FINAL MEMORANDUM

TO: HDR Engineering, Inc.

FROM: SB Friedman Development Advisors

DATE: September 4, 2013

RE: **Central Omaha Transit Alternatives Analysis – Forecast of Development Impacts of BRT and Streetcar Alternatives**

The City of Omaha and Omaha Metro are considering three transit alternatives to connect Downtown and North Downtown ("NoDo") with areas to the west, including Midtown, the University of Nebraska Medical Center, and Crossroads, as part of the Federal Transit Administration's Alternatives Analysis process. As part of the process, *SB Friedman Development Advisors* ("*SB Friedman*") forecasted the impact that each transit alternative would have on real estate development in the area served by transit. This memorandum describes the forecasted impacts as well as the methods used to construct the forecast, and is organized as follows:

- Alternatives and Study Areas: This section briefly describes each transit alternative under consideration and the study areas defined for the purpose of the development forecast.
- Baseline Estimate of Future Development: This section forecasts future study area development without transit investment, based on regional forecasts of future development activity and the historical rate of development in study areas relative to the region.
- Estimating the Future Development Impact of Transit Alternatives: This section relies on a case study assessment of transit development impacts to forecast the increase in future development activity associated with each transit alternative.

Alternatives, Study Areas and Timeframe

ALTERNATIVES

The three transit alternatives under consideration would all run from 16th Street to 10th Street along Fahey Street, then along 10th Street to Downtown, where they continue as follows:

- Alternative 1: On Dodge Street west to 72nd Street, then returning east on Dodge Street until 31st Street, then south to Douglas Street, then west on Douglas Street to 10th Street
- Alternative 2: On Farnam Street to 44th Street, then on 44th Street to Dodge Street, then on Dodge Street to 72nd Street, then returning east via the same path until 31st Street, then south to Harney Street, then east on Harney Street to 10th Street

- Alternative 3: On Farnam Street to 42nd Street, then returning east via the same path until 31st Street, then south to Harney Street, then east on Harney Street to 10th Street

STUDY AREAS

The primary goal of the real estate development impact study is to compare the alternatives based on differences in routes and technologies. Alternatives 1 and 2 present a clear test of the impact of different routes, since both involve BRT technology. However, the shorter streetcar route of Alternative 3 makes it difficult to isolate the impact of technology differences: both BRT alternatives extend into areas between 42nd Street and 72nd Street that have distinct development patterns compared to Midtown and Downtown, and may consequently differ from Alternative 3 in their development potential.

In order to make a more direct comparison between streetcar and BRT technologies, *SB Friedman*'s analysis focuses on the alternative routes from 42nd Street east. The extent of each study area was defined by a three-block buffer around each alternative line. A three-block extent was selected based on a review of other studies of transit development impacts, which generally found that the most meaningful impacts occurred within two to three blocks of the transit line. **Figure 1** shows the study area extent for Alternative 1. Since Alternatives 2 and 3 follow the same route between Downtown and 42nd Street, they share a single study area, which is shown on **Figure 2**.

Figure 1: Boundary of Study Area 1
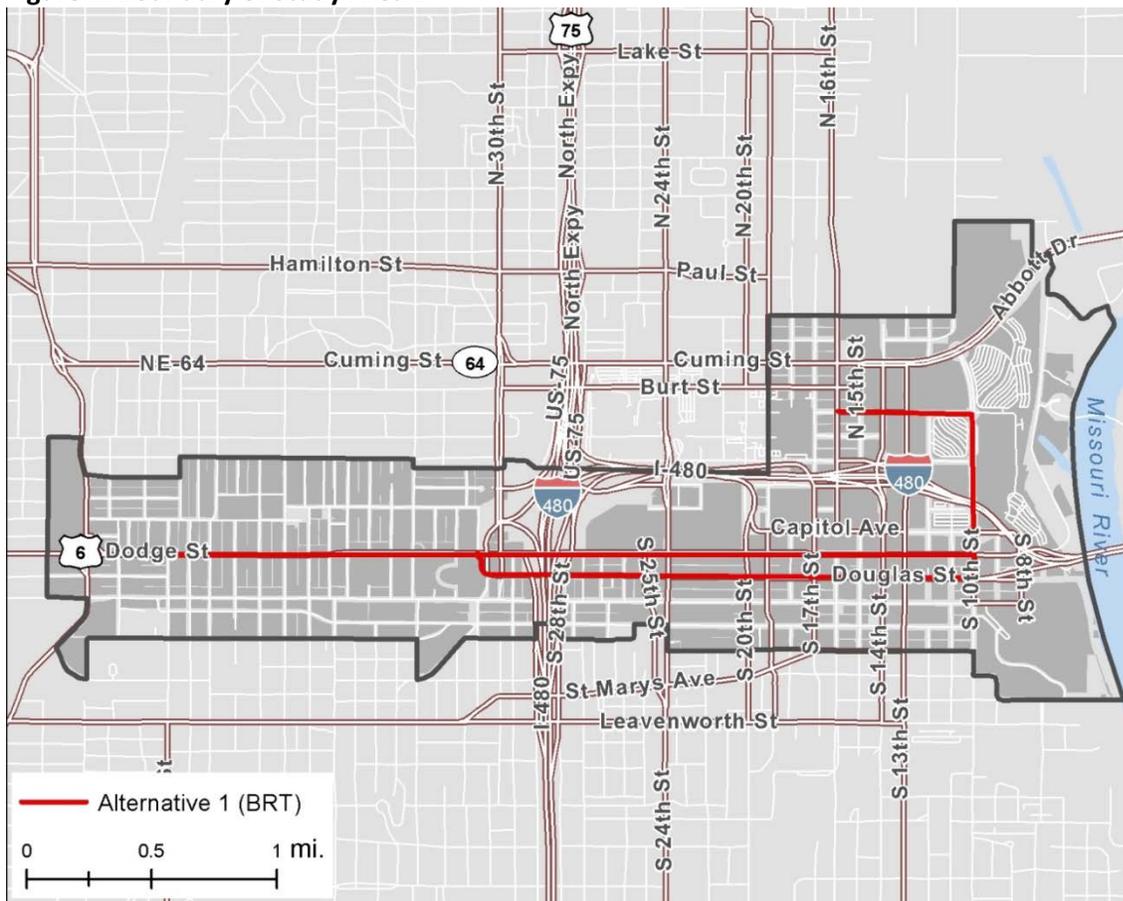
Sources: HDR Engineering, Inc.; SB Friedman Development Advisors

Figure 2: Boundary of Study Area 2
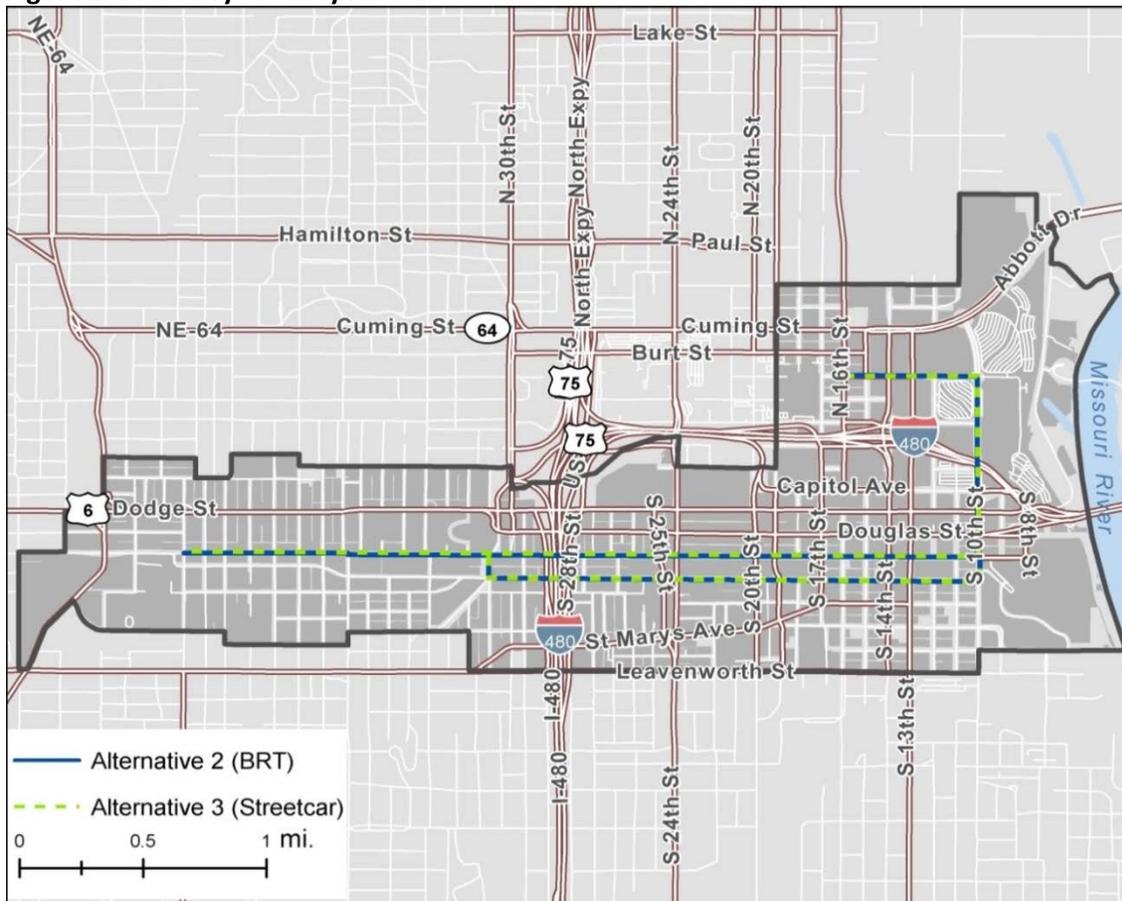
Sources: HDR Engineering, Inc.; SB Friedman Development Advisors

