U.S. Food and Drug Administration Headquarters Consolidation Master Plan Update

Traffic Technical Report

Prepared for:

The U.S. General Services Administration
National Capital Region

In cooperation with:

The U.S. Food and Drug Administration

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accommodating growth

protecting resources

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Executive Summary

This Technical Report has been prepared by the U.S. General Services Administration (GSA) to assess and report potential transportation impacts resulting from revisions to the U.S. Food and Drug Administration (FDA) Master Plan for the consolidation of FDA's headquarters facilities at the Federal Research Center (FRC) at White Oak. This report identifies the existing and future traffic conditions at 18 roadway intersections in the vicinity of the site. Measures to mitigate the impacts on the roadway system are also evaluated and presented in the report.

GSA is proposing to update the FDA Headquarters Master Plan to accommodate an increase of 1,170 FDA employees due to Congressional mandates. The project will involve the development of 1,254,922 additional gross square feet of office and laboratory space, construction of a fitness center, and expansion of the Central Utility Plant to serve the FDA White Oak Campus. In addition, GSA plans to relocate the Child Care Center and the Broadcast Studio from their locations proposed in the 2006 FDA Master Plan. GSA is updating the FDA Headquarters Master Plan to determine how best to accommodate the additional growth on the FDA White Oak Campus.

Existing Conditions

The FDA has already been approved to relocate 7,719 employees to the FDA White Oak Campus. The planned consolidation of its operations is expected to be completed by 2011. As of May 2008, approximately 2,080 employees (1,890 FDA employees and 190 contractors) have relocated to the FDA White Oak Campus. Thus, the existing conditions analysis in this report includes these 2,080 FDA employees. Overall, under existing conditions all of the study intersections operate at acceptable Level of Service (LOS) with the exception of US 29/Fairland Road and US 29/Musgrove Road, and US 29/Stewart Lane intersections which operate at or above capacity conditions.

No-Action Impacts

This analysis assumes that all the 7,719 employees will be relocated to the FDA White Oak Campus by 2011. It also includes all the developments that have been approved for construction by Montgomery and Prince George's Counties in the vicinity of the site. Furthermore, this analysis includes future planned improvements at the study intersections. This analysis was carried out under two scenarios: 1) with the ICC and 2) without the ICC. The ICC is funded and expected to be completed by 2012. However, the build out date for the FDA consolidation of the 7,719 employees is 2011 and thus scenarios with and without the ICC were studied.

Without the ICC, most of the intersections analyzed are expected to operate at unacceptable LOSs during both or at least one peak hour. The intersections of New Hampshire Avenue/Powder Mill Road, New Hampshire Avenue/Mahan Road, New Hampshire Avenue/Lockwood Drive, Beltsville Drive/Powder Mill Road, Beltsville Drive/Calverton Blvd, US 29 N.B. Ramp/Cherry Hill Road and Proposed Cherry Hill Road/Eastern Site Access are expected to operate at an acceptable LOS during both the morning and evening peak hours. Similarly, with the ICC, most of the intersections analyzed are expected to operate at unacceptable LOS during both or at least one peak hour. The intersections of Cherry Hill Road/Powder Mill Road, New Hampshire Avenue/Powder Mill Road, New Hampshire Avenue/Mahan Road, Beltsville Drive/Powder Mill Road, Beltsville Drive/Calverton Blvd, US 29 N.B. Ramp/Cherry Hill Road and Proposed Cherry Hill Road/Eastern Site Access are expected to operate at an acceptable LOS during both the morning and evening peak

hours. Overall, most of the study intersections are expected to operate at above capacity conditions under the No-Action conditions with or without the ICC.

Action Impacts

This analysis looks at the impacts of the 1,170 employees on the study area network. Without the ICC and with the 1,170 new FDA employees, most intersections are expected to continue operating at unacceptable LOSs in the peak hours. The following intersections are expected to operate at acceptable LOS during both the morning and evening peak hours:

- Cherry Hill Road/Eastern Access
- New Hampshire Avenue/Powder Mill Road,
- New Hampshire Avenue/Schindler/Mahan Road
- Beltsville Drive/Powder Mill Road
- Beltsville Drive/Calverton Boulevard
- US 29 N.B. Ramp/Cherry Hill Road

With the ICC and with the 1,170 FDA employees, most intersections are expected to continue operating at unacceptable LOS during the peak hours. However several intersections are expected to operate at acceptable LOS during both the morning and evening peak hours including:

- Cherry Hill Road/Eastern Access
- Cherry Hill Road/Powder Mill Road
- New Hampshire Avenue/Powder Mill Road
- New Hampshire Avenue/Schindler/Mahan Road
- Beltsville Drive/Powder Mill Road
- Beltsville Drive/Calverton Boulevard
- US 29 N.B. Ramp/Cherry Hill Road

Conclusions

Results of the analysis indicate that with the addition of 1,170 new FDA employees at the FDA Campus, most intersections are expected to continue operating above unacceptable LOSs during peak hours. Overall, with the ICC, the volumes at most of the intersections and thus the Critical Lane Volume (CLV) are expected to decrease. However, even with this decrease in traffic, most intersections will continue to operate at unacceptable conditions. Improvements will be required at several intersections to bring them to under the No-Action condition CLVs. Major improvements will be required at most of the intersections to bring them to an acceptable LOS.

Improvements to intersections are recommended in order to bring them to acceptable LOS, even though roadway improvements are not under the jurisdiction of GSA and GSA cannot fund the transportation improvements. These improvements are presented in detail in the report, under Mitigation Measures.

1. Introduction and Scope of Investigation

Due to a mandate by Congress, the Food and Drug Administration (FDA) is planning to add 1,170 employees to their headquarters facilities located within the Federal Research Center (FRC) at White Oak Campus. This will bring the total number of FDA employees at the FRC White Oak Campus to 8,889. A study was conducted for the initial 7,719 planned FDA employees and their impacts on the surrounding roadway network in 2005 (GSA, 2005). This study investigates the impact of the additional 1,170 employees.

1.1 Site Description

The FDA Headquarters at the FRC White Oak is located at 10903 New Hampshire Avenue in Silver Spring, Montgomery County, Maryland. The FDA Headquarters at White Oak encompasses approximately 130 acres located east of New Hampshire Avenue (MD 650) and south of US 29. Access to the FDA Headquarters is provided by three roadways:

- Mahan Road
- Michelson Road
- Eastern Access Entrance from Cherry Hill Road (see Figure 1).

Main access to the site is provided via New Hampshire Avenue at Mahan Road which is located approximately one mile north of I-495. A second access is provided via Michelson Road onto New Hampshire Avenue, and a third access is under construction and will connect to Cherry Hill Road north of Powder Mill Road. Figure 1 presents a site location map.

1.2 Surrounding Land Use

The FDA Headquarters is surrounded by both commercial and residential developments. Land along the western side of New Hampshire Avenue is developed with mostly residential uses and land along the east side is developed with residential and commercial uses. The White Oak Shopping Center is located just north of the site. The site is bounded to the north by commercial and residential properties, the Paint Branch Stream Valley Park, and the Percontee quarry. To the south of the FRC lie the U.S. Army's Adelphi Laboratory, residential properties, Powder Mill Community Park, and the Hillandale Shopping Center.

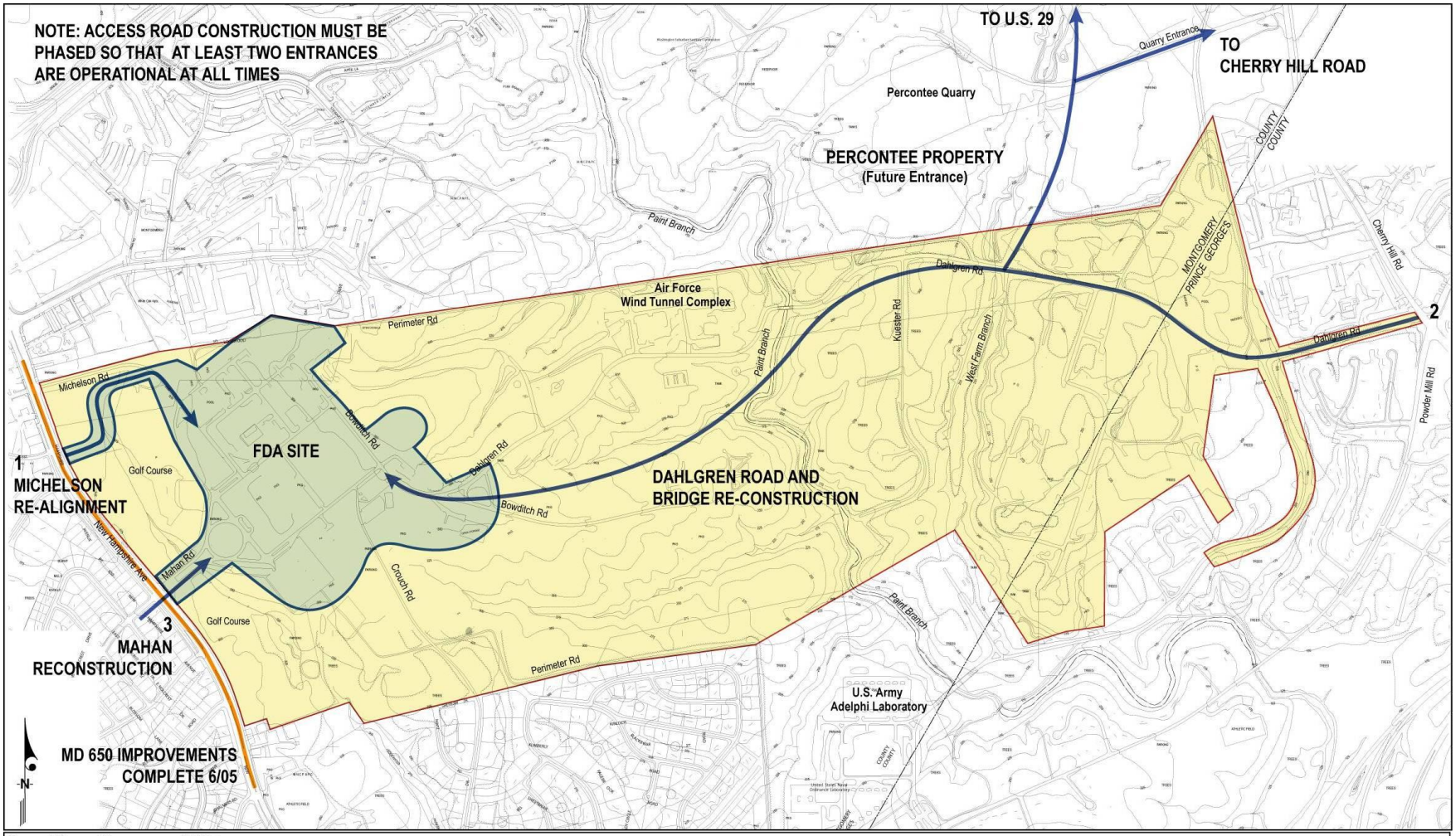

Figure 1
Site Location Map

2. Existing Traffic Condition

This section describes the existing transportation facilities in the vicinity of the FDA White Oak Campus, including the roadway network, traffic conditions, and the availability of public transportation facilities.

2.1 Principal Roadways

The FDA White Oak Campus is located 1.15 miles north of I-495. The campus is surrounded by New Hampshire Avenue to the west, Cherry Hill Road to the east and Powder Mill Road (MD 212) to the south. Figure 1 presents a site location map.

