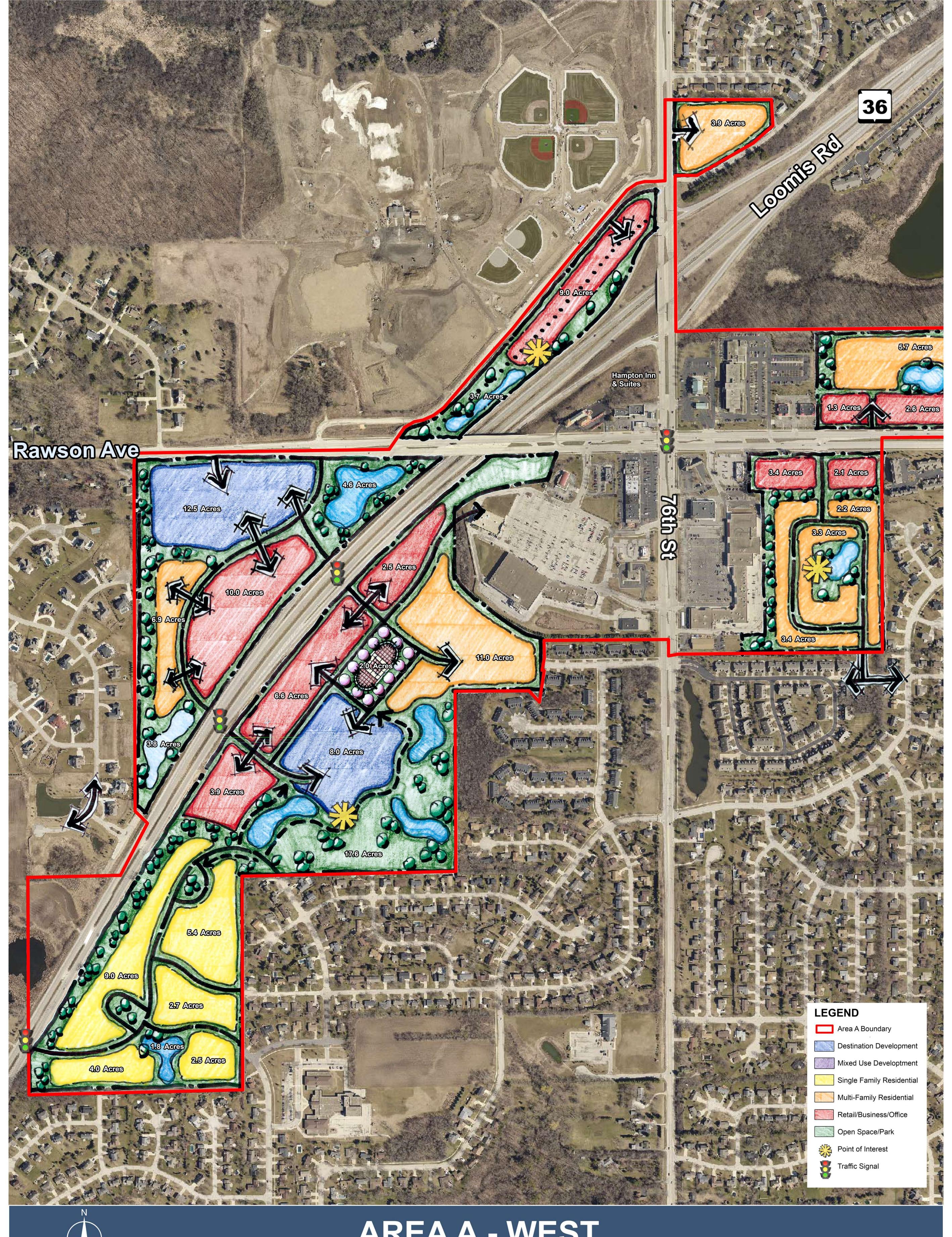
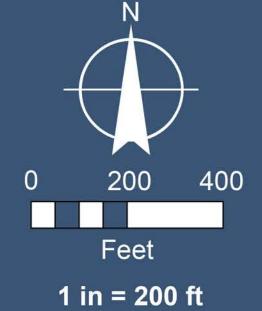




