

**WILMAPCO Council:**

**John Sisson, Chair**  
*Delaware Transit Corporation  
Chief Executive Officer*

**Robert J. Alt**  
*Mayor of Elkton*

**Jennifer Cohan**  
*Delaware Dept. of Transportation  
Secretary*

**Connie C. Holland**  
*Delaware Office of State Planning  
Coordination, Director*

**Alan McCarthy**  
*Cecil County Executive*

**Matthew Meyer**  
*New Castle County Executive*

**Heather Murphy**  
*Maryland Dept. of Transportation  
Director, Office of Planning and  
Capital Programming*

**Michael S. Purzycki**  
*Mayor of Wilmington*

**Michael Spencer**  
*Mayor of Newport*

**WILMAPCO Executive Director**  
Tigist Zegeye

## **Special Committee to Study and Make Recommendations Regarding Truck Traffic and Freight Movements Along SR 41, SR 48 and SR 7**

**(Special Committee per Senate Resolution No. 10)**

Wednesday, October 4, 2017

6:00pm

Cooke Elementary School, 2025 Graves Road, Hockessin DE

### **AGENDA**

1. Introductions – Tigist Zegeye
2. September 13 Meeting Minutes Approval – Tigist Zegeye
3. Follow up Items - Andrew Bing
  - Sign Inventory Updates
4. New Business - Andrew Bing
  - Presentation from Delaware Valley Regional Planning Commission (DVRPC) – Ted Dahlburg - Office of Freight and Aviation Planning
5. Continuing the Discussion of “Ideas & Approaches” - Andrew Bing
6. Next Meeting – Tigist Zegeye
  - Wednesday, October 25, 2017 at 6p.m., Brandywine Springs School, 2916 Duncan Rd, Wilmington, DE 19808
7. Public Comment – Andrew Bing





# MEETING MINUTES

**Subject:** Special Committee to Study and Make Recommendations  
Regarding Truck Traffic & Freight Movements  
Along SR 41, SR 48 & SR 7

**Date:** Wednesday, September 13, 2017  
6:00pm

**Location:** Hockessin Fire Hall  
1225 Old Lancaster Pike  
Hockessin, Delaware 19707

**Attendees:** *Committee Members*  
Tigist Zegeye, Chair – Executive Director of WILMAPCO  
Mike Begatto – Diamond State Port Corporation Board of Directors  
Mike Censurato – Route 7 Representative  
Jennifer Cohan – Secretary of DelDOT  
Nick Ferrara – Route 48 Representative  
Gale Hamilton – Route 48 Representative  
Michael Lewandowski – Route 7 Representative  
Mark Luszc – Chief Traffic Engineer DelDOT  
MaryAnn Summers – Route 41 Representative  
Bill Taylor – Route 41 Representative

*Other Attendees*  
Andrew Bing, Facilitator – Kramer & Associates  
Jim Burnett, Technical Staff Support – RK&K  
General public, see attached sign-in sheets

**Not present:** Matthew Cox – Delaware State Police Truck Enforcement Unit

---

## **MEETING AGENDA**

### **Welcome & Introductions**

Tigist Zegeye welcomed participants to the meeting. All Committee members introduced themselves, including their affiliation with the Committee.

### **August 9, 2017 Meeting Minutes**

Draft meeting minutes were emailed to Committee members on August 24, 2017. Tigist asked for any comments or corrections to the August 9, 2017 Meeting Minutes. There were no noted comments or corrections.

**Meeting Minutes**  
**Special Committee Regarding Trucks on SR 41, SR 48 & SR 7**  
**Wednesday, September 13, 2017**

Mike Begatto made a motion to approve the meeting minutes as written. Michael Lewandowski seconded the motion:

- Ayes: Tigist Zegeye, Mike Begatto, Nick Ferrara, Gale Hamilton, Bill Taylor, Michael Lewandowski, Mike Censurato, Mark Luszc, and Secretary Jennifer Cohan
- Nays: None
- Abstentions: None
- Not present: Matthew Cox, MaryAnn Summers

Motion Carries. Final Meeting Minutes for Meeting #2 will be posted on the WILMAPCO website.

**Follow-up Items from August 9, 2017 Meeting**

Tigist and the project team received over 40 requests for follow-up information after Meeting #2. At the request of the Committee, Tigist provided all questions and responses to all Special Committee members via email. The responses are also included in the project notebooks and will be posted on the WILMAPCO website, along with other SR 10 materials, at [www.wilmapco.org/sr10](http://www.wilmapco.org/sr10).

Tigist noted that responding to questions required a large amount of time and effort from the entire project team and hopes that they have responded to the Committee members' satisfaction. Tigist encouraged the Committee to continue asking questions to meet the Committee's needs, but asked that the members limit questions and requests to those directly from the Committee members, and only those that are essential to complete the task at-hand. This should allow the project team to continue to respond in a timely manner.

Gale Hamilton noted that the answers provided by the project team were thorough and clear and thanked everyone involved in providing responses.

Mike Censurato asked if this portion of the meeting was an appropriate time to ask specifics about the questions submitted to date. Tigist encouraged Mike to follow-up with her if his questions were not answered over the course of the meeting so that the Committee could accomplish everything on the agenda.

Tigist turned the meeting over to Andrew Bing, the Special Committee Facilitator. Andrew reminded everyone in attendance that the Special Committee meetings are designed for the benefit of the Committee members. The meeting is open to the public, but the meeting itself is not participatory for members of the public. There will be a time set aside at the end of each meeting for public comment.

**Presentation on Comprehensive Signage Inventory**

Andrew introduced Jim Burnett to discuss the comprehensive sign inventory completed at the request of the Committee. Andrew reminded everyone that during Meeting #2, the Committee unanimously recommended DelDOT perform a sign inventory. Andrew also noted that the task did not include any analysis of the signs identified during the inventory because the Committee will make recommendations using the information obtained.



**Meeting Minutes**  
**Special Committee Regarding Trucks on SR 41, SR 48 & SR 7**  
**Wednesday, September 13, 2017**

Jim presented the comprehensive sign inventory along SR 7 between the Pennsylvania state line and SR 2, along SR 41 between the Pennsylvania state line and SR 2, and along SR 48 between the SR 41/SR 48 split and SR 141. Jim's team used GPS-enabled iPads to inventory 1,135 signs along the three corridors, documenting the location, sign type, and a photo of each. Jim's team used the results to develop graphics for three sign types: route sign assemblies, speed limit signs, and truck/weight restriction signs. Jim's team also identified 51 damaged or obscured signs. The interactive GIS database with each sign type, photo, and location will be available on the project website.

MaryAnn Summers asked where the weight limit restriction sign on SR 41 is located. Jim responded that the sign is along SR 41 northbound, north/northwest of Kirkwood Highway. *From the GIS database, the sign is specifically located north of Washington Avenue and south of Milltown Road.*

Gale elaborated on the many speed signs along SR 48, including both the regulatory Speed Limit signs (black text on white signs) and the Advisory Speed plaques that supplement warning signs for hills, intersections, and curves (black text on yellow signs).