The main roadways in the vicinity of the FDA White Oak Campus site are described as follows:

- Interstate 495 (I-495). In the vicinity of the site, I-495 also known as the Capital Beltway is an eight-lane, divided, interstate highway. It carries approximately 212,170 vehicles per day (VPD) near New Hampshire Avenue. The posted speed limit in the vicinity of the study area is 55 miles per hour (MPH).
- New Hampshire Avenue (MD 650). This is a six-lane divided roadway with a posted speed limit of 35 mph. It runs in a north south direction and has a grade separated interchange with both I-495 and US 29 (Columbia Pike). It carries approximately 51,400 VPD north of I-495. Its intersections with Elton Road, Powder Mill Road, Schindler Drive/Mahan Road, Michelson Road, and Lockwood Drive are signalized.
- Powder Mill Road (MD 212). This is a two-lane roadway between New Hampshire Avenue and Cherry Hill Road with a posted speed limit of 35 mph. It runs in an east-west direction with signalized intersections at New Hampshire Avenue and Cherry Hill Road. East of Cherry Hill Road, it becomes a four-lane roadway and has an interchange with I-95. It carries approximately 22,500 VPD.
- Columbia Pike (US 29). This is a six-lane highway with a posted speed limit of 50 mph. It runs in a north-south direction, parallel to I-95 and ends at I-70 to the north. It is grade separated at its intersections with New Hampshire Avenue and Cherry Hill Road/Randolph Road. It carries approximately 64,000 VPD.
- Cherry Hill Road. This roadway runs in a north-south direction and has a posted speed limit of 40 mph. In the vicinity of the study area it has a four-lane cross-section. Its intersections with Powder Mill Road, US 29/Randolph Road, Plum Orchard Drive, Calverton Drive, and Prosperity Drive are signalized. As mentioned above, its intersection with US 29 (Columbia Pike) is a grade separated interchange.
- Randolph Road. North of Columbia Pike (US 29) Cherry Hill Road becomes Randolph Road. It is a four-lane, undivided highway that runs in a north-south direction. The posted speed limit for this roadway is 35 miles per hour.
- Plum Orchard Drive. This is a two-lane roadway which runs in a east-west direction. Its intersection with Cherry Hill Road is signalized. It is developed with multi-family homes east of Cherry Hill Road and a large shopping center exists on the northwest quadrant.

- Calverton Boulevard/Broadbirch Drive. This is a two-lane roadway which connects Cherry Hill Road to Powder Mill Road (MD 212) Road via Beltsville Drive. Similarly Broadbirch Drive connects Cherry Hill Road to Columbia Pike via Tech Road. It is two lanes to the east of Cherry Hill Road and becomes a four-lane facility to the west. To the west of the Cherry Hill Road, this roadway serves a shopping center and also other office/commercial developments. To the east of Cherry Hill Road, this roadway serves as the primary access point to a neighborhood. Its intersection with Cherry Hill Road is signalized.
- Prosperity Drive. This two-lane roadway runs in an east-west direction, teeing into Cherry Hill Road and extending past Tech Road. Its intersection with Cherry Hill Road is signalized. Land along Prosperity Drive is developed with either retail or office developments.
- Lockwood Drive. This two-lane roadway runs in an east-west direction from US 29 (Columbia Pike) to east of New Hampshire Avenue. It provides access to several commercial and residential developments located along it. There is a large shopping center at the northeast corner of its intersection with New Hampshire Avenue.
- Schindler Drive/Mahan Road. This two-lane roadway runs in an east-west direction. To the west of New Hampshire Avenue, it provides access to a neighborhood and to the east it provides the main access point for the FDA development. Its intersection with New Hampshire Avenue is signalized.
- Fairland Road: The two-lane roadway runs in an east-west direction and makes a four leg signalized intersection with US 29. Fairland road intersects with Old Columbia Pike at signalized intersection to the west of US 29 and provides access to the commercial and residential developments. To the east of US 29, Fairland road provides access to the residential developments and connected to Briggs Chaney Road.

2.2 Traffic Operations Analysis

Traffic count data was collected at the following intersections in October 2007 and March and April 2008:

1. New Hampshire Avenue (MD 650)/Powder Mill Road
2. New Hampshire Avenue (MD 650)/Mahan Road
3. New Hampshire Avenue(MD 650)/Michelson Road/Northwest Drive
4. New Hampshire Avenue (MD 650)/Lockwood Drive
5. Cherry Hill Road/Powder Mill Road
6. Cherry Hill Road/Plum Orchard Drive
7. Cherry Hill Road/Broadbirch Drive/Calverton Boulevard
8. Cherry Hill Road/Prosperity Drive
9. Beltsville Drive/Powder Mill Road
10. Beltsville Drive/Calverton Boulevard
11. US 29/ Lockwood Drive
12. US 29/ Stewart Lane
13. US 29/Industrial Parkway
14. US 29/Tech Road
15. US 29 SB Ramp/ Randolph Road
16. US 29 NB Ramp/Randolph Road

17. US 29/Musgrove Road
18. US 29/Fairland Road
19. Cherry Hill Road/Eastern Access

The existing morning and evening peak hour traffic volumes at these intersections are presented in Figure 2. The raw traffic count data is located in Appendix A of this report.

It should be noted that the consolidation of the FDA employees at the FDA White Oak Campus has begun and as of January 2008, approximately 2,080 employees (1,890 FDA employees and 190 contractors) are currently located at the site. Thus, the existing traffic count data includes these FDA employees.

Using these volumes and existing lane geometries, intersection capacity analysis was performed for both the a.m. and evening peak hours. Analysis was performed using the Critical Lane Analysis Technique as directed by both the Montgomery County and Prince George's County guidelines. The Critical Lane Analysis outputs a Level of Service (LOS). LOS is described in the Highway Capacity Manual (HCM) as a "qualitative measure describing operational conditions within a traffic stream, and their perception by motorist and/or passengers". The HCM defines six levels of service ranging from A to F, with A presenting the optimal operating conditions with minimal delays and F representing congestion.

The Critical Lane Analysis technique determines the overall operational LOS for an entire signalized intersection. Unsignalized intersections are assumed to be simple two-phase signalized intersections for the procedure. The procedure examines the combination of vehicular streams with conflicting movement during a peak period. This maximum number of conflicts is termed the critical lane volume (CLV). This CLV value is then compared to a range of values, to determine the approximate LOS at an intersection.

Intersections in Montgomery County with a CLV of 1,475 or lower are considered to be operating at acceptable level of service. Intersections in Prince George's county with a CLV of 1,600 (LOS E) or lower are considered to be operating at acceptable level of service.

Capacity analyses were carried out for both the morning and evening peak at the study area intersections. These LOSs are presented with the existing traffic volumes on Figure 2. Table 1 provides the CLV for each of the intersections. The CLV calculation worksheets are attached in Appendix B.

Table 1. Existing Levels of Service, January 2008

Intersection	Morning (CLV)	Evening (CLV)
Cherry Hill Road/Powder Mill Road*	B (1,128)	C (1,251)
Cherry Hill Road/Plum Orchard Drive	Acceptable (951)	Acceptable (1,055)
Cherry Hill Road/Calverton Boulevard/Broadbirch Drive	Acceptable (1,101)	Acceptable (1,419)
Cherry Hill Road/Prosperity Drive	Acceptable (1,195)	Acceptable (1,050)

Intersection	Morning (CLV)	Evening (CLV)
New Hampshire Avenue/Michelson Road	Acceptable (1,073)	Acceptable (1,008)
New Hampshire Avenue/Powder Mill Road	Acceptable (1,272)	Acceptable (1,400)
New Hampshire Avenue/Schindler Drive/Mahan Road	Acceptable (1,048)	Acceptable (870)
New Hampshire Avenue/Lockwood Drive1	Acceptable (1,223)	Acceptable (1,207)
Beltsville Drive/Powder Mill Road*	B (1,044)	C (1,299)
Beltsville Drive/Calverton Boulevard*	A (797)	A (846)
US 29 /Fairland Road	Unacceptable (1,591)	Unacceptable (1,769)
US 29 /Musgrove Road	Acceptable (1,448)	Unacceptable (1,593)
US 29 N.B. Ramp/Cherry Hill Road	Acceptable (875)	Acceptable (819)
US 29 S.B. Ramp/Cherry Hill Road	Acceptable (1,096)	Acceptable (951)
US 29/ Tech Road	Acceptable (1,448)	Acceptable (1,460)
US 29/ Industrial Parkway	Acceptable (1,343)	Acceptable (1,396)
US 29/Stewart Lane	Acceptable (1,423)	Unacceptable (1,681)
US 29/ Lockwood Drive	Acceptable (1,475)	Acceptable (1,448)

* These intersections are located in Prince George's County

As can be seen in Table 1, all of the study intersections operate at acceptable level of service with the exception of US 29/Fairland Road and US 29/Musgrove Road, and US 29/Stewart Lane intersections which operate at or above capacity conditions.

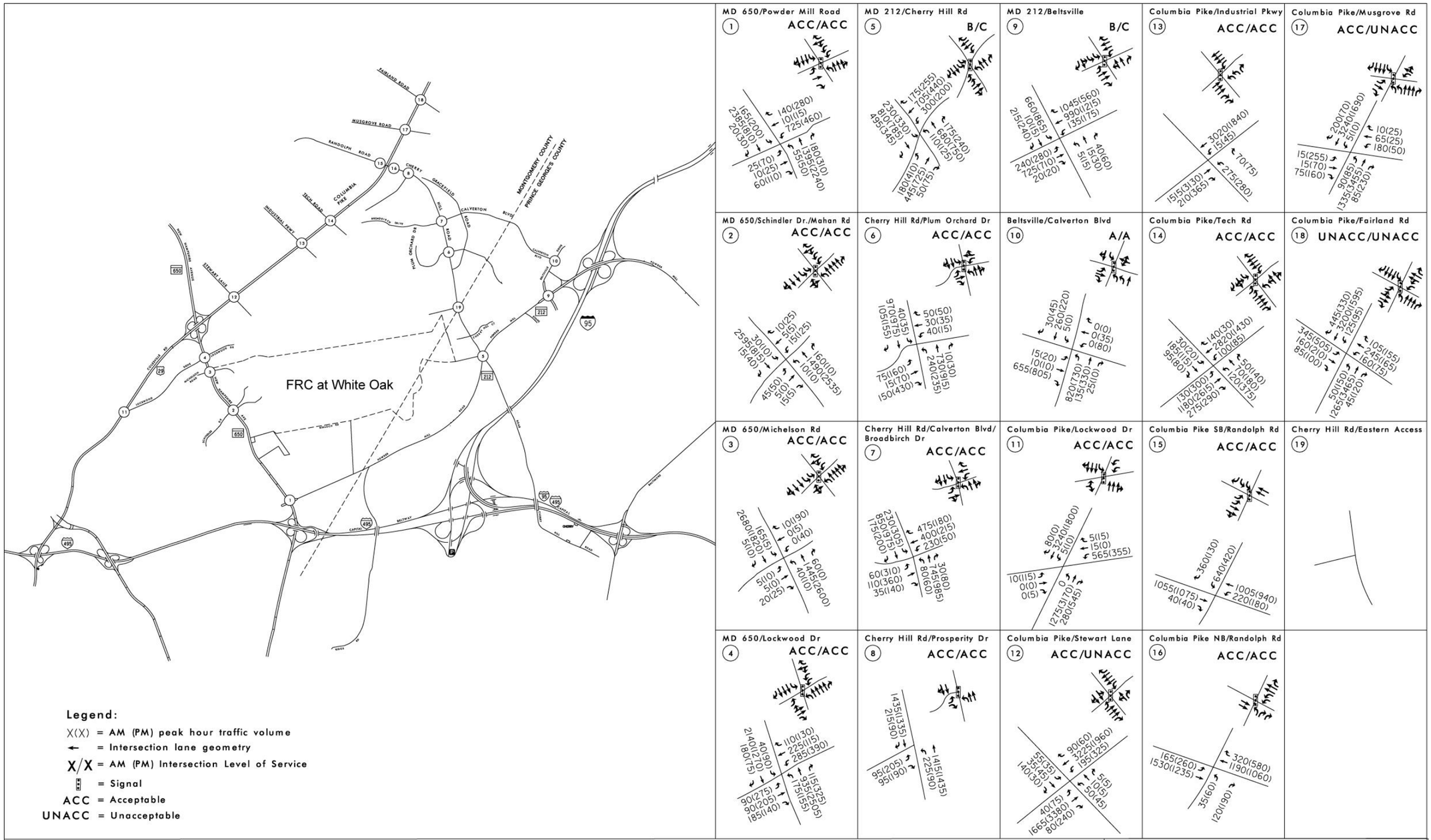

Figure 2
Existing Traffic Volumes, Lane Geometries, and LOS Results

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3. Roadway Impacts

The evaluation of the transportation impacts of the FDA White Oak Campus was based on the guidelines set forth by Montgomery County and Prince George's County. In particular these impacts were evaluated per Prince George's Guidelines for the Analysis of the Traffic Impact of Development Proposals (M-NCPPC, 2002) and the Local Area Transportation Review Guidelines (M-NCPPC, 2008) set forth by Maryland-National Capital Park and Planning Commission (Montgomery County).

