

F.S.M. Traffic Study Guidelines (12/07)  
Checklist for Application Acceptance  
Page 1 of 4

Loudoun County Virginia  
Office of Transportation Services

Feb. 25, 2007 Memo

Application Name: Hybrid Energy Park Stonehill Science Business Park Date: 3/13/09

Application Type: SE/Commission Permit Reviewer: James R. Phillips

# of Guidelines Satisfied: 13 of 13

Accept or Reject: Accept Comment: See Feb. 25, 2009 memo. The traffic study dated Oct. 28, 2008 covers everything else. This is a trip generation reduction.

- (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: N.A.

- (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 page 6 of the memo (includes trip generation comparison)

- (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: N.A.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(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: N.A.

---

---

---

(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.  
(Already included in previous traffic study)

---

---

---

(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: Conced in the traffic  
Study

- (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.

Imm/

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



# Memorandum

**To:** Jordan Dimoff

**Organization/Company:** Andrews Community Investment Corp.

**From:** John Callow

**Date:** February 25, 2009

**Project Name/Subject:** Stonewall Secure Business Park

**PHR+A Project Number:** 16206-1-0

Patton Harris Rust & Associates (PHR+A) has prepared this document for the proposed Hybrid Energy Park at Stonewall Secure Business Park development to be located to the east of Sycolin Road, south of Cochran Mill Road and west of Gant Lane, in Loudoun County, Virginia. The Hybrid Energy Park will be located on 78 acres of the 294-acre Stonewall Secure Business Park. The purpose of this document is to provide a trip generation comparison for the previously “proposed” land uses for the rezoning application for the Stonewall Secure Business Park (ZMAP 2008-0017) and the “revised” land uses for the special exception/commission permit applications for the Hybrid Energy Park.

The “previously proposed” land uses included 1,359,072 square feet of office and research and development uses to be zoned PD-IP. Per agreement with Loudoun County, 49% of the development (665,945 square feet) would consist of office and 51% of the development (693,127 square feet) would consist of research & development, respectively. The newly “revised” development land uses would include the hybrid energy park located within the proposed PD-GI zoned portion of the Stonewall Secure Business Park, which would accommodate 25-full time employees. PHR+A has provided **Table 1** below in order to demonstrate the comparison of trips generated by “revised” land uses and “proposed” land uses, respectively.

**Table 1**  
**Development: Stonewall Secure Business Park**  
**Trip Generation Comparison**

Code	Land Use	Amount	AM Peak Hour			PM Peak Hour			ADT
			In	Out	Total	In	Out	Total	
<b>“Revised” Land Uses</b>									
	Hybrid Energy Park	25 Employees	22	2	24	3	23	26	89
	<b>Total Trips</b>		<b>22</b>	<b>2</b>	<b>24</b>	<b>3</b>	<b>23</b>	<b>26</b>	<b>89</b>
<b>“Proposed” Land Uses</b>									
710	Office	665,945 SF	752	103	855	140	684	825	5,744
760	Research & Development	693,127 SF	633	130	762	99	559	658	4,933
	<b>Total Trips</b>		<b>1,385</b>	<b>232</b>	<b>1,617</b>	<b>239</b>	<b>1,244</b>	<b>1,483</b>	<b>10,678</b>
<b>Differential</b>									
<b>(“Revised” Land Use Trips minus “Proposed” Land Use Trips)</b>			<b>-1,363</b>	<b>-230</b>	<b>-1,593</b>	<b>-236</b>	<b>-1,221</b>	<b>-1,457</b>	<b>-10,589</b>

As shown in Table 1, the “revised” Hybrid Energy Park development will generate 24 AM peak hour trips (22 in, 2 out), 26 PM peak hour trips (3 in, 23 out) and 89 ADT. The “proposed” Stonewall Secure Business Park development will generate 1,617 AM peak hour trips (1,385 in, 232 out), 1,483 PM peak hour trips (239 in, 1,244 out) and 10,678 Average Daily Trips (ADT). As a result, the “Revised” uses will generate 1,593 total AM peak hour trips, 1,457 total PM peak hour trips and 10,589 ADT less than the “Proposed” development.