Mike C. clarified that the image Jim showed during his presentation with a 5,000-lbs weight restriction was related to SR 7, not SR 41 as originally stated. The photo in question was of a sign that faces SR 7 traffic that is turning onto Griffin Drive. The weight restriction applies to travel on Griffin Drive, not on SR 7. Jim elaborated to the Committee that the rule of thumb used in completing the sign inventory was "if you can see the face of the sign as you drive along SR 7, SR 41, or SR 48, it is included in the inventory." Based on the rule of thumb, there are some signs included that apply to side streets, including side street weight and axle restrictions, street name signs, and Keep Right signs at entrances to neighborhoods.

Nick Ferrara asked how many engine compression signs there are on all three corridors. Michael Lewandowski counted 13 engine compression signs from the sign inventory truck/weight restriction map.

MaryAnn asked to re-address her previous question regarding the designation of the road between the Pennsylvania state line and the SR 41/SR 48 split, which has the route designation SR 41 and the road name Lancaster Pike. MaryAnn is concerned that, for people who do not know the area, if SR 48 ends at the split, then it is not logical to call the road Lancaster Pike. Jim reiterated that roads often change names multiple times along a given state numbered route. For example, if you look in DelDOT's road inventory, many state numbered routes change names at least once if not multiple times. The route designation for this segment is SR 41. Jim noted that an "End 48" sign is missing and an existing "West 48" sign is incorrect at the SR 41/SR48 split.

**Presentations from Corridor Representatives**

Prior to the meeting, corridor representatives were asked to identify the top five issues for each of their respective corridors and to send the list to Tigist. Andrew reminded Committee members that the purpose of the exercise was to raise the issues first, not to try to identify solutions at this time. Hard copies of the issues submitted to the project team are included in the project notebooks for reference.

Andrew invited the corridor representatives to come up to the podium or to present from the table, whichever was more comfortable. Andrew encouraged all members of the Committee to listen carefully to each other, and especially for corridor representatives to pay close attention to corridors other than

**Meeting Minutes**  
**Special Committee Regarding Trucks on SR 41, SR 48 & SR 7**  
**Wednesday, September 13, 2017**

their own, to prepare for brainstorming activities to follow. Presentations followed in numerical order: SR 7, SR 41, and SR 48.

Michael L. spoke to the issues identified by himself and Mike C. for the SR 7 corridor, providing specific examples related to high noise levels, speeding, intersection performance, and road safety. Mike C. elaborated on concerns about truck convoys using both lanes where SR 7 is a four-lane road.

Bill Taylor presented the SR 41 top five issues. Bill elaborated on the growth in the number of trucks over time, difference in distances using SR 41 and/or SR 48, noise, fumes, and vibrations common on all corridors, speed of trucks, proximity of residents to the highway, perceived lack of police enforcement, safety and quality of life, tourist venues, and speed limit signs at Cooke Elementary School.

Gale provided specific details and examples of the five issues identified by the SR 48 representatives in the categories of dangerous intersections, entrances and exits; speed; congestion; sudden hills, curves, and blind spots; and, noise and vibration.

Following the presentations from the corridor representatives, Andrew asked the Committee to reflect and comment on what they heard from each other, but not to expand on their own corridor (for the corridor representatives).

MaryAnn noted that during the time she's been working on the problem on SR 41, she's communicated with Nicole Majeski asking for noise testing, fume testing, and vibration testing. MaryAnn stated she has received four letters stating that those tests cannot and will not be done. MaryAnn noted that representatives from all three corridors brought up the same problems. She would like to revisit the issue and find out why the testing cannot be done. Andrew encouraged MaryAnn to bring those thoughts to the brainstorming session and asked the Committee to again reflect on anything that was surprising or interesting from the presentations.

Gale noted that suffering is not a competitive sport and that residents on all three roads are suffering and need to be heard. Gale provided a metaphor of a three-headed dog barking at itself, even though there is only one body. Gale reminded everyone that the purpose of the Committee is to 1) reduce truck traffic, and 2) improve the quality of life.

Mike C. noted that although corridor representatives each pointed to specific examples and anecdotes of safety concerns, the presentation at the last meeting captured all crashes and provided an evaluation of safety that was based on crash rates over time. Mike would like the safety data to be the basis for making decisions. Mike noted that the anecdotal examples are less useful compared to the long-term statistics that measure what is happening over time.

Bill commented that on SR 7 near the Christiana Mall/SR 1/I-95, there are six lanes compared to two lanes where SR 7 and SR 4 split. Bill also noted that the Committee cannot work in a vacuum, and must have cooperation from Pennsylvania, the Port of Wilmington, and the companies sending trucks their way. Bill observed that the Committee has not heard from other players who will be critical in making the Committee's recommendations viable over five years. Bill would like to avoid situations where the number of lanes on the highway is reduced from six to two.

**Meeting Minutes**  
**Special Committee Regarding Trucks on SR 41, SR 48 & SR 7**  
**Wednesday, September 13, 2017**

Mike C. responded to Bill that before thinking about widening SR 7 to six lanes, the Committee should consider four lanes for the other two corridors.

Andrew thanked the corridor representatives for presenting and noted the commonalities heard from all corridors both during the presentations and the discussion that followed.

**Breakout Session, Report-outs, and Discussion**

The Special Committee was separated into two groups (a “blue” group and a “green” group) for a breakout session. Andrew tasked each group to spend approximately 20 minutes discussing ideas and/or approaches to address the identified issues. Andrew noted that he specifically did not use the term “solutions” because the Committee is in the initial stages of the process to develop recommendations. In the short breakout session, groups were not expected to come up with everything necessary to solve problems, but rather to discuss and write down initial ideas.

Blank matrices were provided for each Committee member to make notes about approaches to solving issues in the four broad categories of safety, quality of life, enforcement/regulatory, and engineering/infrastructure. Andrew asked that each breakout group 1) identify a member to report back to the rest of the Committee, and 2) develop at least two approaches or ideas to address the four broad categories.

At the end of the breakout session, Bill provided the report-out for the “blue” brainstorming group. The blue group discussed speeding as a safety concern. There are red-light cameras in Delaware, but no speed enforcement cameras. One idea was to get legislation passed to allow speed enforcement cameras. For quality of life, the blue group focused on enforcement of jake-braking and air quality. There was debate among the blue group about enhanced law enforcement efforts on the corridors, what has been done and how effective the efforts have been. The blue group suggested that the Committee find out best practices in Pennsylvania. As a member of the blue group, Tigist noted that she will be coordinating with the Delaware Valley Regional Planning Commission (DVRPC) and that dialogue is possible. The blue group suggested International Fuel Tax Agreement (IFTA) stickers, virtual weigh stations, and electric gantries as ideas for the enforcement/regulatory category. The blue group noted that in many cases the technology exists, but the Committee must determine where it can be used most effectively. Finally, in terms of engineering/infrastructure, the blue group suggested a Road Safety Audit, a bypass, and changes to tolls on the Pennsylvania turnpike.

