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## MEMORANDUM

TO: Planning Commission Members,  
Upper Providence Township

FROM: Frank A. Zabawski, P.E.

DATE: September 8, 2011

RE: Gumbes Road Traffic Calming  
Discussion of Potential Actions

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This memo discusses potential traffic calming actions for Gumbes Road between Black Rock Road and Egypt Road that were identified with the applicant and other local residents. The identified actions and this memo are a follow-up to the initial discussion held with the Planning Commission at the July 13, 2011 meeting.

The contents of this memo include: a listing of potential actions that was developed in conjunction with the applicant and other neighborhood residents; a discussion of the various actions, including how they can be implemented and preliminary cost estimates; and, a suggested implementation sequence. The overall budget, funding source and a schedule for implementation, which are dependent on the input from and decisions by the Board of Supervisors, are not addressed in this memo.

This submission is being provided for review, comment and discussion by the Planning Commission, Township Staff, the applicant and other participating residents.

### **Proposed Traffic Calming Actions**

The potential traffic calming actions for Gumbes Road identified with the applicant and other residents are listed in the following Exhibit 1, which was previously shared with the applicant.

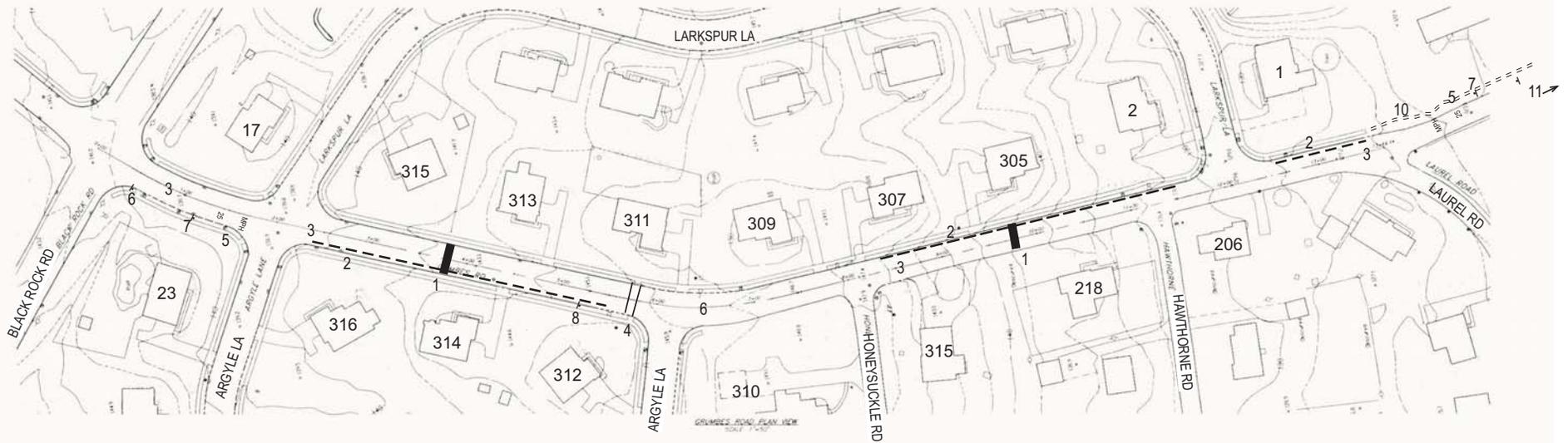
The various actions are also illustrated on a road layout plan that was prepared previously by the Township Engineer. This illustration is included as Exhibit 2. The exhibit shows the general layout of Gumbes Road, intersecting streets, residence locations along with property addresses and suggested locations, where applicable, for the actions proposed by the residents.