AREAA - EAST
SCHEMATIC MASTER PLAN
CITY OF FRANKLIN
MILWAUKEE COUNTY, WISCONSIN







AREA A - WEST
SCHEMATIC MASTER PLAN - ALT. B
CITY OF FRANKLIN
MILWAUKEE COUNTY, WISCONSIN



CITY OF FRANKLIN - AREA A - ALTERNATIVE B DEVELOPABLE LAND ASSESSMENT

		Existing	Land Informatio	n	Proposed Development									
GRAEF ID	Acres	Total Assessed Value	Assessed Value Per Acre	Developable Land	Roadways \$0	Open Space \$0	Retail \$825,000	Single Family \$614,000	Multi-Family \$600,000	Large User \$825,000	Mixed Use \$825,000	Industrial \$517,000	Total	Increase in Value
Area A Total	29.16	\$501,200	\$17,186	29.16 acres	0 \$0		14 \$11,550,000	21.1 \$12,955,400	9.7 \$5,820,000	8.7 \$7,177,500	\$0	0 \$0	53.5 \$37,502,900	\$37,001,700
Area B Total	68.86	\$690,000	\$10,020	53.71 acres	0 \$0		0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	-\$690,000
Area C Total	44.54	\$1,302,000	\$29,232	41.31 acres	0 \$0		9.5 \$7,837,500	0 \$0	3.9 \$2,340,000	10.9 \$8,992,500	0 \$0	0 \$0	24.3 \$19,170,000	\$17,868,000
Area D Total	16.65	\$0	\$0	16.65 acres	0 \$0		6 \$4,950,000	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	6 \$4,950,000	\$4,950,000
Area E Total	5.01	\$901,400	\$179,900	5.01 acres 0.00	0 \$0		0 \$0	0 \$0	3.9 \$2,340,000	0 \$0	0 \$0	0 \$0	3.9 \$2,340,000	\$1,438,600
Area F Total	21.42	\$1,979,400	\$92,406	20.15 acres	0 \$0		5.5 \$4,537,500	0 \$0	8.9 \$5,340,000	0 \$0	0 \$0	0 \$0	14.4 \$9,877,500	\$7,898,100
Area G Total	19.63	\$1,777,900	\$90,548	15.28 acres	0 \$0		5.7 \$4,702,500	0 \$0	5.7 \$3,420,000	0 \$0	0 \$0	0 \$0	11.4 \$8,122,500	\$6,344,600
Area I Total	85.74	\$4,876,400	\$56,874	36.38 acres	0 \$0	\$0	18.3 \$15,097,500	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	18.3 \$15,097,500	\$10,221,100
Total Ar	291.02	\$12,028,300	\$41,331	217.66 acres	0 \$0		59 \$48,675,000	21 \$12,955,400	32 \$19,260,000	20 \$16,170,000	0 \$0	0 \$0	132 \$97,060,400	\$85,032,100

CITY OF FRANKLIN - AREA A - ALTERNATE B

					Proposed Infrastructure Improvements											
GRAEF ID	Total Acres	Developed Acres	Lots	Earthwork (Acre) \$18,900	Water Transmission System (L.F.) \$150	Water Distribution System (L.F.) \$125	Water Valves (Each) \$2,300	Hydrants (Each) \$4,500	Water Services (Lot) \$2,750	Sanitary Sewer (L.F.) \$200	Sanitary Services (Lot) \$2,400	Paving & Storm Sewer (L.F. Road) \$500	Stormwater Management @50% Impervious (Acre) \$25,000	Traffic Signals and Lane Improvements (Intersection) \$750,000	Lighting - 100' spacing (L.F Road) \$75	Power Distribution (L.F Road) \$60
Area A Total	29.16	21.10	50	21.10 \$398,790	0 \$0	1,700 \$212,500	4 \$9,200		50 \$137,500			2420 \$1,210,000			2420 \$181,500	2420.00 \$145,200
Area B Total	68.86	32.40	15	32.40 \$612,360	0 \$0	6,500 \$812,500	14 \$32,200			•		6630 \$3,315,000			6630 \$497,250	6630.00 \$397,800
Area C Total	44.54	24.30	10	24.30 \$459,270	0 \$0	2,290 \$286,250	5 \$11,500		10 \$27,500	2,430 \$486,000		2240 \$1,120,000			2240 \$168,000	2240.00 \$134,400
Area D Total	16.65	6.00	6	6.00 \$113,400	0 \$0	3,500 \$437,500	7 \$16,100			,		2750 \$1,375,000			2750 \$206,250	2750.00 \$165,000
Area E Total	5.01	3.90	1	0.00 \$0	0 \$0	0 \$0	0 \$0					0 \$0			0 \$0	
Area F Total	21.42	14.40	5	0.00 \$0	0 \$0	0 \$0	0 \$0					0 \$0			0 \$0	
Area G Total	19.63	9.60	5	0.00 \$0	0 \$0	0 \$0	0 \$0					0 \$0			0 \$0	0.00 \$0
Area I Total	85.74	18.30	5	0.00 \$0	0 \$0	0 \$0	0 \$0					0 \$0			0 \$0	0.00 \$0
Total Area G	291.01	130.00	97	\$1,583,820	\$0	\$1,748,750	\$69,000	\$180,000	\$222,750	\$2,806,000	\$194,400	\$7,020,000	\$1,047,500	\$3,000,000	\$1,053,000	\$842,400