3.1 No-Action Analysis

The No-Action analysis examines the impacts of FDA relocating to the FDA White Oak Campus with 7,719 employees. Access would be provided along New Hampshire Avenue via Schindler Drive/Mahan Road, Michelson Road, and along Cherry Hill Road via the new Eastern Access Road. Access to buses would also be provided through an onsite bus stop. In accordance with the *2006 Master Plan Update,* two parking spaces would be provided for every three employees, for a parking ratio of 1:1.5 (or 5,146 employee parking spaces). Five hundred additional parking spaces would be provided for visitors. To achieve this parking ratio a Transportation Management Plan (TMP) has been developed (see Section 4.2 for more information on the TMP). This analysis assumes the number of vehicles traveling to the site equals the number of parking spaces.

The No-Action Alternative is an analysis of the future anticipated volumes at the study intersections without the project traffic. It includes, existing traffic volumes, regional background growth, and approved un-built developments in the study area including the previously approved FDA development (with 7,719 employees). Discussions with the Montgomery and Prince George's County staff have indicated that they will not require the regional growth factors.

The No-Action analysis also takes into account any funded infrastructure improvements in the study area. The Intercounty Connector (ICC) is expected to be fully constructed and open by 2012. However, a majority of the FDA employees will be at the FDA White Oak Campus before it opens. Thus, in order to understand the impacts of the ICC two No-Action scenarios were studied and they were as follows:

- No-Action Analysis without Inter County Connector (ICC)
- No-Action Analysis with Inter County Connector (ICC)

3.1.1 Regional Growth

Discussions with the Montgomery and Prince George's County staff have indicated that they will not require additional regional growth because they wanted all background development included.

3.1.2 Approved Developments

Approved developments which are not yet built or occupied are included in the background traffic. A list of approved background developments was obtained from both Prince George's County and Montgomery County. The developments are graphically presented in Figure 3. It is assumed that these developments will be built out by 2012. Table 2 presents the background developments and the associated trip generation. The number of vehicle trips generated by these developments was

estimated using rates presented in Figure 3 of the Guidelines for the Analysis of the Traffic Impact of Development Proposals (M-NCPPC, 2002) for the Prince Georges County developments and the rates documented in Appendix A of the Local Area Transportation Review Guidelines (LATR) (M-NCPPC, 2008) for the Montgomery County developments. Trip rates for any developments not covered by these two documents were estimated using rates documented in Trip Generation, 7th Edition, Institute of Transportation Engineers (ITE, 2003).

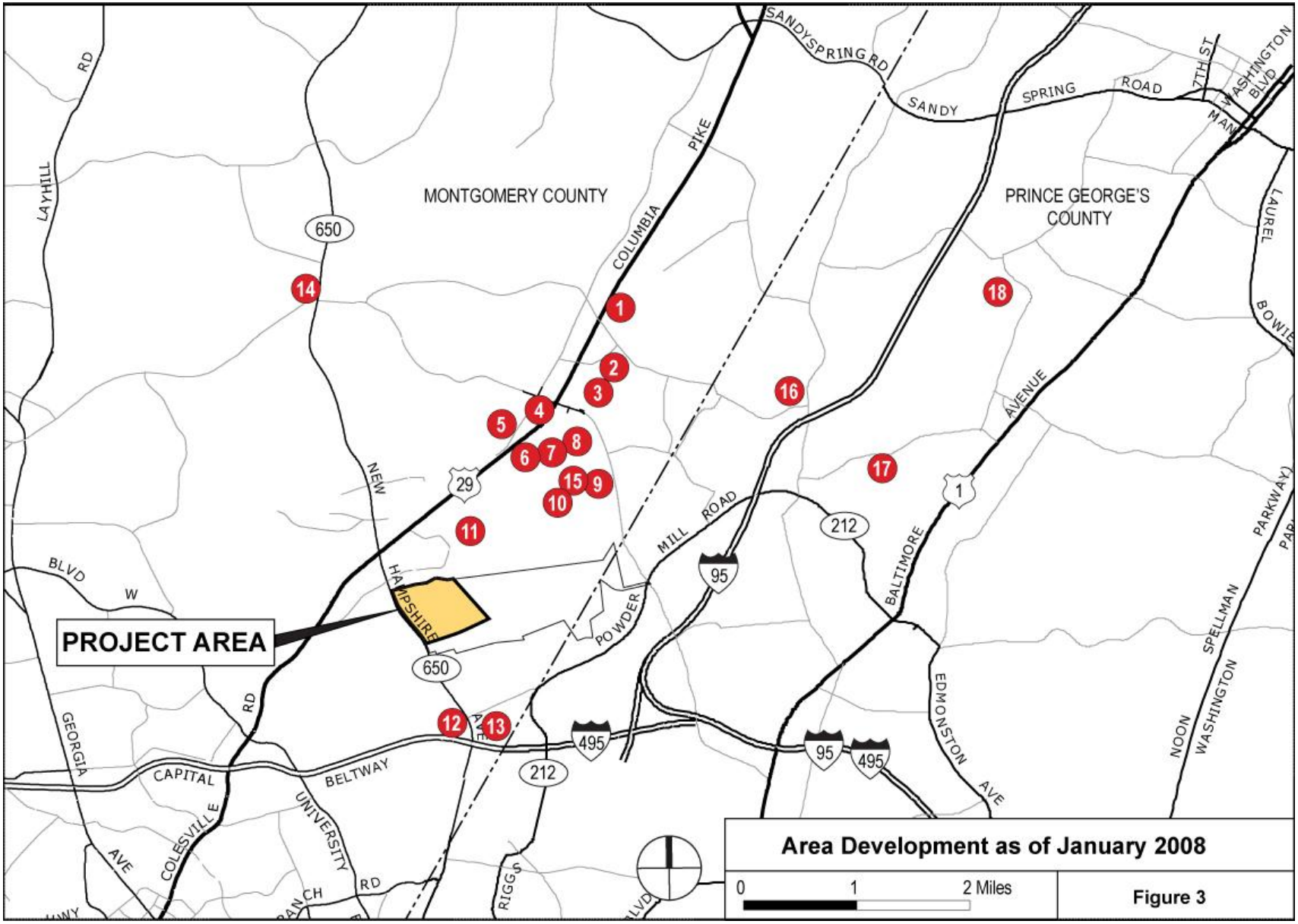
In order to determine the impact of these developments on the surrounding roadway network, these trips were distributed to the study area according to the trip distribution percentages presented in Table E-6 of the LATR for Super District 6. The FDA trips were distributed along the roadway network based on the trip distribution/assignment presented in the previous FDA Final Supplemental Environmental Impact Statement (GSA, 2005).

Table 2: Approved Background Developments

SR #	Land Use	Code	Size	Unit	Morning Peak			Evening Peak		
					In	Out	Total	In	Out	Total
	MONTGOMERY COUNTY									
1	Fairland View									
	Townhouses	MG	39	Each	5	15	20	20	10	30
2	Deer Park Subdivision									
	Single-Family Detached	MG	12	Each	5	5	10	10	5	15
3	Summer Hill									
	Single-Family Detached	MG	3	Each	0	5	5	5	0	5
4	Seventh Day Adventist									
	General Office	MG	350,000	SF	505	75	580	85	420	505
5	Rolling Acres									
	Single-Family Detached	MG	10	Each	5	5	10	5	5	10
6	WestTech Village Corner High-Turnover Restaurant									
	TGI	932	7,000	SF	40	40	80	40	35	75
	Pass-By Reduction (43%)							15	15	30
	Panera Bread	932	5,000	SF	30	30	60	30	25	55
	Pass-By Reduction (43%)							15	10	25
	Steakhouse	932	7,000	SF	40	40	80	40	35	75
	Pass-By Reduction (43%)							15	15	30
	Total Pass-By Reduction							45	40	85
	Net Trips				110	110	220	65	55	120
7	Baywood Hotels									
	Room Hotel	320	104	Rooms	15	30	45	30	30	60
8	WestFarm I-1									
	GBLLC	MG	73,078	SF	100	15	115	20	105	125
	Home Depot	MG	129,134	SF	185	25	210	35	170	205
	State Farm Insurance Co.	MG	63,552	SF	85	15	100	20	90	110
	Mont. County Public School	MG	239,575	SF	350	50	400	60	305	365
	Total Trips				720	105	825	135	670	805

SR #	Land Use	Code	Size	Unit	Morning Peak			Evening Peak		
					In	Out	Total	In	Out	Total
9	Orchard center									
	Office	MG	79,772	SF	115	15	130	25	110	135
10	WestFarm I-3									
	Marriott International	MG	18,824	SF	20	5	25	5	35	40
	SHA	MG	160,639	SF	230	35	265	45	205	250
	Clark Security	MG	10,000	SF	15	0	15	5	15	20
	USPS	MG	64,774	SF	85	15	100	20	95	115
	Kaiser Permanente	MG	294,847	SF	430	65	495	75	370	445
	GBLLC	MG	428,000	SF	625	95	720	110	525	635
	Total Trips				####	215	1,620	260	1,245	####
11	White Oak Property									
	Townhouses	MG	106	Each	10	40	50	55	30	85
12	FDA Relocation*									
	FDA White Oak	Report	7,719	Emp	2430	300	2,730	340	2,205	2,545
13	Chevy Chase Bank, Hillandale									
	Drive-in Bank	912	3,650	SF	25	20	45	85	80	165
	Diverted Trips (25%)							20	20	40
	Pass-By Trips (54%)							45	45	90
	Total Trips							20	15	35
14	New Hampshire Ave									
	General Office	MG	55,862	SF	75	10	85	15	85	100
15	Randolph Plaza									
	General Office	MG	16,806	SF	20	5	25	5	35	40
	General Retail	MG	4,005	SF	5	5	10	15	15	30
	Pass-By Reduction (40%)				5		5	5	5	10
	Net New Trips				0	5	5	10	10	20
	Total Trips				20	10	30	15	45	60
	PRINCE GEORGE'S COUNTY									
16	Cross Creek									
	Hotel	PG	50	Rooms	20	15	35	20	20	40
	Single Family Detached	PG	97	Each	15	60	75	55	30	85
	Total Trips				35	75	110	75	50	125
17	Ammendale South									
	Flex Office	PG	90,000	SF	70	20	90	20	70	90

* For trip generation analysis refer to Food and Drug Administration Headquarters Consolidated Final Environmental Impact Statement (GSA, 2005)


MONTGOMERY COUNTY
PRINCE GEORGE'S COUNTY
PROJECT AREA
SANDY SPRING RD
SANDY SPRING ROAD
COLUMBIA PIKE
NEW HAMPSHIRE AVE
MILL ROAD
POWDER
BALTIMORE AVENUE
EDMONSTON AVE
SPELLMAN
NOON
WASHINGTON
PARKWAY
LAUREL BOWIE
WASHINGTON BLVD
7TH ST
LAYHILL RD
GEORGIA AVE
COLESVILLE RD
UNIVERSITY BLVD
CAPITAL BELTWAY
RIGGS RD
650
29
212
95
495
1
Area Development as of January 2008
0
1
2 Miles
Figure 3

3.1.3 Roadway Improvements

The following roadway improvements are programmed and or are under construction in the study area as of January 2008:

- New Hampshire Avenue/Schindler Drive/Mahan Road
  - Along westbound Mahan Road provide dual left turn lanes, a shared left turn-through lane, and an exclusive right turn lane

- Inter County Connector (ICC)
  - Contract A – Section between I-270/I-370 to MD 97 is under construction and will be opened in Fall of 2010
  - Contract B – Section between MD 97 to US 29 is scheduled to open in 2011
  - Contract C – Section between US 29 to I-95 is expected to open in 2011
  - Contract D – Collector-Distributor road along I-95 is scheduled to open by 2012
  - Contract E- Section between I-95 and US 1 is expected to open by 2011

3.1.4 No-Action without Inter County Connector (ICC) – Traffic Operations Analysis

Under the No-Action Analysis without ICC scenario, FDA would relocate to the FDA White Oak Campus site with 7,719 employees. Access would be provided along New Hampshire Avenue via Schindler Drive/Mahan Road and Michelson Road and along Cherry Hill Road via the new Eastern Access Road. The ICC would not be constructed.