MaryAnn provided the report-out for the “green” brainstorming group. The green group also focused on speeding. One idea was to lower the speed limit. Another approach was more enforcement of the existing speed limits. The green group also talked about intersection safety design and suggested DelDOT look at intersections to see where there are blind spots and capacity issues. In terms of quality of life, the green group suggested stricter enforcement and inspections of vehicle equipment. The green group also suggested state sponsored homeowner noise reduction inspections. While discussing enforcement/regulatory issues, the green group discussed the placement of jake-brake prohibition signs. The green group suggested that the signs be relocated upstream of traffic signals. The green group also suggested DelDOT install signs prohibiting vehicles longer than 60-feet to let truck drivers know about the law in Delaware before they are on Delaware roads. The green group also discussed glow-in-the-dark guardrails.

**Meeting Minutes**  
**Special Committee Regarding Trucks on SR 41, SR 48 & SR 7**  
**Wednesday, September 13, 2017**

Following the report-out from each group, Andrew opened the floor for group discussion about anything the Committee members heard from the other brainstorming group, items they were starting to talk about in their own small groups, other items on the agenda, or anything that would be helpful for future Committee meetings.

Mike B. noted that there was a lot of discussion about the speed limit in school zones and particularly that the speed limit near Cooke Elementary School is different than other school zones. Mike asked why there are different speed zones. Mark responded that per state law, the school speed limits are 20 mph unless posted otherwise. State code also includes standard speed limits by road type, unless posted otherwise. Mark noted that some school zones include flashing lights, some are only applicable when children are present, and some are set based on whether there are students who walk to school or if all children take a bus or are dropped off. Mark also noted that in some cases, school speed limits were determined decades ago and may not be the same determination that would be made today if they were reevaluated. Mark noted that school zone speed limits can be looked at again and based on the volume, type of road, and if there are students who walk to school or not, the suggested school zone speed limits may be different than what was decided in the past.

Bill identified two ideas that did not come out of either breakout group, 1) congestion tolls, and 2) traffic calming. Bill defined congestion tolls to include tolls used to divert traffic elsewhere. Bill also suggested traffic calming devices be considered, specifically, concrete barriers that force traffic to slow down to safely navigate side-to-side movements. Bill suggested that these items be considered at the next meeting and specifically how they apply to trucks.

Nick turned the Committee's attention to the 60-foot length restriction. Nick observed that most new trailers are 53-feet long and that if a tractor has a sleeper cab on it, then the total vehicle length is likely to exceed the 60-foot limit. Nick suggested that the law is obsolete and that if Delaware enforced the 60-foot length restriction, the number of trucks in Delaware would be reduced by 90%. Nick noted that the State Police representative was not present and that DelDOT left. *(Although Secretary Cohan had to leave the meeting early, Mark Luszcz from DelDOT was present for the entire meeting).*

Gale suggested that the Committee implement special use licenses for class 8 trucks other than local deliveries to use the three routes. She also suggested adding class 6 and class 7 vehicles to that consideration.

Andrew thanked the Committee members for the discussion and noted that this is just the beginning of the Committee's discussion and that more opportunities will follow.

Andrew asked Mark to address a question earlier in the evening from Mike C. regarding level of service (LOS) calculations. Mark informed the Committee that there are multiple methods to evaluate intersection operations. Most methods result in a letter grade, similar to grades in school, where A is the best and F is failing. The critical summation method that was used to provide LOS results that are included in the project notebooks is the simplest method. More complicated methods that estimate delay per vehicle and queue lengths are also available. Mark noted that at signalized intersections, typically delay and queue length are considered. Mike C. indicated that the LOS results provided to date seemed insufficient because they were based on volume only. Mark reassured Mike C. and the Committee that the LOS results to date also account for the number of lanes at each intersection.

**Meeting Minutes**  
**Special Committee Regarding Trucks on SR 41, SR 48 & SR 7**  
**Wednesday, September 13, 2017**

**Future Meetings**

Tigist thanked the Committee members for attending and noted that the next meeting is scheduled for October 11, 2017. Due to location constraints, the next meeting will be held at Cooke Elementary School. *Note: The meeting has since been rescheduled to Wednesday October 4, 2017 at 6:00pm.*

**Public Comment**

Andrew concluded the formal meeting and opened up the floor for public comment.

1. Joanne Abruzzese expressed concerns that affect residents at the Coffee Run condominium homes. Joanne noted that during her professional career, she negotiated a variety of solutions for various issues, and knows that the Committee has a very tough job. Joanne moved to Coffee Run from New York City and stated that she has become an overly cautious driver to deal with sharp curves, significant hilliness of the area, sudden side streets, speed limits that seem to change frequently, and heavy tractor-trailer use. She noted that she became even more cautious and stopped driving whenever possible after the signs directing traffic onto SR 48 were installed. Joanne stated that she also has a passion for walking, but that she has decided to stay in her neighborhood because she is concerned about crossing the street at SR 48 and Loveville Road, even though there is a traffic signal and crosswalk. Joanne observed that things improved when the signs came down. Joanne expressed concern that things will be worse if the signs are re-installed.
2. Ann Tucker has been a resident on SR 48 for several years and noted that traffic congestion, and particularly truck traffic, has increased. Anne described several concerns including trucks speeding through intersections, hills and curves where vision is limited, changes in speed limit, and locations where the number of lanes changes (truck climbing lanes). Anne noted that there have been some fatalities and she has increasingly witnessed roadkill. Anne expressed concern that it is only a matter of time before someone trying to avoid hitting a deer results in an injury or fatality.
3. Marilynn D'Amico lives on McKennans Church Road and, similar to the previous meeting, requested that this road also be considered. Marilynn requested that signage for SR 41 to SR 7 be coordinated with PennDOT. She suggested that a larger sign is necessary. Marilynn noted that she has observed truck traffic from Millcreek Road, Walmart trucks, and car carriers using McKennans Church Road. Marilynn also suggested cameras to identify speeders, similar to what is done in Europe. She would like to know why Delaware can't have a system where cameras are used to take a picture of speeders and a ticket is sent by mail.
4. Carole Crowe is a resident of Limerick off SR 48 and noted that the Committee has come up with wonderful ideas. Carole noted that traffic increased on SR 48 over the last year, including more trucks, due to the new CSC building on SR 48. She expressed concern over disregard for posted speed limits. Carole also noted that it is difficult to make a left-turn out of her neighborhood at times.
5. Jonathan Free stated that the Committee's report to the legislature should include a long-term plan. He noted that the issues are not going to go away and not going to be fixed by the Committee's report within a very short time frame. Jonathan noted that DelDOT has been spending a lot of money in Sussex County and in Middletown related to truck issues, creating a bypass. He suggested that the Committee should have a long-term plan so that the legislature can commit money.

