4. Evaluation Data and Results

With the results of the different weightings, the consultant examined the information presented to evaluate/score the alternatives. To make the data and the subsequent evaluation more easily understood, the corridor has been divided into "sectors" from north (I-69) to south (I-75) (Figure 4-1). For example, by forming Sector B and Sector E, the two proposed bypasses can be compared to M-15 over only the limited distances which the bypasses would cover. Likewise, the uniqueness of the surroundings of M-15 can be better understood by using information for the six sectors through which an improved M-15 could have different effects depending on its width.

At the outset of this chapter, traffic information is discussed as it controls whether the proposed alternative to improving M-15 is really needed. The Transportation Research Board (Special Report 209) recommends "level of service" as the measure of traffic performance. Levels of service range from free-flow conditions with insignificant delays (LOS A) to extremely congested conditions with large delays and low speeds (LOS F). The latter condition indicates the most a two-lane road can handle in an M-15 environment (more rural than urban) is 15,600 vehicles per day (vpd) (Table 4-1). However, transportation agencies strive for LOS C or a maximum volume of 14,400 vpd on a two-lane road in a rural setting.

Alternative No. 1 - Paved Gravel Roads/M-15 Intersection Improvements

Year 2025 traffic flow data are shown for the Do-Nothing condition on Figure 1-2. Alternative No. 1 calls for more than one dozen intersections to be improved, which will smooth traffic on M-15 but not divert it, and paving 57+ miles of gravel roads. Alternative No. 1 doesn't relieve the gridlock expected to occur on M-15 by 2025 (Figure 4-2). It doesn't address the need for which this project is intended. So, while Alternative No. 1 will not take many homes or acres of farmland/wetlands, nor will it impact waterways, historic properties or parks, the consultant believes it is fatally flawed because it has no effect on M-15 traffic (Table 4-2). Something must be done in this corridor as traffic growth will cause M-15's gridlock to negatively impact the overall quality of life in the area. So, Alternative No. 1 is recommended to be dropped from consideration as an option to improving M-15. However, paving of some gravel roads may be needed to handle traffic during construction if M-15 were widened. This issue will be revisited during later stages of the project when a preferable alternative is evident.

[1] Likewise, continuing to improve intersections through state/local partnerships over the several years preceding any possible changes to M-15 is important.

