

F.S.M. Traffic Study Guidelines (12/07)
Checklist for Application Acceptance

Loudoun County Virginia
Office of Transportation Services

Page 1 of 4

Memo dated January 27, 2009 / Revised March 25, 2009 by William H. Gordon, Associate Inc. Lot 1

Application Name: Adles Industrial Park South, Lot 1 Date: 3/30/09

Application Type: Special Exception Reviewer: James P. Philly

of Guidelines Satisfied: 13 of 13

Accept or Reject: Accept Comment: _____

- (1) **Study Area:** Roadways internal or adjacent to the development site shall be included in the traffic study. The study area should be defined at the scoping meeting and as a guideline should include other external roads to the extent that the project's generated traffic is anticipated to exceed 10 percent of the road's current/existing traffic volumes (at the time of application).

Does Study Meet Guidelines? yes Comments: See page 1, 2

- (2) **Traffic Count Locations:** Traffic counts are required on the adjacent roads, the adjacent intersections beyond the project's frontage on adjacent roads in the study area. The AM/PM peak period traffic counts shall not be more than twelve (12) months old at the time of the application submission. Twenty-four (24) hour weekday traffic counts are also required for roadway segments.

Does Study Meet Guidelines? yes Comments: N.A.

- (3) **Trip Generation:** As a general guide to vehicle trip generation, the latest edition of the Institute of Transportation Engineer's (I.T.E.). Trip Generation Report shall be used. These rates may be supplemented by additional information provided by the County. If the applicant chooses to use different rates, they shall be documented and agreed to at the scoping meeting prior to their use in the traffic analyses. Primary trip reductions associated with passby trips and methodologies for trip reductions associated with passby trips shall be discussed and agreed upon at the scoping meeting.

Does Study Meet Guidelines? yes Comments: See Site Generation Volumes on pages 2 + 3

- (4) **Traffic Volume Projections:** The traffic study shall include an agreed upon build out year and provide existing and projected traffic volumes, with and without the subject project, for Average Daily Traffic (ADT), as well as AM and PM peak hours. The peak hour of the project/individual land use(s) (as given in the ITE Trip Generation Report) should be added to the corresponding AM/PM existing peak hour of the adjacent roadway traffic volumes (to show the worst case scenario), if the peak hour of the project/individual land use(s) for the generator is greater than the peak hour of the adjacent roadway (per ITE Trip Generation Report). The existing peak hour of traffic on the roads adjacent to the subject project site shall be identified. These traffic volumes shall be provided at roadway intersections and commercial or private accessways/entrances.

Does Study Meet Guidelines? yes Comments: N.A.

- (5) **LOS Analysis:** : Level of Service (LOS) calculations for existing and projected conditions, with and without the subject project, for highway segments, intersection legs, and entrances shall be provided. Calculations shall be in accordance with the Highway Capacity Manual (HCM) and/or the Highway Capacity Software (HCS), or as may be agreed at the scoping meeting. Traffic volumes and LOS information shall be provided for each phase of development, to include conditions at date of project completion. Projections shall also be made for date of completion plus ten (10) years or to an agreed upon forecast year.

Does Study Meet Guidelines? yes Comments: N.A.

- (6) **Minimum Roadway/Intersection LOS Standards:** Recommendations for phased improvements to the road network links in order to maintain an acceptable LOS (minimum LOS "D") shall be provided. For each phase up to and including buildout, a minimum approach and overall LOS "D" at intersections shall apply.

Does Study Meet Guidelines? yes Comments: Insignificant Traffic

(7) **Background Traffic Assumptions:** Assumptions which determine projected background traffic, including through traffic growth rate to be applied on roadway links, shall be confirmed at the scoping meeting. The sources for determining future traffic projections will include one or more of the following:

- The Loudoun County Growth Summary or similar documents from Loudoun County.
- The Loudoun County transportation model which incorporates COG's Cooperative Forecasts for Loudoun County.
- Approved developments in the vicinity of the proposed development.

Specific other approved development names and respective development square footage or residential units in the study shall be provided.

Does Study Meet Guidelines? yes Comments: N.A.