The frequency, level of service, and key features (e.g., level boarding, fare pre-payment, signal prioritization, dedicated lanes) of each transit alternative were not conclusively defined at the time of analysis, and were not directly considered in *SB Friedman*'s analysis. However, the Estimation of Development Impact section comments on the design and service-level differences in the case study transit systems, and the potential implications for the development impacts of Omaha's transit alternatives.

FORECAST TIMEFRAME

The future period covered by this forecast starts in 2015 and ends in 2030. The initial year was selected to match the anticipated timeframe in which transit line construction would begin and/or the new line would be placed in service. A 15-year forecast period was selected, since 15 years is the lifespan of tax increment financing (TIF) districts in Nebraska, and TIF has been discussed as one source of local funding for the transit alternatives.

Where historical data was used to construct a baseline forecast, the timeframe for historical observation was defined as the 2002 to 2012 period. Data is widely available for this period, and it covers two full economic cycles up to the present.

Baseline Estimate of Future Development

In order to forecast the impact of the transit alternatives on future development within the study areas, we first need to estimate future development without transit improvements to provide a baseline for comparison. We do this via the following steps:

1. Determine the historical share of the development in the region captured by the study area;
2. Forecast future regional development for residential, office and hotel uses;
3. Apply historical study area capture rates for residential, office and hotel uses with adjustments for changes in market conditions (as specified in this memo) to future regional development to estimate future study area development; and
4. Forecast future growth of retail and ground floor service uses in the study area, based on future household and office worker spending from new residential and office development in the study area and the continued regional attraction of the downtown as a restaurant destination.

HISTORICAL DEVELOPMENT IN STUDY AREAS

SB Friedman acquired data on historical development activity within the boundaries of each study area from CoStar Group, Inc. (CoStar). *SB Friedman* vetted this data by comparing it with Douglas County Assessor records, building permits, online articles and information about specific projects, and Consultant Team members' local knowledge of development activity. To the extent possible, building rehabilitation was excluded unless it represented a new addition of units or square footage to the market. **Table 1** below summarizes the amount of development activity that took place during the reference period within each study area.

Table 1. Historical Development Activity in Study Areas (2002-2012)

Land Use	Study Area 1	Study Area 2
Residential	1,640 units	1,600 units
Office	1,500,000 SF	1,500,000 SF
Hotel	1,200 keys	1,200 keys
Retail/Service	450,000 SF	470,000 SF

Sources: Costar Group, Inc.; Douglas County Assessor; HDR Engineering, Inc.; SB Friedman Development Advisors

Since the study areas overlap significantly, the difference in development activity overall is relatively minor. This is illustrated in more detail on **Figures 3 and 4** on the following page, which show where development activity occurred by land use.

Figure 3. Historical Development Activity in Study Area 1
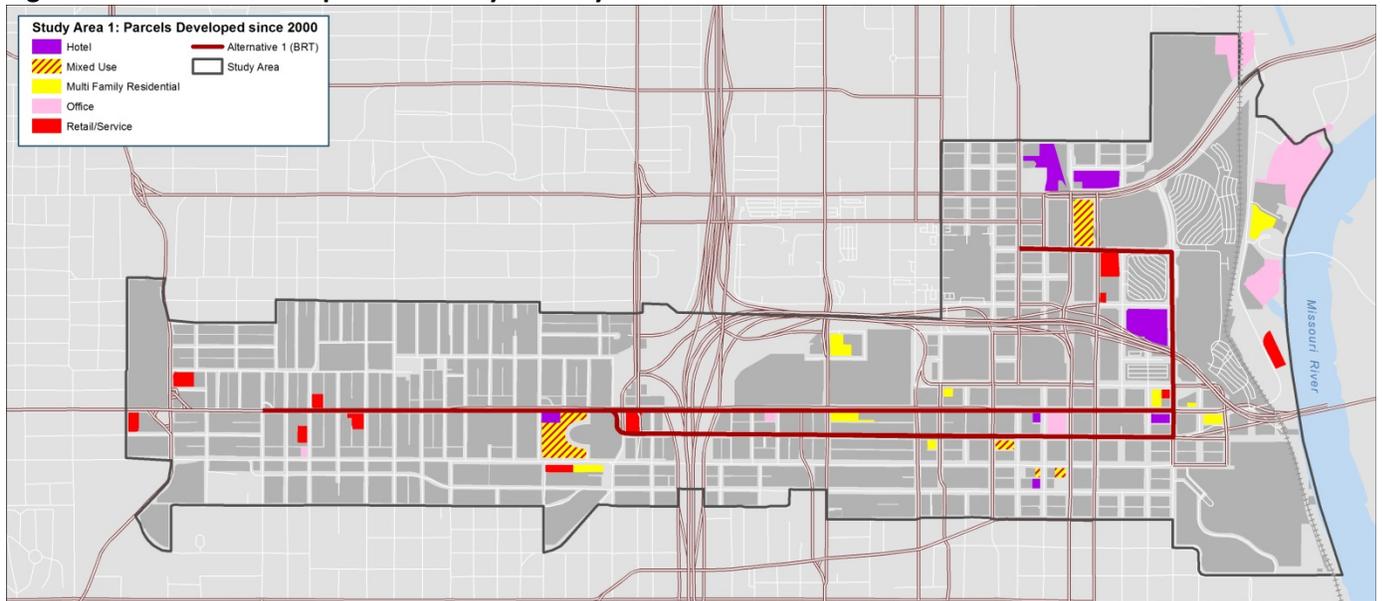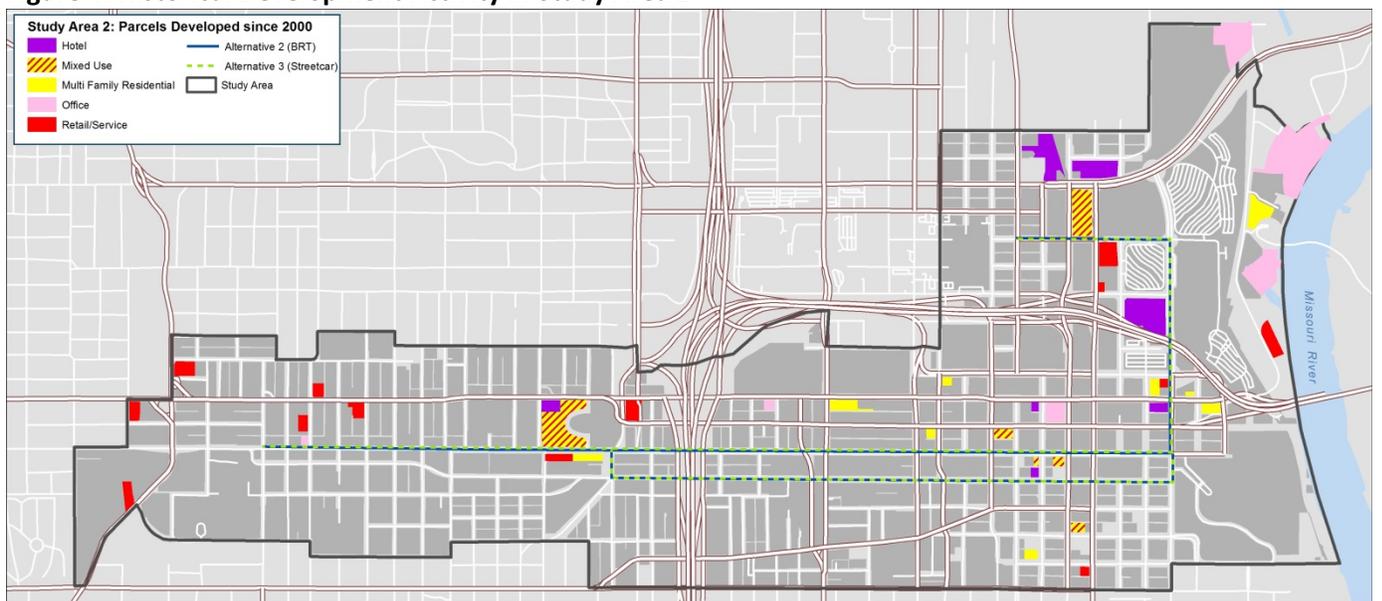

