this intersection throughout the day, resulting in operations within the adopted standard. Similarly, the county has implemented increases in cycle length at the intersection of Old Cutler Road with SW 184 Street. This was also recommended in the previous traffic study to meet LOS standards for future conditions.

3.0 PLANNED AND PROGRAMMED ROADWAY IMPROVEMENTS

The 2010 Miami-Dade County *Transportation Improvement Program* (TIP) was reviewed to identify any programmed roadway improvements within the limits of the aforementioned study area. This document shows no officially programmed capacity improvement projects within the area. The 2005 *Palmetto Bay Comprehensive Plan* shows the widening of SW 184th Street (Eureka Drive) between US 1 and Old Cutler Road from a 2 lane undivided roadway to a 5 lane divided facility. In addition, the Capital Improvement Element of this document provides for intersection improvements along Old Cutler Road, specifically at SW 184 Street. These improvements, however, are not reflected in the *Miami-Dade Transportation Plan for the Year 2035*.

4.0 FUTURE (2015) WITHOUT PROJECT TRAFFIC CONDITIONS

4.1 Background Traffic

Future traffic without the project was estimated after examining existing traffic volumes and future projections published in the *Palmetto Bay Transportation Master Plan* (see Appendix E). A 1.4% annual growth rate was established using the Village's Master Plan 2004 counts and their Master Plan projections. This growth rate was used to project future traffic volumes for the year 2015 including background traffic growth and other developments in the area. Projected 2015 volumes without the project are graphically portrayed in Exhibit 8 for AM and PM peak hour conditions.

4.2 Roadway Segment Analysis

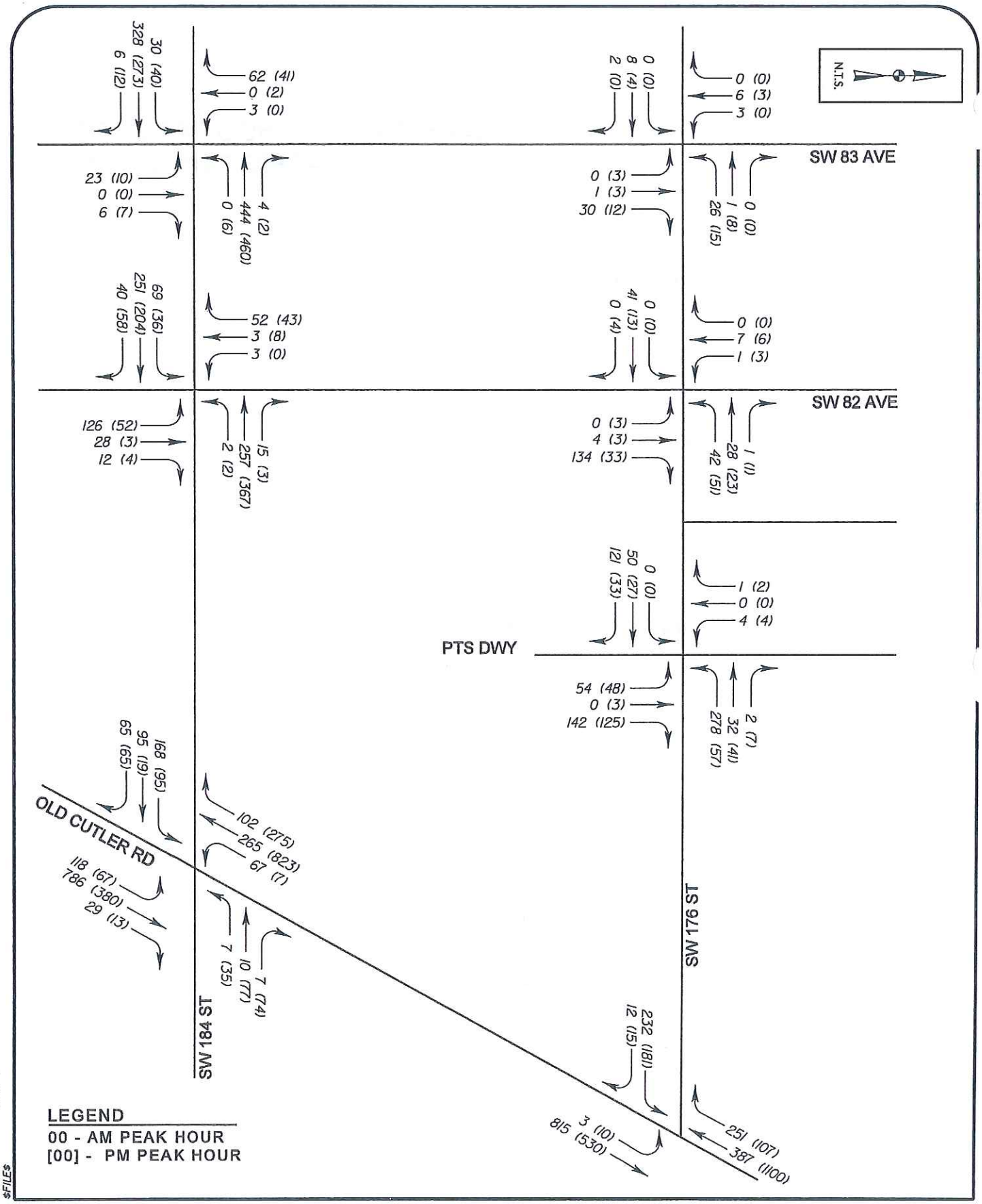
Future traffic conditions without project were analyzed consistent with the analysis for existing (2010) conditions. The details of the travel time and delay study for the Old Cutler Road segment for this scenario is also included in Appendix C. The results of the roadway analysis are summarized in Exhibit 9.