(8) **Traffic/Trip Distribution:** Directional trip distribution information shall be provided for project entrances and collector and arterial intersections within the study area for the phases and categories (e.g., residential, office, retail, industrial and institutional) of development.

Does Study Meet Guidelines? yes Comments: See page 3 for percentage distribution

(9) **LOS Calculations Assumptions:** Traffic counts and LOS worksheets and projected traffic volume LOS analyses, using agreed upon analysis techniques, including existing AM/PM peak hour signal timing, shall be included as a part of the traffic study.

Does Study Meet Guidelines? yes Comments: N.A.

(10) **Mode Choice:** Modal split information shall be provided for the phases of the analysis, with sources of information identified (e.g., COG model).

Does Study Meet Guidelines? yes Comments: N.A.

- (11) **Safety Locations:** Road safety hazards, as identified by the ISTEA set-aside funding criteria and/or as identified by the County at the scoping meeting, within the study area shall be analyzed for all roadway links and intersections in the traffic study.

Does Study Meet Guidelines? yes Comments: See page 3 for description of construction on Pleasant Valley Road and Route 50

- (12) **Traffic Mitigation Measures:** If trip reduction factors are used in the study, measures necessary to implement the reduction must be specified, with supporting documentation.

Does Study Meet Guidelines? yes Comments: N.A.

- (13) **Bicycle & Pedestrian Accommodations:** When bicycle and pedestrian accommodations are used to reduce anticipated traffic volumes, a description of the physical and functional characteristics of the proposed bicycle and pedestrian accommodations shall be provided. If such separate bicycle accommodations (e.g., striped lanes or multi-purpose trails) are anticipated, they shall also be identified. A description of the functional characteristics shall be provided to identify the transportation options that these accommodations provide (e.g., pedestrian access to retail center, safe bicycle route to elementary school, inter-parcel connections to adjacent neighborhoods, access to W&OD trail, etc.)

Does Study Meet Guidelines? yes Comments: N.A.

lmm/

G:\LCG\OTS\FSM Traffic Study Scoping Documents\FSM Checklist for Application (12-07 FSM Revisions).doc

From: Ginni VanHorn
To: Polis, Wini
Date: 3/26/2009 5:19 PM
Subject: Fwd: Re: FW: Dulles Industrial Park Lot 1

>>> George Phillips 3/25/2009 3:21 PM >>>
Roy- 3/25/09

I got your phone message and E mail. Your revised traffic statement covers it. Go ahead and send this in with your application and when it comes to me through Ginni in Planning, I'll check it off as accepted.

Thanks, George

>>> "Roy Clark" <RClark@whga.com> 3/25/2009 1:26 PM >>>

> -----Original Message-----

> From: Roy Clark
> Sent: Wednesday, March 25, 2009 1:24 PM
> To: 'gphillips@loudoun.gov'
> Subject: FW: Dulles Industrial Park Lot 1

>

>

>

> -----Original Message-----

> From: Roy Clark
> Sent: Wednesday, March 25, 2009 1:21 PM
> To: 'gphillips@loudoun.gov'
> Subject: Dulles Industrial Park Lot 1

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> George: Here is the revised Traffic Impact Statement for SPEX 2009 - 0006. Sorry for the delay.....roy

>

>

>

> > <<Revised 3-25-09 Traffic Study Statement for Dulles Industrial Park South Lot 1.doc>>

>

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> Roy Clark

> Director of Planning and Land Use Services

> rclark@whga.com

> 571-291-4625

>

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> WILLIAM H. GORDON ASSOCIATES, INC.

> Civil Engineering * Survey * Landscape Architecture * Land Planning

> Site Security Consulting * GIS

> 44084 Riverside Pkwy., Ste. 100, Leesburg, VA 20176

> 703-729-9009 (office) / 703-478-8517 (fax)

> <http://www.whga.com> (<http://www.whga.com/>)

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William H. Gordon Associates, Inc.

Date: January 27, 2009
Revised March 25, 2009
Re: **Dulles Industrial Park South, Lot 1**
Traffic Study Statement

On behalf of Dulles South Properties, LLC, we are writing to provide you traffic information in lieu of a full Traffic Study for a proposed Special Exception application as discussed with County staff at the October 14, 2008 Traffic Study Scoping meeting.