The No-Action without the ICC volumes were obtained by combining the existing traffic volumes with the background development volumes. These volumes are presented in Figure 4 and the LOS results are presented in Table 3 below. The CLV calculations sheets are attached in Appendix D

Table 3. No Action Alternative without ICC LOS Results

Intersection	Existing		No-Action	
	morning (CLV)	evening (CLV)	morning (CLV)	evening (CLV)
Cherry Hill Road/Powder Mill Road*	B (1,128)	C (1,251)	C (1,238)	F (1,660)
Cherry Hill Road/Plum Orchard Drive	Acceptable (951)	Acceptable (1,055)	Unacceptable (1,817)	Unacceptable (1,723)
Cherry Hill Rd/Calverton Blvd./Broadbirch Dr	Acceptable (1,101)	Acceptable (1,419)	Unacceptable (1,826)	Unacceptable (2,074)
Cherry Hill Road/Prosperity Drive	Acceptable (1,195)	Acceptable (1,050)	Unacceptable (1,648)	Acceptable (1,411)
New Hampshire Avenue/Michelson Road	Acceptable (1,073)	Acceptable (1,008)	Acceptable (1,192)	Unacceptable (1,530)
New Hampshire Avenue/Powder Mill Road	Acceptable (1,272)	Acceptable (1,400)	Acceptable (1,373)	Acceptable (1,444)
New Hampshire Avenue/Schindler	Acceptable (1,048)	Acceptable (870)	Acceptable (1,083)	Acceptable (1,039)

Intersection	Existing		No-Action	
	morning (CLV)	evening (CLV)	morning (CLV)	evening (CLV)
Drive/Mahan Road				
New Hampshire Avenue/Lockwood Drive	Acceptable (1,223)	Acceptable (1,207)	Acceptable (1,415)	Acceptable (1,361)
Beltsville Drive/Powder Mill Road*	B (1,044)	C (1,299)	E (1,460)	D (1,421)
Beltsville Drive/Calverton Boulevard*	A (797)	A (846)	A (836)	A (849)
US 29 Fairland Road	Unacceptable (1,591)	Unacceptable (1,769)	Unacceptable (1,837)	Unacceptable (1,993)
US 29 /Musgrove Road	Acceptable (1,448)	Unacceptable (1,593)	Unacceptable (1,698)	Unacceptable (1,814)
US 29 N.B. Ramp/Cherry Hill Road	Acceptable (875)	Acceptable (819)	Acceptable (1,328)	Acceptable (1,304)
US 29 S.B. Ramp/Cherry Hill Road	Acceptable (1,096)	Acceptable (951)	Unacceptable (1,573)	Acceptable (1,286)
US 29/ Tech Road	Acceptable (1,448)	Acceptable (1,460)	Unacceptable (1,906)	Unacceptable (2,478)
US 29/ Industrial Parkway	Acceptable (1,343)	Acceptable (1,396)	Acceptable (1,397)	Unacceptable (1,499)
US 29/Stewart Lane	Acceptable (1,423)	Unacceptable (1,681)	Unacceptable (1,560)	Unacceptable (1,792)
US 29/ Lockwood Drive	Acceptable (1,475)	Acceptable (1,448)	Unacceptable (1,574)	Unacceptable (1,595)
Cherry Hill Road/Eastern Site Access	---	---	Acceptable (902)	Acceptable (1,261)

* These intersections are located in Prince George's County

Results of the analysis indicate that under the No-Action without the ICC Alternative most of the intersections analyzed are expected to operate at unacceptable LOSs during both or at least one peak hour. The intersections of New Hampshire Avenue/Powder Mill Road, New Hampshire Avenue/Mahan Road, New Hampshire Avenue/Lockwood Drive, Beltsville Drive/Powder Mill Road, Beltsville Drive/Calverton Blvd, US 29 N.B. Ramp/Cherry Hill Road and Proposed Cherry Hill Road/Eastern Site Access are expected to operate at acceptable LOS during both the morning and evening peak hours.

Overall, most of the study intersections are expected to above capacity conditions under the No-Action conditions.

3.1.5 No-Action with Inter County Connector (ICC) – Traffic Operations Analysis

The volumes for the No-Action Alternative with ICC were projected based on the forecasts contained in the ICC Travel Analysis Technical Report (SHA, 2004). The No-Action Volumes without the ICC were adjusted based on the percent change rates calculated from the ICC Travel Analysis Technical Report to determine the No-Action with the ICC Volumes. These volumes were

further adjusted based on access points of developments and the level developments anticipated in the study area. Furthermore, the employees from the approved FDA development (7,719 employees) were redistributed to the roadway network based on the change in travel patterns that the ICC is expected to create. The distribution percentages used are presented under the Action Analysis.

The No-Action Volumes with the ICC are presented in Figure 5 and the LOS results are presented in Table 4 below. The CLV calculations sheets are attached in Appendix D.

Table 4. No Action Alternative with ICC LOS Results

Intersection	Existing		No-Action	
	morning (CLV)	evening (CLV)	morning (CLV)	evening (CLV)
Cherry Hill Road/Powder Mill Road*	B (1,128)	C (1,251)	B (1,076)	E (1466)
Cherry Hill Road/Plum Orchard Drive	Acceptable (951)	Acceptable (1,055)	Unacceptable (1,586)	Acceptable (1,357)
Cherry Hill Road/Calverton Blvd./Broadbirch Dr	Acceptable (1,101)	Acceptable (1,419)	Unacceptable (1,631)	Unacceptable (1,626)
Cherry Hill Road/Prosperity Drive	Acceptable (1,195)	Acceptable (1,050)	Unacceptable (1,645)	Acceptable (1,138)
New Hampshire Avenue/Michelson Road	Acceptable (1,073)	Acceptable (1,008)	Acceptable (1,318)	Unacceptable (1,549)
New Hampshire Avenue/Powder Mill Road	Acceptable (1,272)	Acceptable (1,400)	Acceptable (1,433)	Acceptable (1,372)
New Hampshire Avenue/Schindler Drive/Mahan Road	Acceptable (1,048)	Acceptable (870)	Acceptable (1,178)	Acceptable (1,242)
New Hampshire Avenue/Lockwood Drive	Acceptable (1,223)	Acceptable (1,207)	Unacceptable (1,610)	Acceptable (1,275)
Beltsville Drive/Powder Mill Road*	B (1,044)	C (1,299)	D (1,362)	C (1287)
Beltsville Drive/Calverton Boulevard*	A (797)	A (846)	A (797)	A (834)
US 29 Fairland Road	Unacceptable (1,591)	Unacceptable (1,769)	Unacceptable (1,979)	Unacceptable (2,234)
US 29 /Musgrove Road	Acceptable (1,448)	Unacceptable (1,593)	Unacceptable (1,743)	Unacceptable (1,931)
US 29 N.B. Ramp/Cherry Hill Road	Acceptable (875)	Acceptable (819)	Acceptable (1,325)	Acceptable (1,157)
US 29 S.B. Ramp/Cherry Hill Road	Acceptable (1,096)	Acceptable (951)	Unacceptable (1,637)	Acceptable (1,150)
US 29/ Tech Road	Acceptable (1,448)	Acceptable (1,460)	Unacceptable (1,923)	Unacceptable (3,044)
US 29/ Industrial Parkway	Acceptable (1,343)	Acceptable (1,396)	Unacceptable (1,557)	Unacceptable (1,845)
US 29/Stewart Lane	Acceptable (1,423)	Unacceptable (1,681)	Unacceptable (1,800)	Unacceptable (2,164)

Intersection	Existing		No-Action	
	morning (CLV)	evening (CLV)	morning (CLV)	evening (CLV)
US 29/ Lockwood Drive	Acceptable (1,475)	Acceptable (1,448)	Acceptable (1,231)	Unacceptable (1,814)
Cherry Hill Road/Eastern Site Access	---	---	Acceptable (849)	Acceptable (1,056)

* These intersections are located in Prince George's County

Most of the intersections analyzed are expected to operate at unacceptable LOS during both or at least one peak hour. The intersections of Cherry Hill Road/Powder Mill Road, New Hampshire Avenue/Powder Mill Road, New Hampshire Avenue/Mahan Road, Beltsville Drive/Powder Mill Road, Beltsville Drive/Calverton Blvd, US 29 N.B. Ramp/Cherry Hill Road and Proposed Cherry Hill Road/Eastern Site Access are expected to operate at acceptable LOS during both the morning and evening peak hours.

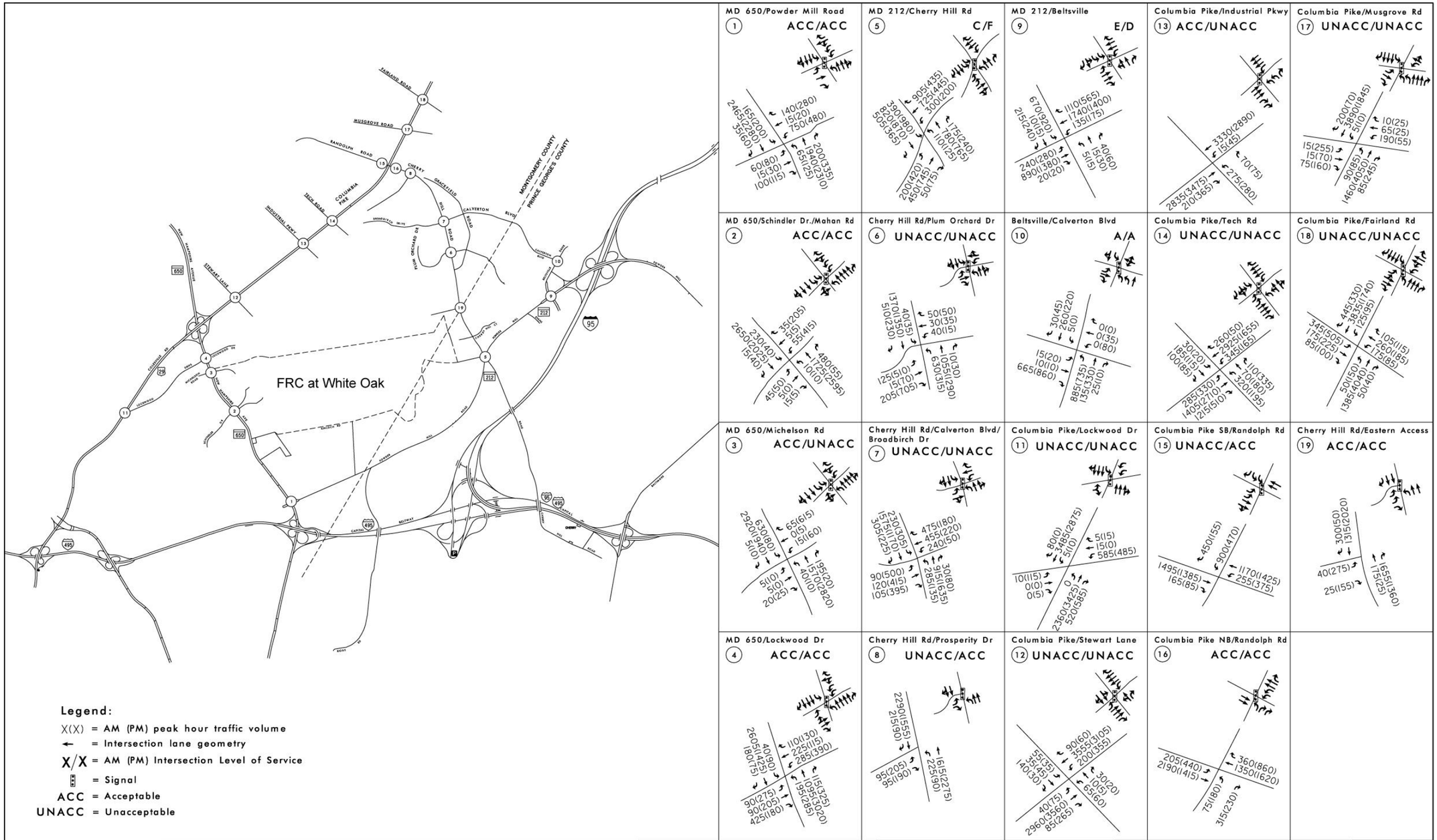


Figure 4
No Action Traffic Volumes, Lane Geometrics, and LOS Results (Without ICC)