Exhibit 9
Future (2015) without Project Roadway Segment Analysis
Palmer Trinity School

Roadway	Limits		Roadway Type	Direction	Number of Lanes	LOS Standard	Service Volume	2015 AM Pk Hr Volume	Meets LOS Std?	2015 PM Pk Hr Volume	Meets LOS Std?
	From	To									
Old Cutler Rd	SW 184 Street	SW 176 St	County Minor Arterial	NB	1LU	D	NA	960	Yes (1)	549	Yes (1)
				SB	1LU	D	NA	433	Yes (1)	1,104	Yes (1)
SW 184 St	SW 87 Avenue	SW 83 Avenue	County Minor Arterial	EB	1LU	D	810	364	Yes	325	Yes
				WB	1LU	D	810	529	Yes	510	Yes
	SW 83 Avenue	Proposed Palmer Trinity Dwy	County Minor Arterial	EB	1LU	D	810	267	Yes	208	Yes
				WB	1LU	D	810	274	Yes	373	Yes
	Proposed Palmer Trinity Dwy	Old Cutler Road	County Minor Arterial	EB	1LU	D	810	327	Yes	179	Yes
				WB	1LU	D	810	230	Yes	419	Yes

(1) See Travel Time and Delay Study in Appendix C.

Source: David Plummer and Associates, Inc.



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PROJECT:	TITLE:	EXHIBIT No.
PALMER TRINITY TRAFFIC IMPACT STUDY	FUTURE (2015) TRAFFIC CONDITIONS WITHOUT PROJECT	8

4.3 Intersection Analysis

Intersection analysis was performed for future (2015) traffic conditions without the project. Exhibit 10 shows the resulting LOS for the intersections under study. Analysis worksheets are included in Appendix D. All intersections are projected to operate within the adopted LOS standards adopted by the Village of Palmetto Bay except for the northbound minor approach of the intersection of SW 184 Street with SW 82 Avenue, which operates below the adopted standards during the AM peak hour. It should be noted, for the unsignalized intersections, the software tends to overestimate delay measurements for the side streets (minor approach). The actual delays (observed in the field) are acceptable and similar to other comparable intersections in the area. However, should the delays ever reach such a point shown by the software, motorists tend to use an alternate route, balancing demand throughout an area. All other intersections are projected to operate within the LOS standard adopted by the Village.

Exhibit 10
Intersection Analysis Results - Weekday AM and PM Peak Hour
Future (2015) without Project Traffic Conditions

Intersection	Signalized /Unsignalized	Movement	LOS Standard	AM Peak Hour LOS	PM Peak Hour LOS
Old Cutler Road / SW 176 Street	S	Overall	D (NB/SB)	B	C
Old Cutler Road / Eureka Drive	S	Overall	D	C	C
SW 176 Street / SW 83 Avenue	U	NB SB	E E	A A	A A
SW 176 Street / SW 82 Avenue	U	NB SB	E E	A A	A A
SW 184 Street / SW 83 Avenue	U	Main Street - EB Main Street - WB Minor Street - NB Minor Street - SB	D D E E	A A D B	A A C B
SW 184 Street / SW 82 Avenue	U	Main Street - EB Main Street - WB Minor Street - NB Minor Street - SB	D D E E	A A F * B	A A C B

Source: DPA
U= unsignalized S= signalized
* for unsignalized intersections, the software tends to overestimate delay measurements for the side streets (minor approach). The actual delays (observed in the field) are acceptable and similar to other comparable intersections in the area. However, should the delays ever reach such a point shown by the software, motorists tend to use an alternate route, balancing demand throughout an area.