Site Description

Dulles South Properties, LLC is seeking to relocate AmeriGas propane distributor to their property located at 44180 Wade Drive, Chantilly, Virginia (PIN 097-40-7676). The application is for a special exception to permit bulk storage and commercial distribution of propane gas. The property is zoned MR-HI Mineral Resource – Heavy Industrial and is currently occupied by an air compressor rental company and a landscape contractor. The current users occupy approximately 13,280 square feet of gross floor area. The proposed facility will be two (2) 30,000 gallon propane storage tanks on a concrete pad within a fenced compound. No building structures are proposed with this application.

Site Access

Access to the site is from a VDOT commercial entrance from Wade Drive, Route 873. Wade Drive intersects with Pleasant Valley Drive, Route 609, approximately 1,000 linear feet east of the site and ends in the west at a cul-de-sac adjacent to the site. Pleasant Valley Drive intersects Route 50 to the south and terminates at the Washington Dulles International Airport boundary line to the north.

Use / Hours of Operation

The special exception is for two (2) 30,000 gallon propane storage tanks. There is no direct sale to the general public. AmeriGas delivery trucks come to the site to fill their trucks for delivery to their customers in southeast Loudoun County and the surrounding areas. The 30,000 gallon propane storage tanks are replenished at various times of the month by a tractor-trailer. Normal business hours are 7:30 A.M. to 5:00 P.M. Monday through Friday with occasional deliveries after hours and weekends.

Wade Drive

Wade Drive (Route 873) is a two lane paved local roadway within a 60' right-of-way. The Revised Countywide Transportation Plan calls for this segment to become a major collector (Route 50 North Collector Road) with four lanes in a 70' right-of-way. The estimated Annual Average Daily Traffic (AADT) for Wade Drive is 180 per VDOT's 2007 Daily Traffic Volume Estimates.

Pleasant Valley Drive

Pleasant Valley Drive (Route 609) is a two lane paved roadway within a variable width right-of-way. The Pleasant Valley Drive / Route 50 intersection is signalized. Plans are currently under review by Loudoun County for improvements to the Route 609 and Route 50 intersection with site plan application STPL-2008-0030 to allow a left, left/through, and right turn lanes. The current posted limit is 35 MPH. The estimated Average Annual Daily Traffic (AADT) for Pleasant Valley Drive is 3,300 per VDOT's 2007 Daily Traffic Volume Estimates.

Site Generation Volumes

Permitted Use as Zoned

Land Use	ITE Code	Size (GFA)	----- Weekday -----						
			AM Peak Hour			PM Peak Hour			Daily Total
			In	Out	Total	In	Out	Total	
General Heavy Industrial	120	147,995 SF	38	37	75	50	50	100	222

Existing / Proposed Use

Land Use	ITE Code	Size (GFA)	----- Weekday -----						
			AM Peak Hour			PM Peak Hour			Daily Total
			In	Out	Total	In	Out	Total	
Office	710	1,978 SF	1	0	1	0	3	3	4
General Heavy Industrial	120	11,302 SF	3	3	6	4	4	8	17
AmeriGas – Historical Data		N/A	1	1	2*	1	1	2*	4*
Site Total		13,280 SF	5	4	9	5	8	13	25

*Assumes Worse Case

Refer to the attached "Aldie Plant Activity" for site generation volumes used with this Traffic Study Statement.

Site Trip Distribution

To / From East on Route 50	25%
To / From West on Route 50	25%
To / From North on Pleasant Valley Drive	25%
To / From South on Pleasant Valley Drive	25%
Total	100%

Safety Issues

A portion of Pleasant Valley Drive is currently under construction for a widening which will be completed in the near future. Route 50 is scheduled to be widened to six (6) lanes from Route 28 to Route 742. Construction is scheduled to begin in the summer of 2010. This area will be a construction zone for a period of time and will require caution when used.

Conclusion

The addition of the AmeriGas Propane Storage and Distribution Facility to existing uses already located on the property will be substantially less than if the property was developed with by-right uses. The AmeriGas facility will have negligible impact on the existing transportation network.