**Exhibit 1**  
**Gumbes Road Traffic Calming**  
**Proposed Actions <sup>(1)</sup>**

1. Install Speed Humps with appropriate signing and pavement markings in the vicinity of 305 and 313/314 Gumbes Road. Consider use of temporary speed humps for trial period.
2. Shift the double-yellow centerline marking where feasible to provide 10' travel lanes and an 8' shoulder parking lane on one side of the roadway.
3. As a supplement to Item #2, add white shoulder line pavement markings creating 10' travel lanes along Gumbes Road in addition to the existing double-yellow centerline marking.
4. Add white crosswalk lines to the Gumbes Road crosswalk at the southern Argyle Lane intersection.
5. Add "25 MPH" word message pavement markings on the entrance approaches from Black Rock Road and Egypt Road.
6. Review the size and placement of the No Truck signs at Black Rock Road and Egypt Road.
7. Add 'No Thru Street' (W14-2-1) warning signs to the entrance approaches from Black Rock Road and Egypt Road.
8. Add a solar powered speed display sign, wither permanent or for an extended (3 to 6 months) time period.
9. Evaluate effectiveness of speed humps and other actions after a 4 to 6 month trial period.
10. Provide a future sidewalk extension on the eastern side of Gumbes Road from the existing sidewalk (south of Larkspur Lane) to Egypt Road.
11. If needed after initial evaluations, consider prohibiting through (cross) traffic between Gumbes Road and Station Avenue.

<sup>(1)</sup> Based on resident meeting held Tuesday, July 26, 2011.

Exhibit 2  
GUMBES ROAD TRAFFIC CALMING  
PROPOSED ACTIONS



Use of Proposed Actions:

- |                                                                                                                                                                                                                 |                                                                                                                                                                                                                          |                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>1. Install speed humps</li> <li>2. Restripe for parking lanes</li> <li>3. Add shoulder lines for 10' traffic lanes</li> <li>4. Add crosswalk pavement marking</li> </ul> | <ul style="list-style-type: none"> <li>5. Add 25 MPH pavement markings</li> <li>6. Review location and size of No Truck signs</li> <li>7. Add No Thru Street warning signs</li> <li>8. Add speed display sign</li> </ul> | <ul style="list-style-type: none"> <li>9. Three (3) to six (6) month evaluation</li> <li>10. Provide future sidewalk to Egypt Road</li> <li>11. Consider future traffic restrictions at Egypt Road and Station Avenue, if needed.</li> </ul> |
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## Discussion

The identified actions from Exhibits 1 and 2 are described in the following paragraphs. Comments are also provided for consideration.

- 1) *Install Speed Humps with appropriate signing and pavement markings in the vicinity of 305 and 313/314 Gumbes Road. Consider use of temporary speed humps for trial period.*

Speed humps reduce traffic speeds in the vicinity of the humps, which dictates that multiple humps be installed, and may reduce traffic volumes by diverting some traffic. They can be installed in two areas of Gumbes Road based on PennDOT's location guidelines, which include a 150' spacing from intersections. The identified locations are a 100' segment extending north of the driveway at 313 Gumbes Road and a 15' segment 150' north of Hawthorne Road, which is at 305 Gumbes Road.

The speed humps should measure 12' in length, taper to a maximum height of 4" at the center and extend across the width of the roadway except for a curb/shoulder drainage offset. Warning signs (W8-17) with arrow plaques and approach pavement markings also need to be provided at each hump to identify the location and warn motorists of the speed hump.

A temporary installation is preferred by the residents to test of the effectiveness of the speed humps. This can be accomplished through use of a manufactured, removable speed hump or through use of an asphalt one that could be milled off if removal is necessary.

Estimated total cost: \$8,000 to \$12,000

- 2) *Shift the double-yellow centerline marking where feasible to provide 10' travel lanes and an 8' shoulder parking lane on one side of the roadway.*

The portion of Gumbes Road between the two Argyle Lane intersections is 32' wide and can be restriped for an 8' parking lane, two 10' travel lanes and a 4' shoulder. An initial review shows that parking on the west side provides better sight lines for the curve south of Argyle Lane and a longer length of a shoulder parking lane.