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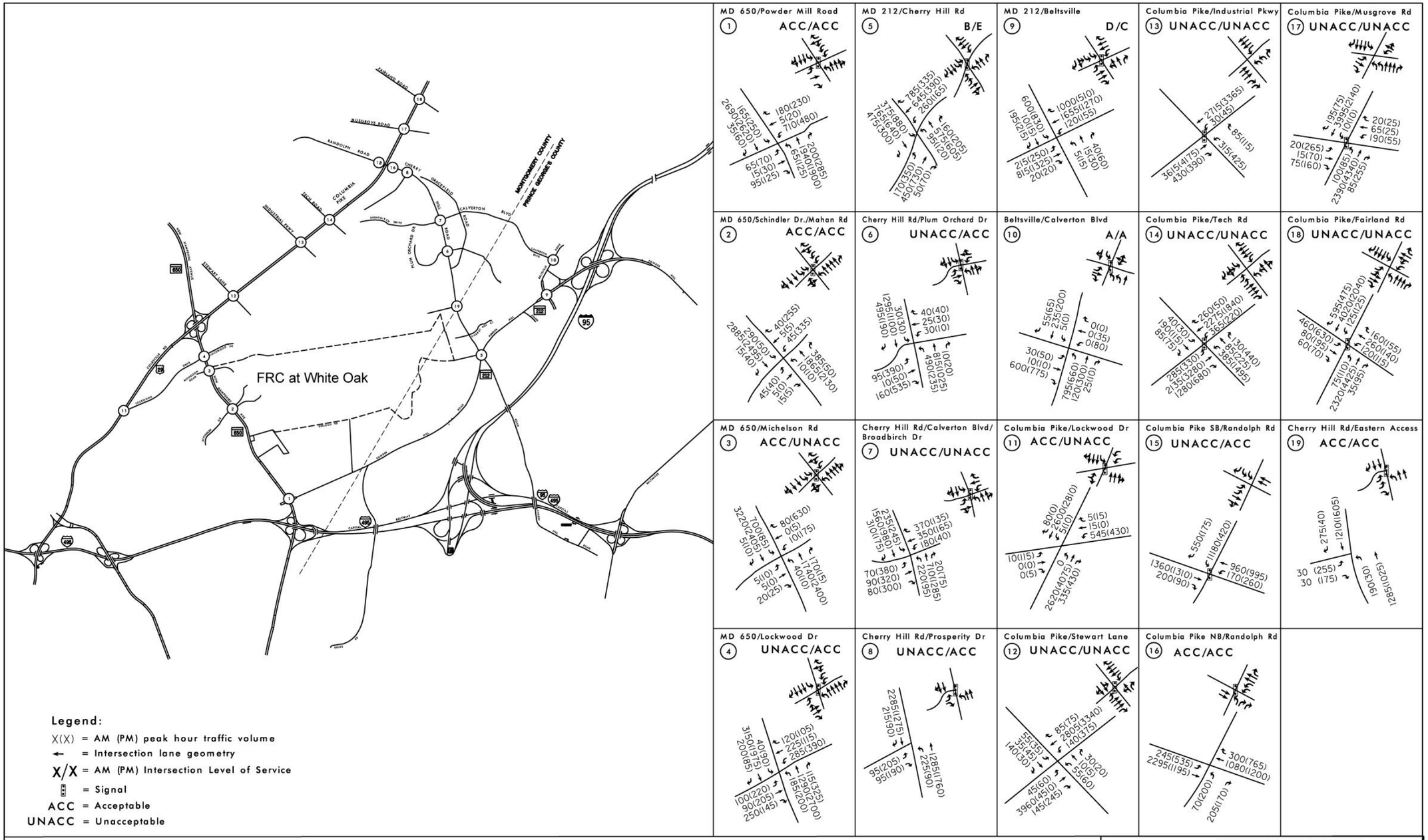

Figure 5
No Action Traffic Volumes, Lane Geometrics, and LOS Results (With ICC)

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3.2 Proposed Action Analysis

Under the Proposed Action, the number of employees at the FDA White Oak Campus would increase from the previously approved 7,719 to 8,889. This constitutes an increase of 1,170 employees. These employees are expected to be new hires and not relocations from existing FDA locations.

The National Capital Planning Commission (NCPC) Comprehensive Plan for the National's Capital: Federal Elements (2004) has established a goal of providing one parking spaces for every two employees. The 2006 Master Plan for the FDA White Oak Campus had a parking ratio of one parking space for every 1.5 employees. For the purposes of this study, it has been assumed that the parking ratio would maintain the 2006 Master Plan parking ratio of one parking space for every 1.5 employees.

The 2006 FDA Master Plan development also allows for 500 visitor parking spaces. However, the FDA is experiencing large numbers of visitors on a daily basis at the FDA White Oak Campus, and this is expected to continue as the consolidation continues. Thus FDA would like to provide an additional 500 visitor parking spaces, for a total of 1,000 visitor spaces. The Transportation Management Plan (TMP) provides more information on visitor parking.

Access to the FDA White Oak Campus would be provided by three access points; two along New Hampshire Avenue and one along Cherry Hill Road at the following locations:

- Via Schindler Drive/Mahan Road
- Via Michelson Road
- Via new eastern access onto Cherry Hill Road

The number of vehicle-trips generated by the proposed development was estimated based on the travel patterns of the existing FDA employees, which were determined based on a survey of approximately 7,235 employees, and on discussions with the Montgomery County and Prince George's County staff. Table 5 presents the trip generation for the 1,170 new employees at this site. As can be seen in Table 5, the FDA White Oak Campus is expected to generate approximately 777 vehicle trips in the morning peak hour and approximately 776 vehicles trips in the evening peak hour.

Table 5. FDA White oak Campus Trip Generation

	morning	evening
Employees	1,170	1,170
Percent Absentees	10	10
Trips	1,053	1,053
Proposed Additional Parking Spaces	780[1]	780[1]
Percent in Peak Hour (peak direction)	42%[2]	40%[2]
Peak Hour Vehicle Trips (peak direction)	328	312
Peak Hour Vehicle Trips (non-peak direction)	49[3]	64[4]
Peak Hour Visitor (peak direction)	400[5]	400[5]
Total Vehicle Trips	**777**	**776**

[1] The total number of parking spaces provided on site at the new FDA facility
[2] Peak hour percentages have been based on the employee survey. For a conservative analysis the peak hour percentages have been increased by 5 percent
[3] Peak direction percentage for "outbound) based on in/out ratio provided by M-NCPPC guidelines for office 87 percent/13 percent
[4] Peak direction percentage for "inbound" based on in/out ratio provided by M-NCPPC guidelines for office land use of 83 percent/17 percent
[5] The FDA site is proposing an additional 500 visitor parking spaces. In order to perform a conservative analysis, it has been assumed that approximately 80 percent of the total visitors will arrive and depart during the peak hour

3.2.1 Site Trip Distribution

The trip distribution was based on the trip distribution percentages presented in Table E-6 of the LATR for Super District 6 as well as the existing/proposed roadway network and the existing/proposed access points. The trip distribution percentages are presented in Figure 6 and Figure 7 for the 'without ICC scenario' and 'with ICC scenario', respectively.

- Site Trip Distribution without ICC
    - 16 percent to/from the west along I-495
    - 10 percent to/from the west along University Boulevard (MD 193)
    - 4 percent to/from the south along Colesville Road (US 29)
    - 3 percent to/from the south along New Hampshire Avenue
    - 20 percent to/from the east along I-495
    - 6 percent to/from the north along I-95
    - 10 percent to/from the north along US 29
    - 15 percent to/from the noth/west along Randolph Road
    - 15 percent to/from the north along New Hampshire Avenue
    - 1 percent to/from the south along Cherry Hill Road

- Site Trip Distribution with ICC
    - 10 percent to/from the west along I-495
    - 1 percent to/from the west along University Boulevard (MD 193)
    - 4 percent to/from the south along Colesville Road (US 29)
    - 3 percent to/from the south along New Hampshire Avenue
    - 20 percent to/from the east along I-495
    - 6 percent to/from the north along I-95
    - 20 percent to/from the north along US 29
    - 10 percent to/from the west along Randolph Road
    - 25 percent to/from the north along New Hampshire Avenue
    - 1 percent to/from the south along Cherry Hill Road

3.2.2 Site Trip Assignment

The trip generation estimated for the FDA White Oak Campus was distributed along the study area roadways/intersections based on the trip distribution estimates presented above for two different scenarios. The site trip assignments for Without ICC and With ICC are presented in Figure 8 and Figure 9, respectively.

3.2.3 Action without Inter County Connector (ICC) – Operations Analysis

Impacts from the Action Alternatives without ICC Traffic Volumes were determined by adding the Site Traffic Volumes without ICC (Figure 10) to the No-Action Traffic Volumes without ICC (Figure 4). Intersection capacity analyses were performed at the study intersections and the results are presented in Figure 10 and Table 6.