Sources: Costar Group, Inc.; Douglas County Assessor; HDR Engineering, Inc.; SB Friedman Development Advisors

Figure 4: Historical Development Activity in Study Area 2

Sources: Costar Group, Inc.; Douglas County Assessor; HDR Engineering, Inc.; SB Friedman Development Advisors

HISTORICAL RESIDENTIAL, OFFICE AND HOTEL DEVELOPMENT IN THE OMAHA REGION

Historical residential development in the Omaha metropolitan region was estimated using building permit data collected by the U.S. Census Bureau for the 2002 to 2012 period. Historical office development was sourced from Costar's office analytics report, which tracks quarterly office inventory and deliveries of new building space. Hotel development was sourced from the Smith Travel Research (STR) hotels database. Since the most current year in the STR database was 2011, the reference period was set to 2001 to 2011. Historical regional retail and service development was not investigated, since it

will be forecast based on anticipated demand from residential and office development as well as regional growth. **Table 2** below compares regional historical development with development in each study area and shows the percentage of regional development captured by the study areas.

Table 2. Historical Development Activity in Omaha Region vs. Study Areas

Use	Region	Study Area 1		Study Area 2	
	Units or SF	Units or SF	Capture Rate	Units or SF	Capture Rate
Residential	52,800 units	1,640 units	3.1%	1,600 units	3.0%
Office	6,800,000 SF	1,500,000 SF	22%	1,500,000 SF	22%
Hotel	4,400 units	1,200 units	27%	1,200 units	27%

Sources: CoStar Group, Inc.; SB Friedman Development Advisors; Smith Travel Research; U.S. Census Bureau

BASELINE FORECAST OF FUTURE DEVELOPMENT WITHOUT TRANSIT

This forecast of future development within the study areas assumes that without new transit service, the study areas will continue to capture the same share of residential development that they have historically. The capture rate for office was adjusted slightly downward, to 20 percent from 22 percent, based on the relatively lower likelihood of the study areas physically accommodating another large-scale office campus development, such as the Gallup Campus, in the future. Similarly, the baseline forecast for hotels assumes that the future capture rate for hotel development will decline to 20 percent. This is the historical hotel capture rate excluding the 600-room Hilton Omaha, which is a convention-related headquarter hotel facility that is unlikely to be duplicated within the study area in the 15-year forecast timeframe (2015 to 2030). However, the forecast does account for 660 hotel rooms that are known to be under construction or in planning stages.

Future regional development trends were forecast for each land use as follows:

- **Residential:** Population forecasts for Omaha metropolitan area counties were taken from the 2007 update to the University of Nebraska at Lincoln (UNL) Bureau of Business Economic Research's "Omaha Projections to 2050" report. Since the dataset was published in 2008, *SB Friedman* updated the original forecast by replacing the 2010 population numbers with actual Census figures, then growing future population at the same rate as in the original forecast. Population forecasts were divided by average household size to yield a forecast of future households.[1] The number of households was then divided by 97 percent, the assumed occupancy rate for new housing units, to derive a forecast of housing unit production.
- **Office:** *SB Friedman* constructed an office supply forecast using office employment forecasts from Moody's and historical office supply data from CoStar Group, Inc. The forecast assumes that office demand is driven primarily by expansion of office-related employment, which includes the information, financial activities, professional and business services, and educational services sectors. The analysis also assumes that the ratio of employees per thousand square feet of occupied office space will increase over time from 3.34 in 2012 to 3.64 in 2026 before

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[1] From 2000 to 2010, average household size in the Omaha metropolitan area decreased from 2.46 to 2.39. It was assumed that household size would continue to decline into the future, but at a slower rate: from 2.39 in 2010 to 2.35 in 2030.

plateauing. It also assumes that the office vacancy rate will decrease from 7.9 percent in 2012 to 7.0 percent in 2020. Demolition of obsolete office space is assumed to be 0.40 percent of all space per year, which is less than the historical average of 0.61 percent from 2008 through 2012.

- **Hotel:** Hotel data from Smith Travel Research includes information on hotels under development in the region, including the number of rooms and anticipated year of opening. Between 2001 and 2011, hotel room inventory increased at an average annual rate of 4.2 percent. During this period, both the CenturyLink Center and TD Ameritrade Park were developed, which likely had a significant regional impact on the hotel market. At the same time, hotel occupancy in 2011 was 55 percent, whereas hotel experts generally consider an occupancy rate of 65 percent indicative of a healthy hotel market. Given the absence of a new convention center or major stadium on the horizon, as well as soft occupancy conditions, the regional hotel forecast assumed that the annual rate of hotel supply increase would fall to 2.25 percent through 2030. This rate of increase would allow for 2030 occupancy levels to return to 65 percent through the projection period, assuming that hotel demand grows by roughly 3 percent per year.

Full tables showing the regional residential, office and hotel forecasts are included in **Appendix 1**. **Table 3** below shows the baseline forecast for these three land uses within the study area based on the regional forecast and assumed study area capture rates.

Table 3. Baseline Regional and Study Area Capture Forecast: Residential, Office and Hotel Demand

	Region	Study Area 1		Study Area 2	
Use	**Units or SF**	**Capture Rate**	**Market Demand**	**Capture Rate**	**Market Demand**
Residential	65,000 units	3.1%	2,000	3.0%	2,000
Office	14,900,000 sf	20%	2,980,000	20%	2,980,000
Hotel	5,600 units	20%	1,100	20%	1,100

Sources: City of Omaha; CoStar Group, Inc.; HDR Engineering, Inc.; SB Friedman Development Advisors; UNL Bureau of Business Research; U.S. Census Bureau

SB Friedman determined that the capture methodology would not be useful for retail and service uses due to quality issues with the available retail data for case study communities that were discussed in a separate memorandum regarding case studies ("Case Study Memorandum"). Consequently, the regional capture analysis does not directly forecast future development of retail and service uses. Instead, *SB Friedman* constructed a separate, but related, model to forecast spending on retail and services induced by residential and office development in the study areas, as well as spending by outside visitors. These three demand sources were modeled as follows:

- **Residents**: ESRI Business Analyst was used to estimate current spending per household within the study areas for categories of retail and services that were deemed most compatible with urban infill projects (grocery stores, drug stores, personal care establishments, etc.). Since the timeframe of analysis extends through 2030, 2030 spending was estimated by assuming a 1

percent annual real increase in spending.[2] This household spending forecast was then multiplied by the number of new residential units in the baseline study area forecast to estimate total new household spending.

- **Office Workers**: The International Council of Shopping Centers (ICSC) publishes benchmarks of office worker spending on retail and services near their place of work based on survey data. The most recently updated version of these benchmarks was used to estimate spending per office worker. As with the household spending estimate, 2030 spending was estimated by assuming a 1 percent annual real increase in spending. New office employees were estimated using the baseline office square footage forecast, assuming an occupancy rate of 93 percent and an average of 3.5 employees per thousand square feet. The number of new office employees was then multiplied by average office worker spending to estimate net new spending by office workers.

- **Visitors**: Existing visitor spending was derived from the current retail sales surplus (the amount by which sales within the study area exceed retail demand from residents within the study area) as estimated by ESRI Business Analyst for restaurants, clothing, and health and personal care stores. This surplus was extrapolated to 2030 by applying the UNL Bureau of Business Economic Research's forecast rate of regional population growth. The difference between the 2030 surplus and current surplus was then used to estimate retail spending by new visitors.

