2. Project To Date

This section summarizes the first phase of the analysis of alternatives and the refinement of the remaining Practical Alternatives.

2.1 Illustrative Alternatives

From June through October 2000, the project focused on what are known as "Illustrative" Alternatives. These are broadly-defined options that reflect both public input and study by the consultant. The list of alternatives is shown in Table 2-1.

Table 2-1
M-15 Illustrative Alternatives

Year 2025 Alternatives	Description
Baseline	Do Nothing
Alternative 1	TSM plus Pave Gravel Roads
Alternative 2A	Improve Irish Road to Boulevard
Alternative 2A + SLAM	Improve Irish Road plus Land Use Reallocation
Alternative 2B	Build Goodrich Bypass
Alternative 2C	Build Lake Louise Bypass
Alternative 3	Widen M-15

Source: The Corradino Group

In addition, mass transit and other non-automobile modes/options (e.g., telecommuting, demand management, etc.) were considered from the standpoint of the maximum potential diversion from personal vehicles that might be achieved. Today, no such transit approach is evident. And, even under the most favorable conditions, it is unlikely that more than five percent of the travel on M-15 could be diverted from the auto. This option

would not reduce the need for more lanes on M-15. Therefore, the non-auto alternative is not considered a viable option and was not the focus of additional analysis.

Traffic volume projections for the scenarios listed on Table 2-1 are obtained by using SEMCOG's travel model. It covers a seven-county region that includes Oakland County, but not Genesee. The SEMCOG model was "extended" into Genesee County by using the zonal structure and data from the Flint area model. Traffic volumes along M-15 provided by the model, along with 1998 volumes, are listed on Table 2-2.

Table 2-2
2025 Traffic Projections on M-15

Location	1998 Existing	2025 Scenarios						
		Do Nothing	Alt. 1	Alt. 2A	Alt. 2A plus SLAM	Alt. 2B	Alt. 2C	Alt. 3
I-69	12,400	21,000	21,700	19,800	21,100	21,000	21,000	21,800
Atherton Road	12,600	20,800	20,800	18,500	18,000	20,800	20,800	21,400
Maple Avenue	10,900	19,700	19,300	16,400	16,300	19,700	19,700	20,100
Perry Road	11,300	18,400	18,000	13,000	12,800	14,900	18,400	18,800
Hegel Road	12,100	18,500	18,300	15,800	14,400	15,000	18,500	20,200
Horton Road	12,500	18,600	18,600	18,600	16,000	18,600	18,600	20,700
Groveland Road	17,000	21,900	21,900	21,900	18,600	21,900	17,000	22,900
Seymour Lake Road	19,000	25,100	25,100	25,100	21,100	25,100	25,100	25,100
Rattalee Lake Road	27,300	35,200	35,100	35,200	29,500	35,200	35,200	35,200
I-75								

Source: The Corradino Group
Alternative 1 TSM Improvements plus pave local roads
Alternative 2A Improve Irish Road
Alternative 2A plus SLAM Improve Irish Road plus Land Use Reallocation proposed by the Simplified Land Allocation Model
Alternative 2B Build Goodrich Bypass
Alternative 2C Build Lake Louise Bypass
Alternative 3 Widen M-15 to four lanes for through travel

At the outset, standards were employed by which to measure the effectiveness of the alternatives. 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). However, transportation agencies strive for LOS C or a maximum volume of 14,400 vpd on a two lane road in a rural setting.

Of the alternatives that do not call for widening M-15 (Nos. 2A, 2B, and 2C), all have a positive but limited effect on reducing traffic on M-15. But, overall, the relief of any alternative is not enough to reduce forecast traffic along M-15 so that widening is not needed. Even if the growth in the area were shifted as defined in Alternative 2A, widening M-15 is still needed. That improvement (Alternative No. 3) would include four through lanes plus a fifth for turning vehicles either as a five-lane road or as a boulevard with a landscaped median. Such a road would provide daily capacity of more than 30,000 vpd, meeting the 2025 forecast of M-15 traffic. (Capacity at the interchanges is even greater because of the additional width of the roadway to transition to and from the interchange ramps.)

