

T.G. MILLER P.C.

Road Use Agreements & Road Use Regulations

**Strategies for Managing
Heavy Hauling on
Local Roads**

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RUA Project Experience

Cohocton Wind Farm
Steuben County
Road Use Agreement Approach
\$750,000 of damage reimbursement

4 miles of reconstruction
2 miles of major rehabilitation
2 miles of surface treatment



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RUA and RUR Publications by Key Staff

- Steuben County DPW Road Use Agreement Technical Articles for Cohocton Wind Farm and Large Developers (Peter F. Messmer)
- Sullivan County Multi-Municipal Gas Drilling Impacts Study and Report (co-authors: Peter F. Messmer, Steven D. Messmer)
- Analytical Process for Road Use Regulation Incorporating a Fishnet Analysis Method for Distinguishing Regulated and Non-Regulated Road Users, 2010 (Patent Pending – Peter F. Messmer)
- Development of a Road Use Regulation – The Basis for Road Use Agreements to be Incorporated in Legislation Adopted by Municipalities Intending to Regulate Heavy Road Users (Copyright Pending – Peter F. Messmer)
- Strategies for the Effective Mitigation of Heavy Trucking on Local Roads (White Paper – David A. Herrick P.E., Frank L. Santelli P.E., Andrew J. Sciarabba P.E., Peter F. Messmer)

How Many Trucks are too Many? Understanding Thresholds!

- Low Thresholds
 - Unmanageable Bureaucracy
 - High probability of multiple small users on **SAME** road
 - Puts long-standing residents and resident businesses in the 'cross hairs' for penalties
 - Creates public outcry
 - Road postings year round
 - Road postings on roads that do not need it
 - Proverbial sledge hammer to kill a fly!
- Appropriate Thresholds:
 - Efficiency – Create a 'doable' system
 - Greatly reduces actual RUR and RUA applications
 - Focuses RUR and RUA efforts where needed
 - Meet tax payer expectations to control large development of concern
 - Very Limited Road Postings

Measuring Truckloads & Setting Thresholds

Approximate ESALS

- Car or Pickup Truck = 0.0003 ESALS
- 1 loaded 18-wheeler = 2.62 ESALS
- 1 loaded 10-wheeler = 3.46 ESALS
- 1 unloaded 18-wheeler = 0.86 ESALS
- 1 unloaded 10-wheeler = 1.5 ESALS

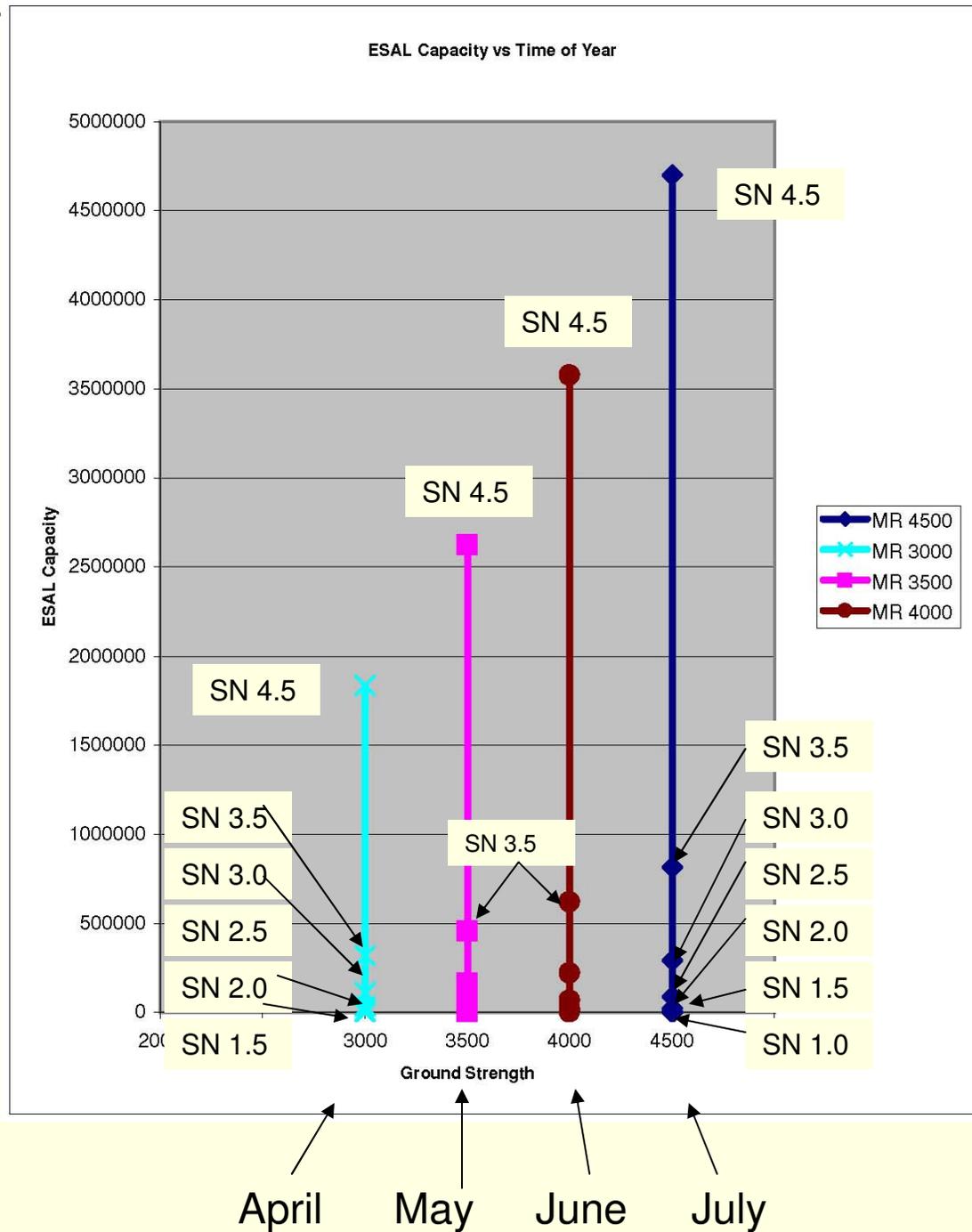
Tompkins County Proposed Threshold

- 30 loaded 10-wheelers = 103.8 ESALS
- 30 unloaded 10-Wheelers = 45 ESALS
- Approximate Total = 150 ESALS