Table 6. Action Alternative without ICC LOS Results

Intersection	No-Action		Action	
	morning (CLV)	evening (CLV)	morning (CLV)	evening (CLV)
Cherry Hill Road/Powder Mill Road*	C (1,238)	F (1,660)	C (1,244)	F (1,684)
Cherry Hill Road/Plum Orchard Drive	Unacceptable (1,817)	Unacceptable (1,723)	Unacceptable (1,964)	Unacceptable (1,880)
Cherry Hill Road/Calverton Boulevard/Broadbirch Drive	Unacceptable (1,826)	Unacceptable (2,074)	Unacceptable (1,919)	Unacceptable (2,164)
Cherry Hill Road/Prosperity Drive	Unacceptable (1,648)	Acceptable (1,411)	Unacceptable (1,740)	Unacceptable (1,501)
New Hampshire Avenue/Michelson Road	Acceptable (1,192)	Unacceptable (1,530)	Acceptable (1,239)	Unacceptable (1,759)
New Hampshire Avenue/Powder Mill Road	Acceptable (1,373)	Acceptable (1,444)	Acceptable (1,423)	Acceptable (1,451)
New Hampshire Avenue/Schindler Drive/Mahan Road	Acceptable (1,083)	Acceptable (1,039)	Acceptable (1,089)	Acceptable (1,125)
New Hampshire Avenue/Lockwood Drive	Acceptable (1,415)	Acceptable (1,361)	Unacceptable (1,494)	Acceptable (1,430)
Beltsville Drive/Powder Mill Road*	E (1,460)	D (1,421)	E (1,485)	D (1,424)
Beltsville Drive/Calverton Boulevard*	A (836)	A (849)	A (836)	A (849)
US 29 Fairland Road	Unacceptable (1,837)	Unacceptable (1,993)	Unacceptable (1,865)	Unacceptable (2,021)
US 29 /Musgrove Road	Unacceptable (1,698)	Unacceptable (1,814)	Unacceptable (1,726)	Unacceptable (1,841)
US 29 N.B. Ramp/Cherry Hill Road	Acceptable (1,328)	Acceptable (1,304)	Acceptable (1,420)	Acceptable (1,369)
US 29 S.B. Ramp/Cherry Hill Road	Unacceptable (1,573)	Acceptable (1,286)	Unacceptable (1,670)	Acceptable (1,294)
US 29/ Tech Road	Unacceptable (1,906)	Unacceptable (2,478)	Unacceptable (1,782)	Unacceptable (2,020)
US 29/ Industrial Parkway	Acceptable (1,397)	Unacceptable (1,499)	Acceptable (1,401)	Unacceptable (1,502)
US 29/Stewart Lane	Unacceptable (1,560)	Unacceptable (1,792)	Unacceptable (1,564)	Unacceptable (1,796)

Intersection	No-Action		Action	
	morning (CLV)	evening (CLV)	morning (CLV)	evening (CLV)
US 29/ Lockwood Drive	Unacceptable (1,574)	Unacceptable (1,595)	Unacceptable (1,581)	Unacceptable (1,615)
Cherry Hill Road/Eastern Site Access	Acceptable (902)	Acceptable (1,261)	Acceptable (952)	Acceptable (1,368)

* These intersections are located in Prince George's County

With the 1,170 new FDA employees, most intersections are expected to continue operating at above unacceptable LOSs in the peak hours. The intersections of Cherry Hill Road/Eastern Access, New Hampshire Avenue/Powder Mill Road, New Hampshire Avenue/Schindler/Mahan Road, Beltsville Drive/Powder Mill Road, Beltsville Drive/Calverton Boulevard and US 29 N.B. Ramp/Cherry Hill Road are expected to operate at acceptable LOS during both the morning and evening peak hours.

3.2.4 Action with Inter County Connector (ICC) – Operations Analysis

Impacts from Action Alternatives with ICC Traffic Volumes were determined by adding the Site Traffic Volumes with ICC (Figure 11) to the No-Action Traffic Volumes with ICC (Figure 5). Intersection capacity analyses were performed at the study intersections and the results are presented in Figure 11 and Table 7.

Table 7. Action Alternative with ICC LOS Results

Intersection	No-Action		Action	
	morning (CLV)	evening (CLV)	morning (CLV)	evening (CLV)
Cherry Hill Road/Powder Mill Road*	B (1,076)	E (1,466)	B (1,085)	E (1,514)
Cherry Hill Road/Plum Orchard Drive	Unacceptable (1,586)	Acceptable (1,357)	Unacceptable (1,660)	Acceptable (1,365)
Cherry Hill Rd/Calverton Blvd./Broadbirch Dr	Unacceptable (1,631)	Unacceptable (1,626)	Unacceptable (1,705)	Unacceptable (1,695)
Cherry Hill Road/Prosperity Drive	Unacceptable (1,645)	Acceptable (1,138)	Unacceptable (1,719)	Acceptable (1,207)
New Hampshire Avenue/Michelson Road	Acceptable (1,318)	Unacceptable (1,549)	Acceptable (1,365)	Unacceptable (1,785)
New Hampshire Avenue/Powder Mill Road	Acceptable (1,433)	Acceptable (1,372)	Acceptable (1,442)	Acceptable (1,429)
New Hampshire Avenue/Schindler Drive/Mahan Road	Acceptable (1,167)	Acceptable (1,218)	Acceptable (1,172)	Acceptable (1,332)
New Hampshire Avenue/Lockwood Drive	Unacceptable (1,610)	Acceptable (1,275)	Unacceptable (1,719)	Acceptable (1,339)
Beltsville Drive/Powder Mill Road*	D (1362)	C (1287)	D (1406)	C (1292)

Intersection	No-Action		Action	
	morning (CLV)	evening (CLV)	morning (CLV)	evening (CLV)
Beltsville Drive/Calverton Boulevard*	A (797)	A (834)	A (797)	A (834)
US 29 Fairland Road	Unacceptable (1,979)	Unacceptable (2,234)	Unacceptable (2,033)	Unacceptable (2,286)
US 29 /Musgrove Road	Unacceptable (1,743)	Unacceptable (1,931)	Unacceptable (1,797)	Unacceptable (1,983)
US 29 N.B. Ramp/Cherry Hill Road	Acceptable (1,325)	Acceptable (1,157)	Acceptable (1,400)	Acceptable (1,366)
US 29 S.B. Ramp/Cherry Hill Road	Unacceptable (1,637)	Acceptable (1,150)	Unacceptable (1,722)	Acceptable (1,159)
US 29/ Tech Road	Unacceptable (1,884)	Unacceptable (2,463)	Unacceptable (1,884)	Unacceptable (2,492)
US 29/ Industrial Parkway	Unacceptable (1,557)	Unacceptable (1,845)	Unacceptable (1,557)	Unacceptable (1,874)
US 29/Stewart Lane	Unacceptable (1,800)	Unacceptable (2,164)	Unacceptable (1,800)	Unacceptable (2,193)
US 29/ Lockwood Drive	Acceptable (1,231)	Unacceptable (1,814)	Acceptable (1,231)	Unacceptable (1,822)
Cherry Hill Road/Eastern Site Access	Acceptable (849)	Acceptable (1,056)	Acceptable (948)	Acceptable (1,156)

* These intersections are located in Prince George's County

As can be seen in Table 7, with the 1,170 FDA employees, most intersections are expected to continue operating at unacceptable LOS during the peak hours. Several intersection, however, are expected to operate at acceptable LOS during both the morning and evening peak hours and they are the intersections of Cherry Hill Road/Eastern Access, Cherry Hill Road/Powder Mill Road, New Hampshire Avenue/Powder Mill Road, New Hampshire Avenue/Schindler/Mahan Road, Beltsville Drive/Powder Mill Road, Beltsville Drive/Calverton Boulevard, and US 29 N.B. Ramp/Cherry Hill Road.

It should be noted that most intersections analyzed are expected to operate at unacceptable LOS either with or without the 1,170 FDA employees. Major improvements will be required at most of the intersections to bring them to acceptable LOS. Improvement will be required at several intersections to bring them to No-Action CLVs. These improvements are discussed in the Section 4 below.

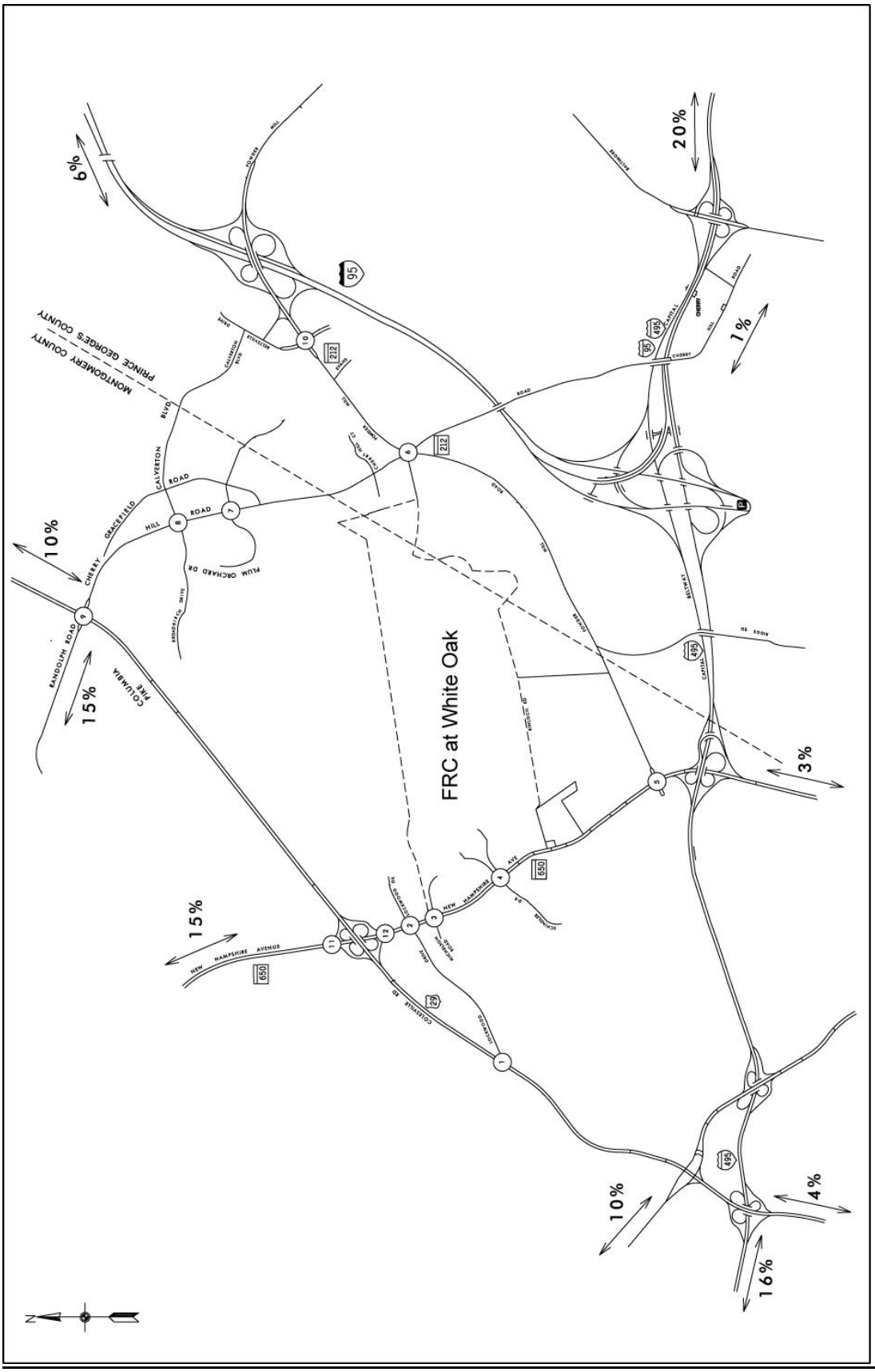

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Figure 6
Trip Distribution Percentages
(Per FDA employee zip code)
Without ICC

