Delta Road Protection Program

Mitigating Damage Caused by Unplanned, Concentrated Traffic

June 2, 2015

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Delta's Approach

- **Delta's approach:**
  - Not Biased - Not aimed at regulating any particular industry.
  - Does not regulate "everyday" traffic from the community or local businesses.
  - Aimed at capturing large spikes in concentrated construction traffic that have not been planned for and are associated with a specific construction activity.

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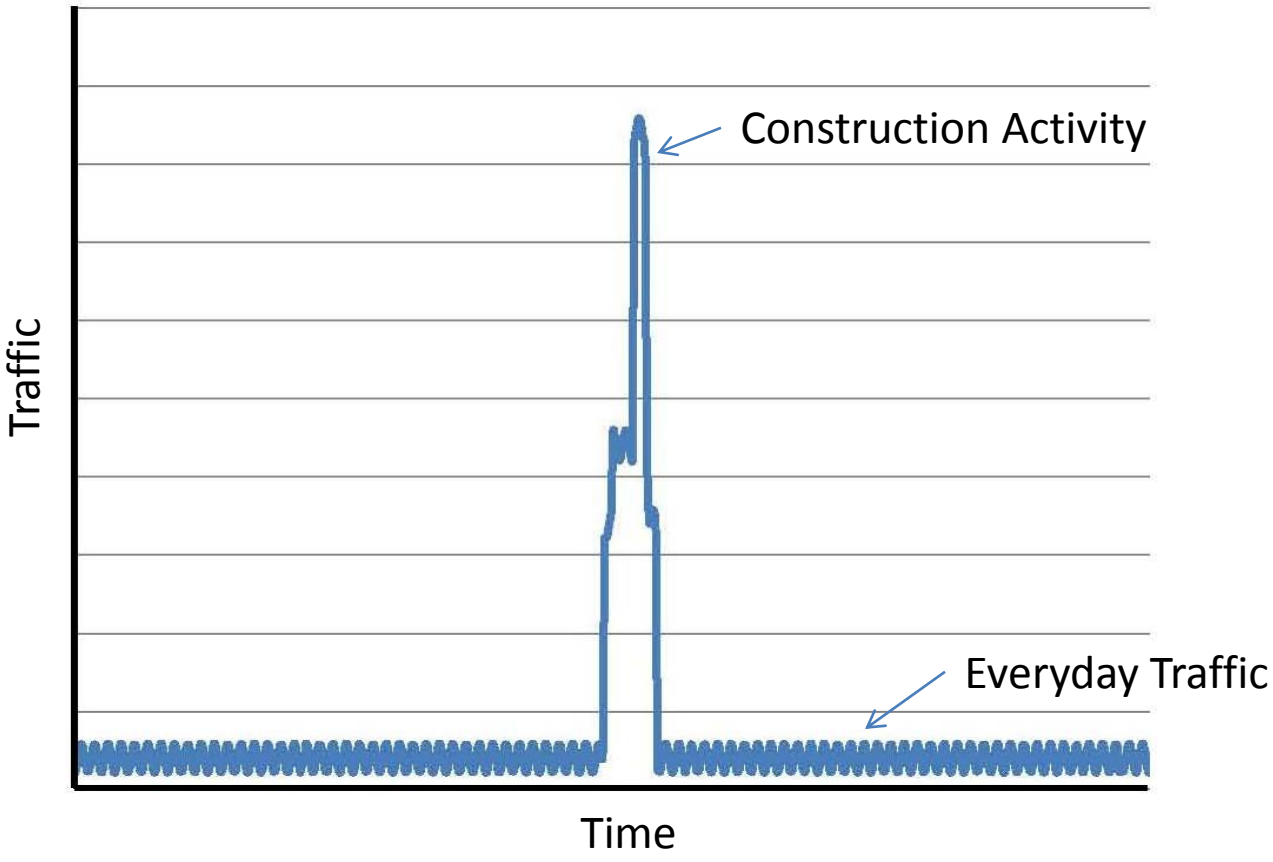
Construction Activity Explained



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Definitions

- **Construction Activity:**
  - Has a defined begin and end date
  - Results in land disturbance or improvement of a parcel
  - Proposed developed has to produce enough traffic to exceed a predetermined threshold for regulation
- **Developer:**
  - The developer is the entity responsible for the entire project.