CITY OF FRANKLIN - AREA A - ALTERNATE B

	Proposed Infrastructure Improvements												
GRAEF ID	Natural Gas (Lot) \$1,500	Telephone, Data, CATV (Lot) \$3,000	Methane Pipe Relocation (L.F.) \$400	Green Infrastructure - Purple Pipe (Acre) \$5,000	Pedestrian/ Bicycle Path (L.F.) \$40	Street Trees - 50' spacing (L.F. Road) \$20	Decorative Streetscape (L.F. Road) \$275	Signage (Each) \$20,000	Public Park/ Open Space (Acre) \$2,000	Town Square (Each) \$1,000,000	Ramp Fill and Compaction (S.Y.) \$200	Contaminated or Unsuitable Soil Removal (C.Y.) \$50	Total Notes
rea A otal	50 \$75,000	50 \$150,000	0 \$0		0 \$0	, -	0 \$0	1 \$20,000	5.00 \$10,000	0 \$0			Full infrastructure \$4,063,840 improvements
rea B otal	15 \$22,500	15 \$45,000	0 \$0	0.00	0 \$0	,	2,000 \$550,000	4 \$80,000	30.00 \$60,000	1 \$1,000,000	2,500 \$500,000		Full infrastructure \$10,876,960 improvements
rea C otal	10 \$15,000	10 \$30,000	0 \$0		0 \$0		0 \$0	2 \$40,000	5.00 \$10,000	0 \$0	,		Full infrastructure \$4,441,970 improvements
rea D otal	6 \$9,000	6 \$18,000			0 \$0		0 \$0	2 \$40,000	5.00 \$10,000	0 \$0	,		Full infrastructure \$7,480,150 improvements
rea E otal	0 \$0	0 \$0			0 \$0		0 \$0	0 \$0		0 \$0		0 \$0	\$0 No improvements
ea F otal	0 \$0	0 \$0			0 \$0		0 \$0	0 \$0		0 \$0			\$0 No improvements
rea G otal	0 \$0	0 \$0			0 \$0		0 \$0	0 \$0		0 \$0		0 \$0	\$0 No improvements
rea I otal	0 \$0	0 \$0			0 \$0		0 \$0	0 \$0		0 \$0		0 \$0	\$0 No improvements
otal Area G	\$121,500	\$243,000	\$0	\$0	\$0	\$280,800	\$550,000	\$180,000	\$90,000	\$1,000,000	\$1,500,000	\$3,130,000	\$26,862,920

One Honey Creek Corporate Center 125 South 84th Street, Suite 401 Milwaukee, WI 53214-1470 414 / 259 1500 414 / 259 0037 fax www.graef-usa.com



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MEMORANDUM

TO: Art Baumann, P.E. – WisDOT SE Region

Mayor Steve Olson – City of Franklin

FROM: Andre Ost, P.E., PTOE

Shana Brummond, P.E., PTOE

DATE: May 13, 2015

SUBJECT: Franklin Area A TIA - Initial Review

Franklin, Wisconsin

Introduction

The Franklin Area A Development is a mixed use development proposed to be located along W. Loomis Road (STH 36) at the interchanges with W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U) in the City of Franklin. The development includes four specific areas along W. Loomis Road. The development plan requires the removal of the W. Rawson Avenue ramps and realignment of the S. 76th Street ramps. Construction is expected to begin with the realignment of the ramps in 2017 with full build out by 2022.

The Wisconsin Department of Transportation (WisDOT) requires a full Traffic Impact Analysis (TIA) for developments generating more than 500 peak hour trips. This initial review identifies the study area, trip generation and analysis periods for the TIA.

Development Overview

Site Location

A street map illustrating the location of the Franklin Area A developments is shown on Exhibit 1.