Total forecast sales from each source were converted to square feet of retail space using benchmark sales per square foot figures from *The Dollars and Cents of Shopping Centers*, published by ICSC and the Urban Land Institute (ULI). Benchmarks were inflated to 2013 dollars using the U.S. Bureau of Labor Statistics' consumer price index. **Table 4** below summarizes the resulting baseline forecast of retail square footage by demand source. Full tables illustrating the calculation of demand from each source are located in **Appendix 2**.

Table 4. Baseline Forecast of Study Area Retail/Services Development

Category	Retail Spending in 2030 (2013 $)	Retail SF
Residents	$15 - $16 million	53,000 - 56,000
Office Workers	$40 - $54 million	124,000 - 166,000
Visitors	$23 - $24 million	73,000 - 74,000
TOTAL	**$78 - $94 million**	**250,000 - 296,000**

Sources: ESRI Business Analyst; ICSC- "Office Worker Retail Spending in a Digital Age"; ICSC & ULI- "Dollars & Cents of Shopping Centers"; SB Friedman Development Advisors

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[2] Nationally, retail sales have increased at a real rate of approximately 1 percent annually from 1992 through 2010 after accounting for inflation and population growth.

Estimating the Future Development Impact of Transit Alternatives

The baseline forecast generated in the previous section estimates future development within the study areas without any of the three transit alternatives in place. This section develops a forecast of the impact of each alternative on future study area development. Two methods are used to estimate total future development with transit investment:

- **"Top-Down" Method**: This method builds on the regional capture approach used to create the baseline forecast of future development in the previous section. It estimates an increase in the regional share of development captured by the study area, based on the increase that occurred in five case study communities that implemented BRT or streetcar service.
- **"Ground-Up" Method**: This method estimates the maximum development capacity of the study area based on:
  - Development Pipeline: Projects that developers are either building or planning are identified and added to study area capacity.
  - Sites Susceptible to Change: Vacant lots, surface parking and other underutilized sites are identified throughout the study area.
  - Local Planning Documents: Zoning and master plan goals are used to program sites susceptible to change, and the resulting development program is added to site capacity along with the development pipeline.

The results of these two methods are then reconciled to produce a final estimate, which reflects the market demand for development that can be accommodated based on the capacity of sites within each study area.

"TOP-DOWN" METHOD: BRT AND STREETCAR DEVELOPMENT IMPACTS FROM NATIONAL CASE STUDIES

Within the last two decades, public transportation has experienced a resurgence; communities that initially developed around private vehicles are implementing a variety of transit lines that go beyond traditional bus service. In addition to light rail and heavy rail projects, streetcar and bus rapid transit have become increasingly popular with communities due in part to their ability to operate in mixed traffic on existing roads. However, relatively few studies have sought to investigate the impact of streetcar and BRT systems on real estate development in the vicinity of stations and service lines. Existing studies are generally cursory in nature, describing development that occurred after transit systems were implemented, without controlling for existing development patterns or broader economic conditions that could be influential.

In an effort to at least partially account for these factors, *SB Friedman* undertook a case study analysis that identified the following five communities with streetcar or BRT systems for which real estate data was available before and after the systems were implemented:

- BRT
  - Cleveland (Healthline)
  - Kansas City (Main Street MAX)

- Streetcar

       o   Portland (Portland Streetcar)
       o   Seattle (South Lake Union)
       o   Tampa (TECO Line)

Case studies were selected based on city size, recent establishment of transit service, and service quality. Each case study and selection criteria are described in greater detail in *SB Friedman*'s Case Study Memorandum.

SB Friedman developed a method to control for broader economic conditions by comparing development within a study area (defined by the three blocks on either side of each BRT or streetcar line) to regional development both before and after the transit line was placed in service. In this way, booms and busts that impact the broader real estate market are accounted for. However, it is important to note that this method does not control for other policy changes and actions that might shift development to transit corridors, nor does it control for broader shifts in household and firm preferences that might favor mixed-use urban centers. The analysis focuses exclusively on private new construction activity, excluding public and institutional (e.g., hospitals and universities) investment, as well as rehabilitation of existing buildings. A more complete account of this methodology is provided in the Case Study Memorandum.
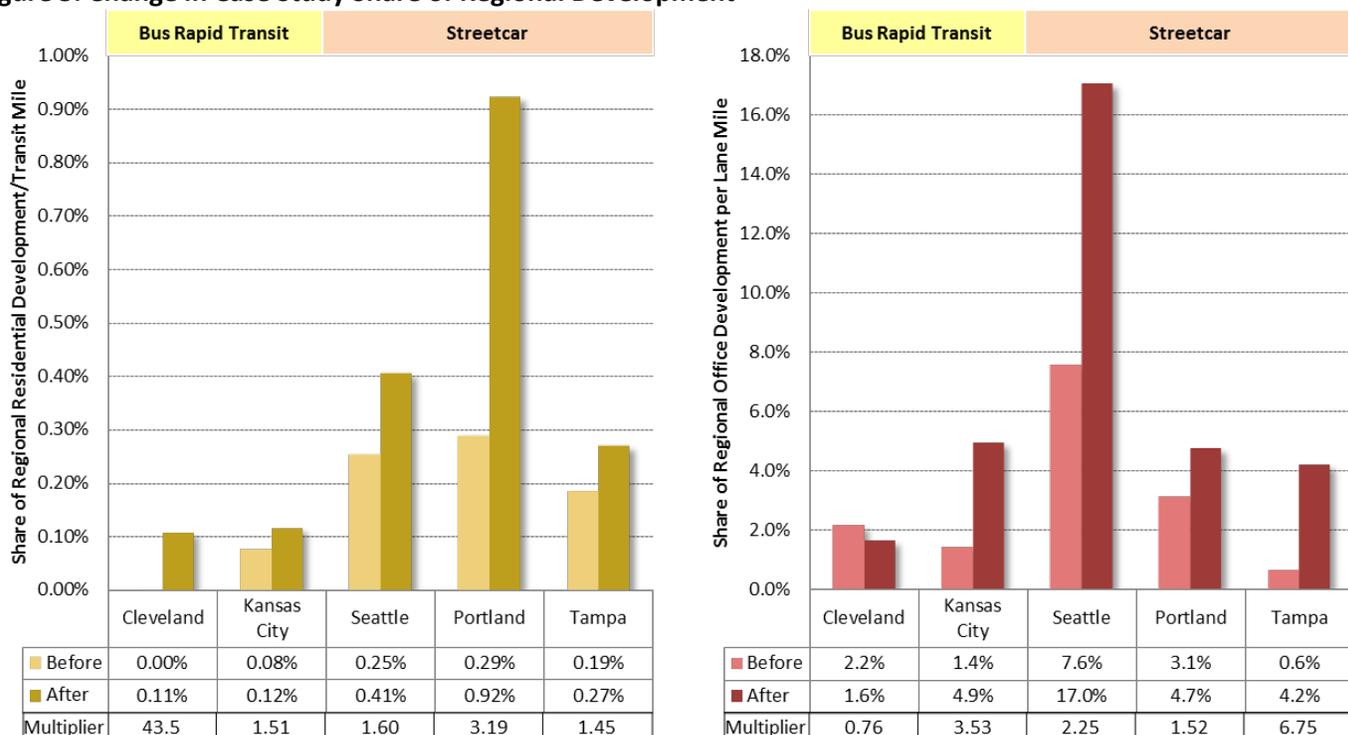
Figure 5 summarizes the share of residential and office development captured by the study area in each case study community before and after each transit line was placed in service.[3] The table also provides a "multiplier," or measure of the proportional factor by which the amount of regional development captured by the study area changes after transit improvements are put in place. The multiplier is simply the ratio of the post-transit regional share of development to the pre-transit regional share. A multiplier greater than one indicates that development increased subsequent to the opening of the transit line for the analysis period; conversely, a number less than one indicates that development decreased after the opening of the line. It is important to note that the multiplier can be greater than one even if the pace of development in the study area slows after the line is opened. Such an outcome would be expected in a general recession, where the pace of regional development activity slows down more than development activity within the study area.