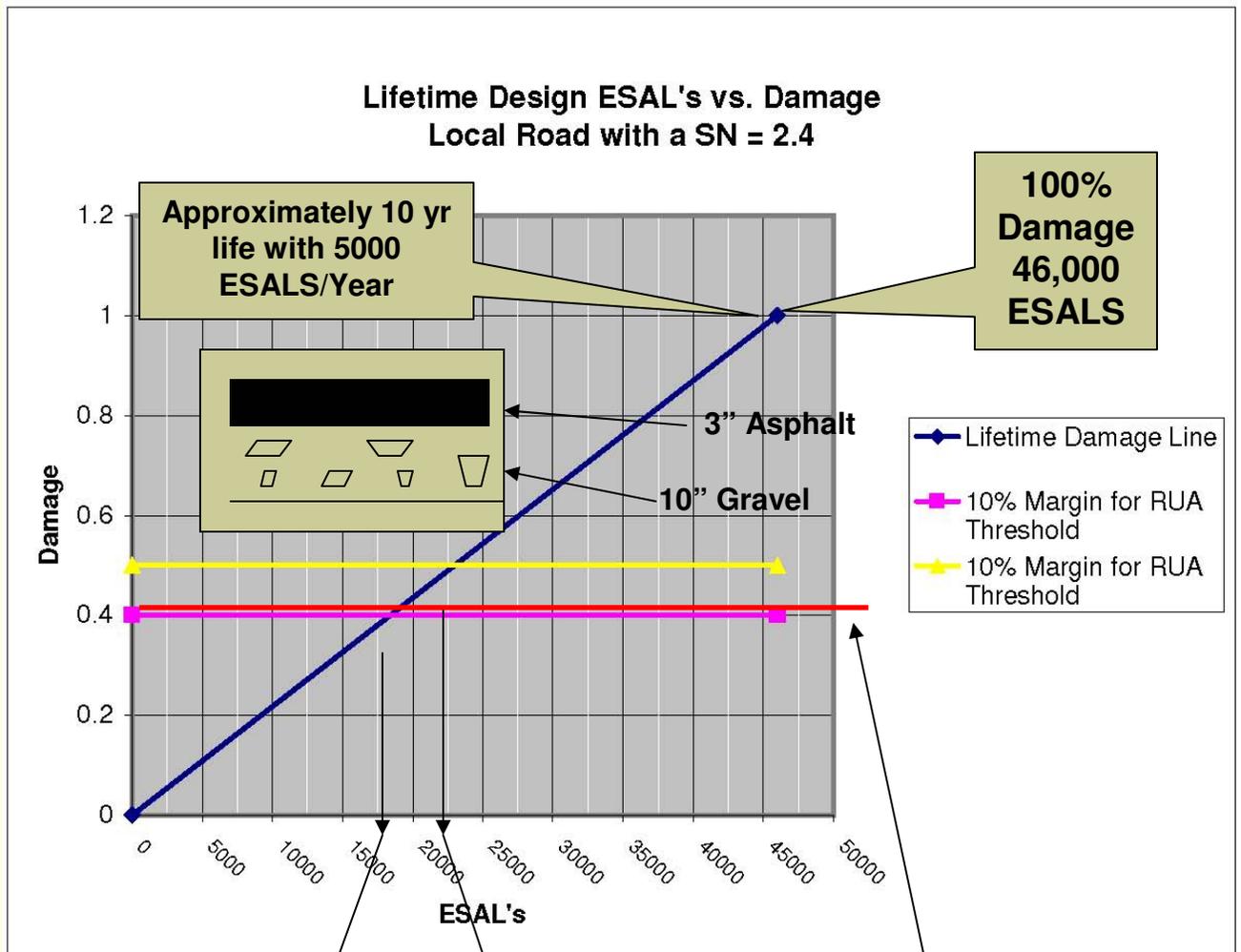
Examples are all 'Legal' Loads

- 70,000 ESALS to fill an 8-million gallon water impoundment once
- 3-inch overlay on 1-mile = 596 ESALS
- Haul away spoils from 5 each 40'x20' basement excavations = 560 ESALS