Study Area

As discussed with WisDOT staff, the study area for the TIA is recommended to include the following intersections:

- W. Loomis Road (STH 36) Northbound ramps & W. Rawson Avenue (CTH BB)
- W. Loomis Road (STH 36) Northbound ramps & S. 76th Street (CTH U)
- W. Loomis Road (STH 36) Southbound ramps & S. 76th Street (CTH U)
- W. Loomis Road (STH 36) Southbound ramps & W. Rawson Avenue (CTH BB)
- S. 76th Street (CTH U) & W. Rawson Avenue (CTH BB)
- S. 68th Street & W. Rawson Avenue (CTH BB)
- S. 76th Street (CTH U) and W. Crystal Ridge Drive
- W. Rawson Avenue (CTH BB) and W. Crystal Ridge Drive
- W. Loomis Road (STH 36) & W. Drexel Avenue
- W. Loomis Road (STH 36) & 3 Proposed Study Intersections (North, Middle, South)

The existing geometrics at the study area intersections are shown on Exhibit 2. The future planned transportation system with the proposed ramp realignments is shown on Exhibit 3. The following is a description of the existing study area roadways.

W. Loomis Road (STH 36) is a four-lane northeast/southwest divided principal arterial that passes under S. 76th Street and W. Rawson Avenue with ramp connections to both roadways. According to the Wisconsin Department of Transportation (WisDOT), the Year 2014 Annual Average Daily Traffic (AADT) along W. Loomis Road was 16,700 vehicles per day (vpd) north of W. Drexel Avenue and 18,600 vpd north of 76th Street. W. Loomis Road has a 45-mph speed limit from the south project limits to 0.3 miles north of W. Drexel Avenue where the speed limit increases to 55-mph. The 55-mph speed limit continues for 1.9 miles through the W. Rawson Avenue and S. 76th Street ramps and then decreases to 45-mph near S. 68th Street.

Crystal Ridge Drive / Old Loomis Road (CTH K) is a two-lane northeast/southwest undivided local roadway that provides access through the Rock Sports Complex. The speed limit on Crystal Ridge Drive / Old Loomis Road is posted at 35-mph.

- S. 76th Street (CTH U) is a six-lane divided north/south principal arterial with a posted speed limit of 40-mph through the study area. According to WisDOT, S. 76th Street had a 2011 AADT of 28,300 vpd north of Crystal Ridge Drive and 24,700 vpd south of W. Rawson Avenue.
- S. 68th Street is a two-lane undivided north/south collector roadway with a posted speed limit of 30-mph through the study area. According to WisDOT, S. 76th Street had a 2011 AADT of 2,300 vehicles per day (vpd) north of W. Rawson Avenue and 2,600 vpd south of W. Rawson Avenue.
- W. Rawson Avenue (CTH BB) is an east/west principal arterial that transitions from a two-lane undivided roadway section to a four-lane divided roadway section west of Crystal Ridge Drive. The median width through the study area is at least 25 feet wide allowing for two-stage crossing movements (vehicles can wait in the median before completing their maneuver) at stop controlled intersections. W. Rawson Avenue has a 40-mph speed limit within the study area. The 2011 WisDOT AADT on W. Rawson Avenue was 14,700 vpd between Crystal Ridge Drive and the W. Loomis Road southbound ramps and 29,900 vpd east of S. 76th Street.

W. Drexel Avenue is a two-lane undivided east/west minor arterial roadway with a posted speed limit of 35-mph through the study area. The 2014 WisDOT AADT on W. Drexel Avenue was 13,700 vpd west of W. Loomis Road and 4,100 vpd east of W. Loomis Road.

On-Site Development

Exhibit 4 shown the conceptual site plan of the development. The development is planned to be constructed in one phase and is expected to beginning construction in 2017 with full build out planned by the Year 2027. The development is proposed to include the following land uses:

Area 1:

- Apartments –232 units
- General Retail 95,000
- Destination Retail 75,000
- Bank –3 drive-in lanes
- High-Turnover Sit-Down Restaurants 20,000 total sf
- Fast Food Restaurants With Drive Through 15,000 total sf
- Town Square Park 2 acres

Area 2:

• Single Family Houses – 50 lots

Area 3:

- Apartments –108 units
- Health Club 60,000 sf
- Medical Office Building 30,000 sf
- General Retail 60,000 sf
- Specialty Grocery 15,000 sf
- Pharmacy 18,000 sf
- High-Turnover Sit-Down Restaurant 10,000 sf
- Fast Food Restaurant With Drive Through 7,500 sf

<u> Area 4:</u>

- Apartments –48 units
- Retail 65,000 sf
- High-Turnover Sit-Down Restaurant 10,000 sf
- Fast Food Restaurant With Drive Through 7,500 sf

Off-Site Development

Based on discussions with the City, there are two planned developments in the vicinity of the Franklin Area A TIF. Trip generation for these sites will be added to the background traffic. A summary of the off-site developments is included below:

Hampton Inn & Suites Hotel

Hotel - 100 Rooms

The Hampton Inn & Suites hotel will be located at 6901 S. 76th Street and will have access to the east side of S. 76th Street north of W. Rawson Road. The hotel is planned to open this summer.