The section of Gumbes Road between the southern Argyle Lane and Laurel Road intersections is approximately 27' wide. While two 10' travel lanes and a 7' shoulder parking lane could be considered for this section, the parking lane would be narrower than the 8' recommended width and no shoulder would be provided on the western side, which could result in damage to the road edge and adjacent lawn areas. Provision of a designated shoulder parking lane in this section is not recommended unless the roadway is widened by at least two feet.

Implementation requires removal of the existing centerline pavement marking and the addition of new centerline markings shifted by approximately 2' and shoulder/parking lane pavement markings. Shadowing of the old centerline markings may occur unless the roadway is resurfaced.

Estimated cost for segment between Argyle Lane: \$2,500

- 3) *As a supplement to Item #2, add white shoulder line pavement markings creating 10' travel lanes and variable width (2' to 6') shoulders along Gumbes Road.*

The existing double-yellow centerline marking and parking restrictions would remain in place with this action, which would white shoulder lines to designate 10' travel lanes. Six (6') foot shoulders would result for the section between Black Rock Road and the southern Argyle Lane intersection. A 2' shoulder on the west side and a 5' shoulder on the east side would result for the section extending to the Laurel Road intersection. The section between Laurel Road and Egypt Road would consist of 1'± shoulders on each side.

Estimate cost for entire roadway \$3,000

- 4) *Add white crosswalk lines to the Gumbes Road crosswalk at the southern Argyle Lane intersection.*

The addition of crosswalk pavement markings will emphasize the existing crosswalk and two parallel 6" white lines spaced 6' apart and centered on the existing pedestrian curb ramps are recommended.

Estimated cost: \$300

- 5) *Add "25 MPH" word message pavement markings on the entrance approaches from Black Rock Road and Egypt Road.*

The '25 MPH' word pavement markings supplement the existing speed limit signs and are suggested for the southbound lane just prior to the Argyle Lane/Larkspur Lane intersection and for the northbound lane just north of the Laurel Road intersection. These markings are 8' long, 3' to 5' wide and should be centered in the travel lane.

Estimate Cost \$1,500

- 6) *Review the size and placement of the No Truck signs at Black Rock Road and Egypt Road.*

The existing 'No Truck' signs are standard size (24" x 24") for local roads and have the required 'Except Local Deliveries' plaques. The sign for southbound traffic is located just below Black Rock Road and is properly located. The sign for

northbound traffic is located on the north side of an existing drainage culvert and slightly north of Egypt Road. Relocation of this sign closer to Egypt Road is desirable, if existing road, driveway and intersection conditions permit it. If relocation is not feasible, use of a larger (30" x 30") sign for northbound traffic can be considered.

Estimate Cost \$200.

- 7) *Add 'No Thru Street' (W14-2-1) warning signs to the entrance approaches from Black Rock Road and Egypt Road.*

The intent of this proposed action is to discourage through traffic on Gumbes Road. The warning signs are advisory signs and do not create an enforceable condition. These signs may have little effect on existing traffic patterns or volumes, especially if the speed humps are installed. If these signs are provided, one sign should be installed on the entrance approaches from Black Rock Road and Egypt Road after the 'No Truck' signs, which should remain the first sign for entering traffic.

Estimate cost \$500.

- 8) *Add a solar powered speed display sign, either permanent or for an extended (3 to 6 months) time period.*

The action would provide a continuous notice to drivers of their travel speeds. The signs can also collect volume/speed data as an optional feature, require a rigid pole installation and serve one direction of travel. While an additional informational action, the sign(s) may have limited long-term value if speed humps (Item #1) are provided. The size, shape and sign format are subject to PennDOT standards and an authorization for use on local roads may also be needed for any specific sign placed in the public right-of-way.

If considered, one sign for southbound traffic is suggested since this is the higher volume movement and differences in speed by direction are not significant. Use of the Township's speed display trailer and automatic traffic counter, which have both been used previously on Gumbes Road, are alternatives to display and collect speed and volume data.