Structural Number & Total ESALS vs Time of Year



Example of Damage Threshold Typical Town or County Road



17500 22600

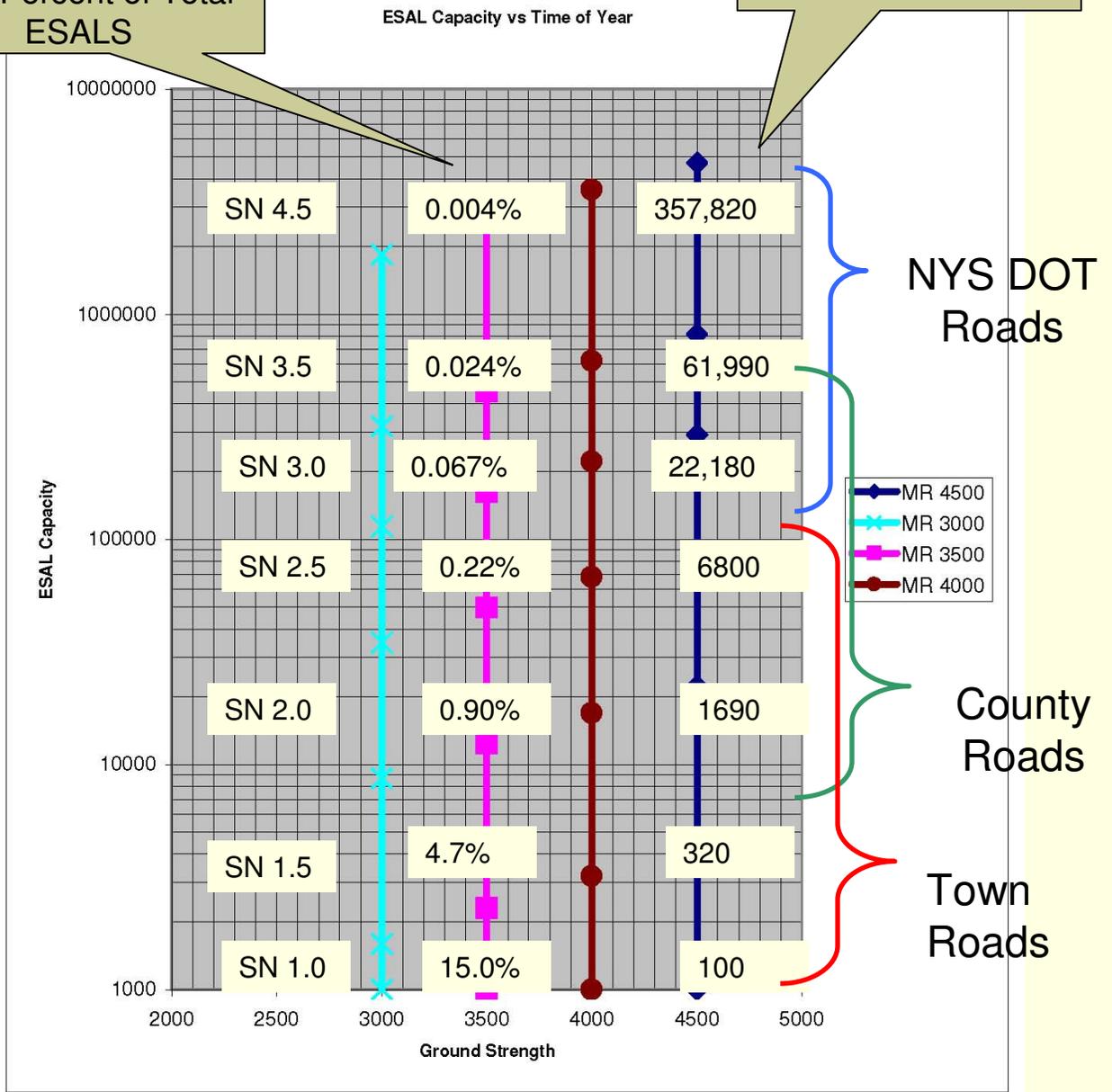
10% Allowable Margin
 $22600 - 17500 = 5100$

Tompkins Margin
 $150 \text{ ESALS} = 0.32\%$

Threshold Comparisons

Tompkins Proposed
ESAL Threshold (150)
As a Percent of Total
ESALS

ESAL Threshold
10% of Total
Lifetime ESALS



Pre-existing Depreciation

Wind-farm Company to County Highway Dept.

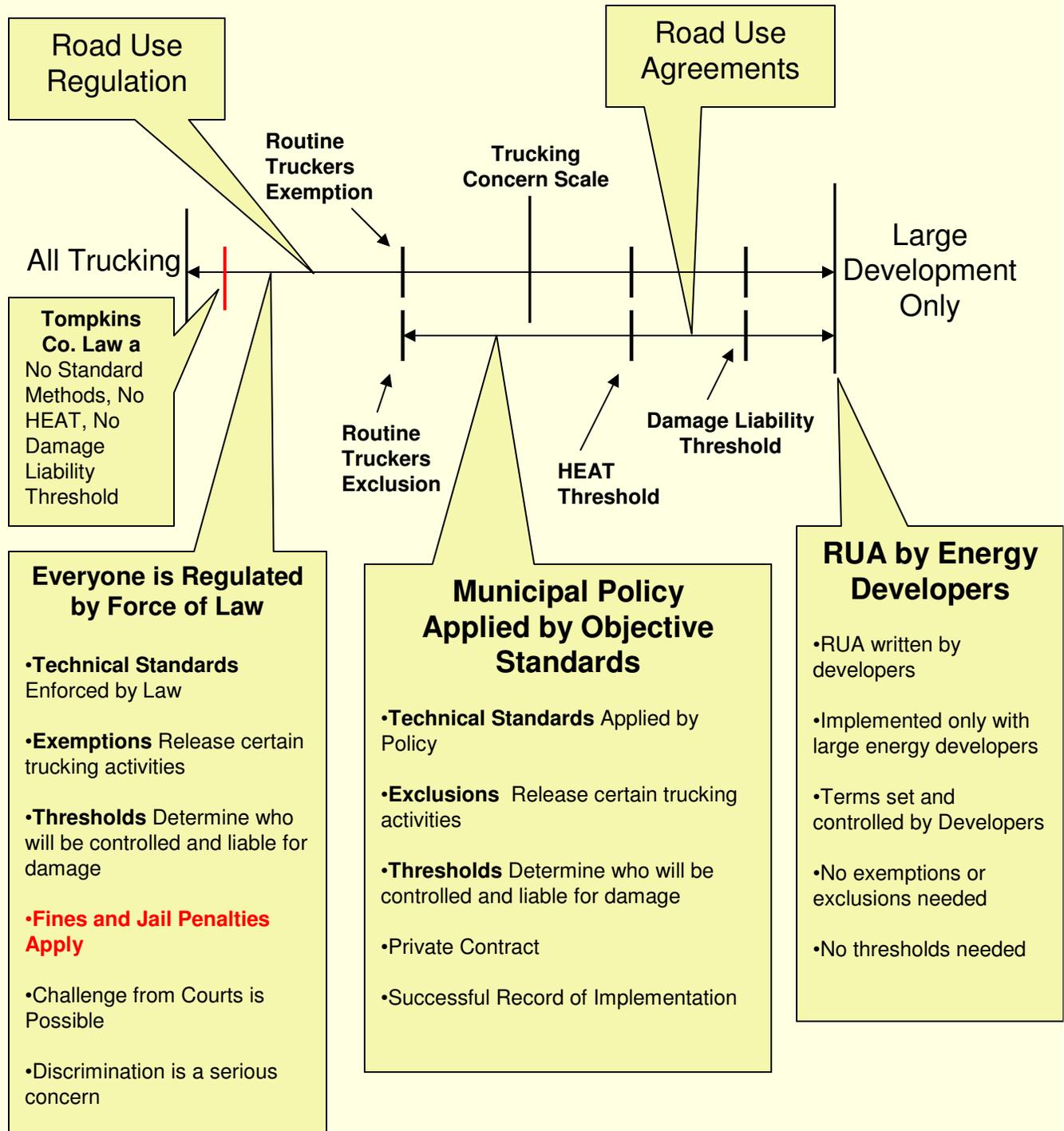
Q: Why should my post-use repair costs include the costs of damages that were on the road before I got there?