The Rock – Additional Fields

The Rock complex is planning to add the following fields to their site:

- 2 baseball fields
- 4 soccer fields
- 4 futsal fields

Access for the Rock complex is located on the north side of Crystal Ridge Drive between S. 76th Street and W. Rawson Road. The additional fields are planned to be constructed before 2017.

Site Trip Generation

To address any potential future traffic impacts within the study area, it is necessary to identify the traffic expected to be generated by the proposed development. The expected traffic volumes generated by the development are based on the size and type of proposed land uses, and on trip data published in the Institute of Transportation Engineer's (ITE's) *Trip Generation*, 9th Edition (2012).

It can be expected that approximately 20 percent of the development trips will be linked trips within Areas 1, 3 and 4. A linked trip occurs when a motorist has more than one destination within the site. Additionally, it can be expected that pass-by trips will be common with the development that is located on an arterial roadway. Pass-by trips occur when vehicles that are already on the roadway system stop at the development prior to continuing on their intended route. The following pass-by percentages were used:

- 10% of Discount store
- 25% of General retail
- 40% of Pharmacy
- 40% of Bank
- 30% of High-Turnover Sit-Down restaurant
- 40% of Fast food restaurant

Exhibit 5 shows the trip generation for the proposed development. As shown in Exhibit 5, the proposed development is expected to generate 2,755 total vehicle trips (1,420 entering vehicles/1,335 exiting vehicles) during the weekday morning peak hour. Of the 2,755 total trips, 545 trips are expected to be linked trips and 665 trips are expected to be pass-by trips resulting in 1,545 new development generated trips.

During the weekday evening peak hour, the proposed development is expected to generate 3,655 total vehicle trips (2,755 entering vehicles/1,735 exiting vehicles). Of the 3,655 total trips, 720 trips are expected to be linked trips and 730 trips are expected to be pass-by trips resulting in 2,205 new development generated trips.

During the Saturday midday peak hour, the proposed development is expected to generate 4,895 total vehicle trips (2,520 entering vehicles/2,375 exiting vehicles). Of the 4,895 total trips, 970 trips are expected to be linked trips and 1,065 trips are expected to be pass-by trips resulting in 2,860 new development generated trips.

Assumptions for the Development of the TIA

The following assumptions were made by GRAEF regarding the study area peak hours, distribution of traffic and the proposed access on W. Loomis Road (STH 36).

Data Collection/Peak Hours

The Franklin Area A development is expected to generate the highest amount of traffic during the weekday evening and Saturday midday time periods. Therefore, it is recommended that this study analyze the weekday evening and Saturday midday peak hours.

In March and April of 2015, GRAEF collected 13 hour weekday turning movement counts from 6:00 am to 7:00 pm at the following intersections:

- W. Loomis Road (STH 36) Northbound ramps & W. Rawson Avenue (CTH BB)
- W. Loomis Road (STH 36) Northbound ramps & S. 76th Street (CTH U)
- W. Loomis Road (STH 36) Southbound ramps & W. Rawson Avenue (CTH BB)
- W. Rawson Avenue (CTH BB) and W. Crystal Ridge Drive

GRAEF collected weekday evening turning movement counts from 3:00 pm to 7:00 pm at the following intersections:

- W. Loomis Road (STH 36) & W. Drexel Avenue
- W. Loomis Road (STH 36) Southbound ramps & S. 76th Street (CTH U)
- S. 76th Street & W. Crystal Ridge Drive
- S. 76th Street & W. Rawson Avenue (CTH BB)
- W. Rawson Avenue (CTH BB) & S. 68th Street

GRAEF collected Saturday turning movement counts at all 9 study intersections from 10:00 am to 2:00 pm.

Based on the traffic counts, the weekday evening peak hour was determined to be 4:30 - 5:30 pm and the Saturday midday peak hour was determined to be 11:30 am - 12:30 pm. A summary of the existing traffic volumes can be found in Exhibit 6. All intersection traffic counts are included in Appendix A.