**Meeting Minutes**  
**Special Committee Regarding Trucks on SR 41, SR 48 & SR 7**  
**Wednesday, September 13, 2017**

Following the public comments, Andrew thanked everyone for attending and closed the meeting.

**NEXT MEETING**

Special Committee Meetings will be held on the second Wednesday of each month starting at 6:00pm for the duration of the project.

During Special Committee Meeting #3, Tigist noted the next meeting will be held on Wednesday, October 11, 2017 at 6:00pm at Cooke Elementary School, 2025 Graves Road, Hockessin, DE 19707.

***Please note that after the meeting, the date for the next meeting was changed to Wednesday, October 4, 2017 at 6:00pm at Cooke Elementary School, 2025 Graves Road, Hockessin, DE 19707.***

If you have any additions, corrections or comments regarding these minutes please contact Tigist Zegeye at [tzegeye@wilmapco.org](mailto:tzegeye@wilmapco.org).

Attachments: Committee Member Sign-in Sheet  
General Sign-in Sheet  
Public Comment Speaker Sign-up Sheet  
Written comments from Charlie Weymouth

cc: Attendees

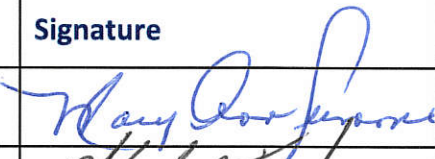
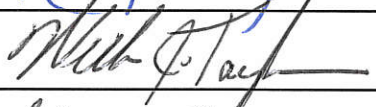
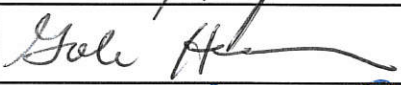
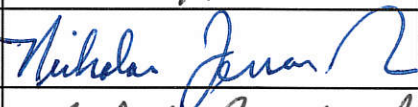



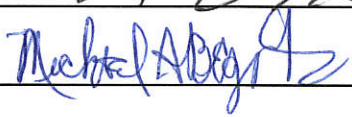
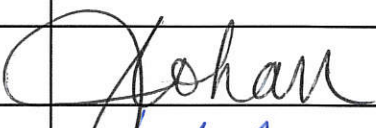

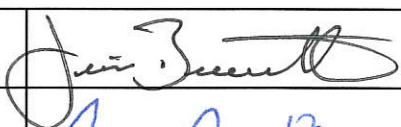

**Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7**

**Wednesday, September 13, 2017**

**6:00pm**

**Hockessin Fire Hall, 1225 Old Lancaster Pike, Hockessin, DE**

**Committee Member Sign-in Sheet**

<b>Member</b>	<b>Organization</b>	<b>Signature</b>
MaryAnn Summers	Route 41 Representative	
Bill Taylor	Route 41 Representative	
Gale Hamilton	Route 48 Representative	
Nick Ferrara	Route 48 Representative	
Michael Lewandowski	Route 7 Representative	
Michael Censurato	Route 7 Representative	
Tigist Zegeye	Executive Director of WILMAPCO	
Mike Begatto	Diamond State Port Corporation Board of Directors	
Matthew Cox	Delaware State Police Truck Enforcement Unit	
Jennifer Cohan	Secretary of DelDOT	
Mark Luszc	Chief Traffic Engineer DelDOT	
<b>Staff Support</b>		
Jim Burnett	RK&K	
Andrew Bing	Kramer & Associates	





Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7

Wednesday, September 13, 2017  
6:00pm

Hockessin Fire Hall, 1225 Old Lancaster Pike, Hockessin, DE

Sign-in Sheet

Name	Address	Phone Number	Email
Mr + Mrs ABRUZZESE			
Ellen + Allan Hughes			
Rose + Bob. ATALLIA			
Michael Beggs			
MARCELINE KNOX			
Charlie Byrd			
Grace Fillos			
Ted			
NATHAN WALTERS			
John POWELL			
Fred Perella			

Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7

Wednesday, September 13, 2017

6:00pm

Hockessin Fire Hall, 1225 Old Lancaster Pike, Hockessin, DE

Sign-in Sheet

Name	Address	Phone Number	Email
Marie Fleming			
SKIP NEUBECK			
JOHN NEWCOMER			
Rita Girardi			
Earl Girardi			
Bobby COLLINS Anglesov			
PETE HAYWARD			
Chris Ellis			
STEVE MCGRATH			
KRIS Nonnenmacher			
Margaret Kneaning			


Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7

Wednesday, September 13, 2017

6:00pm

Hockessin Fire Hall, 1225 Old Lancaster Pike, Hockessin, DE

Sign-in Sheet

Name	Address	Phone Number	Email
Bob Reed			
Steve Larrimore			
Ann Tucker			
Marilynn D'Amico			
Alexandra Perella			
MARK A. DENNEY			
Robert C Gilbert			
EVA D Gilbert			
			
John Antinelli			
Judi Flee			

Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7

Wednesday, September 13, 2017

6:00pm

Hockessin Fire Hall, 1225 Old Lancaster Pike, Hockessin, DE

Sign-in Sheet

Name	Address	Phone Number	Email
MAUREN GIANANTI			
Sheila DIXON			
Jim MORRISON			
Debbie Hudson			
Marti Williams			
Rep Kim Williams			
Joel Wagner			
Sally & Jim Kennedy			
Ramya Sathesh			
GEORGE SARDINO			
Anna Powell			

Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7

Wednesday, September 13, 2017

6:00pm

Hockessin Fire Hall, 1225 Old Lancaster Pike, Hockessin, DE

Sign-in Sheet

Name	Address	Phone Number	Email
BRONDA HERNANDEZ			
Carolyn Ruszkay			
JAIME VARGAS			
Scott Malfitano			
SUSANNE + Jim Hesse			
Jennifer Noel			
Louie Giansanti			
Greg Cavell			



Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7

Wednesday, September 13, 2017  
6:00pm  
Hockessin Fire Hall, 1225 Old Lancaster Pike, Hockessin, DE

Sign-in Sheet

Name	Address	Phone Number	Email
Grease Hervey			
Lynne Clark			
Carol Crowe			
Barbara Hanks			
Terry Hanks			
Joe Canucci			
John Wilkie			

Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7

Wednesday, September 13, 2017  
6:00pm

Hockessin Fire Hall, 1225 Old Lancaster Pike, Hockessin, DE

Public Comment Sign-up Sheet

- ✓ 1. Joanne Abruzzese
- ✓ 2. ~~CHARLIE WYMOUTH CRYMOUTH AOL.COM~~
- ✓ 3. ANN TUCKER
- ✓ 4. Marilyn D'Amico
- ✓ 5. CAROLE CROWE
6. ~~Carolyn Ruszkay~~
7. ~~JOE CARUCCI~~
8. ~~how GIAN SANTI (John-Santi)~~
9. JONATHAN FREE
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.
- 21.
- 22.





Special Committee to Study and Make Recommendations Regarding Truck Traffic and Freight Movements Along SR 41, SR 48 and SR 7 (Special Committee per Senate Resolution No. 10)

Meeting Scheduled for 13 September, 2017-Hockessin Fire Hall

Committee Members-Good Day!