A: It shouldn't!

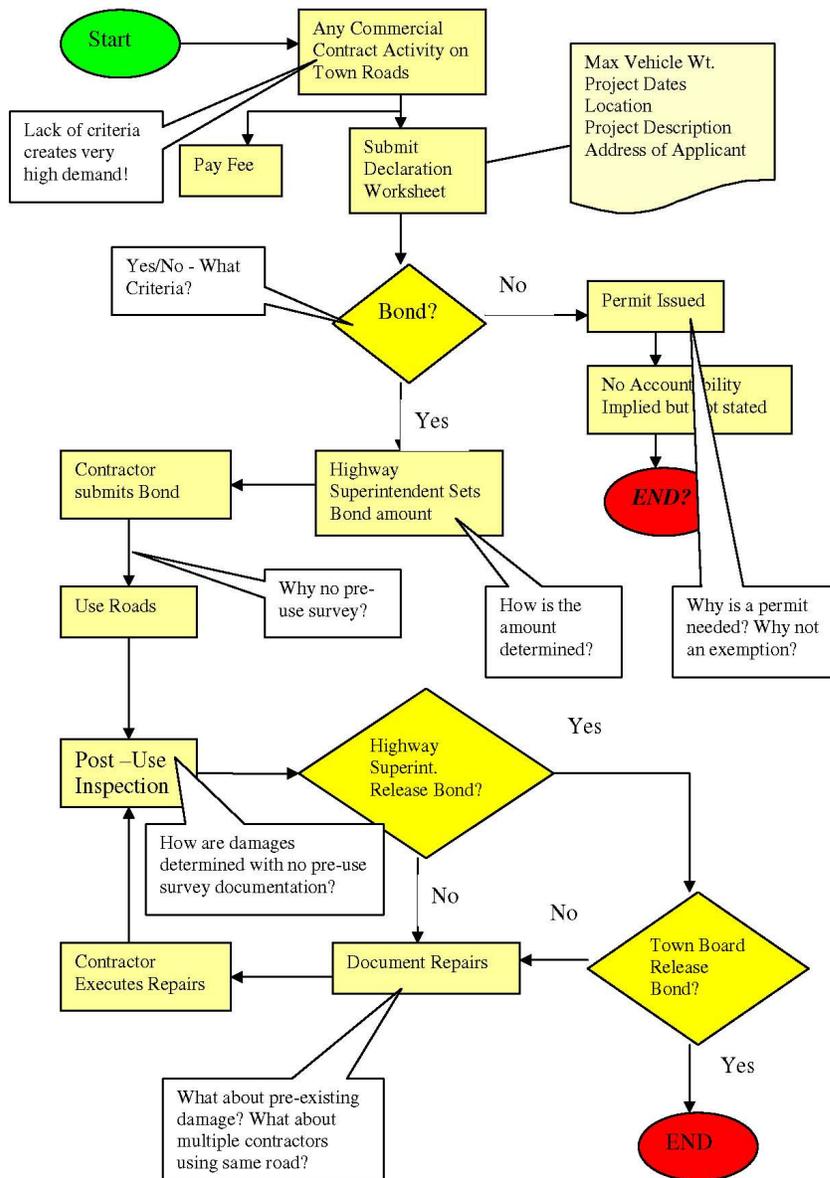
The smaller the 'regulated' user the more important this question becomes because road damage is expensive!

Low Thresholds = Very Large Bureaucratic Challenge

What are your goals?



Example RUR



Challenges Posed by Example Laws

- Unrealistically Low Thresholds
- No objective method to establish when a bond is required
- No objective method to establish a bond amount
- No requirements for pre-use inspections
- No standard means to compare before & after damage
- Before & after comparison is needed to establish pre-existing depreciation
- Low thresholds mean multiple regulated users on same roads
- No means to divide damage liability between multiple users
- No means to sort out good weather versus bad weather trucking
- Overkill on good roads
- Overkill in good weather
- Tremendous regulatory burdens created

Keep in Mind!

- RUR = LAW = Possible Fines & Jail Penalties
- Standard methods and objectivity is the obligation of the municipality when implementing law!
- ‘Judgment’ and ‘approximations’ not good enough when citizens face fines and jail penalties for activities they have been freely engaging in before!

Needed Functions (Common to RUR & RUA)

- Meaningful Thresholds
 - Routine Trucker Exemptions
 - Routine Developer Exemptions
- Standard Condition Assessment (Before and After Inspections)
 - Quantify pre-existing damage/depreciation
 - Set Bond Amounts before hand
 - Determine damages of development traffic
 - Specify Upgrades
- Standard Damage Calculation Method
 - Sub-grade
 - Roadbed Material
 - Traffic Loads
 - Seasonal affects
- Repair Designs & Specifications
- \$ Liability Calculations
 - Account for Non-linear relationship between SN of Repairs and ESAL Capacity
 - Pre-existing depreciation (Municipal Liability)
 - Multiple Users

Basic Building Blocks

(for Municipal RUA or RUR)

- RUR Law or RUA Policy
- Standard Analysis & Assessment Methods (SAAM)
 - Upgrade Policy & Specifications
 - Damage Assessment
 - Exemption & Liability Thresholds
 - Damage Liabilities (Cost Shares)
 - Repair Design & Specifications
- Administrative Code
 - RUA/RUR process schedule
 - Reference to SAAM
 - Financial Instruments (Bonds, Escrow)
 - Liability/Indemnification Articles
 - Contract
 - Haul Route Use Rules
- Repair Services Package
 - Controlled by Municipality
 - Bid Options
 - Existing Municipal Bid System
 - Special Turnkey Bid System