5.0 FUTURE (2015) WITH PROJECT TRAFFIC CONDITIONS

5.1 Project Traffic

5.1.1 Site Access

The proposed increase in land area, and the location of buildings within the site will result in improved vehicular circulation throughout the school. The addition of a main driveway on SW 184 Street, an arterial road that the Village has identified for major widening, will serve approximately 690 students. The existing driveway accessing SW 176 Street will remain at its present location (see Exhibit 2). In order to minimize impact to the surrounding neighborhoods at buildout, access through this driveway will be reduced. 460 students will use this driveway at buildout, which is a ***23% reduction*** compared to the current 600 students using this driveway. The distribution of future traffic reflects the proposed driveways configuration and the proposed student limits for the use of each driveway.

5.1.2. Project Trip Generation

Traffic counts were taken during the AM, Midday, and PM peak hours of operation at the existing Palmer Trinity School driveway on SW 176 Street. All the vehicular trips entering and exiting the school were then converted to trip generation rates per student for the AM and PM peak hours. These rates were compared to the ITE trip generation rates for Land Use 536 – Private School (K-12). The AM and PM peak hour trip generation rates obtained using the data collected at PTS were found to be considerably higher than those published by ITE. The data collected at PTS shows slightly lower trip generation rates during the midday peak than ITE.

Since the AM and the PM peak hours represent higher traffic volumes on the streets and PTS trip generation at these times is higher than what ITE would estimate, the trip generation rates obtained from traffic counts at the driveway were used for all time periods included in this analysis for the expanded school. Exhibit 11 shows a summary of existing and future trip generation. Appendix F shows detailed trip generation by driveway.

Exhibit 11
Palmer Trinity School Trip Generation

AM Peak Hour of the Adjacent Street [1]

	Students	In	Out	Total
Existing School	600	399	196	595
Buildout	1,150	765	375	1,140
Additional	***550***	***366***	***375***	***545***

PM Peak Hour of the Adjacent Street [1]

	Students	In	Out	Total
Existing School	600	91	176	267
Buildout	1,150	173	337	510
Additional	***550***	***83***	***161***	***244***

Notes:

[1] Based on data colected at the PTS driveway.

5.1.3 Project Trip Assignment

Miami-Dade County's Miami Urban Area Transportation Study (MUATS) publishes cardinal distribution for Traffic Analysis Zones (TAZs), which gives a generalized distribution of trips to other parts of the county. The existing school is located in TAZ 1123. The cardinal distribution for these zones is listed in Exhibit 12.

Surveys were also taken of the routes used by the existing PTS patrons during the school discharge hour. A summary of the findings is provided in Appendix F. In addition, counts taken at intersections west of the school on SW 176 Street at SW 82 Avenue and SW 83 Avenue suggest that existing school traffic patterns vary through the day. For estimating the distribution of both existing and future project trips, consideration was given to the survey findings, traffic volumes at intersections nearby, and the cardinal distribution. Consideration was also given to conditions such as network accessibility by the project, roadways available in the desired direction of travel, and attractiveness of traveling on a specific road.