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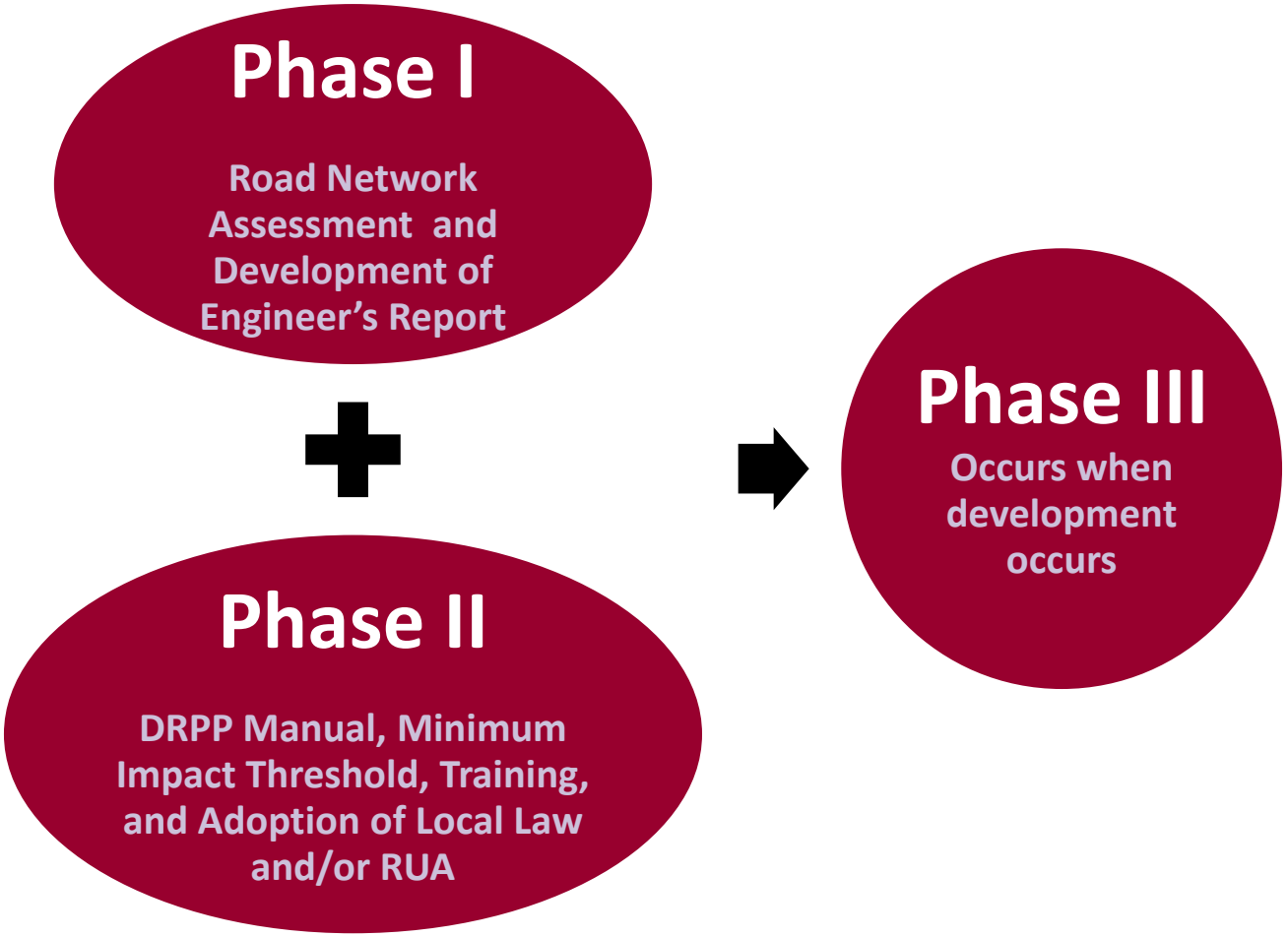
Three Phase Process