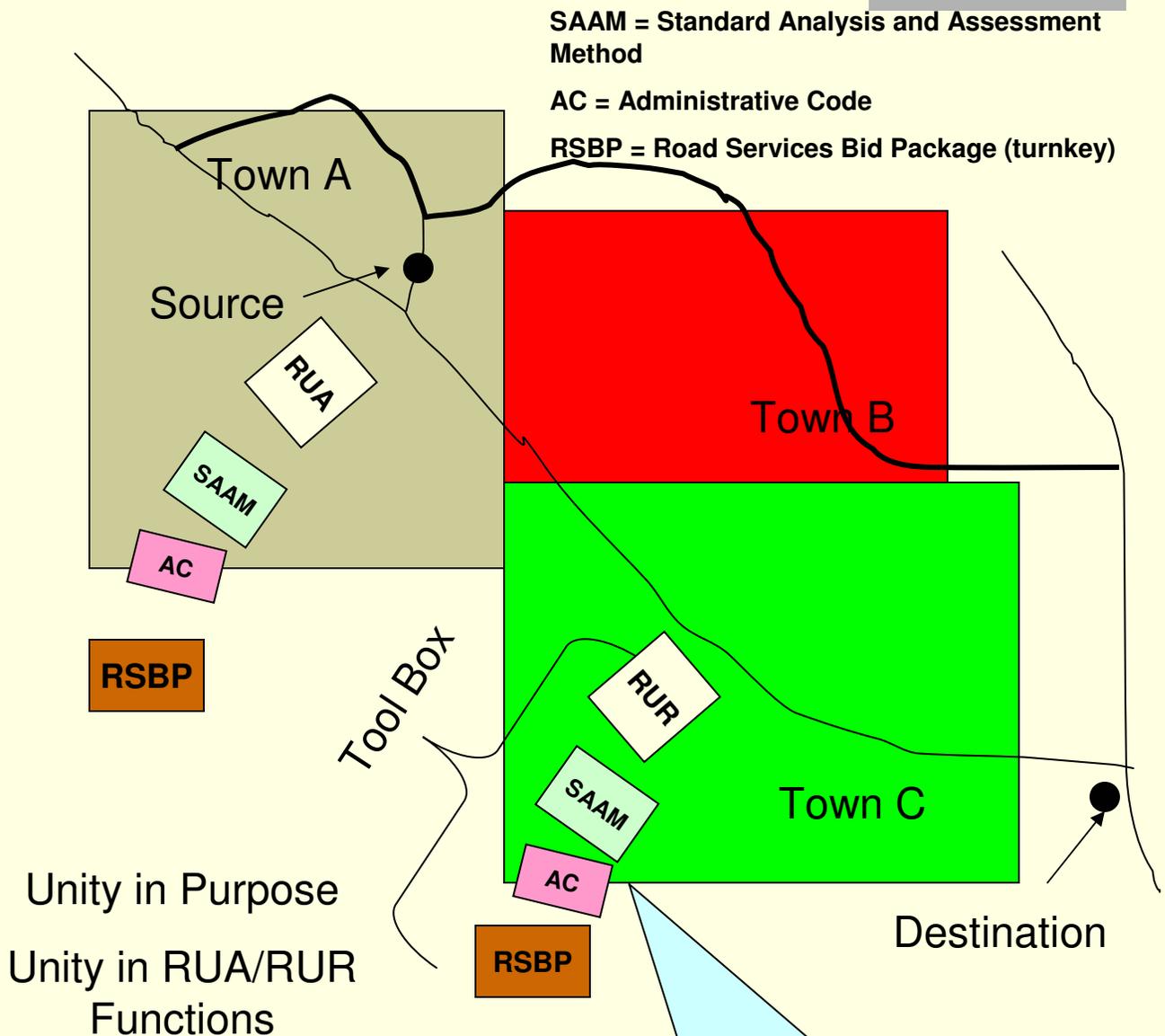
Room for Variation

- RUR or RUA can be town by town
- Thresholds can vary from Town to Town (road structures change)
- Road Services Bid Package can be customized in each town
- Engineer can be different in each town
- SAAM and AC can be unique
 - Not necessary to have soul-source proprietary system across the region
 - Must have sound SAAM and AC

Purposes for Unified Implementation

- Prevent concentration of trucking in towns where there is no control
- Dispersion of Haul Routes:
 - Less disruption to homeowners
 - Safer driving conditions
 - Less damage of individual roads
 - Lower overall infrastructure costs to public

Unity of Purpose Customized Application



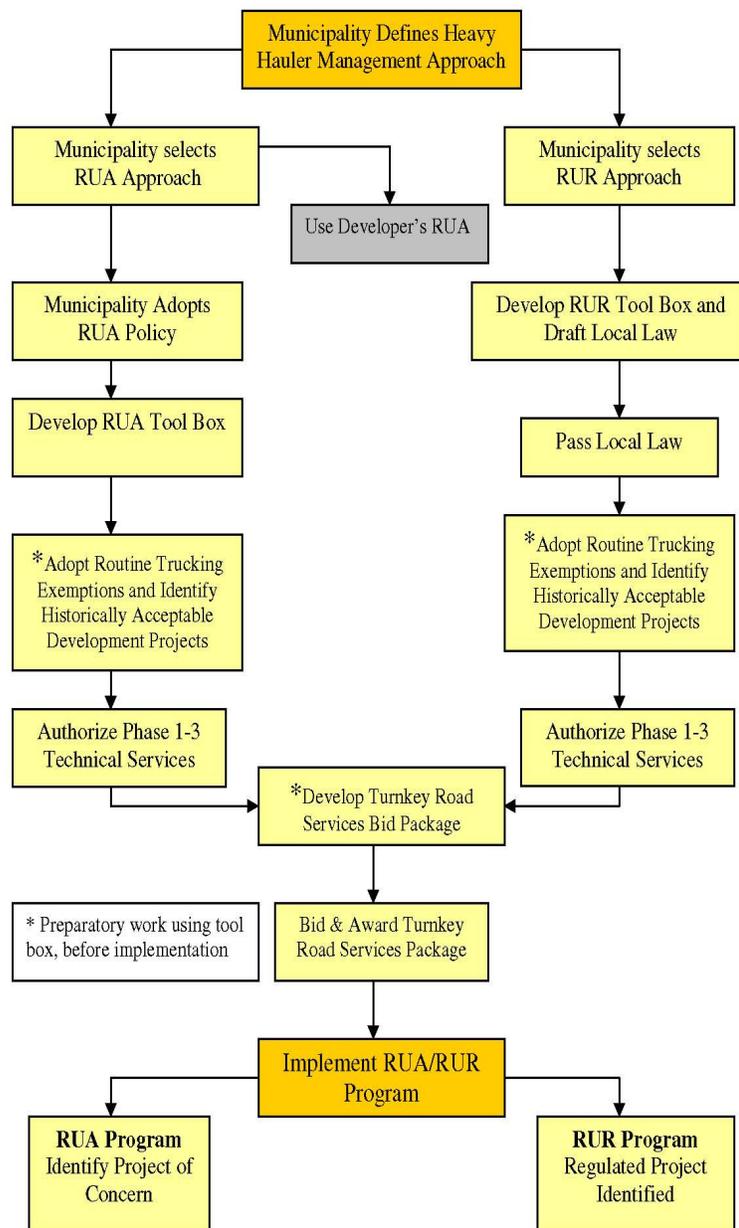
Tool Box Can be
Different as long as
functions are available

We don't all own the same
brand of automobile, or
electric drill...But we all buy
these items for the same
functions!