Exhibit 12
Cardinal Distribution

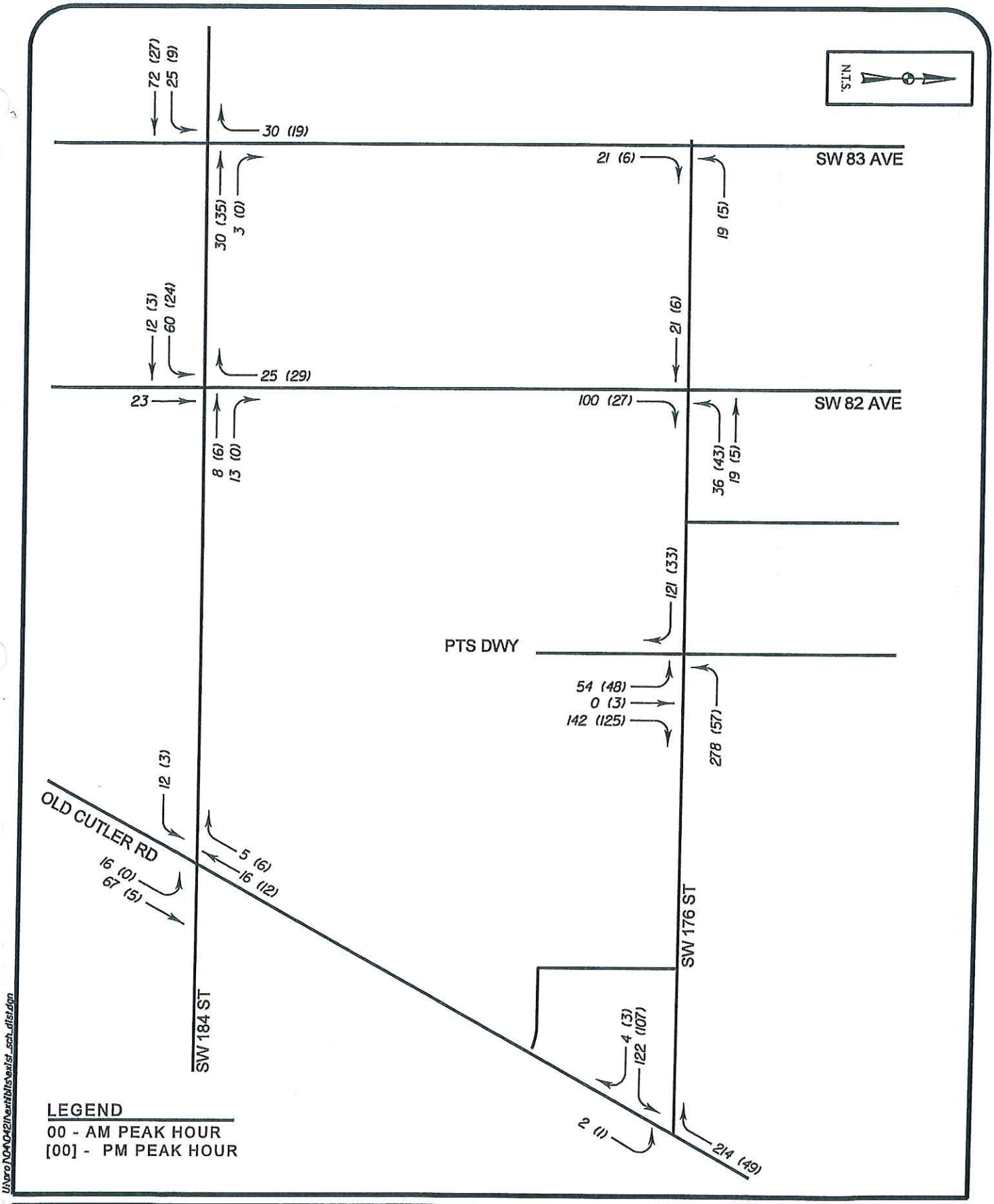
Direction	TAZ 1123 Distribution
NNE	30.51%
ENE	0.36%
ESE	0. 14%
SSE	1.46%
SSW	9.26%
WSW	20.93%
WNW	11.71%
NNW	25.63%
Total	**100.00%**