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**DULLES INDUSTRIAL PARK
SOUTH**

SPECIAL EXCEPTION EXHIBIT

GA
DESIGNS • SURVEYS • LAND PLANNING • LANDSCAPE ARCHITECTS
William H. Gordon Associates, Inc.
4400 Riverside Pkwy., Suite 100, Leesburg, Virginia 20176
(703) 785-0000 FAX (703) 490-0000

ALDIE PLANT ACTIVITY

MONTH/2008	LOADS DROPPED	LOADS PULLED OUT		
08-Jun	1	5		
08-May	1	8		
08-Apr	3	17		
08-Mar	8	24		
08-Feb	8	42		
08-Jan	17	77		
Dec-07	7	35		
Nov-07	7	18		
Oct-07	3	26		
Sep-07	3	7		
Aug-07	4	6		
Jul-07	0	6		
Jun-07	3	4		
May-07	2	10		
Apr-07	4	19		
Mar-07	17	31		
Feb-07	20	73		
Jan-07	14	48		
06-Dec	5	20		
06-Nov	9	21		

Virginia Department of Transportation
Traffic Engineering Division
2007
Annual Average Daily Traffic Volume Estimates By Section of Route
Loudoun Maintenance Area

Route	Length	AADT	QA	4Tire	Bus	Truck				QC	K Factor	QK	Dir Factor	AAWDT	QW	Year
						2Axle	3+Axle	1Trail	2Trail							
Loudoun County																
(863) Highwater Rd	0.09	40	R								NA		NA			1999
(864) Glenn Dr	0.54	8400	R								NA		NA			03/14/2005
(864) Glenn Dr	0.11	1900	R								NA		NA			1999
(864) Glenn Dr	0.10	1900	N								NA		NA			1999
(865) Acacia Dr	0.21	200	R								NA		NA			1999
(866) Underwood Lane	0.31	1200	R								NA		NA			1999
(867) Shepard Dr	0.25	3300	R								NA		NA			03/14/2005
(868) Davis Dr	0.31	4400	R								NA		NA			03/19/2005
(868) Davis Dr	0.06	5400	N								NA		NA			03/19/2005
(868) Davis Dr	0.11	5400	R								NA		NA			03/19/2005
(868) Davis Dr	0.33	NA									NA		NA			
(869) Bryant Ct	0.11	290	R								NA		NA			1999
(870) Mullen Hill Rd	0.22	60	R								NA		NA			04/25/2005
(871) Manor House Rd	0.08	70	R								NA		NA			1999
(872) Lewis Ct	0.15	80	R								NA		NA			1999
(873) Wade Dr	0.27	180	R								NA		NA			1999
(875) Powers Ct	0.13	150	R								NA		NA			1999
(877) Racefield Lane	0.60	140	R								NA		NA			1999
(878) Glendale St	0.26	290	R								NA		NA			1999
(879) Basswood Ct	0.23	170	R								NA		NA			1999

Virginia Department of Transportation
Traffic Engineering Division
2007
Annual Average Daily Traffic Volume Estimates By Section of Route
Loudoun Maintenance Area