Road Use Agreements compared to Road Use Regulations

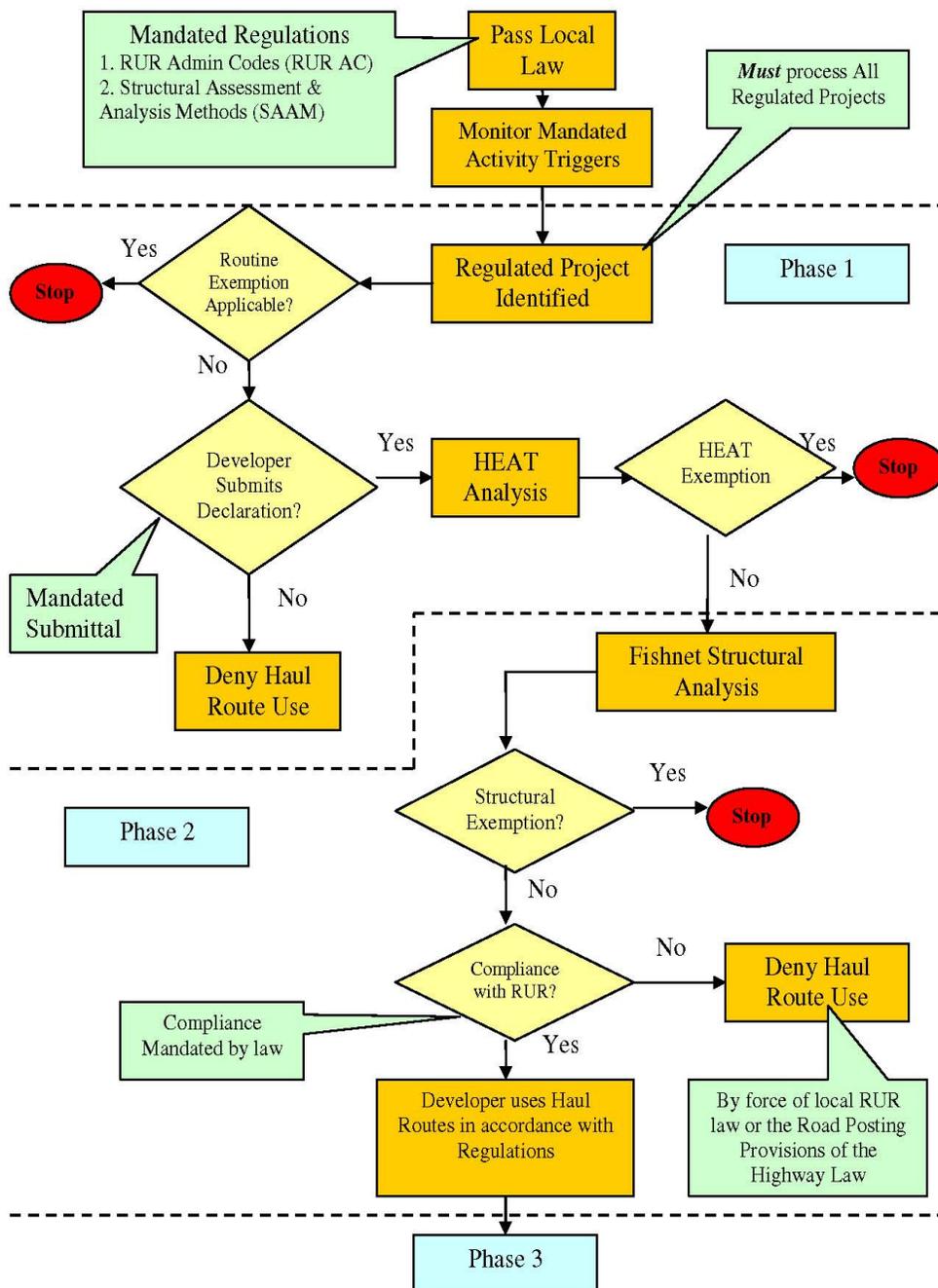
Road Use Agreements (RUA) or Road Use Regulation (RUR)