Base Year/ Horizon Year Analysis

The development is expected to begin construction in 2017 and have the first buildings opened in 2017 with full build out by 2022. Therefore it is recommended that 2017 represent the base analysis year for the TIA.

According to the WisDOT TIA guidelines, the horizon year shall be established as 10 years after the opening of the proposed development or five years after full buildout, whichever is greater. Therefore it is recommended that 2027 represent the horizon year in the TIA.

The W. Loomis Road ramps to W. Rawson Avenue and S. 76th Street are anticipated to be reconfigured by 2017 in preparation for site development. We propose the TIA will study the traffic operations for the following scenarios with the proposed ramps realignments:

- 2017 & 2027 Background Traffic
- 2017 & 2027 Build Traffic (Includes Area A Development)
- 2017 & 2027 Total Traffic (Includes Area A & Off-Site Developments)

Proposed Development Access on W. Loomis Road (STH 36)

W. Loomis Road (STH 36) is currently access controlled and WisDOT has the final approval for any new access to the state highway. In order to create acceptable access locations for the proposed development on W. Loomis Road (STH 36), it is necessary to eliminate the ramps to W. Rawson Avenue and realign the existing ramps to S. 76th Street. Exhibit 7 shows the feasibility of realigning the ramps to S. 76th Street. The piers for the existing W. Rawson Avenue bridge over W. Loomis Road have 27 feet of horizontal clearance from the edge of the travel lane. Therefore the ramp will fit adjacent to the through lanes without impacting the structure.

North Access: This access location is proposed to be right-in / right-out only. Per FDM 11-5 Attachment 5.2, 1,500 feet is the recommended distance from the end of a ramp taper to a new right-in / right-out access point. The proposed north access location is shown at 1,140 feet from the end of the taper.

Middle Access: This location is proposed to be full access and likely signalized since the W. Loomis Road corridor is a signalized corridor. Per FDM 11-5 Attachment 5.2, 2,640 feet is the recommended distance from the end of a ramp taper to a new signalized intersection. The proposed middle access location is shown at 2,345 feet from the end of the taper.

South Access: This location is proposed to be full access and unsignalized. The intersection is approximately 1,650 feet north of W. Drexel Avenue and would only provide access to the residential use.

We are requesting the WisDOT further evaluate the speed limit on W. Loomis Road with the proposed access locations and realignment of the ramp. The roadway currently has a speed limit posted at 55-mph (expressway) within the area of the three proposed access locations. On both ends of the project, W. Loomis Road has a speed limit posted at 45-mph (arterial / transitional roadway). If the speed limit is lowered to 45-mph to remain consistent along the corridor, the roadway would no longer fall under the requirements of FDM 11-5 as this only applies to freeway / expressway.