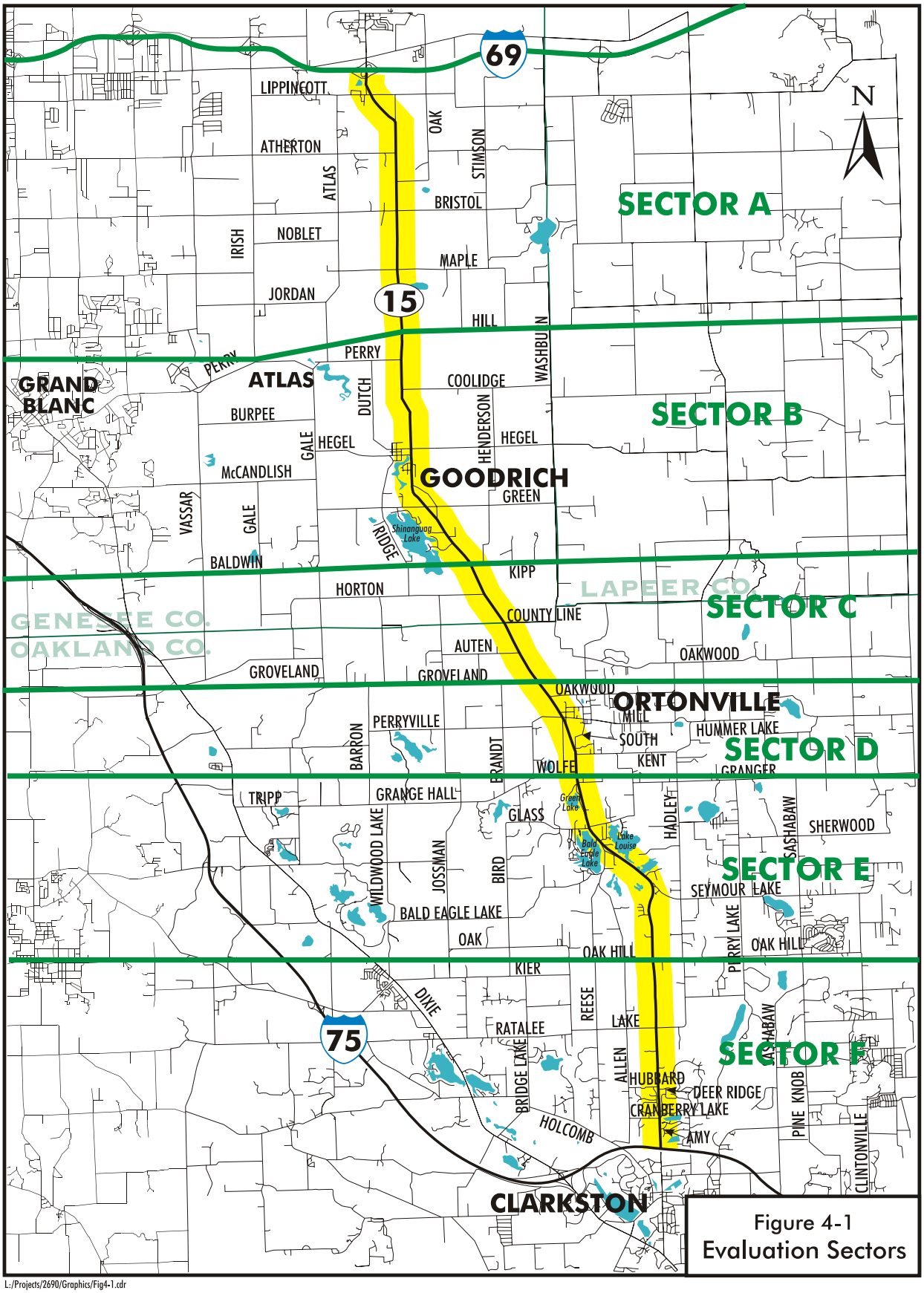

Figure 4-1
Evaluation Sectors

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Table 4-1
General Annual Average Daily Capacity
Of Several Typical Roadways
In Areas Transitioning into Urbanized Areas

STATE TWO-WAY ARTERIALS

UNINTERRUPTED FLOW

Unsignalized

Lanes/ Divided	Level of Service A	B	C	D	E
2 Undivided	8,400	13,000	17,700	23,300	31,000
4 Divided	20,600	34,500	47,800	57,000	66,300
6 Divided	30,800	51,700	71,600	85,600	99,500

INTERRUPTED FLOW

Class I (>0.00 to 1.99 signalized intersections per mile)

Lanes/ Divided	Level of Service A**	B	C	D***	E***
2 Undivided	N/A	10,000	14,400	15,600	15,600
4 Divided	N/A	22,000	30,500	32,800	32,800
6 Divided	N/A	33,500	46,000	49,200	49,200

Class II (2.00 to 4.50 signalized intersections per mile)

Lanes/ Divided	Level of Service A**	B**	C	D	E
2 Undivided	N/A	N/A	9,100	13,700	14,900
4 Divided	N/A	N/A	21,100	29,900	31,600
6 Divided	N/A	N/A	32,800	45,000	47,600

Class III (more than 4.50 signalized intersections per mile)

Lanes/ Divided	Level of Service A**	B**	C	D	E
2 Undivided	N/A	N/A	3,100	11,200	14,700
4 Divided	N/A	N/A	7,200	25,900	31,200
6 Divided	N/A	N/A	11,300	40,300	47,000

Source:

The Florida Department of Transportation
Systems Planning Office
605 Suwannee Street - Mail Station 19
Tallahassee, Florida 32399-0450

http://www.dot.state.fl.us/planning

FREEWAYS

Level of Service

Lanes	A	B	C	D	E
4	20,000	32,400	46,900	58,600	69,000
6	30,800	49,800	72,100	90,100	106,000
8	41,000	66,500	96,100	120,200	141,400
10	52,500	85,100	123,100	153,900	181,000

NON-STATE ROADWAYS

MAJOR CITY/COUNTY ROADWAYS

Level of Service

Lanes	A**	B**	C	D	E
2 Undivided	N/A	N/A	8,000	13,500	14,800
4 Divided	N/A	N/A	18,500	29,300	31,400
6 Divided	N/A	N/A	28,700	44,200	47,200

OTHER SIGNALIZED ROADWAYS
(signalized intersection analysis)

Lanes	A**	B**	C	D	E
2 Undivided	N/A	N/A	4,400	10,200	11,300
4 Divided	N/A	N/A	10,900	22,500	24,000

ADJUSTMENTS

DIVIDED/UNDIVIDED

(alter corresponding two-way volume indicated percent)

Lanes	Median	Left Turn Bays	Adjustment Factors
2	Divided	Yes	+5%
2	Undivided	No	-20%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

ONE-WAY

(alter corresponding two-way volume indicated percent)

One-Way Lanes	Equivalent Two-Way Lanes	Adjustment Factors
2	4	-40%
3	6	-40%
4	6	-25%

* The table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Values shown are annual average daily volumes (based on K100 factors, not peak-to-daily ratios) for levels of service, and are based on the 1997 Update to the Highway Capacity Manual and Florida traffic, roadway, and signalization data. The table's input value assumptions and level of service criteria appear on the following page.