Route	Length	AADT	QA	4Tire	Bus	Truck				QC	K Factor	QK	Dir Factor	AAWDT	QW	Year
						2Axle	3+Axle	1Trail	2Trail							
Loudoun County																
(600) Lenah Rd	2.00	650	R									NA		NA		03/01/2002
			From:	53-705 Braddock Rd												
			To:	US 50 John S Mosby Hwy												
(601) Raven Rocks Rd	0.40	140	R									NA		NA		1999
			From:	Dead End												
			To:	West Virginia State Line												
(602) Russell Rd	0.44	210	R									NA		NA		02/01/2002
			From:	53-671 S, Harpers Ferry Rd												
			To:	53-671 N, Harpers Ferry Rd												
(603) Brockman Lane	0.13	320	R									NA		NA		04/21/2005
			From:	Fairfax County Line												
			To:	53-1637 Yorktown Dr												
(603) Brockman Lane	0.16	860	R									NA		NA		1999
			From:	Dead End												
			To:	Dead End												
(604) Alcott Way	0.21	40	R									NA		NA		1999
			From:	53-1500 Englewood Dr												
(604) Alcott Way	0.21	180	R									NA		NA		02/16/2005
			From:	53-625 Church Rd; 53-1454												
(604) Sugarland Rd	0.25	9800	G	99%	0%	0%	0%	0%	0%	C	0.107	F	0.636	11000	G	2007
			From:	Fairfax County Line												
			To:	Fairfax County Line												
(605) Rock Hill Rd	0.60	2100	R									NA		NA		04/05/2005
			From:	53-606 Old Ox Rd												
(606) Old Ox Rd	0.81	30000	G	92%	2%	2%	2%	2%	0%	F	0.098	F	0.685	31000	G	2007
			From:	US 50 John S Mosby Hwy												
			To:	53-621 Evergreen Mills Rd												
(606) Old Ox Rd	1.98	21000	G	92%	2%	2%	2%	2%	0%	F	0.095	F	0.736	22000	G	2007
			From:	53-857 Bears School Rd												
(606) Old Ox Rd	3.03	24000	G	92%	2%	2%	2%	2%	0%	C	0.092	F	0.620	24000	G	2007
			From:	SR 267 Dulles Toll Rd												
(606) Old Ox Rd	2.12	37000	G	92%	2%	2%	2%	2%	0%	F	0.088	F	0.650	38000	G	2007
			From:	SR 28 Sully Rd												
(606) Old Ox Rd	1.09	33000	G	97%	0%	1%	1%	0%	0%	C	0.088	F	0.507	37000	G	2007
			From:	53-605 Rock Hill Rd												
(606) Old Ox Rd	0.03	41000	G	97%	0%	1%	1%	0%	0%	F	0.086	N	0.515	43000	G	2007
			From:	WCL Herndon												
			To:	53-640 Farmwell Rd												
(607) Smith Switch Rd	3.36	890	R									NA		NA		01/25/2005
			From:	SR 7 Harry Byrd Hwy												
(607) Presidential Dr	0.35	330	R									NA		NA		1999
			From:	53-1050 George Washington Blvd												
			To:	53-662 Loudoun Orchard Rd												
(608) Foxhill Rd	0.49	120	R									NA		NA		1999
			From:	Fairfax County Line												
			To:	Dead End												
(609) Pleasant Valley Rd	0.56	2300	G	96%	1%	2%	1%	1%	0%	C	0.086	F	0.801	2300	G	2007
			From:	US 50 John S Mosby Hwy												
(609) Pleasant Valley Rd	0.65	3300	R									NA		NA		01/06/2005
			From:	Dulles Airport												
			To:	Dead End												
(610) Ruritan Rd	0.40	400	R									NA		NA		1999
			From:	53-859 Ruritan Circle												
			To:													

Application Name: Americas Propane (Dulles South) Date: 10/14/08

Application Type: Special Exception

Attendees: George Phillips
Steve Conforti
Steve Stacklein

Ray Clark
Tony Brathwaite
John Herman
Tom Kinlaw

- (1) **Study Area:** Roadways internal or adjacent to the development site shall be included in the traffic study. The study area should be defined at the scoping meeting and as a guideline should include other external roads to the extent that the project's generated traffic is anticipated to exceed 10 percent of the road's current/existing traffic volumes (at the time of application).

Comments: Route 50 / Route 609 (Lodge Drive) north of Route 50
about
Mention in letter of the planned Route 50 North Collector Road

- (2) **Traffic Count Locations:** Traffic counts are required on the adjacent roads, the adjacent intersections beyond the project's frontage on adjacent roads in the study area. The AM/PM peak period traffic counts shall not be more than twelve (12) months old at the time of the application submission. Twenty-four (24) hour weekday traffic counts are also required for roadway segments.

Comments: Not necessary assuming the proposed trip generation is
lower than the existing by right use as zoned.
If it does exceed then additional analysis will be required
and meeting will need to be held with the applicants consultants

- (3) **Trip Generation:** As a general guide to vehicle trip generation, the latest edition of the Institute of Transportation Engineer's (I.T.E.). Trip Generation Report shall be used. These rates may be supplemented by additional information provided by the County. If the applicant chooses to use different rates, they shall be documented and agreed to at the scoping meeting prior to their use in the traffic analyses. Primary trip reductions associated with passby trips and methodologies for trip reductions associated with passby trips shall be discussed and agreed upon at the scoping meeting.