Decision Making Process



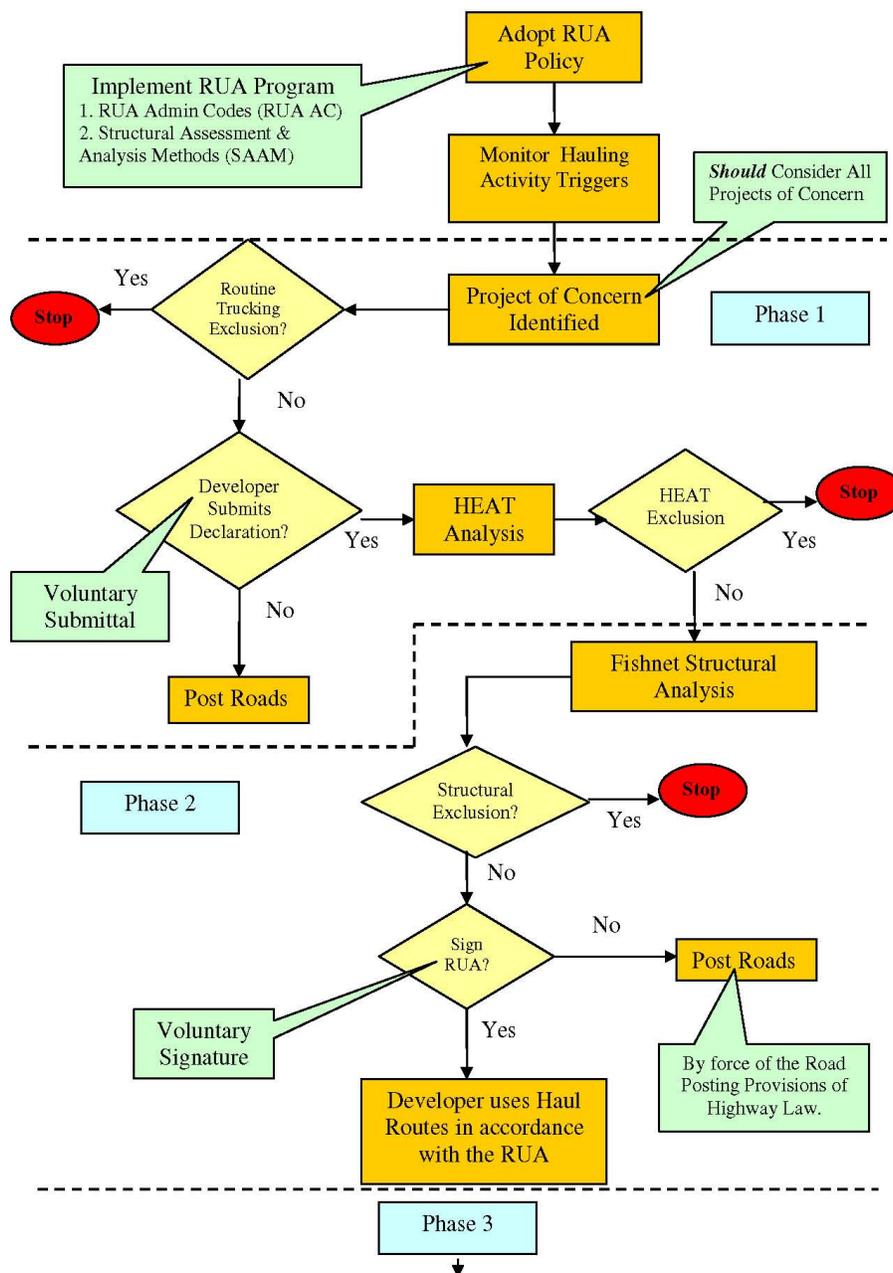
Road Use Agreements compared to Road Use Regulations

Road Use Regulation (RUR) Process



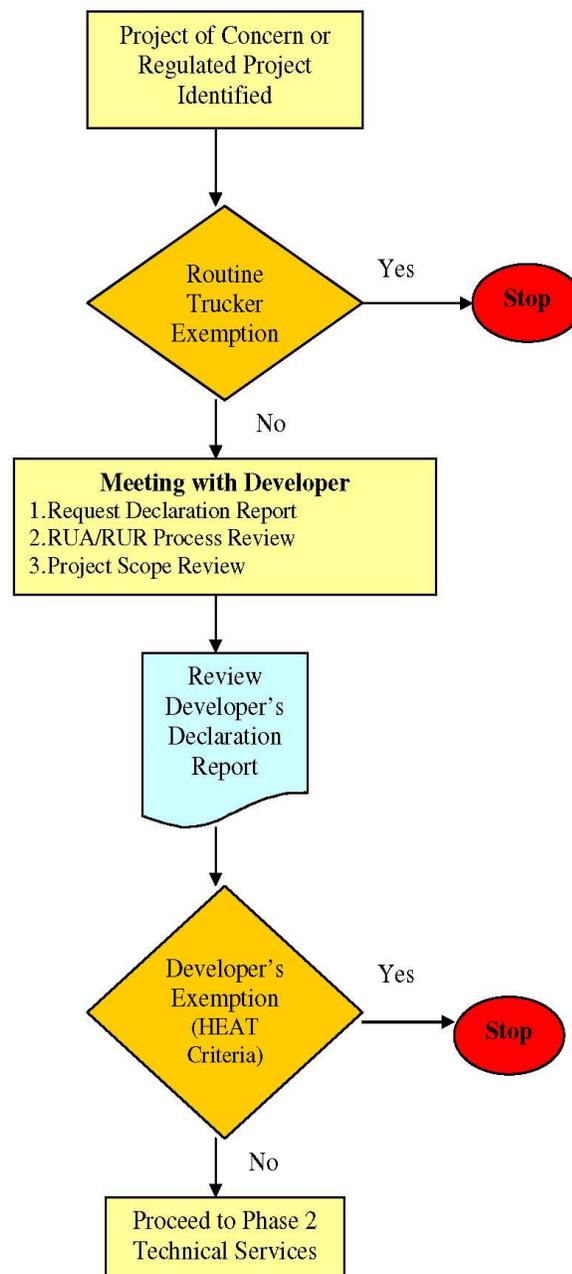
Road Use Agreements compared to Road Use Regulations