Charlie Weymouth--

In forming this Special Committee, the State has but again employed the tactics of delay and avoidance rather than taking direct action. Far too long, our State Government has by-passed the essential correcting/improving of our subject interstate trade/commuter highways. By example, the Select Committee should have received for each studied route, in order to form a "recommendation", the following:

- Identification of earlier Capital improvements by date and costs. For Rt. 41 alone, earlier improvements totaled into the multi millions.
- Cost/value analysis for recent years' improvements for each subject route (and to include buildings/land acquisition/condemnation to improve each of the subject routes.)
- Noting certain members of the Select Committee, and in all probability, such individuals placing a priority on Port development, before you should be cost/value analysis for the individual Port options, the required support infra structure,-----access roads, etc. One should be aware of the State's ongoing annual multi million dollar contribution to the Port of Wilmington and the 2014 offering of outside, private, bail out. Chemours and with property acquisition costs should be included. Totally missing is the opportunity for expansion of the Port at Delaware City. Why ?

**Required improvements for routes 41, 48, SR 7 long precede the needs precipitated by the current Port proposals.** Residential growth has engulfed each of the above routes.

- Earlier determinations in regard to viability and costs for SR 7/41 interchange and a proposed new alignment for SR 7, including the

Avondale by pass.

- Noting the significant requirement for communication between Delaware and the Commonwealth of Pennsylvania representatives (for Pennsylvania-State Senator Joe Pitts ), to bring concurrence and go forward, such re affirms that final design decisions happen only with Political consent of State Government leadership .

Your Select Committee should **not** be called upon to find that “recommendation”, no matter how small that assigned focus appears . Where are our State's (and the County ) Design Engineers ? Existent facts should now be before you. Local County Growth can no longer encumber our critical interstate commerce. Nor can Ports to an intended National scale be the one charm to find solution to better roads. State action with County in regard to local corrective measures, is immediately required .

Thank You

---

If relevant to the above, please call my office at (302)-658-8760

# Freight Facilities and Planning In the Delaware Valley

Presented by Ted Dahlburg



*Nancy Tiver, CSX Intermodal*

Hockessin, Delaware  
October 4, 2017

# Delaware Valley Regional Planning Commission



- Designated Metropolitan Planning Organization for the 9 county, bi-state region
- Prepares a long range plan and coordinates transportation funding
- Works collaboratively with local freight stakeholders

# Freight Movements

- Complex chain of interregional or international trips
- Heavier vehicles have greater infrastructure impacts
- Often more intermodal jurisdictional cooperation required
- Freight movements sensitive to market forces; difficult to forecast demand
- Fewer sources of publicly available data
- Often requires innovative funding and financing sources/strategies
- Private sector industry not always well understood
- Freight stakeholders harder to identify and more challenging to engage



## Freight Flows by Highway, Railroad, and Waterway: 2010



**Sources:** **Highways:** U.S. Department of Transportation, Federal Highway Administration, *Freight Analysis Framework*, Version 3.4, 2013; **Rail:** Based on Surface Transportation Board, Annual Carload Waybill Sample and rail freight flow assignments done by Oak Ridge National Laboratory; **Inland Waterways:** U.S. Army Corps of Engineers, Institute of Water Resources, Annual Vessel Operating Activity and Lock Performance Monitoring System data, 2013.

# The Importance of Supply Chains

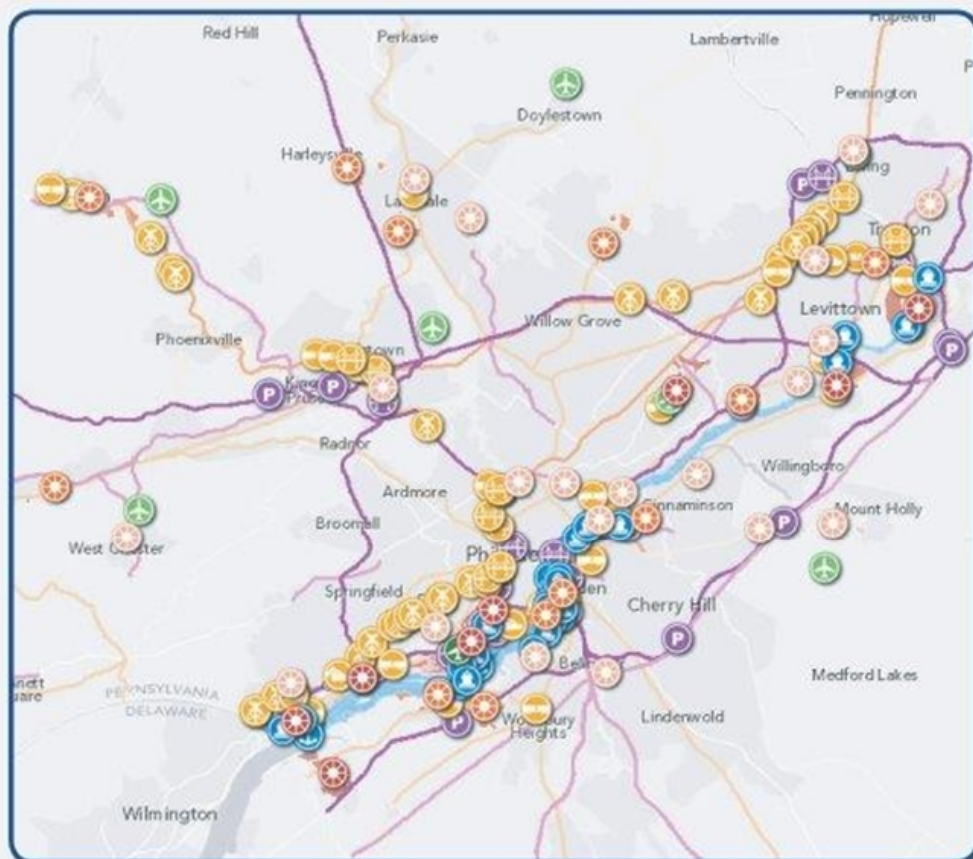




# PHILLY FREIGHT FINDER

FREIGHT MAPPING & DATA PLATFORM  
FOR THE DELAWARE VALLEY

AVAILABLE AT:  
[www.dvrpc.org/webmaps/phillyfreightfinder](http://www.dvrpc.org/webmaps/phillyfreightfinder)



## Why a web map?

- Unique regional tool
- Public access to data
- Improve region-wide data-sharing
- Better identify & justify funding priorities

Application is an integrated system that allows for exploration on various levels, including links to existing reports

## What kind of data?

### Standard Data

To build consistency in the information about facilities throughout the region

- Name
- Owner
- Operator
- Size
- Municipal Location

### Indicators

To better understand the use and role of facilities in the larger regional system

- Capacity
- Activity
- Related Reports

Standard data and indicators establish a framework for creation of performance measures and an improved DVRPC counting program