Forecast Change in Omaha Study Area Capture Based on Case Study Impacts

Variation in the development capture multipliers for BRT and streetcar case studies reflects local conditions that may or may not be comparable to conditions in Omaha. In order to select appropriate multipliers to forecast the impact of the transit alternatives on the study areas' development capture in the Omaha region, *SB Friedman* excluded multipliers that appeared to be outliers. In addition, *SB Friedman* reviewed local conditions in order to focus on case studies that most closely resemble the anticipated real estate conditions and transit improvements in Omaha.

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[3] While the original case study analysis included an analysis of retail and hotel development, these were excluded from this analysis due to problems with the comprehensiveness and accuracy of the underlying data. The methods used to forecast retail and hotel development are described elsewhere in this memorandum.

Figure 5. Change in Case Study Share of Regional Development

	Bus Rapid Transit		Streetcar		
	Cleveland	Kansas City	Seattle	Portland	Tampa
Before	0.00%	0.08%	0.25%	0.29%	0.19%
After	0.11%	0.12%	0.41%	0.92%	0.27%
Multiplier	43.5	1.51	1.60	3.19	1.45

	Bus Rapid Transit		Streetcar		
	Cleveland	Kansas City	Seattle	Portland	Tampa
Before	2.2%	1.4%	7.6%	3.1%	0.6%
After	1.6%	4.9%	17.0%	4.7%	4.2%
Multiplier	0.76	3.53	2.25	1.52	6.75

Source: SB Friedman Development Advisors

Residential development multipliers were selected as follows:

- BRT: Cleveland was removed from consideration due to its limited dataset (which produced an unusually large capture rate increase), leaving Kansas City's 1.5 capture rate multiplier for BRT systems.
- Streetcar: The average multiplier (2.1) was used.

Multipliers for office development were selected as follows:

- BRT: Cleveland actually registered a decline in office capture rates, while Kansas City registered a large increase due primarily to a large headquarters consolidation that started before the BRT line was announced. Consequently, Cleveland was removed from consideration and the multiplier for Kansas City was recalculated without the headquarters project, yielding a multiplier of 1.1.
- Streetcar: With a multiplier of 6.8 and a very low base capture rate (0.6 percent), Tampa was considered an outlier and removed. Seattle and Portland multipliers were then averaged to 1.8.

Demand for hotel nights is driven primarily by activity generators such as convention centers, sports, concerts, and major attractions and events. Therefore, BRT and streetcar service are unlikely to drive additional hotel demand. A hotel multiplier of 1 was assigned to both BRT and streetcar alternatives to reflect this lack of anticipated impact. However, over time, greater transit connectivity between key convention and sports destinations in NoDo with dining and entertainment venues in the Old Market area could help make downtown Omaha a more vibrant destination.

The selected multipliers were applied to the baseline study area capture rates for residential and office development to calculate capture rates for each study area with either BRT or streetcar service. Table 5 summarizes these calculations.

Table 5. Calculation of Study Area Office and Residential Multipliers with Transit Improvements

Use	Capture Rate Without Transit	Case Study Multiplier Range		Multiplier Selected for Omaha		New Capture Rate with Transit	
		BRT	Streetcar	BRT	Streetcar	BRT	Streetcar
Residential	3.0% -3.1%*	1.5x - 43.5x	1.5x - 3.2x	1.5x	2.1x	4.5% - 4.7%	6.5%
Office	20%	0.8x - 3.5x	1.5x - 6.8x	1.1x	1.8x	22%	36%
Hotel	20%	N/A	N/A	1x	1x	20%	20%

* Range is due to differences in study area boundaries

These new capture rates were then applied to the same regional market forecast used to produce the baseline forecast of study area demand for residential, office and hotel uses without transit improvements. The new residential and office demand figures were then used to recalculate induced development of retail and service uses (full tables illustrating this recalculation of retail and service demand are located in **Appendix 2**). The estimated market demand for development for each transit alternative is summarized in **Table 6**.

Table 6. Study Area Capture Forecast with Transit Improvements

Use	Regional Projections	Alternative 1		Alternative 2		Alternative 3	
		Capture Rate	Market Demand	Capture Rate	Market Demand	Capture Rate	Market Demand
Residential	65,000	4.7%	3,100	4.5%	2,900	6.5%	4,200
Office	14,900,000	22%	3,300,000	22%	3,300,000	36%	5,400,000
Hotel	5,600	20%	1,100	20%	1,100	20%	1,100
Retail/Service	N/A	N/A	341,000	N/A	336,000	N/A	490,000

Sources: City of Omaha; CoStar Group, Inc.; HDR Engineering, Inc.; SB Friedman Development Advisors; UNL Bureau of Business Research; U.S. Census Bureau

GROUND-UP METHOD: SITE CAPACITY OF STUDY AREAS

HDR's Omaha office estimated the maximum development that could be accommodated in each study area based on its knowledge of planned projects, a parcel-by-parcel assessment of vacant and underutilized sites susceptible to change, and current zoning and planning prescriptions for land use. This assessment produced a parcel-by-parcel estimate of the maximum development capacity of each site susceptible to change. **Table 7** summarizes the total capacity of sites within each study area boundary, while **Figure 6** shows the location of each site susceptible to change.

Table 7. Maximum Development Capacity by Land Use and Alternative

Use	Alternative 1	Alternatives 2 and 3
Residential	3,500 units	4,100 units
Office	4,800,000 SF	5,900,000 SF
Hotel	1,300 units	1,400 units
Retail/Service	1,300,000 SF	1,600,000 SF

Source: HDR Engineering, Inc.

Figure 6. Sites Susceptible to Change
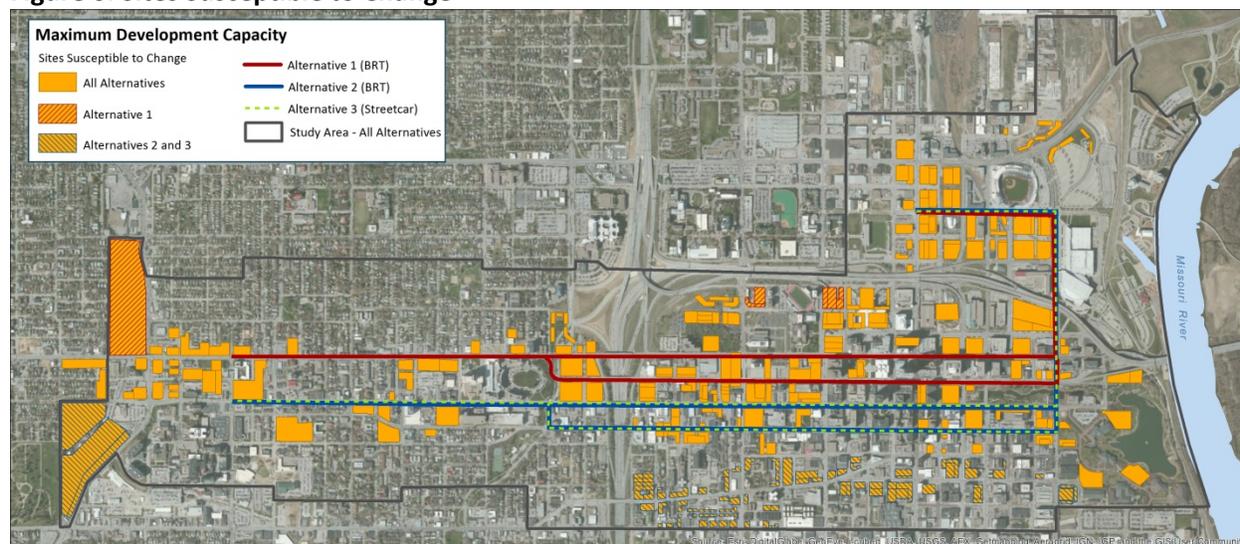
Sources: HDR Engineering, Inc.; SB Friedman Development Advisors

RECONCILIATION OF "TOP-DOWN" AND "GROUND-UP" APPROACHES

As previously stated, the "top-down" approach forecasts the amount of real estate demand that could be captured in the study areas based on regional market conditions for each transit alternative, while the "ground-up" approach estimates the capacity of sites within each study area to accommodate development based on physical conditions and policy decisions. This study reconciles these two approaches by assuming that they are mutually constraining, i.e., the amount of development that will occur in each alternative can exceed neither market demand nor site capacity. As a result, the lesser of the two numbers is always selected for each land use in each alternative. **Table 8** summarizes the results for each approach and the reconciled forecast of future development using this logic. Based on the reconciled forecast for each alternative, HDR revisited its sites susceptible to change and identified the sites most likely to be redeveloped. **Figure 7**, **Figure 8** and **Figure 9** highlight the sites corresponding to each transit alternative.