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Phase I Specifics

Phase I

Road Network Assessment

- **Road Inventory Condition Survey**
  - Municipal official interview – Obtain repair/construction methods and costs
  - Field documentation by Delta – Visual road survey and photos
  - Traffic counts- Determine typical low, medium, high volume roads
- **Engineer's Report**
  - Summarizes findings
  - Provides a basis from which to measure all future road use activity

Phase II Specifics

Phase II

Training of Municipal Personnel, Selection of Minimum Impact Threshold, Implementation of Local Law and/or Road Use Agreement (RUA)

- **Delta Training / Selection of Minimum Impact Threshold**
  - Program manuals and forms
  - Provided to all involved municipal personnel
  - Minimum Impact Threshold (MIT) selected by Municipality, provided to Delta, and added as further documentation to Engineer's Report developed in Phase I
- **Law and/or RUA**
  - Provided by Delta's legal partners or developed by Municipality's Lawyer
  - Modified as needed to address specific local concerns

Phase III Specifics

Phase III

The business of assessing damage:

- Discuss the process
- Filling out program forms
- Assessing actual road damage
- Paying for repairs and upgrades

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Phase III Specifics

Developer

- Fills out Haul Route Notification Form
- Declares routes, types and amount of traffic

Municipality

- Uses Minimum Impact Evaluation Form to assess if law applies
- Compares expected developer traffic to the minimum impact threshold
- If threshold is exceeded, enlists engineer and begins RUA process

Engineer (Delta)

- Delta reviews information on Haul Route Notification Form to confirm minimum impact threshold is exceeded
- Notifies Municipality if further evaluation is required
- Delta (or other municipal consulting engineer) begins process of evaluating likely impacts and advising Town

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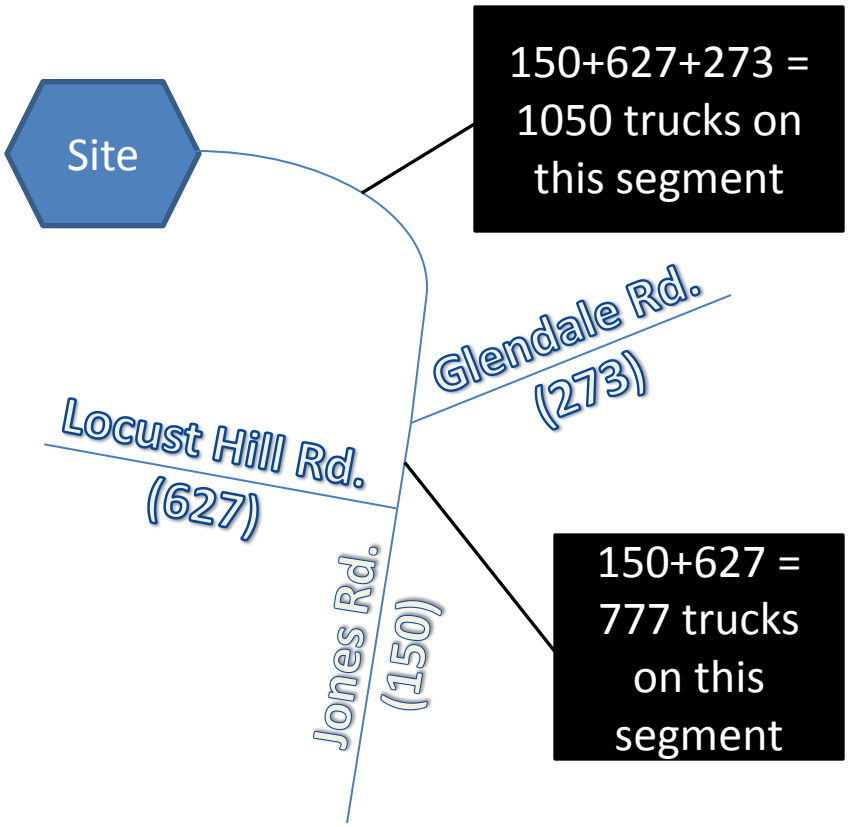
Haul Route Notification Form