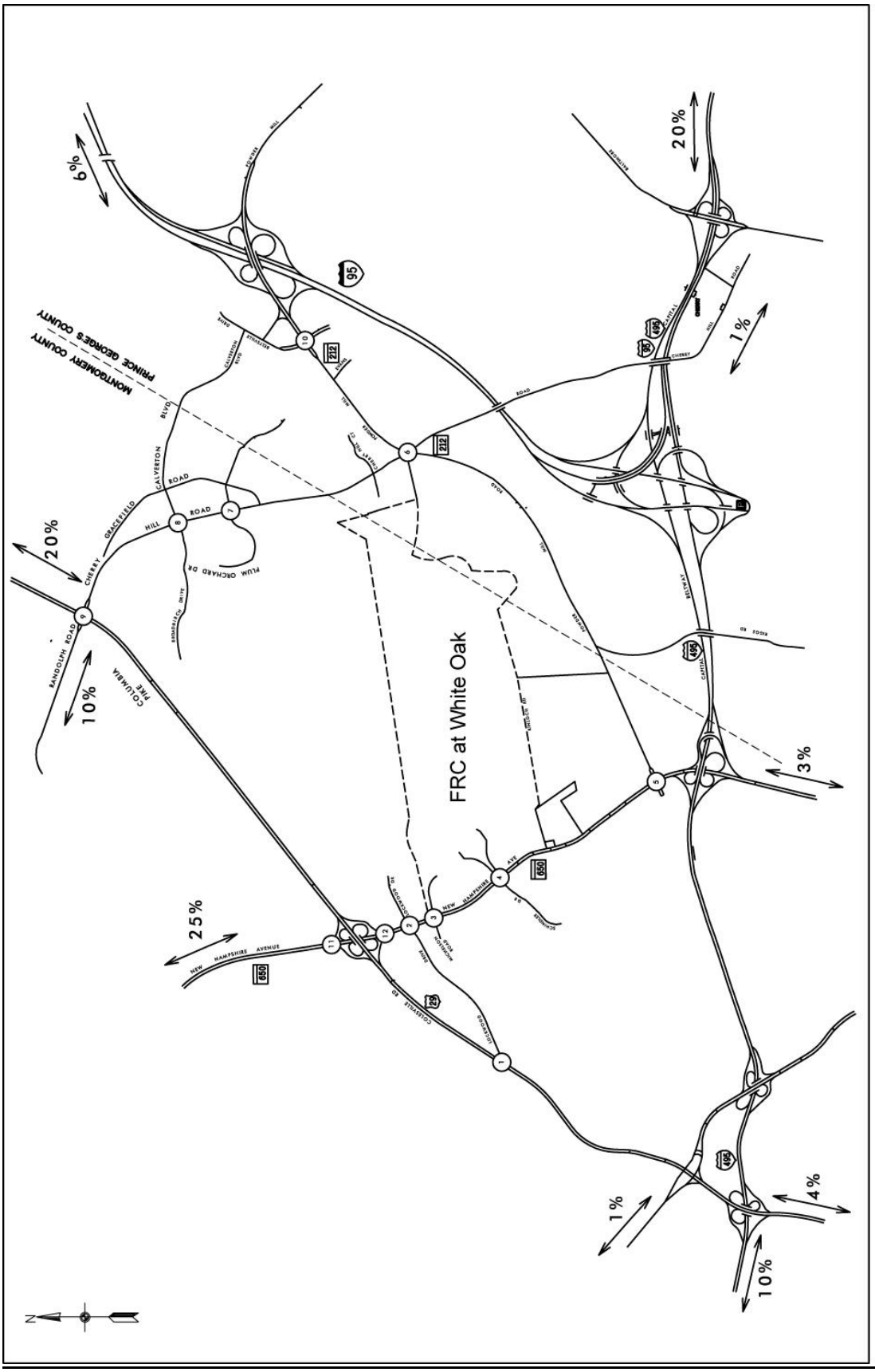

Figure 7
Trip Distribution Percentages
(Per FDA employee zip code)
With ICC

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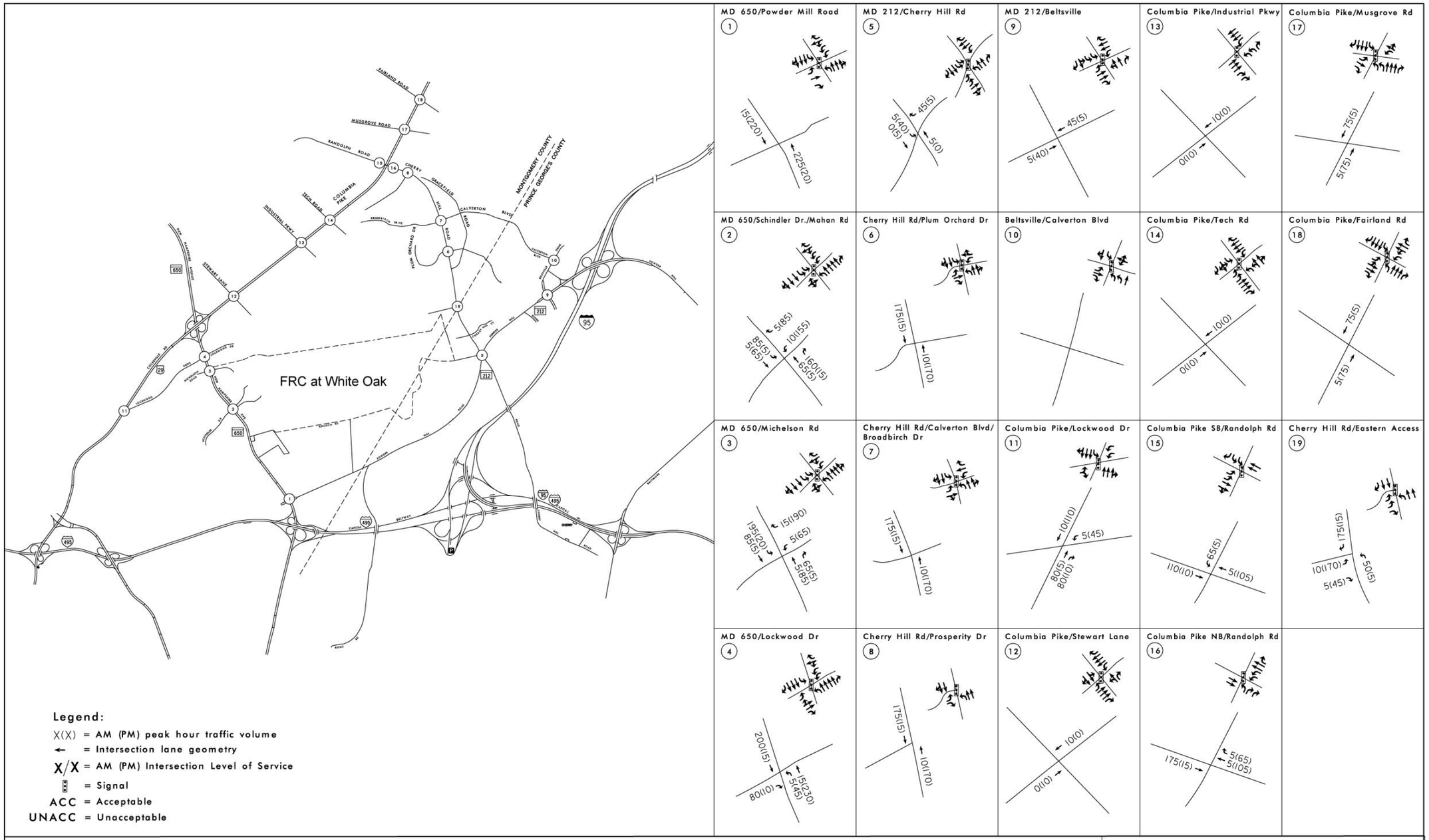

Figure 8
Site Trip Assignment
(Without ICC)

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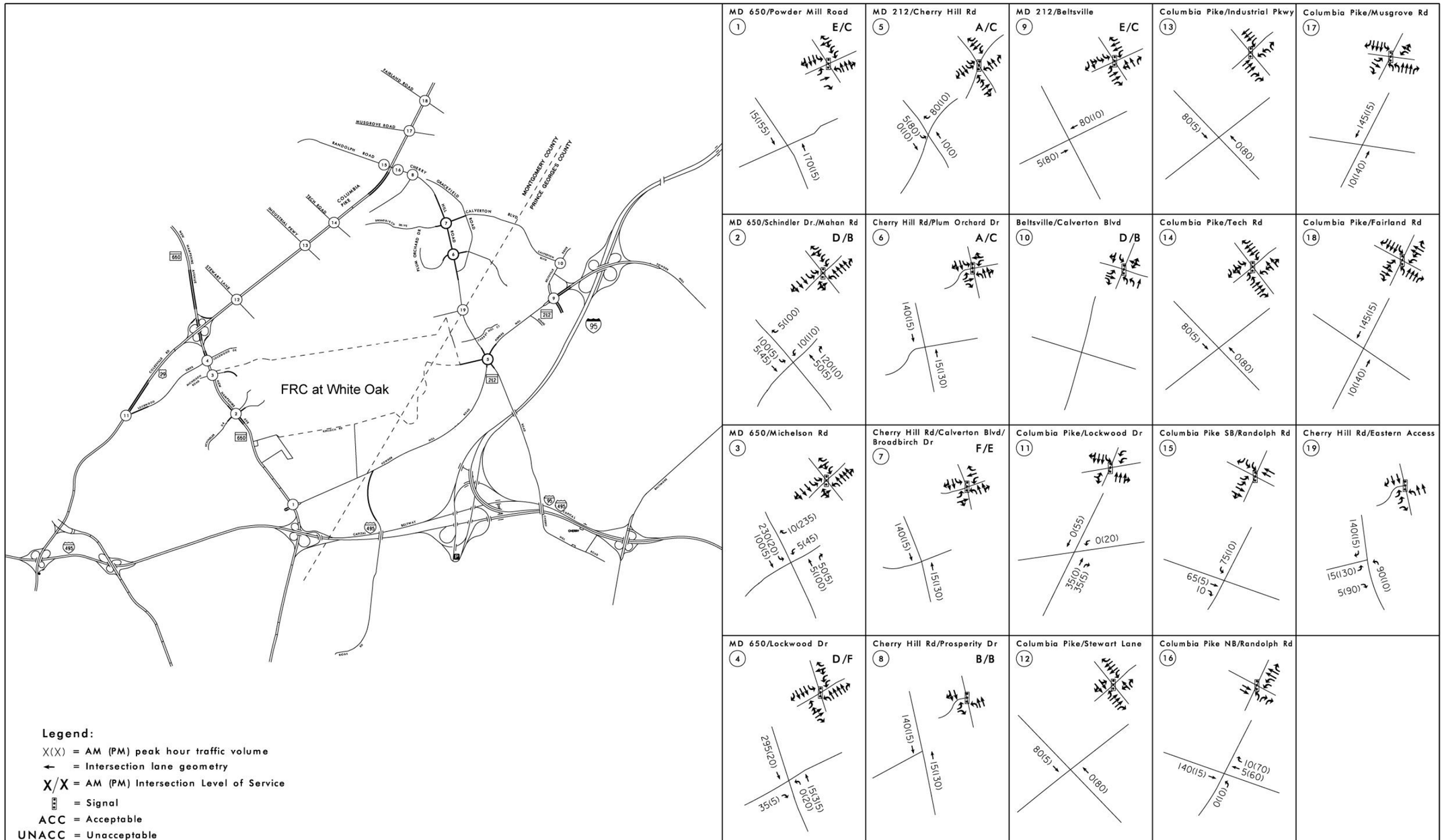

Figure 9
Site Trip Assignment (With ICC)