Table 8. Reconciled Forecast of Development for Each Transit Alternative

Land Use	Alternative 1			Alternative 2			Alternative 3		
	Market Demand	Site Capacity	Forecast	Market Demand	Site Capacity	Forecast	Market Demand	Site Capacity	Forecast
Residential	3,100	3,500	3,100	2,900	4,100	2,900	4,200	4,100	4,100
Office	3,300,000	4,800,000	3,300,000	3,300,000	5,900,000	3,300,000	5,400,000	5,900,000	5,400,000
Hotel	1,100	1,300	1,100	1,100	1,300	1,100	1,100	1,400	1,100
Retail/Service	341,000	1,300,000	341,000	336,000	1,600,000	336,000	490,000	1,600,000	490,000

Source: HDR Engineering, Inc.; SB Friedman Development Advisors

Figure 7. Alternative 1 Potential Future Development Sites
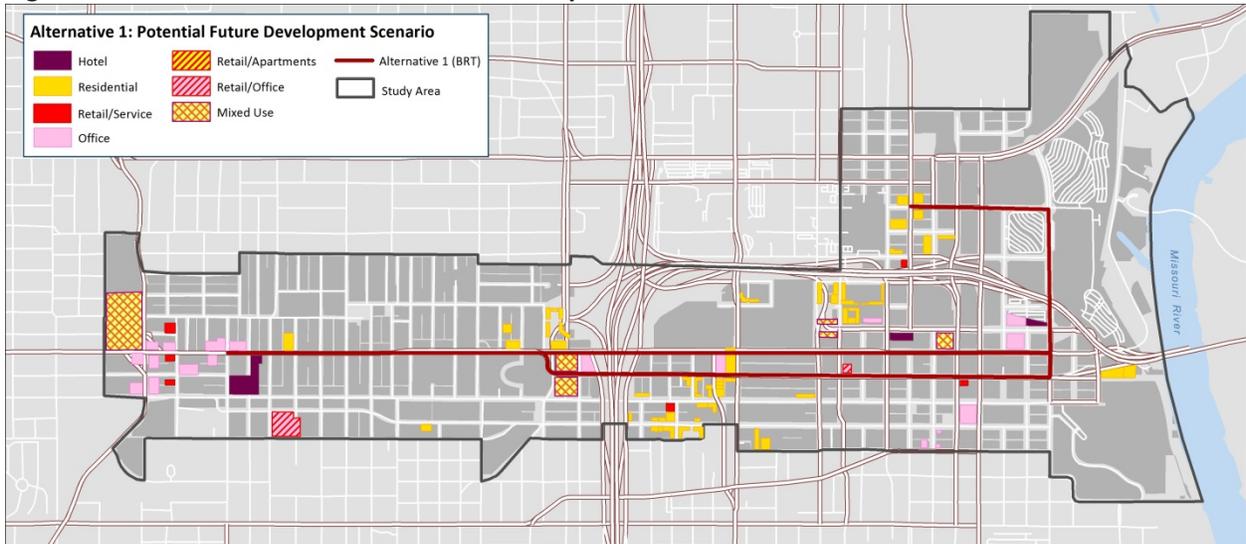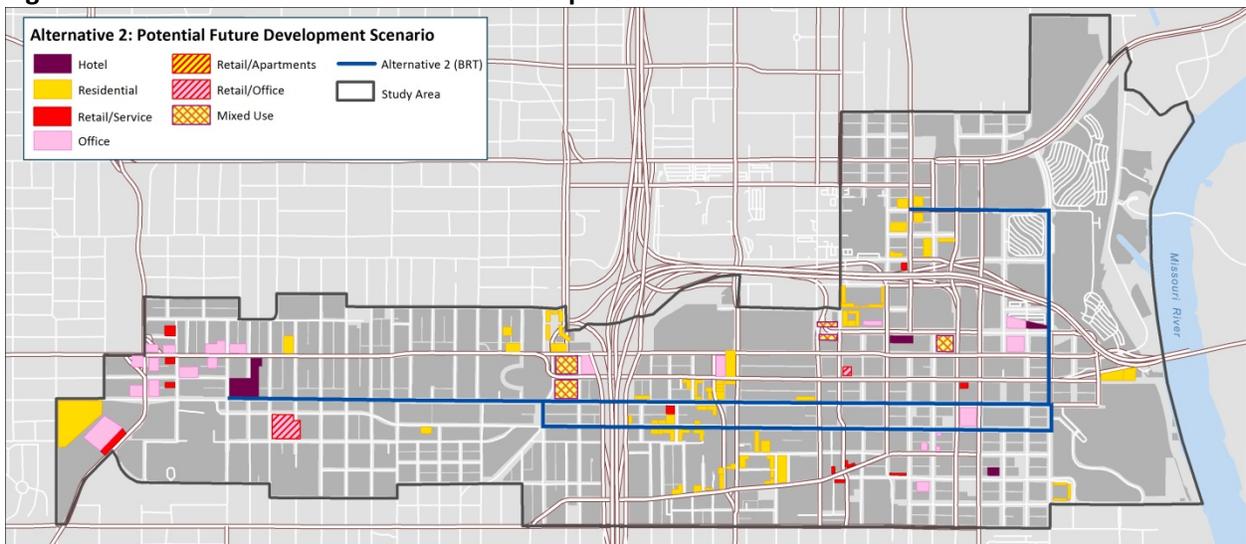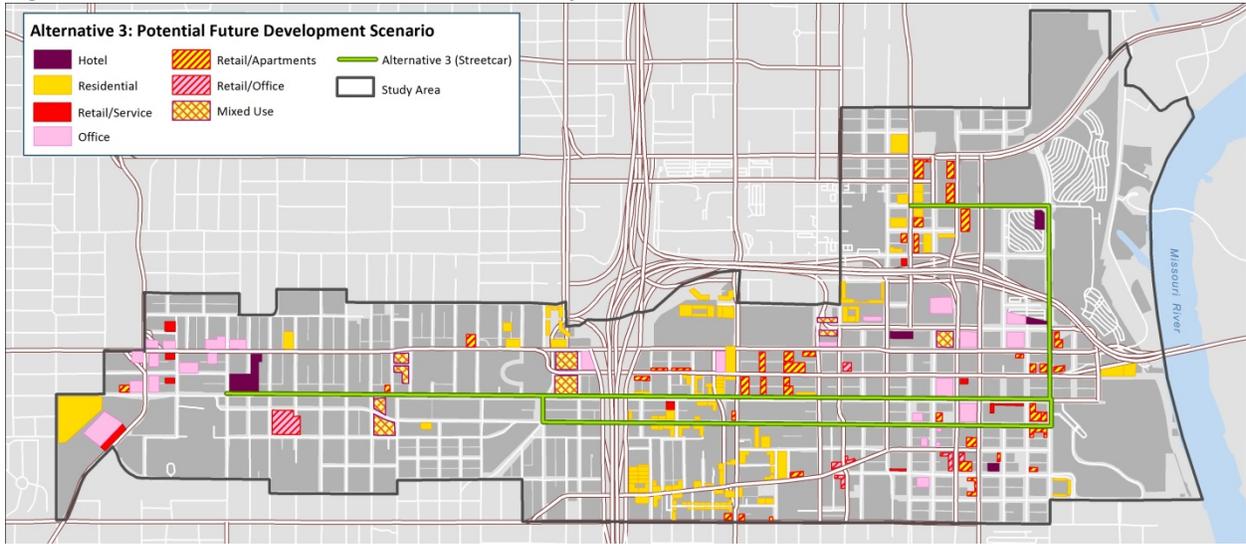

Sources: HDR Engineering, Inc.; SB Friedman Development Advisors

Figure 8. Alternative 2 Potential Future Development Sites

Sources: HDR Engineering, Inc.; SB Friedman Development Advisors

Figure 9. Alternative 3 Potential Future Development Sites

Sources: HDR Engineering, Inc.; SB Friedman Development Advisors

Conclusions

Based on the findings of *SB Friedman's* assessment, both streetcar and BRT alternatives are associated with greater development activity in the study areas compared to a no-transit alternative (see **Table 9**). Moreover, it is anticipated that the streetcar alternative may precede greater development than the BRT alternatives within the study areas. This could be due to differences in perceptions of quality, permanence, or other issues among members of the real estate community. There may also be real differences in service quality in the case study systems that were used to establish benchmarks for BRT and streetcar systems that we were unable to account for.

