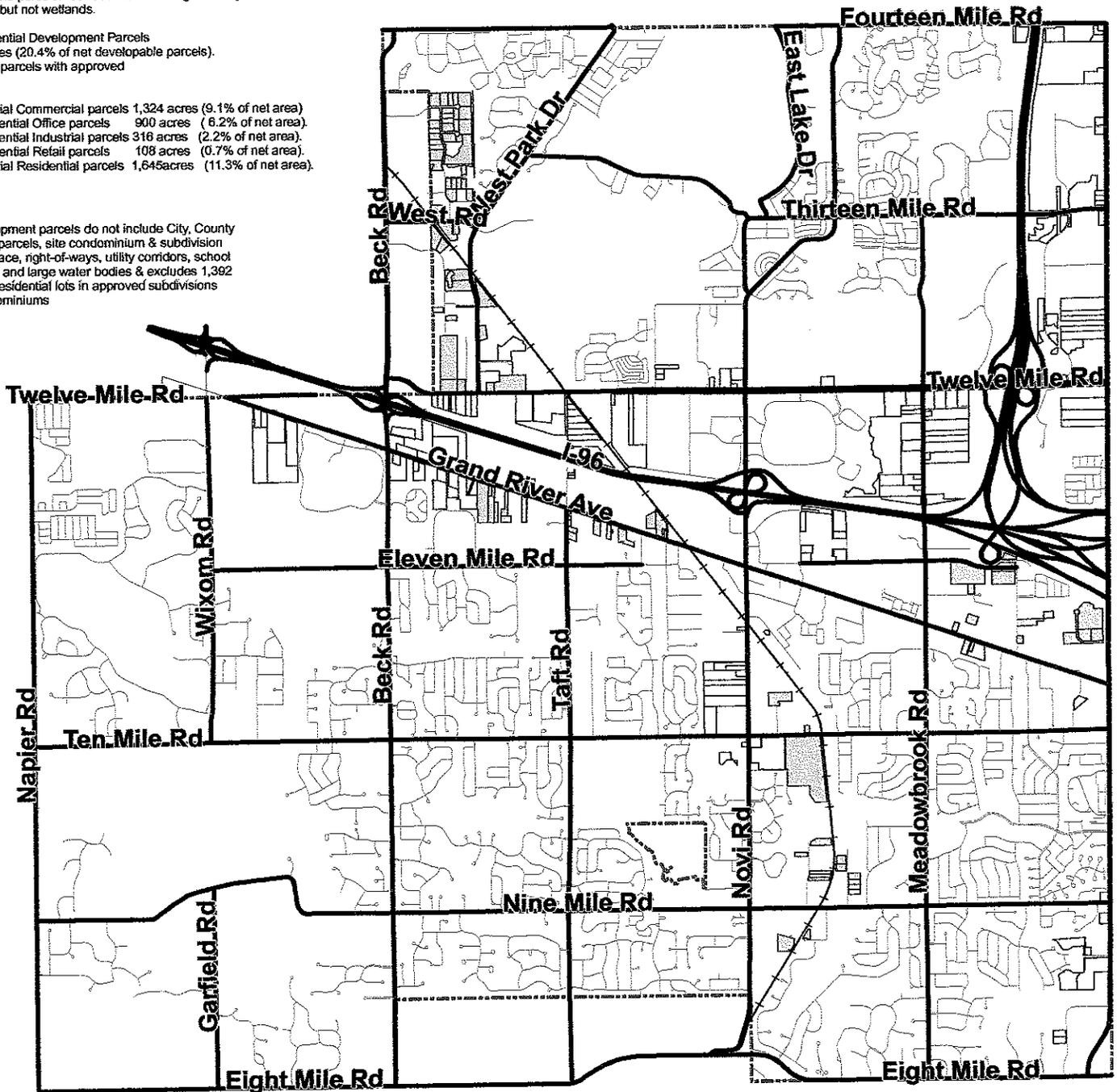
**Notes:**

City of Novi=20,020 acres gross 14,570 acres net in developable parcels. Surface water and right-of-ways excluded but not wetlands.

Total Potential Development Parcels  
2,969 acres (20.4% of net developable parcels).  
Excludes parcels with approved site plan.

All Potential Commercial parcels 1,324 acres (9.1% of net area)  
 potential Office parcels 900 acres (6.2% of net area).  
 potential Industrial parcels 316 acres (2.2% of net area).  
 potential Retail parcels 108 acres (0.7% of net area).  
 All Potential Residential parcels 1,645 acres (11.3% of net area).

\* Development parcels do not include City, County & State parcels, site condominium & subdivision open space, right-of-ways, utility corridors, school property and large water bodies & excludes 1,392 vacant residential lots in approved subdivisions or condominiums



**Potential Development Parcels**



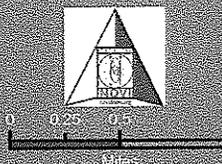
Potential Industrial Parcels



Potential Office Parcels



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 MARK SPENCER, AICP, PLANNER  
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**MAP INTERPRETATION NOTICE**

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and uses the most recent aerial photography available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm sources and accuracy information related to this map.