Highlights of the Haul Route Notification Form

- **Relatively short (3 pages)**

- **Developer provides basic information he/she typically has on hand:**
  - Contact information
  - Brief summary of the nature of the project
  - Project begin and end date
  - Expected truck traffic
  - Proposed haul routes (Map)
  - Certification that information provided is accurate



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Minimum Impact Evaluation Form

- **Purpose: Determine if the amount of proposed developer traffic is enough to warrant further investigation for potential regulation.**

- **Definitions:**
  - ESAL's – Equivalent Single Axle Load, common unit of measure for traffic

  - Minimum Impact Threshold – The pre-determined amount of ESAL's that developer traffic must meet or exceed to be further reviewed for regulation

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Minimum Impact Evaluation Form

- **Purpose: Determine if the amount of proposed developer traffic is enough to actually be regulated by the local law.**

- **Form used twice:**

  - First – determines if total project ESAL's meets/exceeds minimum impact threshold

  - Second – determines if ESAL's on individual road segments meets/exceeds minimum impact threshold.

(1) FHWA Class	(2) No. of Vehicles	(3) Truck Factor	(4) Developer ESALS
1 -- 3		0.0007	
4		0.5700	
5		0.2600	
6		0.4200	
7		0.4200	
8		0.3000	
9		1.2000	
10		0.9300	
11		0.8200	
12		1.0600	
13		1.3900	
(5) Total Developer ESALS			

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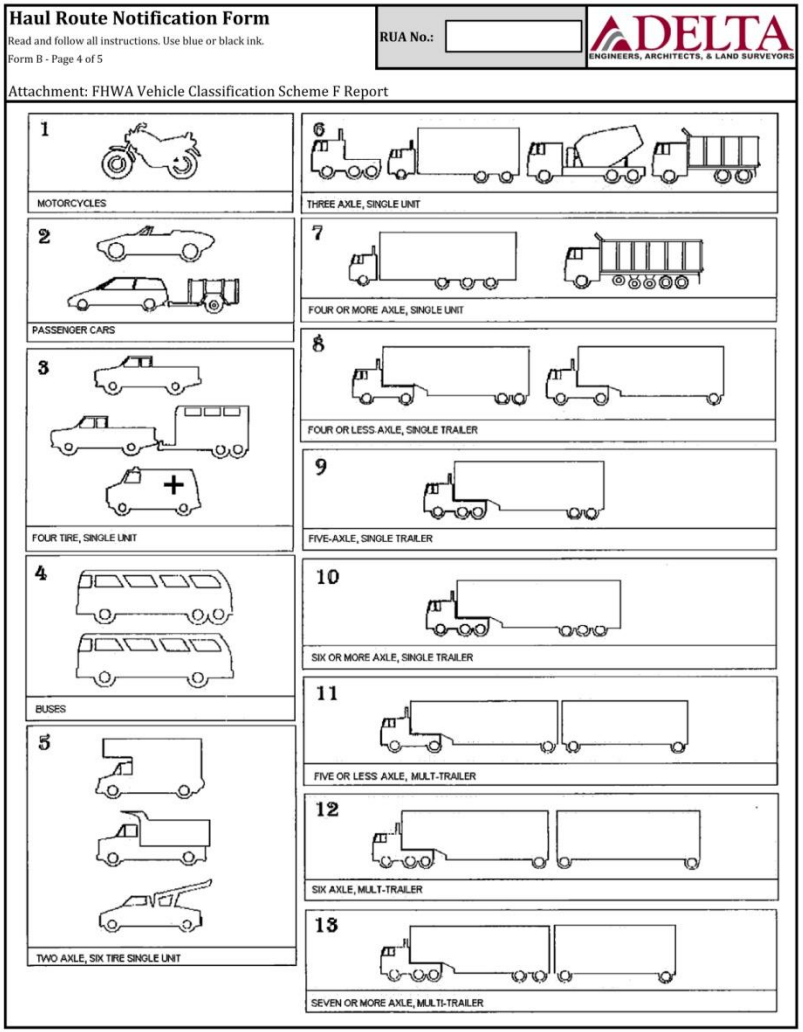
Relative Impact of Vehicle Classes