## Trucking/Highways

- Freeway (Interstate + Limited Access)
- Truck Parking
- NHS Connector
- Highway River Crossing

## Freight Rail

- Rail Lines (Interstate + Secondary + Industrial)
- Class 1 Grade Crossing
- Rail Yard
- Intermodal Rail Yard
- Rail River Crossing

## Ports/Waterways

- River (Delaware + Schuylkill)
- Anchorage
- Port Terminal

## Airports

- Commercial
- Reliever
- Helipoint

## Freight Centers

- Mega Center
- Major Center
- Intermediate Center

## Pipelines

- Pipeline

## Communities

- Freight as a Good Neighbor



For more information contact:

Ted Dahlburg, DVRPC  
p. (215) 238-2844  
e. [tdahlburg@dvrpc.org](mailto:tdahlburg@dvrpc.org)

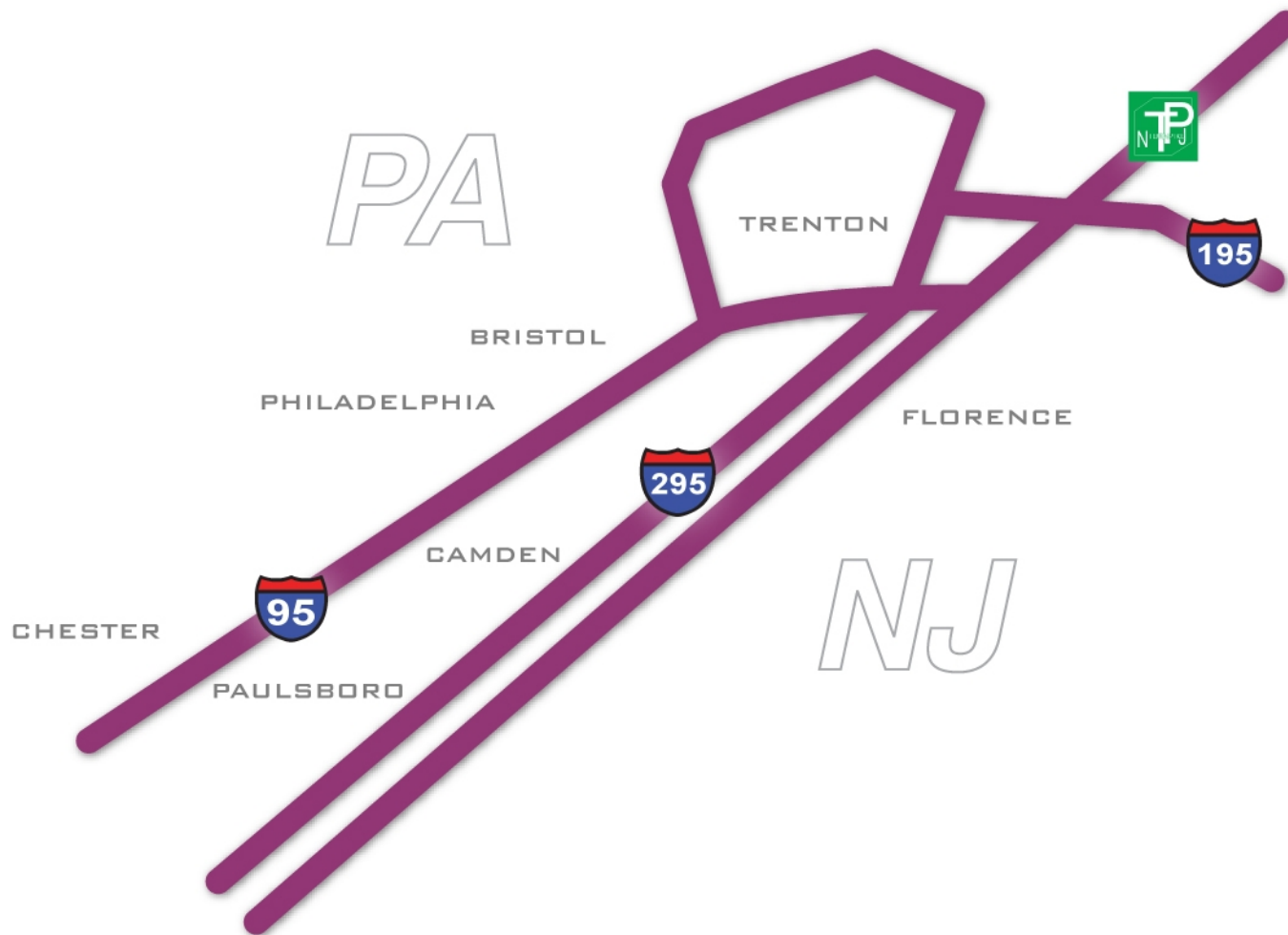
Michael Ruane, DVRPC  
p. (215) 238-2888  
e. [mruane@dvrpc.org](mailto:mruane@dvrpc.org)



# Engaging Freight Stakeholders



# North-South Interstate Highways



# Current TIP Projects

- PA 41 and Newark Road Improvements
  - New Garden Township
- US 1 Expressway Reconstruction
  - Northern Section
- PA 41 at PA 841 Improvements
  - London Grove Township
- PA 41 and SR926 Improvements
  - Londonderry Township

---

# Thank You!

Questions?

For more Information, please contact:

Ted Dahlburg

DVRPC Office of Freight and Aviation Planning

[tdahlburg@dvrpc.org](mailto:tdahlburg@dvrpc.org)

DVRPC's Freight Planning website:

<http://www.dvrpc.org/Freight/>

Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7

The matrix below documents ideas and approaches to address issues raised by the Committee at Special Committee Meeting #3 on September 13, 2017, as well as those received from Committee members as of September 22, 2017 regarding Senate Resolution #10. Each of the ideas received has been categorized based on the stated purpose and role of the Special Committee. Per Senate Resolution #10, the Special Committee shall study and make recommendations regarding:

- 1. How to reduce the number of trucks traveling along SR 7, SR 41 and SR 48; and
- 2. Any improvements in engineering, infrastructure, education and enforcement that can improve the quality of life for those that live along these roadways.

The project support staff has developed suggested revised text, as well as timeframe and cost estimates, for the ideas and approaches submitted to date based on their technical expertise.