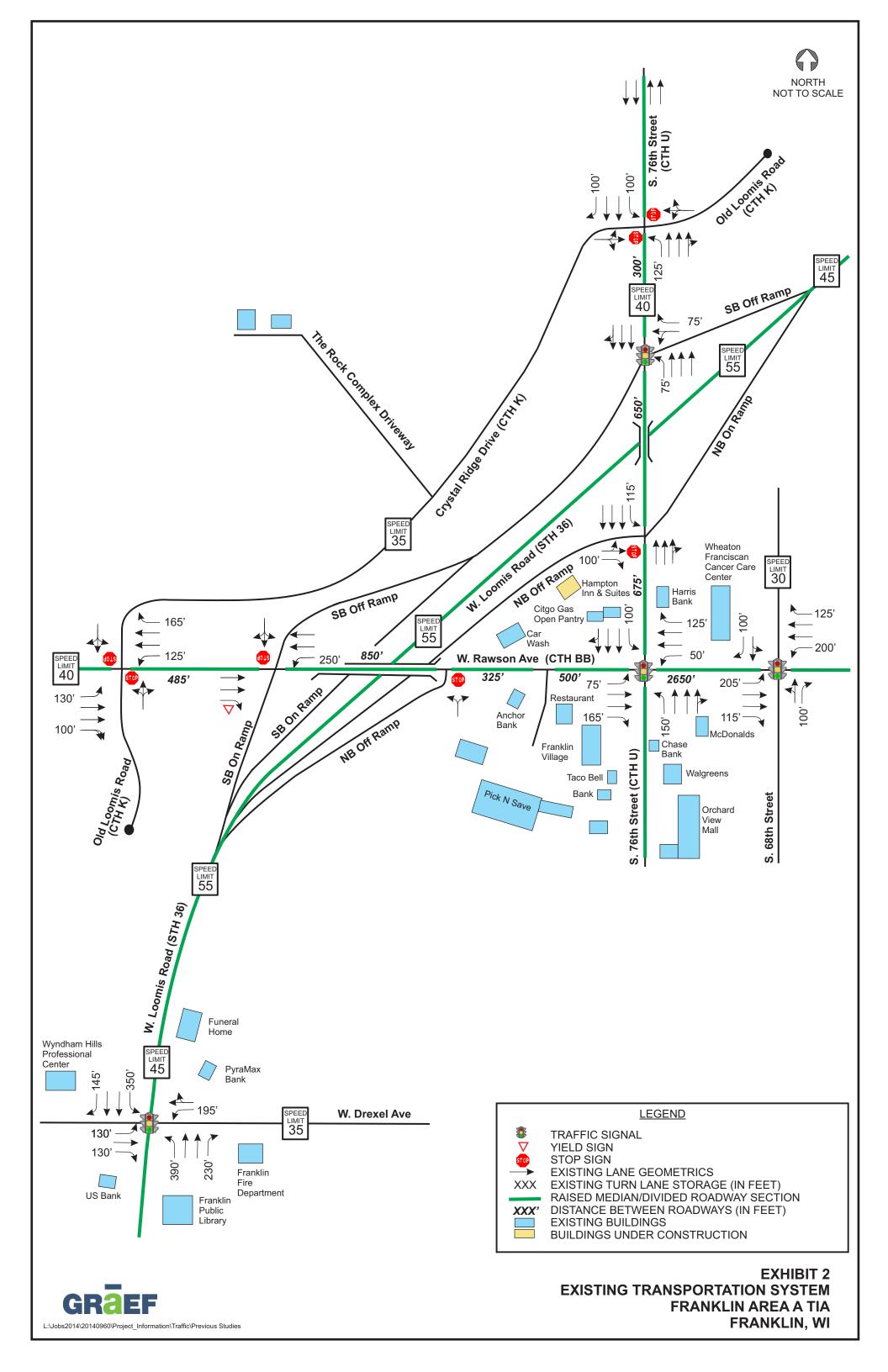
Conclusions

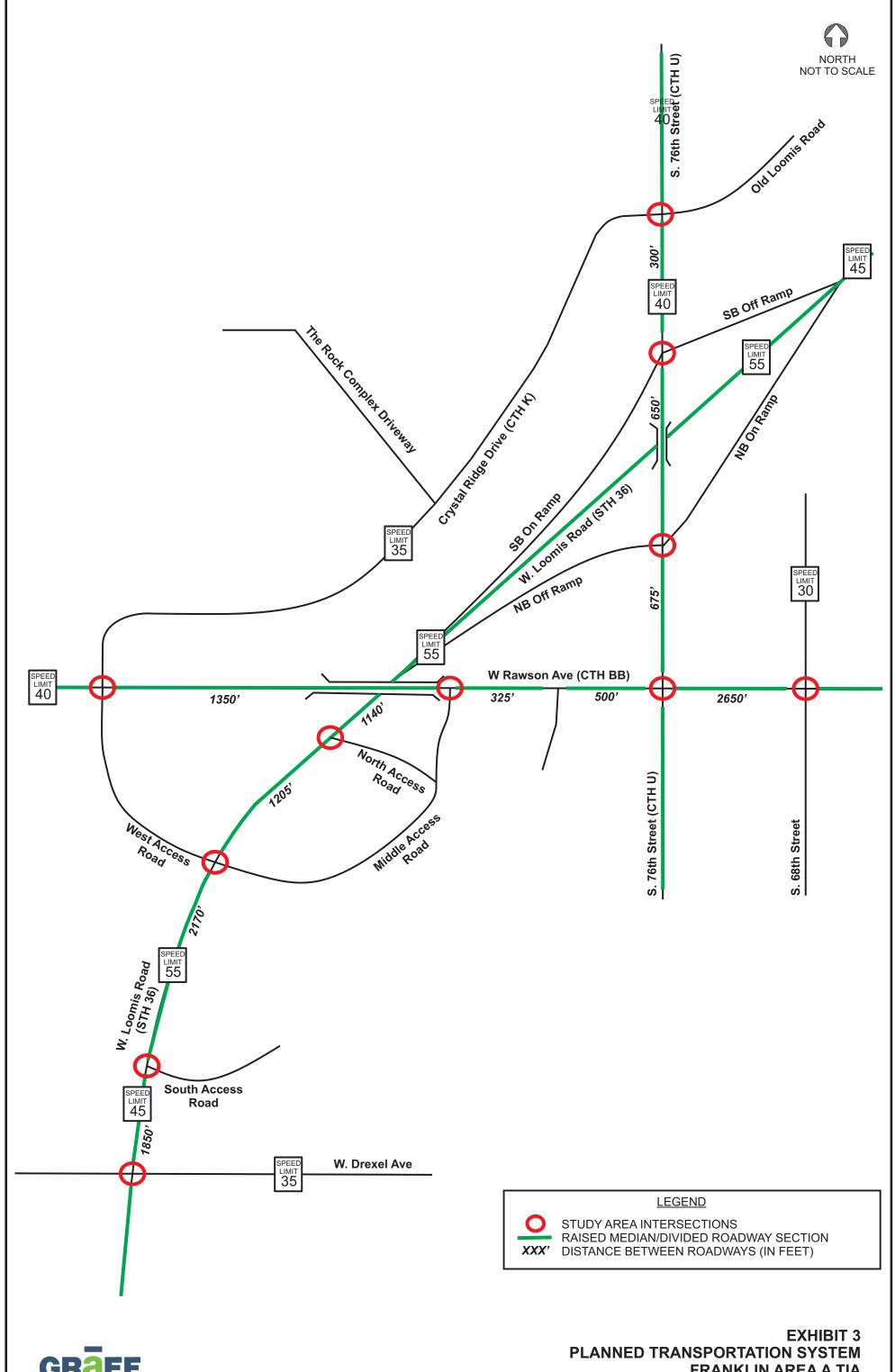
The TIA for the proposed development is recommended to analyze the weekday evening and Saturday midday peak hours at the identified study area intersections. The analysis years are recommended to be Year 2017 and 2027. If the analysis peak hours and years are acceptable, we will request WisDOT to develop forecasts for the background traffic with the ramp realignments. We would appreciate comments on the information provided in this memo.