Number of <u>developer</u> vehicles that would exceed the minimum impact threshold: (Example based on 50 ESAL's)

1. Not considered
2. Not considered
3. Not considered
4. 87
5. 192
6. 119
7. 119
8. 166
9. 41
10. 53
11. 60
12. 47
13. 35



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Delta Assessment of Proposed Haul Route

- **Delta assesses proposed haul route roads:**
  - Evaluate current condition of roadway:
    - Corings are taken to definitively establish road/s capacity
  - Identify and inspect bridges and culverts
- **Delta provides recommendations to municipality for moving forward:**
  - **If it appears that the roadway can handle the developer traffic:**
    - Recommend pre/post use testing
      - Additional corings
      - Ground penetrating radar
      - Video logging with GPS referencing
      - Visual "on the ground" inspections
    - Monitor the road during use
  - **If it appears that the roadway will fail as a result of developer use**
    - Provide plans for necessary upgrade before developer use
    - Provide plans for post use repairs

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Phase III – Damage Assessment

- **This only occurs when a developer is regulated.**
- **A Phase III project (e.g., monitoring of roads during use by a developer) is separate from Phases I & II. The project has it's own project number, is tracked separately, and billed to the Municipality. The Municipality is then reimbursed by the Developer.**
- **The developer is ALWAYS responsible for bringing the road back to its pre-use condition or better!**
- **The municipality decides who performs the repair/upgrade:**
  - Municipal forces
  - Developer
  - Release project for competitive bid
- **The municipality has the final authority to accept or decline adequacy of work.**

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Typical DRPP Costs

- **Phases I & II are bundled as one project:**
  - **Phase I - $7,519****
  - **Phase II - $1,481**
    $9,000
    - *Reimbursable expenses included in the $9,000 lump sum fee are:
    - Mileage associated with:
      - Phase I highway superintendent interview (to and from our Endwell office)
      - Phase I baseline condition road surveys (on site mileage plus to and from our Endwell office) – up to 440 miles
      - Phase II training (to and from our Endwell office) – up to 150 miles
    - Printing costs for the Phase I Engineer's Reports (1 Draft and 1 Final) and Phase II Training Manuals (10 copies)
    - **Phase I costs can be reduced if the Municipality can provide data which Delta Engineers would otherwise collect as part of this process. The data and associated reductions are as follows:
      - Completed road survey by Delaware County, if available - $1,600 reduction
      - Traffic counts – if the County can provide in a format useable by Delta Engineers, the price can be reduced by $1,000. Delta will provide locations at which the counts should be taken if this can occur.
- **Phase III – Developed and invoiced as a separate project; costs vary by specific needs for the development.**

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Summary

- The DRPP is specific in what it looks at. It does not target any specific type of development or industry. Instead, it focuses on concentrated traffic events associated with a specific construction activity with a defined begin and end date.
- Un-biased approach for determining road regulation and assessing damage.
- Well established process with easy to use forms
- Sound engineering practices used to determine damage assessments
- Legally sound Template Law and/or Road Use Agreement available if needed.
- The Municipality is not in this alone. Delta will be there to help.

Thank you for your time!

Questions?