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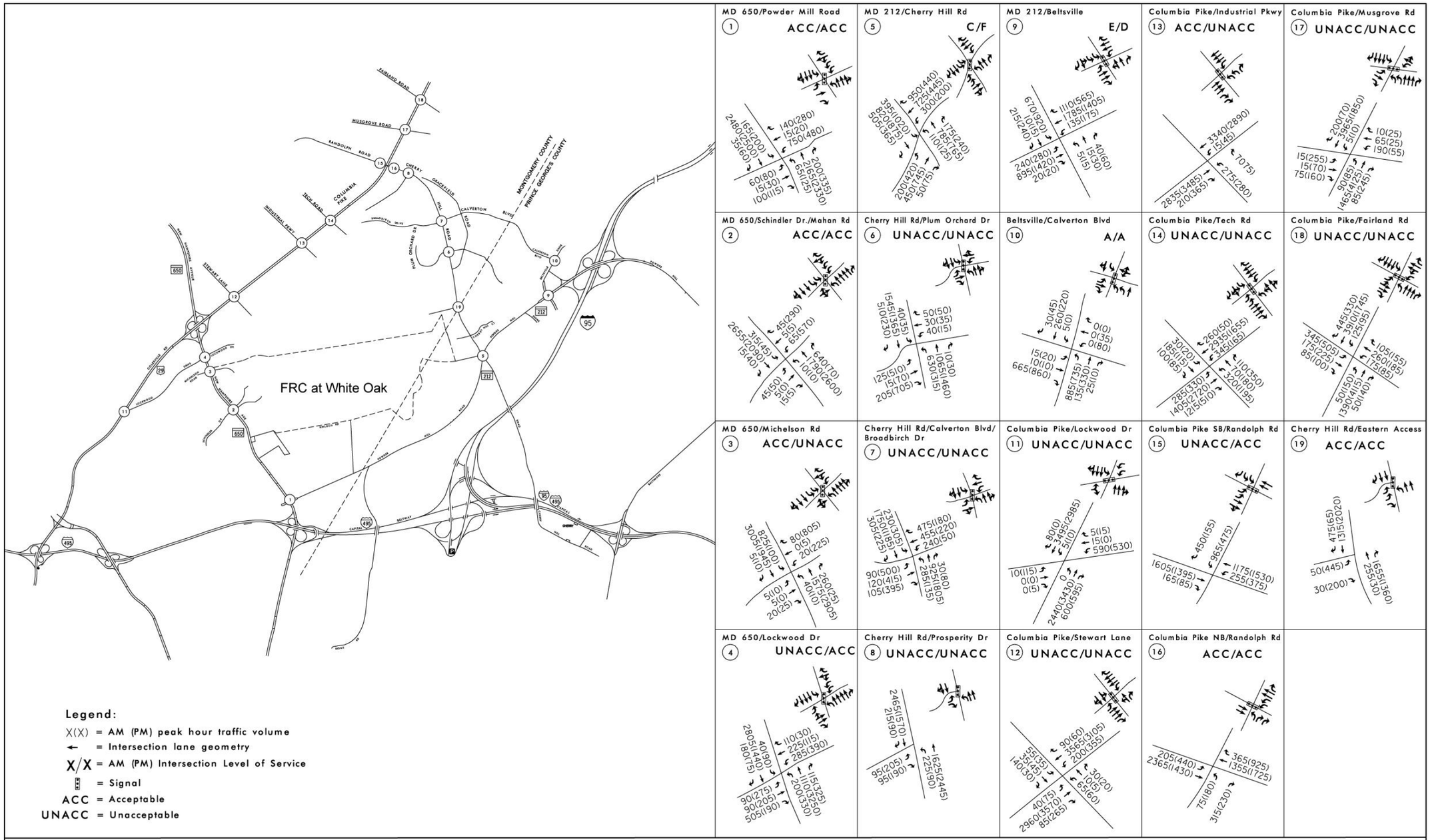

Figure 10
Action Traffic Volumes, Lane Geometries, and LOS Results
(Without ICC)

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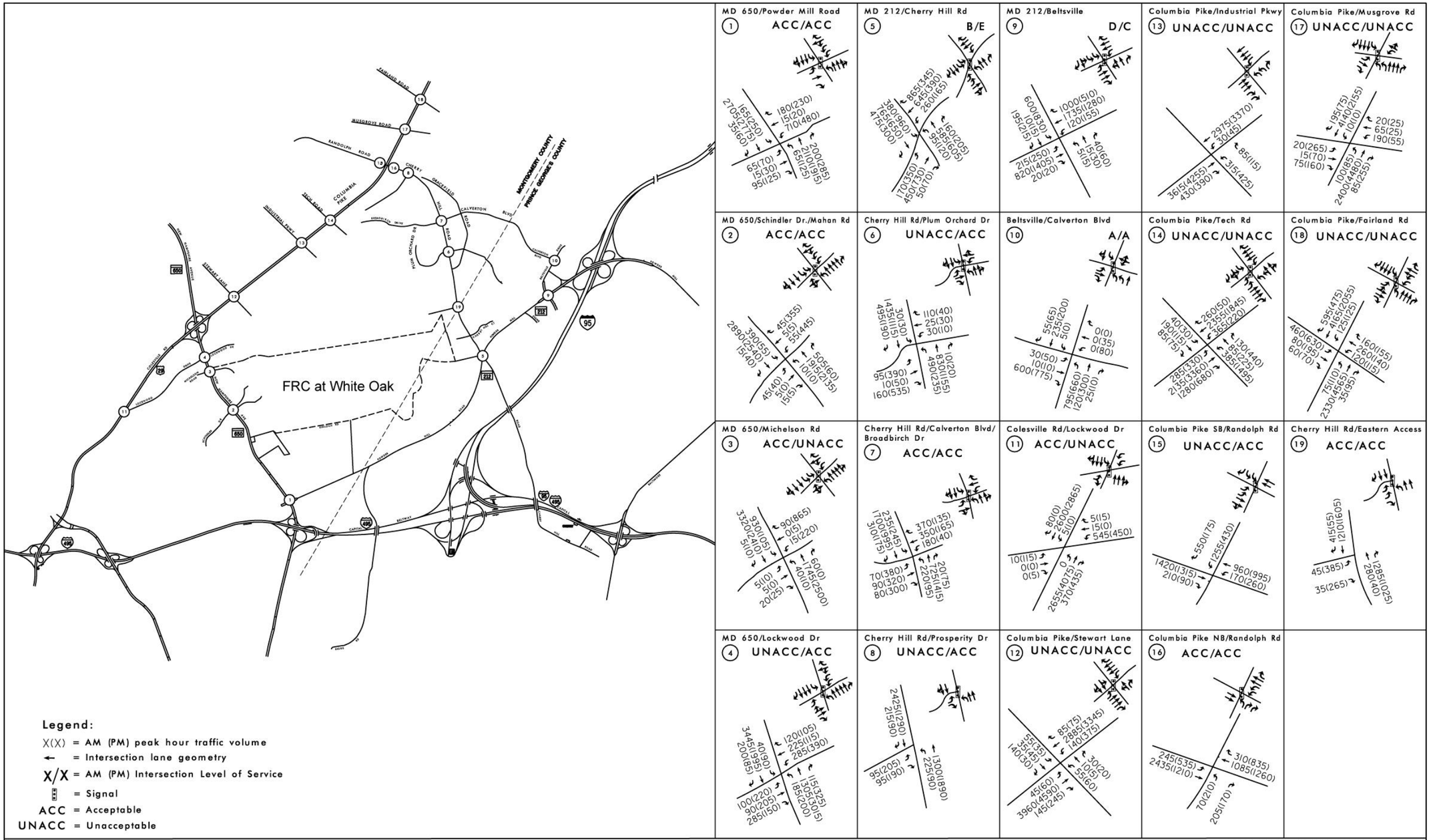

Figure 11
Action Traffic Volumes, Lane Geometries, and LOS Results
(With ICC)

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4. Mitigation Measures

Major improvements would be required at most of the intersections to bring them to acceptable levels of service whether under the 2006 Master Plan or the Master Plan Update alternatives. The following mitigation measures are recommended, even though roadway improvements are not under the jurisdiction of GSA and GSA cannot fund the transportation improvements.

4.1 Improve Operational Conditions at Intersections

A majority of the intersections in the study area are expected to operate at an unacceptable LOS. With the ICC, many intersections along US 29 are expected to operate with a higher CLV as compared to without the ICC. Many of the intersections along Cherry Hill Road, however, are expected to operate with a lower CLV.

Even though roadway improvements are not under the jurisdiction of GSA and GSA cannot fund the transportation improvements, Table 18 shows the roadway improvements that are recommended to improve traffic conditions based on an analysis of the traffic conditions:

Table 8. Recommended Roadway Improvements

Intersection	No-Action Alternative (2006 Master Plan)	Alternatives 2 & 3 (Master Plan Update)	
		Without the ICC	With the ICC
Cherry Hill Road/Powder Mill Road			
Provide an exclusive right turn lane along Powder Mill Road		X	
Cherry Hill Road/Plum Orchard Drive			
Provide an exclusive southbound right turn lane along Cherry Hill Road	X	X	X
Cherry Hill Rd/Calverton Blvd./Broadbirch Dr			
Provide an exclusive southbound right turn lane along Cherry Hill Road	X	X	X
Provide an exclusive right turn lane along Broadbirch Drive	X	X	X
Cherry Hill Road/Prosperity Drive			
Provide an additional eastbound left turn lane from Prosperity Drive to northbound Cherry Hill Road		X	
Provide an additional northbound left turn lane along Cherry Hill Road		X	X
MD 650/Michelson Road			
Change the striping/signage on the westbound Michelson Road approach to a shared left turn/through lane, and two right turn lanes			X

Intersection	No-Action Alternative (2006 Master Plan)	Alternatives 2 & 3 (Master Plan Update)	
		Without the ICC	With the ICC
US 29 Fairland Road/Musgrove Road			
The interchange as proposed by SHA (CTP 2008-2013) should be constructed*		X	X
US 29/ Tech Road; US 29/Stewart Lane			
The interchange as proposed by SHA (CTP 2008-2013) should be constructed		X	X

*The Consolidated Transportation Program (CTP) is Maryland's six-year capital budget for transportation projects. The Capital Program includes major and minor projects for the Maryland Department of Transportation and the modal agencies and related authorities.

4.2 Transportation Management Plan (TMP)

The Master Plan Update action analysis presented above includes the implementation of a Transportation Management Plan (TMP). The site trip generation for the 1,170 FDA employees is based on the parking provided on site, which includes 1 parking space for every 1.5 employees, thus inherent in the analysis is the need to provide the employees who will not have parking spaces with viable alternative modes of transportation. Therefore, the FRC White Oak Campus has implemented a TMP which seeks to reduce the number of single occupancy vehicles and encourage alternate modes of traveling to work.

An update to the FDA TMP has been prepared. In order to update the TMP, an employee survey was completed in December 2007. Separate surveys were completed by the employees currently at the White Oak Campus and the employees slated to move to the Campus. Travel characteristics as well as the TMP strategies which are in place as of December 2007 were analyzed. Overall, the FDA is meeting or exceeding the goals outlined in the 2005 TMP. As of December 2007, the FDA employees at the FRC White Oak Campus have an average vehicle occupancy (AVO) of 1.27. FDA is dedicated to continue on this path and obtain an AVO of 1.5 by 2012. Strategies to attain this AVO have been outlined in the TMP. The following strategies are either in place or are in the process of being implemented:

- FDA employees eligible to receive Transit Subsidies
- FDA provides shuttle service from Silver Spring, Twinbrook, and College Park Metrorail stations and other FDA locations
- FDA also runs a circulator shuttle which provides service within the FDA Campus
- FDA will provide Carpool/Vanpool incentives such as preferred parking, and guaranteed Ride Home service
- An On-Site Transit Stop will be provided
- Telecommuting programs are and will continue to be provided
- FDA provides Bicycling/Walking-to-work incentives
- FDA employ a full time Employee Transportation Coordinator

5. Conclusions

FDA is proposing to increase its employee population from 7,719 employees to 8,889 employees by 2012 as part of its headquarters consolidation project at the FDA White Oak Campus which is located in White Oak, Maryland. This is an increase of 1,170 employees. The FDA is also proposing to increase its visitor parking by an additional 500 spaces, for a total of 1,000 visitor spaces. This development is expected to add approximately 777 trips during the morning peak hour and 776 trips during the evening peak hour.

The ICC is expected to be completed by 2012; however, a majority of the FDA employees are expected to be on site before the completion of the ICC. Thus, two scenarios were investigated; one scenario with the ICC and another without the ICC.

Overall, under both scenarios, a majority of the study intersections are expected to operate at or above capacity conditions. Results of the analysis indicate that with the addition of 1,170 new FDA employees at the FDA Campus, most intersections are expected to continue operating above unacceptable LOSs during peak hours. With some improvements, however, the trips from the additional FDA employees can be mitigated. These improvements are outlined in the Mitigation Measure section of the report.

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Appendix A: Traffic Counts

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Appendix B: Existing Level of Service Worksheets

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Appendix C: No-Action and Action Level of Service Worksheets (without ICC)

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Appendix D: No-Action and Action Level of Service Worksheets (with ICC)

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