** Cannot be achieved.

*** Volumes are comparable because intersection capacities have been reached.

September 1998

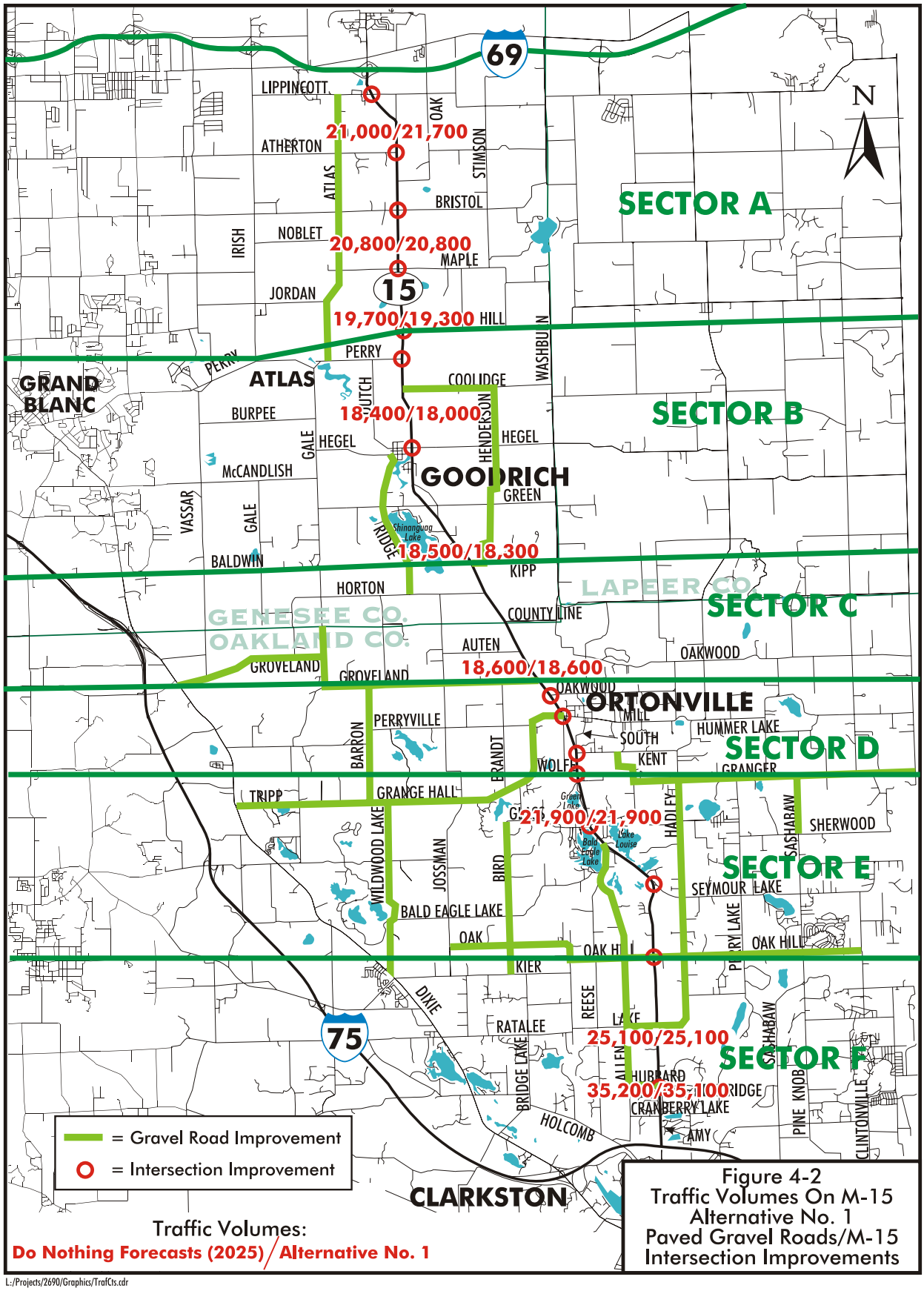

Figure 4-2
Traffic Volumes On M-15
Alternative No. 1
Paved Gravel Roads/M-15
Intersection Improvements

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