Legend:

Timeframe to Implement		Cost to Implement	
S:	Short-term, 1-3 years	\$:	<\$1 million
M:	Mid-term, 4-10 years	\$\$:	>\$1 million - \$100 million
L:	Long-term, >10 years	\$\$\$:	>\$100 million - \$1 billion
		\$\$\$\$:	>\$1 billion
		<sup>A</sup> denotes recurring cost	

Ideas Matrix

SR 10 Directive	Ideas/Approaches Received	Support Team Suggested Approach	Study		Implementation	
			Timeframe	Cost	Timeframe	Cost
I. Reduce the number of trucks traveling along SR 41, SR 48, and SR 7	1. Conduct interagency study for a bypass between US 1 and I-95	Conduct a feasibility study of constructing a bypass between US 1 and I-95	M	\$\$	L	\$\$\$\$
	2. Re-evaluate feasibility of passenger and freight rail spur from Wilmington that parallels the SR 41 corridor	Conduct a feasibility study of constructing a passenger and freight rail spur from Wilmington that parallels the SR 41 corridor	M	\$\$	L	\$\$\$\$
	3. Build dedicated freight line along the NE corridor from Perryville, MD to Newark, DE	Conduct a feasibility study of constructing a dedicated freight line along the NE corridor from Perryville, MD to Newark, DE	M	\$\$	L	\$\$\$\$
	4. Toll travel along SR 7, SR 41, and SR 48	Conduct a feasibility study of implementing tolls on SR 7, SR 41, SR 48 or other Delaware state roads <List of other state roads developed by Committee>	M	\$\$		
	5. Toll travel along other DE state roads					
	6. Establish Alternate routes for trucks during assigned time frames	Conduct a feasibility study of restricting trucks on SR 7, SR 41 and/or SR 48 during specified times, in specified directions, and based on loaded vs. unloaded conditions, determining impacts to, and improvements needed, on alternate routes	M	\$\$		
	7. Establish routes for loaded vs. unloaded trucks					
	8. Require northbound trucks to take a different route and southbound trucks to take SR 48					
	9. Provide incentives to trucks that switch to US 1, US 30, and US 202					
	10. Re-direct truck traffic from the Port					
	11. Install signs at the Port directing trucks to use I-95	Install signs at the Port of Wilmington providing route guidance for trucks to reach I-95	N/A	N/A	S	\$
	12. Make improvements to SR 896	Conduct a feasibility study for improvements to the SR 896 corridor, including a potential alternate parallel route, to encourage trucks to use I-95 to SR 896	M	\$\$	L	\$\$\$\$
	13. Create a road parallel to SR 896 for trucks					
II. Improvements in engineering, infrastructure, education and enforcement that can improve the quality of life for those that live along SR 41, SR 48, and SR 7						
II. A. Engineering/Infrastructure	14. Re-install signs that were originally installed in July 2016 and removed in December 2016 directing Lancaster-bound truck traffic to use SR 48	Re-install signs that were originally installed in July 2016 and removed in December 2016 directing Lancaster-bound truck traffic to use SR 48 <NOTE: This is not an endorsement to re-install signs (or to not re-install signs). This recognizes that a “NO” vote to re-install signs is equivalent to a “YES” vote to not install signs.>	N/A	N/A	S	\$
	15. Do not install signs directing trucks to any specific road (keep current state)					
	16. Perform a Road Safety Audit	Perform a Road Safety Audit on SR 7, SR 41 and SR 48	S	\$	S-M	\$-\$
	17. Establish reduced school speed limit zone with 25 mph speed limit near Cooke Elementary School and install appropriate signs, including a Speed Limit Sign Beacon	Perform a traffic engineering study to implement a school speed limit zone on SR 41 near Cooke Elementary School	S	\$	S	\$





**Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7**

**Ideas Matrix**

SR 10 Directive	Ideas/Approaches Received	Support Team Suggested Approach	Study		Implementation					
			Timeframe	Cost	Timeframe	Cost				
II. A. Engineering/Infrastructure (continued)	18. Establish differential speed limits for trucks and cars	Perform a traffic engineering study to determine appropriate speed limits on SR 7, SR 41, and SR 48	S	\$	S	\$				
	19. Establish lower speed limits									
	20. Provide greater uniformity of speed limits along all three roads									
	21. Restrict trucks to right lane only									
	22. Establish curfew for trucks during nighttime hours a. 12:00 pm to 5:00 am b. During rush hour c. 10:00 pm to 6:00 am	Conduct a feasibility study of establishing time of day restrictions for trucks on SR 7, SR 41 and/or SR 48	S	\$	S	\$				
	23. Restrict vehicles to 3-axes and/or 54,000 lbs GVW on SR 41 between SR 41/SR 48 split and SR 2	Conduct a feasibility study of restricting trucks on SR 7, SR 41 and/or SR 48					M	\$\$		
	24. Restrict vehicles to 7,000 lbs									
	25. Impose a truck ban									
	26. Offer commercial re-zoning of housing too close to the roadway	Recommend that New Castle County evaluate re-zoning options along SR 7, SR 41 and SR 48	S	\$	M-L	\$				
	27. Create buffer zone along routes using open recreational areas, bicycle paths, bus stop parking	Perform a study to determine costs and benefits associated with state acquisition of privately owned property along SR 7, SR 41, and SR 48	S	\$	L	\$\$				
	28. Establish state funded program to purchase existing housing too close to roadway									
	29. Extend bus routes along SR 7, SR 41, and SR 48 into Chester County, PA	Continue to study options described in the Delaware Valley Regional Planning Commission (DVRPC) Chester County New Castle County Transit Study.	S	\$	M	\$^A				
	30. Develop and use low noise road surface specification	Perform testing and evaluation of low-noise road surface options and, if feasible, develop a specification for use in Delaware	S	\$	M	\$\$				
	31. Erect sound barriers	Collect noise data on SR 7, SR 41 and SR 48, and conduct a feasibility study of potential noise mitigation measures	S	\$\$	M	\$\$\$				
	32. Provide dirt berms with planted trees and shrubs									
	33. Relocate existing engine compression brake prohibition signs	Relocate existing engine compression brake prohibition signs to downhill locations approaching signalized intersections	N/A	N/A	S	\$				
	34. Install engine compression brake prohibition sign with flashing beacons at PA state line	Install engine compression brake prohibition sign with flashing beacons at PA state line	N/A	N/A	S	\$				
	35. Install traffic signals to slow down and/or deter trucks a. SR 48 and Old Wilmington Road b. SR 48 and Hercules Road c. SR 48 and Courtney Road d. SR 48 and Harlech Drive / Hedgegrow Place e. SR 48 and Old Hobson Farm	Conduct signal warrant studies for the following locations: <List of locations developed by Committee>	S	\$	S	\$\$				
	36. Do not install additional traffic signals									
	37. Modify signal timings to account for trucks	Perform a traffic engineering study to determine appropriate signal timing plans for SR 7, SR 41, and SR 48 to ensure adequate acceleration and braking time for heavy vehicles	S	\$	S	\$				
	38. Install RED SIGNAL AHEAD WHEN FLASHING signs	Perform a traffic engineering study to determine any appropriate locations on SR 7, SR 41 and SR 48 for the installation of RED SIGNAL AHEAD WHEN FLASHING signs <NOTE: this would be covered under a road safety audit>	S	\$	S	\$\$				





**Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7**

**Ideas Matrix**

SR 10 Directive	Ideas/Approaches Received	Support Team Suggested Approach	Study		Implementation	
			Timeframe	Cost	Timeframe	Cost
II. A. Engineering/Infrastructure (continued)	39. Install advance warning signs, with or without flashing beacons, to warn drivers of upcoming blind spots, unexpected curves, large hills, and lane drops a. SR 48 near Canterbury Hills b. SR 48 from Centerville Road towards Hercules Road	Perform a traffic engineering study to determine any appropriate locations on SR 7, SR 41 and SR 48 for the installation of advance warning signs <NOTE: this would be covered under a road safety audit>	S	\$	S	\$\$
	40. Install sign, with or without flashing beacons, informing drivers of 60-foot length limit a. SR 41 near PA state line b. SR 7 near PA state line				S	\$
	41. Install END 48 sign at SR 41/SR 48 split in westbound direction	Already underway				
	42. Install YOUR SPEED XX MPH signs	Install YOUR SPEED XX MPH signs on SR 7, SR 41 and/or SR 48 as a pilot project to determine the effectiveness of these signs on arterial roadways	S	\$	S	\$
	43. Install street lights on SR 48 between Hercules Road and Old Wilmington Road	Perform a lighting study of SR 48 between Hercules Road and Old Wilmington Road	S	\$	S-M	\$\$
	44. Remove or prune large tree limbs a. SR 48 between Loveville Road and SR 41 b. SR 48 between Loveville Road and Hercules Road	Remove large tree limbs on SR 48 between Loveville Road and SR 41, and on SR 48 between Loveville Road and Hercules Road	N/A	N/A	S	\$
	45. Ensure signs are not covered up	Already underway				
	46. Install acceleration and deceleration lanes	Perform a traffic engineering study to determine any appropriate locations on SR 7, SR 41 and SR 48 for the construction of auxiliary lanes and/or improved shoulders <NOTE: this would be covered under a road safety audit>	S	\$	M	\$\$
	47. Expand and/or improve shoulders					
	48. Install traffic calming devices	<NOTE: Traffic calming is only considered appropriate on subdivision streets and local roads. On major collectors and arterials, traffic calming is not appropriate.>	N/A	N/A	N/A	N/A
	49. Provide spot improvements at any intersections operating at LOS C or worse	Perform a traffic engineering study to determine any potential improvements for intersections on SR 7, SR 41 and SR 48 that are currently operating at LOS E or worse	S	\$	S-M	\$\$
	50. Widen SR 41 to four lanes	Conduct a feasibility study of widening SR 7, SR 41 and/or SR 48	M	\$\$	L	\$\$\$
	51. Widen SR 48 to four lanes					
	52. Widen SR 7 to six lanes					
	53. Upgrade secondary roads to provide relief to the SR 7, SR 41, and SR 48 corridors					
	54. Do not use rumble strips		N/A	N/A	N/A	N/A
II. B. Education	55. Develop school program for teens taking Drivers' Ed/Novice Drivers class to study the features of each road and their safety challenges					
	56. Pair elder drivers from Cokesbury Village and/or other local facilities with young drivers to study the features of each road					
II. C. Enforcement	57. Pass legislation to enable, then install, speed cameras	Introduce legislation that would enable speed cameras to be installed on SR 7, SR 41 and SR 48	S	\$	M	\$
	58. Provide additional enforcement of existing speed limits	Provide additional enforcement of existing speed limits	N/A	N/A	S	\$ <sup>A</sup>



**Special Committee to Study and Make Recommendations  
Regarding Truck Traffic and Freight Movements  
Along SR 41, SR 48 & SR 7**

**Ideas Matrix**

SR 10 Directive	Ideas/Approaches Received	Support Team Suggested Approach	Study		Implementation	
			Timeframe	Cost	Timeframe	Cost
II. C. Enforcement (continued)	59. Install portable/virtual truck weigh stations	Perform a study to identify feasible locations to install virtual WIM stations on SR 7, SR 41 and SR 48	S	\$	M	\$
	60. Increase weight and size enforcement at the DE state line	Increase weight and size enforcement at the DE state line	N/A	N/A	S	\$ <sup>A</sup>
	61. Establish Initial Entry Control Point (IECP) at DE/PA state line to stop trucks and check log books and weights	Perform a study to identify feasible locations to construct one or more weigh and inspection stations on SR 7, SR 41 and/or SR 48	S	\$	L	\$\$
	62. Add weigh stations in DE					
	63. Enforce 60-foot length limit					
	64. Increase the number of truck inspections	Increase the number of truck inspections	N/A	N/A	S	\$ <sup>A</sup>
	65. Increase ticketing					
	66. Use electronic tickets					
	67. Enforce noise level limits					
	68. Provide stricter inspections and enforcement of vehicle noise abatement equipment laws/standards	Increase inspections of vehicle noise abatement equipment	N/A	N/A	S	\$ <sup>A</sup>
	69. Provide strict enforcement of engine compression brake prohibition	Increase enforcement of engine compression brake prohibition	N/A	N/A	S	\$ <sup>A</sup>
	70. Establish method for reporting noise level infractions and muffler issues					
	71. Continue enhanced enforcement on SR 41 and SR 48	Continue enhanced enforcement on SR 41 and SR 48	N/A	N/A	S	\$ <sup>A</sup>
	72. Expand enhanced enforcement to SR 7	Expand enhanced enforcement to SR 7	N/A	N/A	S	\$ <sup>A</sup>
III. Miscellaneous suggestions	73. Perform forensic vibration tests for any resident who requests one and lives within 50 feet of SR 41					
	74. Offer state sponsored home noise reduction surveys					
	75. Establish SR 7, SR 41, and SR 48 “stickers” similar to International Fuel Tax Agreement (IFTA)					
	76. Implement “special use” or “restricted use” licenses of permits for class 6, class 7, and/or class 8 trucks on SR 7, SR 41, and SR 48					
	77. Divert the problem upstream in PA					
	78. Convince PA to reduce tolls on the PA turnpike					
	79. Add weigh stations in PA					
	80. Provide weight and size enforcement at White Clay Point in PA					
	81. Use a flash drive that can show images of speeding trucks					
	82. Create Citizens’ Truck Watch					
	83. Develop electronic noise infraction tickets					
	84. Develop and install colorful, glow-in-the-dark guardrails					
	85. Conduct letter writing campaign to trucking companies					
	86. Cover ears and make “silent scream” faces whenever loud trucks drive by					
	87. Install Warning Signal Ahead sign near existing RED SIGNAL AHEAD WHEN FLASHING sign south of Centerville Road and Greenbank Road					



**Special Committee to Study and Make Recommendations  
Regarding Truck Traffic & Freight Movements  
Along SR 41, SR 48 & SR 7**

**SAVE  
the DATE** **REVISED SCHEDULE**

July 2017

Presentation Topics

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

- Special Committee Welcome & Purpose
- Traffic Data

August 2017

Presentation Topics

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

- Safety Data
- Subject Matter Experts

September 2017

Presentation Topics

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

- Sign Inventory
- Brainstorming Session

October 2017

Presentation Topics

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- Brainstorming and Subject Matter Experts

November 2017

Presentation Topics

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

- Draft Recommendations

December 2017

Presentation Topics

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

- Review of Final Recommendations

January 2018

Presentation Topics

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

- TBD