Source: *Miami Urban Area Transportation Study*

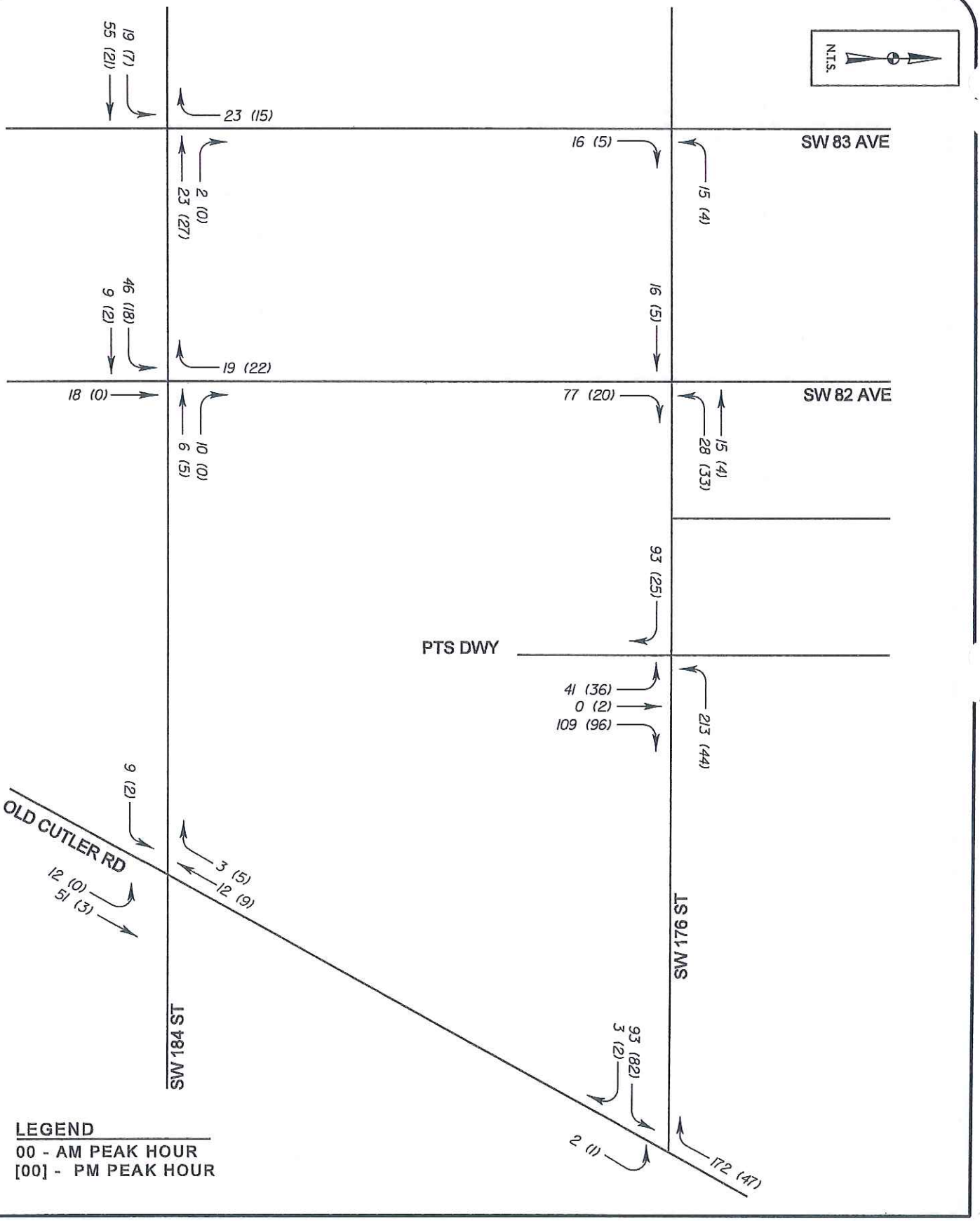
Exhibits 13, 14 and 15 show the resulting traffic volumes for the existing 600 student school being served by the SW 176 Street driveway, the future 460 students that will be by the SW 176 Street Driveway, and the future 690 students that will be served by the main driveway on SW 184 Street. Future traffic volumes with project were obtained by deducting the existing traffic volumes from the current 600 student school to the future traffic volumes without the project. Traffic generated by the proposed 460 students using the existing SW 176 Street driveway and the 690 students accessing the proposed SW 184 Street driveway were added to the roadway network. The resulting volumes are graphically portrayed in Exhibit 16.

5.2 Segment Analysis

Future (2015) traffic conditions with project were analyzed consistent with the analysis for existing conditions. The details of the travel time and delay study for the Old Cutler Road segment for this scenario is also included in Appendix C. The results of the roadway analysis are summarized in Exhibit 17.



	PROJECT:	TITLE:	EXHIBIT No.
dpa	PALMER TRINITY TRAFFIC IMPACT STUDY	EXISTING SCHOOL DISTRIBUTION (600) STUDENTS	13



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	PROJECT:	TITLE:	EXHIBIT No.
dpa	PALMER TRINITY TRAFFIC IMPACT STUDY	FUTURE STUDENTS ACCESSING SW 176 ST DRIVEWAY (460 STUDENTS)	14