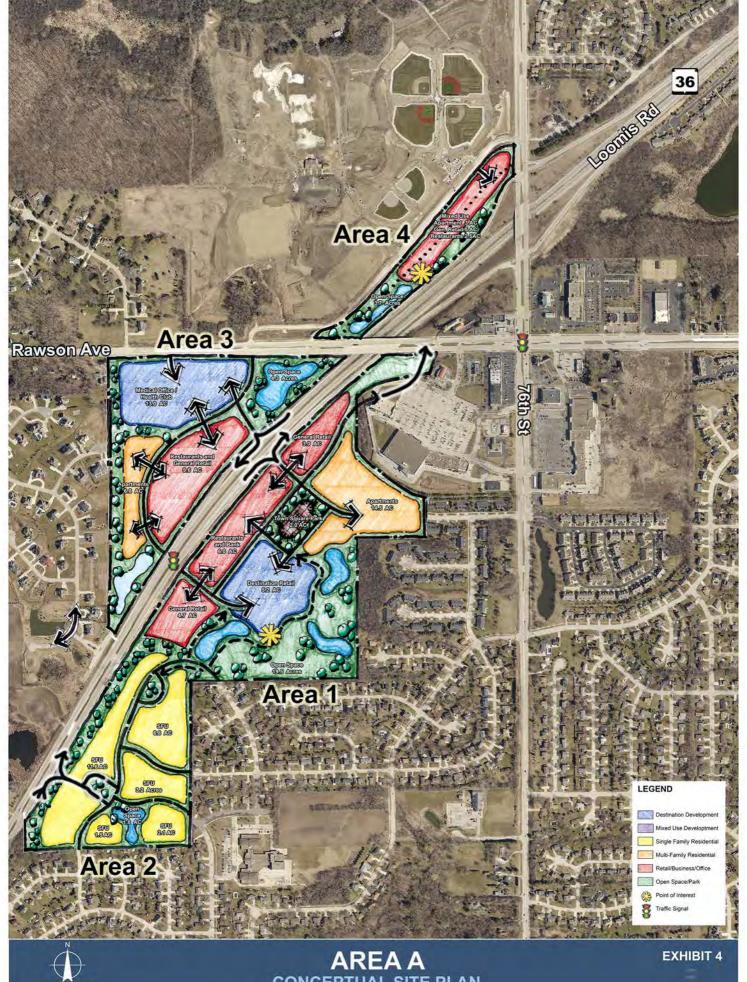
cc: Dan Murphy - Milwaukee County

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AREA A
CONCEPTUAL SITE PLAN
CITY OF FRANKLIN
MILWAUKEE COUNTY, WISCONSIN

GRĀEF