Table 9. Summary of Study Area Baseline and Alternative Development Forecasts

Land Use	Baseline	Alternative 1	Alternative 2	Alternative 3
Residential	2,000	3,100	2,900	4,100
Office	3,000,000	3,300,000	3,300,000	5,400,000
Hotel	1,100	1,100	1,100	1,100
Retail/Service	296,000	341,000	336,000	490,000

Source: SB Friedman Development Advisors

On that note, it is important to acknowledge that modern streetcar and BRT systems are still uncommon in the U.S. compared with more established systems (i.e., heavy rail, traditional bus and light rail), and our study methodology consequently relied on a small set of case studies to establish their development impacts. We attempted to control for differences in quality in our selection of case studies (for instance, by focusing on BRT systems with permanent stations, as well as dedicated lanes and signal prioritization on at least 50% of the route), but all systems are unique.

It is also worth observing that many of the case study transit systems were implemented in coordination with investments by other public agencies, major institutions and real estate interests. In Seattle, the South Lake Union streetcar was supported by Vulcan Inc., a major real estate owner in the affected neighborhood that subsequently attracted Amazon and other large firms to the area. In Cleveland, medical institutions and universities invested heavily in new facilities along the Healthline route, and streetscape improvements were a significant component of the project. In Portland, a development agreement with a key land owner provided higher minimum densities in exchange for key rights of way and a private contribution to the Local Improvement District that helped fund the streetcar. Such coordination may play a key role in the development realized by a new BRT or streetcar line.

Limitations

This memorandum is based on estimates, assumptions and other information developed from research of the market, secondary sources, and knowledge of the industry. The sources of information and bases of the estimates and assumptions are stated in the memorandum. Some assumptions inevitably will not materialize, and unanticipated events and circumstances may occur; therefore, actual results achieved during the period covered by our analysis will necessarily vary from those described in our report, and the variations may be material.

The terms of this engagement are such that we have no obligation to revise the memorandum or to reflect events or conditions which occur subsequent to the date of the memorandum. These events or conditions include, without limitation, economic growth trends, governmental actions, additional competitive developments, interest rates and other market factors. However, we are available to discuss the necessity for revision in view of changes in the economic or market factors affecting the proposed project.

Our study did not ascertain the legal and regulatory requirements applicable to this project, including zoning, other state and local government regulations, permits and licenses. No effort was made to determine the possible effect on this project of present or future federal, state or local legislation, including any environmental or ecological matters.

Furthermore, we neither evaluated management's effectiveness, nor are we responsible for future marketing efforts and other management actions upon which actual results will depend.

Our memorandum is intended solely for your information and for submission to economic development organizations, financial institutions and developers, and should not be relied upon by any other person, firm or corporation, or for any other purposes. Neither the memorandum nor its contents, nor any reference to our Firm, may be included or quoted in any offering circular or registration statement, appraisal, sales brochure, prospectus, loan or other agreement, or any document intended for use in obtaining funds from individual investors.

We acknowledge that our memorandum may become a public document within the meaning of the Freedom of Information Acts of the various governmental entities. Nothing in these terms and conditions is intended to block the appropriate dissemination of the document for public information purposes.

Appendix 1: Regional Residential, Office and Hotel Forecast Tables

Regional Residential Forecast

Population in Core Counties	2000	2005	2010	2015	2020	2025	2030
Douglas	463,585	486,929	511,227	532,354	550,918	567,702	583,538
Sarpy	122,595	139,371	156,696	174,201	191,540	208,441	224,709
Cass	24,334	25,734	27,733	30,037	32,600	35,385	38,381
Saunders	19,830	20,458	21,220	22,525	24,306	26,500	29,084
Washington	18,780	19,772	21,235	23,053	25,140	27,460	30,024
Harrison (IA)	15,666	15,884	16,242	16,753	17,386	18,102	18,885
Mills (IA)	14,547	15,284	16,213	17,164	18,100	18,999	19,879
Pottawattamie (IA)	87,704	89,738	92,378	95,111	97,943	100,850	103,872
Metro Population (Woods & Poole)	767,041	813,170	862,944	911,198	957,933	1,003,439	1,048,372
2010 Census-Adjusted Metro Population	767,175	834,401	865,350	913,739	960,604	1,006,237	1,051,295
Average Persons per Housing Unit	2.46	2.43	2.39	2.38	2.37	2.36	2.35
Housing Unit Forecast	311,601	344,058	362,327	383,924	405,318	426,371	447,360
15-Yr Change in Units	-	-	-	**72,323**	-	-	**63,436**

Sources: UNL Bureau of Business Economic Research; U.S. Census Bureau, SB Friedman Development Advisors

Regional Office Forecast

Assumptions	
Demolition Rate, 2008-2012 (actual)	0.61%
Demolition Rate, 2013+ (assumed)	0.40%

Year	Office Employment	Employees / 1000 SF	Occupied Office SF	Total Inventory SF	SF Demolished	SF New Deliveries	Vacant Office SF	Vacancy Rate
2002	118,082	3.37	35,072,829	37,511,047	150,044	**596,732**	2,438,218	6.5%
2003	120,965	3.43	35,300,693	37,957,735	151,831	**429,664**	2,657,041	7.0%
2004	120,406	3.44	34,985,545	38,235,568	152,942	**1,578,913**	3,250,023	8.5%
2005	121,070	3.35	36,191,154	39,661,539	158,646	**1,083,487**	3,470,385	8.75%
2006	123,959	3.37	36,832,139	40,586,380	162,346	**691,137**	3,754,240	9.25%
2007	126,549	3.45	36,710,475	41,115,171	249,909	**460,334**	4,404,696	10.7%
2008	128,842	3.49	36,888,856	40,801,267	748,029	**434,125**	3,912,411	9.6%
2009	125,028	3.29	37,969,966	41,797,142	-	**995,875**	3,827,176	9.2%
2010	125,598	3.24	38,800,199	42,235,908	203,888	**642,654**	3,435,709	8.1%
2011	128,111	3.31	38,671,136	42,320,413	73,827	**158,332**	3,649,277	8.6%
2012	130,593	3.34	39,063,654	42,394,063	247,948	**321,598**	3,330,409	7.9%
2013	132,673	3.35	39,603,732	43,000,795	172,003	**778,735**	3,397,063	7.9%
2014	136,659	3.40	40,193,855	43,594,203	174,377	**767,785**	3,400,348	7.80%
2015	142,554	3.49	40,846,509	44,230,112	176,920	**812,830**	3,383,604	7.65%
2016	148,519	3.57	41,601,943	44,975,073	179,900	**924,861**	3,373,130	7.50%
2017	152,863	3.61	42,403,043	45,766,911	183,068	**974,905**	3,363,868	7.35%
2018	155,940	3.61	43,196,750	46,548,222	186,193	**967,504**	3,351,472	7.20%
2019	158,976	3.62	43,976,896	47,312,422	189,250	**953,450**	3,335,526	7.05%
2020	162,100	3.62	44,779,071	48,149,538	192,598	**1,029,714**	3,370,468	7.00%
2021	165,214	3.63	45,576,141	49,006,604	196,026	**1,053,092**	3,430,462	7.00%
2022	168,341	3.63	46,413,219	49,906,687	199,627	**1,099,710**	3,493,468	7.00%
2023	171,325	3.63	47,210,031	50,763,474	203,054	**1,059,842**	3,553,443	7.00%
2024	174,146	3.63	47,960,798	51,570,751	206,283	**1,013,559**	3,609,953	7.00%
2025	176,838	3.63	48,675,441	52,339,184	209,357	**977,790**	3,663,743	7.00%
2026	179,526	3.64	49,388,119	53,105,505	212,422	**978,743**	3,717,385	7.00%
2027	182,183	3.64	50,091,503	53,861,831	215,447	**971,774**	3,770,328	7.00%
2028	184,806	3.64	50,784,894	54,607,413	218,430	**964,011**	3,822,519	7.00%
2029	187,394	3.64	51,467,596	55,341,501	221,366	**955,454**	3,873,905	7.00%
2030	189,942	3.64	52,138,915	56,063,350	224,253	**946,102**	3,924,434	7.00%