Road Use Agreement (RUA) Process



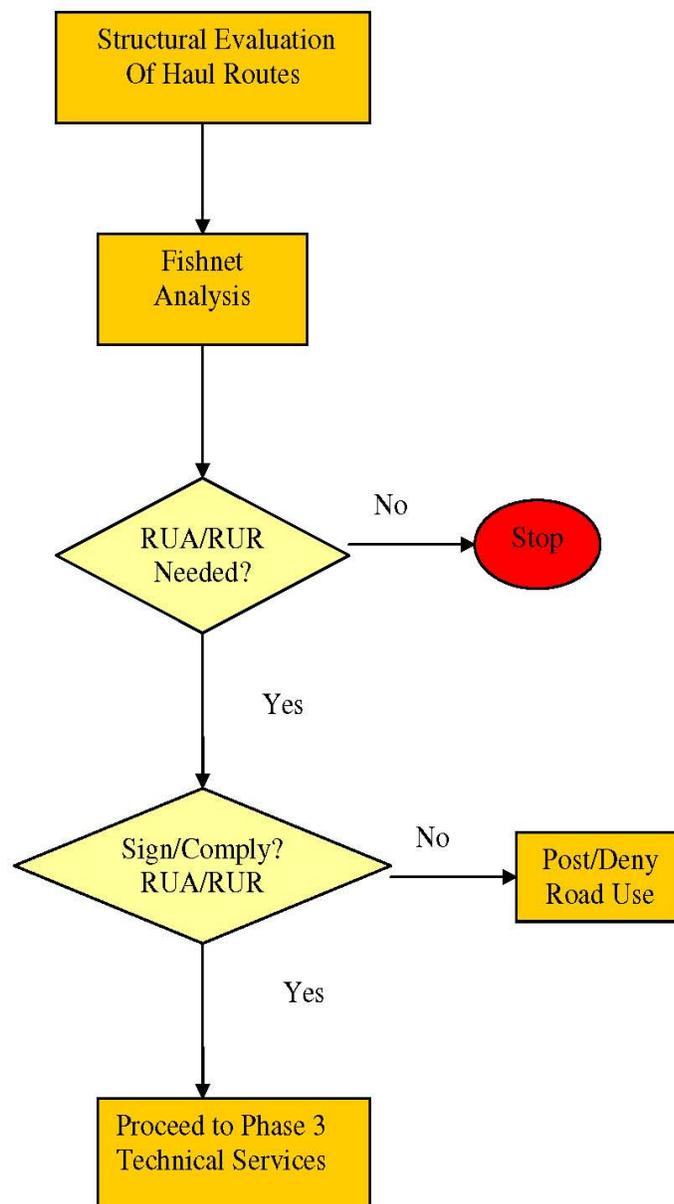
Road Use Agreements compared to Road Use Regulations

RUA/RUR Phase 1 Technical Services



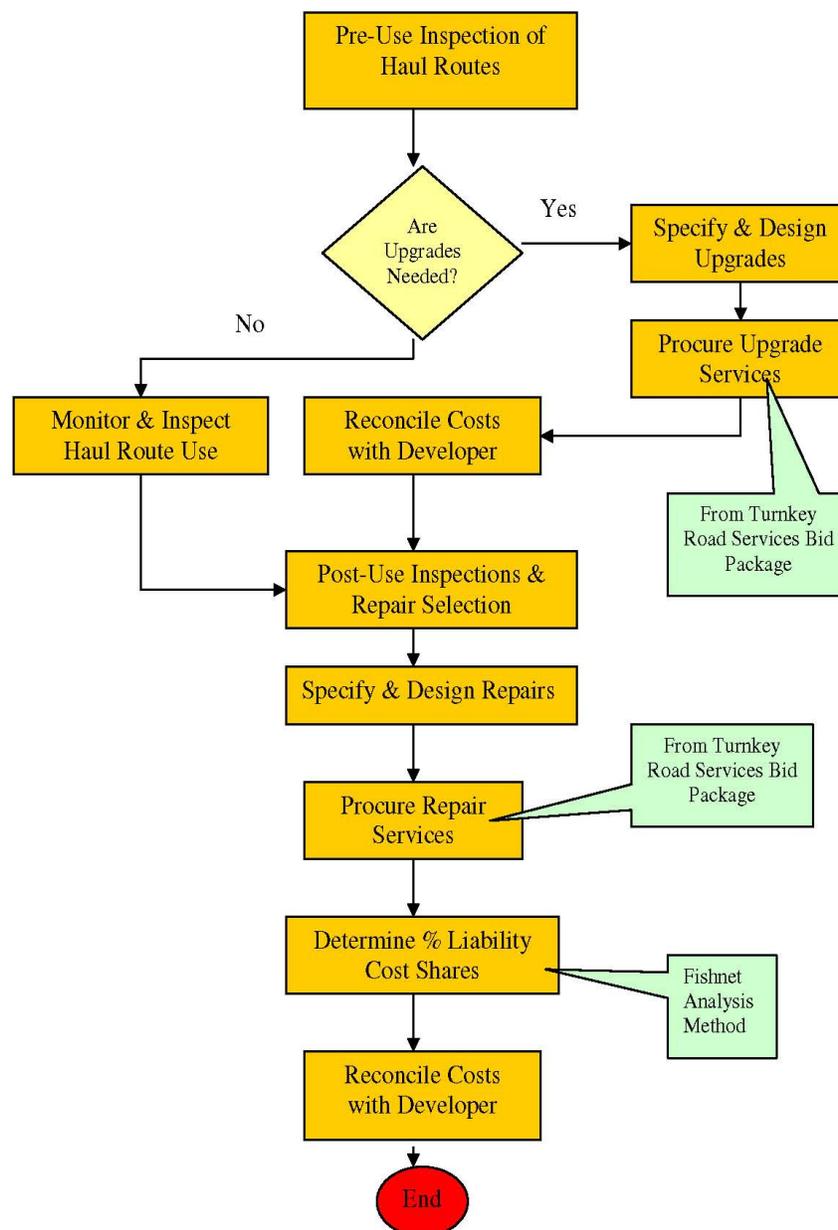
Road Use Agreements compared to Road Use Regulations

RUA/RUR Phase 2 Technical Services



Road Use Agreements compared to Road Use Regulations

RUA/RUR Phase 3 Technical Services



Comparison of RUA versus RUR

Road Use Agreement

Pros

- Record of Success – Implemented in NY, PA, and other States
- Uses Existing Road Posting Provisions of Highway Law
- Private Contract – Less Susceptible to Federal Intervention
- Flexible Application – Voluntary approach allows for more adaptable implementation
- Objective – Based on AASHTO Pavement Design Methods
- Depreciation Based – Accounts for pre-existing damages
- Thorough – Accounts for Weather, Multiple Developers, and Baseline Traffic

Cons

- Relies on Voluntary Cooperation
- Requires Some Negotiation
- May require Road Posting and Enforcement
- Susceptible to Selective Implementation

Road Use Regulation

Pros

- Mandatory – Requires participation
- No negotiations needed
- Objective – Based on AASHTO pavement design methods
- Depreciation Based – Accounts for pre-existing damages
- Thorough – Accounts for weather, multiple developers, and baseline traffic
- Non-discriminatory application – Less susceptible to selective implementation

Cons

- Requires new & unprecedented local law
- Vulnerable to legal challenge – Could be challenged in court
- Local regulations could be overruled by federal Intervention & regulation
- Permanent (if not overruled) – Will require perpetual management and technical support
- May require road posting enforcement