Comments: Applicants will provide a comparison of the
proposed use (Propane Business in Aldie, VA) with the
existing by right zoning (Heavy Industrial). These numbers will
be included in the letter

- (4) **Traffic Volume Projections:** The traffic study shall include an agreed upon build out year and provide existing and projected traffic volumes, with and without the subject project, for Average Daily Traffic (ADT), as well as AM and PM peak hours. The peak hour of the project/individual land use(s) (as given in the ITE Trip Generation Report) should be added to the corresponding AM/PM existing peak hour of the adjacent roadway traffic volumes (to show the worst case scenario), if the peak hour of the project/individual land use(s) for the generator is greater than the peak hour of the adjacent roadway (per ITE Trip Generation Report). The existing peak hour of traffic on the roads adjacent to the subject project site shall be identified. These traffic volumes shall be provided at roadway intersections and commercial or private accessways/entrances.

Comments: N.A. See #2

- (5) **LOS Analysis:** Level of Service (LOS) calculations for existing and projected conditions, with and without the subject project, for highway segments, intersection legs, and entrances shall be provided. Calculations shall be in accordance with the Highway Capacity Manual (HCM) and/or the Highway Capacity Software (HCS), or as may be agreed at the scoping meeting. Traffic volumes and LOS information shall be provided for each phase of development, to include conditions at date of project completion. Projections shall also be made for date of completion plus ten (10) years or to an agreed upon forecast year.

Comments: N.A. See Comment #2

- (6) **Minimum Roadway/Intersection LOS Standards:** Recommendations for phased improvements to the road network links in order to maintain an acceptable LOS (minimum LOS "D") shall be provided. For each phase up to and including buildout, a minimum approach and overall LOS "D" at intersections shall apply.

Comments: N.A. See Comment #2

(7) **Background Traffic Assumptions:** Assumptions which determine projected background traffic, including through traffic growth rate to be applied on roadway links, shall be confirmed at the scoping meeting. The sources for determining future traffic projections will include one or more of the following:

- The Loudoun County Growth Summary or similar documents from Loudoun County.
- The Loudoun County transportation model which incorporates COG's Cooperative Forecasts for Loudoun County.
- Approved developments in the vicinity of the proposed development.

Specific other approved development names and respective development square footage or residential units in the study shall be provided.

Comments: N.A. See Comment #2

(8) **Traffic/Trip Distribution:** Directional trip distribution information shall be provided for project entrances and collector and arterial intersections within the study area for the phases and categories (e.g., residential, office, retail, industrial and institutional) of development.

Comments: Will provide in the letter

(9) **LOS Calculations Assumptions:** Traffic counts and LOS worksheets and projected traffic volume LOS analyses, using agreed upon analysis techniques, including existing AM/PM peak hour signal timing, shall be included as a part of the traffic study.

Comments: N.A. See Comment #2

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Comments: N.A.

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Comments: Will mention either way

- (12) **Traffic Mitigation Measures:** If trip reduction factors are used in the study, measures necessary to implement the reduction must be specified, with supporting documentation.

Comments: N.A.

- (13) **Bicycle & Pedestrian Accommodations:** When bicycle and pedestrian accommodations are used to reduce anticipated traffic volumes, a description of the physical and functional characteristics of the proposed bicycle and pedestrian accommodations shall be provided. If such separate bicycle accommodations (e.g., striped lanes or multi-purpose trails) are anticipated, they shall also be identified. A description of the functional characteristics shall be provided to identify the transportation options that these accommodations provide (e.g., pedestrian access to retail center, safe bicycle route to elementary school, inter-parcel connections to adjacent neighborhoods, access to W&OD trail, etc.)

Comments: N.A.

Staff Signature: Deane R. Phillips 10/14/08

Traffic Consultant Signature: [Signature] AS Attorney
Thomas Dunlap 777-7319