Sources: CoStar Group, Inc.; SB Friedman Development Advisors

Regional and Study Area Hotel Forecast

Year	Region Inventory	Region New Units	Study Area New Units
2002	9,078	-	-
2003	9,078	133	-
2004	9,211	739	600
2005	9,950	185	-
2006	10,135	268	-
2007	10,403	604	139
2008	11,007	761	236
2009	11,768	1,041	114
2010	12,809	328	132
2011	13,137	102	-
2012	13,239	397	
2013	13,636	273	
2014	13,909	300	
2015	14,209	300	
2016	14,509	218	
2017	14,727	350	
2018	15,077	339	
2019	15,416	347	
2020	15,763	355	
2021	16,117	363	
2022	16,480	371	
2023	16,851	379	
2024	17,230	388	
2025	17,618	396	
2026	18,014	405	
2027	18,419	414	
2028	18,834	424	
2029	19,257	433	
2030	19,691	443	
Units Developed 2002-2011	**4,161**		**1,221**
Historical Study Area Capture Rate			**29%**
Forecast Capture Rate (No Convention Hotel)			**20%**
Projected Units (2015-2030)	**5,625**		**1,125**

Sources: Smith Travel Research; SB Friedman Development Advisors

Appendix 2: Retail Development Forecast Tables

Retail Spending Benchmarks

Retail Category	2030 Spending Estimate (2013 $)		
	Per Household	Per Office Worker	Per Regional Resident
Home Furnishings Stores	$97	$0	$0
Electronics & Appliance Stores	$545	$407	$0
Bldg Material & Supplies Dealers	$299	$0	$0
Food & Beverage Stores	$2,377	$1,172	$0
Health & Personal Care Stores	$1,167	$764	$39
Clothing & Clothing Accessories Stores	$819	$591	$15
Sporting Goods/Hobby/Musical Instr Stores	$229	$162	$0
Book, Periodical & Music Stores	$125	$0	$0
Miscellaneous Store Retailers	$242	$854	$0
Food Services & Drinking Places	$1,778	$1,582	$121
Total	$7,678	$5,532	$174

Sources: ESRI Business Analyst; ICSC; SB Friedman Development Advisors

Baseline Forecast

Assumptions	
Number of New Residents	2,000
Number of New Office Workers	9,700
Number of New Regional Residents	137,556

Retail Category	2030 Spending Estimate (2013 $)					
	Household Total	Office Worker Total	Region Total	Total Spending	Sales/ SF	SF
Home Furnishings Stores	$193,344	$0	$0	$193,344	$138	1,404
Electronics & Appliance Stores	$1,090,479	$3,951,787	$0	$5,042,266	$327	15,421
Building Material & Supplies Dealers	$598,179	$0	$0	$598,179	$156	3,828
Food & Beverage Stores	$4,753,641	$11,367,132	$0	$16,120,773	$511	31,524
Health & Personal Care Stores	$2,334,246	$7,409,601	$5,310,601	$15,054,448	$465	32,397
Clothing & Accessories Stores	$1,637,314	$5,732,389	$1,996,254	$9,365,957	$168	55,634
Sporting Goods/Hobby/Musical Instrument Stores	$458,579	$1,568,078	$0	$2,026,657	$216	9,391
Book, Periodical & Music Stores	$250,242	$0	$0	$250,242	$266	940
Miscellaneous Stores	$484,222	$8,288,414	$0	$8,772,636	$235	37,320
Food Services & Drinking Places	$3,555,365	$15,341,894	$16,598,364	$35,495,623	$329	108,050
Total	**$15,355,612**	**$53,659,294**	**$23,905,218**	**$92,920,124**		**295,909**

Sources: ESRI Business Analyst; ICSC; ICSC & ULI; SB Friedman Development Advisors; UNL Bureau of Business Economic Research

Alternative 1 (BRT)

Assumptions	
Number of New Residents	3,100
Number of New Office Workers	10,742
Number of New Regional Residents	137,556

Retail Category	2030 Spending Estimate (2013 $)					
	Household Total	Office Worker Total	Region Total	Total Spending	Sales/ SF	SF
Home Furnishings Stores	$299,684	$0	$0	$299,684	$138	2,177
Electronics & Appliance Stores	$1,690,242	$4,376,095	$0	$6,066,337	$327	18,553
Building Material & Supplies Dealers	$927,177	$0	$0	$927,177	$156	5,933
Food & Beverage Stores	$7,368,144	$12,587,633	$0	$19,955,777	$511	39,023
Health & Personal Care Stores	$3,618,082	$8,205,178	$5,310,619	$17,133,878	$465	36,872
Clothing & Accessories Stores	$2,537,837	$6,347,882	$1,996,260	$10,881,979	$168	64,640
Sporting Goods/Hobby/Musical Instrument Stores	$710,797	$1,736,445	$0	$2,447,242	$216	11,340
Book, Periodical & Music Stores	$387,875	$0	$0	$387,875	$266	1,457
Miscellaneous Store Retailers	$750,544	$9,178,350	$0	$9,928,894	$235	42,239
Food Services & Drinking Places	$5,510,816	$16,989,171	$16,598,419	$39,098,406	$329	119,017
Total	**$23,801,198**	**$59,420,753**	**$23,905,298**	**$107,127,250**		**341,250**

Sources: ESRI Business Analyst; ICSC; ICSC & ULI; SB Friedman Development Advisors; UNL Bureau of Business Economic Research

Alternative 2 (BRT)

Assumptions	
Number of New Residents	2,900
Number of New Office Workers	10,742
Number of New Regional Residents	137,556

Retail Category	2030 Spending Estimate (2013 $)					
	Household Total	Office Worker Total	Region Total	Total Spending	Sales/ SF	SF
Home Furnishings Stores	$280,349	$0	$0	$280,349	$138	2,036
Electronics & Appliance Stores	$1,581,194	$4,376,095	$0	$5,957,289	$327	18,219
Building Material & Supplies Dealers	$867,359	$0	$0	$867,359	$156	5,550
Food & Beverage Stores	$6,892,780	$12,587,633	$0	$19,480,413	$511	38,093
Health & Personal Care Stores	$3,384,657	$8,205,178	$5,310,619	$16,900,454	$465	36,370
Clothing & Accessories Stores	$2,374,106	$6,347,882	$1,996,260	$10,718,248	$168	63,667
Sporting Goods/Hobby/Musical Instrument Stores	$664,939	$1,736,445	$0	$2,401,384	$216	11,128
Book, Periodical & Music Stores	$362,851	$0	$0	$362,851	$266	1,363
Miscellaneous Store Retailers	$702,122	$9,178,350	$0	$9,880,472	$235	42,033
Food Services & Drinking Places	$5,155,279	$16,989,171	$16,598,419	$38,742,869	$329	117,935
Total	**$22,265,637**	**$59,420,753**	**$23,905,298**	**$105,591,688**		**336,394**

Sources: ESRI Business Analyst; ICSC; ICSC & ULI; SB Friedman Development Advisors; UNL Bureau of Business Economic Research

Alternative 3 (Streetcar)

Assumptions	
Number of New Residents	4,200
Number of New Office Workers	17,577
Number of New Regional Residents	137,556

Retail Category	2030 Spending Estimate (2013 $)					
	Household Total	Office Worker Total	Region Total	Total Spending	Sales/ SF	SF
Home Furnishings Stores	$406,023	$0	$0	$406,023	$138	2,949
Electronics & Appliance Stores	$2,290,006	$7,160,883	$0	$9,450,888	$327	28,904
Building Material & Supplies Dealers	$1,256,175	$0	$0	$1,256,175	$156	8,038
Food & Beverage Stores	$9,982,646	$20,597,946	$0	$30,580,592	$511	59,800
Health & Personal Care Stores	$4,901,917	$13,426,655	$5,310,619	$23,639,191	$465	50,871
Clothing & Accessories Stores	$3,438,360	$10,387,443	$1,996,260	$15,822,063	$168	93,984
Sporting Goods/Hobby/Musical Instrument Stores	$963,015	$2,841,455	$0	$3,804,470	$216	17,629
Book, Periodical & Music Stores	$525,508	$0	$0	$525,508	$266	1,974
Miscellaneous Store Retailers	$1,016,866	$15,019,118	$0	$16,035,985	$235	68,220
Food Services & Drinking Places	$7,466,267	$27,800,461	$16,598,419	$51,865,147	$329	157,879
Total	**$32,246,785**	**$97,233,960**	**$23,905,298**	**$153,386,043**		**490,248**

Sources: ESRI Business Analyst; ICSC; ICSC & ULI; SB Friedman Development Advisors; UNL Bureau of Business Economic Research