Estimate cost per sign: \$3,000 to \$6,000 or more depending on size and features.

- 9) *Evaluate effectiveness of speed humps and other actions after a 4 to 6 month trial period.*

The effectiveness of any initial traffic calming actions can be evaluated by resident satisfaction levels and follow-up traffic and/or speed surveys. The type and extent of such counts will be determined after the trial period and include consideration of resident comments and any findings of police and emergency response officials.

The surveys and evaluation can also serve as input to any discussion regarding the need for additional actions.

Estimate Cost \$1,000 to 3,000 depending on scope of evaluation

*10) Provide a future sidewalk extension on the eastern side of Gumbes Road from the existing sidewalk (south of Larkspur Lane) to Egypt Road.*

An extension of the sidewalk on the east side of Gumbes Road to Egypt Road is desirable. The installation of curb should accompany the sidewalk and a pedestrian bridge or an extension/replacement of the culvert located to the north of Egypt Road will be required. Right-of-way, storm drainage requirements and costs may be significant for a sidewalk extension.

Estimate Cost To be determined.

*11) If needed after initial evaluations, consider prohibiting through (cross) traffic between Gumbes Road and Station Avenue.*

The intent of this potential future action is to limit access/egress at Egypt Road and reduce traffic volumes. The restrictions would be accomplished through physical barriers on Egypt Road and/or on the Gumbes Road and Station Avenue intersection approaches. The restrictions would apply to local residents and may affect traffic flows on surrounding roads. Roadway and intersection widening, emergency vehicle/truck access and PennDOT approvals all need to be addressed in a design phase if this action proceeds. The need for and extent of any future traffic restrictions should be deferred until after an evaluation of the initial traffic calming actions.

Estimate Cost To be determined

## **Recommendations**

All of the identified actions from Exhibit 1 could be implemented or considered in more detail to address resident concerns on Gumbes Road. However, several of the proposed actions are considered secondary in priority or would have limited effect when compared to other proposed actions. The implementation of several actions can also be staggered or phased based on the effectiveness of any initial steps.

The actions that are considered as potentially the most effective means of calming traffic on Gumbes Road, ranked in terms of suggested priority, are the following.

- Install two speed humps as described in Action #1.
- Add shoulder pavement markings defining 10" travel lanes as described in Action #3 for the remaining section of Gumbes Road.

- Restripe the portion of Gumbes Road between the two Argyle Lane intersections for a parking lane on the west side as described in Action #2.
- Add “25 MPH” word pavement markings as described in Action #5
- Relocate, if feasible, the No “Trucks” sign on northbound Gumbes Road closer to Egypt Road (Action #6).
- Include a future extension of sidewalk to Egypt Road (Action #10) as part of a Township sidewalk/trail system plan.
- Conduct follow-up traffic volume and speed surveys for a one-week period three to six months after completion of the initial traffic calming actions (Action #8).

It is felt that the above actions will have an impact on the speed and, to a lesser extent, the volume of traffic using Gumbes Road. These actions coupled with planned improvements to Egypt Road can offer an improved environment for the residents of Gumbes Road. Other actions could be implemented as supplemental, follow-up actions, if needed.

The next step for the Gumbes Road traffic calming plan is to achieve a consensus and agreement on those actions that should be advanced, including resident support. Input from other Township Staff and the Board of Supervisors, along with Supervisor approval, are also required for advancement of any traffic calming actions. Funding allocations, an implementation schedule and the completion of any required design plans, construction details or bidding documents are other steps that will also need to follow.

Following your review of this submission, I would be happy to discuss any questions or comments that you may have.

cc: G. Waterman  
L. Milligan, Assistant Township Manager  
S. English, Esq.  
W. Dingman, P.E., Township Engineer  
G. Grace, Township Planner  
E. Fern, Resident Applicant