The complete analysis and evaluation of these options is included in Technical Memorandum No. 2, to which the reader is referred (www.mdot.state.mi.us/m15). This analysis went beyond traffic and included an assessment of the impacts in the following areas:

- Displacements
- Historics
- Waterways
- Farmland Taken
- Parks
- Community Cohesion
- Engineering Issues

Based upon a sector-by-sector examination of information on these issues, the recommendations by the consultant, accepted by MDOT, at the end of the Illustrative Alternatives analyses were:

- Dropping non-auto options that depend on transit, telecommuting, demand management, TSM and paving gravel roads as they do not address the need for more transportation capacity in the corridor whereby widening M-15 can be avoided.

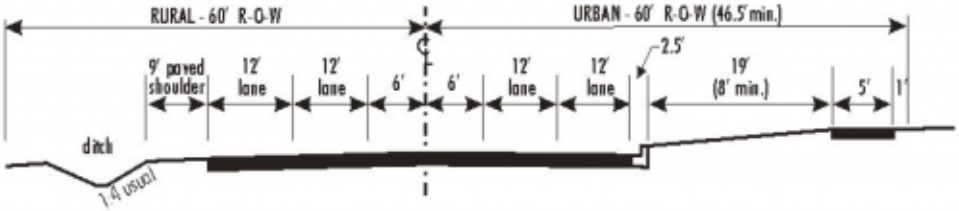
- Eliminating the bypasses of Goodrich and Lake Louise and the Irish Road alternative as their impacts are sufficiently negative even though they each divert some traffic from some sections of M-15.

- Eliminating the widening of M-15 to a wide boulevard as its potential impacts on displacements (197 homes) and wetlands (about 34 acres) are so major that another option(s) must be found. This is particularly the situation in the wetlands area as public sentiment and state and federal regulations render the M-15 wide boulevard an option that will have difficulty in gaining acceptance. Those regulations call for other less-impacting alternatives including those with design exceptions. The M-15 narrow boulevard may be considered one such option.

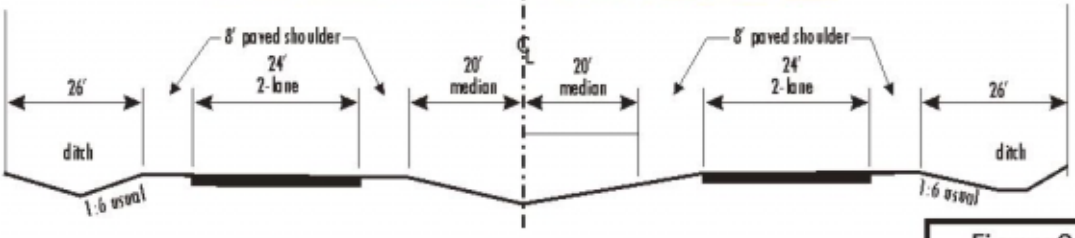
- Continuing to consider widening M-15 to five lanes or to a narrow boulevard, with a one-way pair for about a mile in Goodrich. These options can alleviate many of the impacts associated with all other alternatives and handle the expected traffic. They are considered Practical Alternatives recommended to be carried forward into the next phases of the study along with the do-nothing option.

2.2 Practical Alternatives

The Practical Alternatives, in addition to doing nothing, include widening M-15 to four lanes for through travel with the center of the roadway dedicated to either a landscaped median or to a paved area for vehicles to turn. A five-lane roadway can be constructed in either an urban or rural cross-section type (Figure 2-1). The difference is drainage and sometimes amenities in the form of sidewalks or walkways/bicycle paths. The five-lane urban section is compact, with curb-and-gutter drainage, and requires a minimum of right-of-way. Where more right-of-way is available, the rural section allows for side slope drainage to a ditch. In either case, the outside lane can be widened to allow for bicycle travel concurrent with vehicular travel on the roadway. The five-lane section would be augmented at intersections by exclusive left-turn and right-turn lanes. In addition, on the far sides of intersections, there may be a taper lane that allows right-turning vehicles from the cross road to return smoothly to the two-lane traffic flow. Travel demand projections at this point do not indicate any locations where more than five lanes would be required with the exception of auxiliary lanes at the I-75 and I-69 interchanges.



TYPICAL RURAL/URBAN 5-LANE, 93'-120' R-O-W



TYPICAL NARROW BOULEVARD, 172' R-O-W

Figure 2-1
Road Types

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