North/West Passage Corridor-Wide Commercial Vehicle Permitting – Phase 2

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16. Abstract The efficient movement of freight is a key to the economic success of any state, region or nation. Rising transport costs will tend to make products from the region more expensive and less competitive in the national and global markets. This trend can be addressed by adding capacity, a very expensive and long-term solution; improving the management of the highway and rail systems; and by easing the regulatory burden on carriers. Some states have organized themselves into compacts or coalitions to issue permits for these routine loads on a regional basis. While permitting is one of the issues often raised by truckers as a costly and frustrating process, a number of concerns over exactly how individual state rules can be harmonized to facilitate regional permitting must be resolved before multi-state agreements can be put into place. To better understand the nature of regional permitting processes, existing compact or agreements must be reviewed and their rules, processes and administrative procedures documented. In addition, members of those compacts must be interviewed to measure their perceptions of the costs and benefits entailed in regional agreement.			
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Table of Contents

Introduction and Summary

Task 5, which asked for a discussion of possible next steps is really a summary of the Phase 2 effort. It follows:

> **Task 5: Identify the Next Steps for NWP States to Join/Not Join or Expand WASHTO.**

The final report for phase 1 of this effort recommended that the states join the WASHTO Compact, primarily as a means of keeping the communications open and as a step toward a more robust, technically sophisticated compact. That recommendation might be repeated here, but circumstances make it clear that it would not be accepted. Feelings in the non-WASHTO states remain strong. Joining WASHTO is seen as a step back technologically. It is seen as not having a close enough tie to enforcement. It is seen as a source of increased, rather than reduced, workload. The list of concerns is longer, but all need not be repeated. The simple conclusion is that WASHTO will not be expanded to the East.

Technology has also made the need for a regional permitting less pressing than it may have been in the past. Other actions now receive a higher priority from the trucking industry. One state permitting supervisor pointed out the change in noting that when states relied on paper permitting systems a regional system was very important. Now that all states have some type of computerized system with online access, getting the permit itself is not a major issue. The larger issues deal with the requirements associated with permit, signing, escorts, etc. Therefore, the bigger issue for the industry is making progress on these related issues and developing a uniformity that makes interstate movements easier.

Over the course of the past number of months, we have identified a number of measures that would make the process of moving oversize or overweight truckloads over the corridor easier. These should be considered the next steps. These actions and a few additional actions that are needed to make others a reality are listed below:

1. **Involve more senior management in each of the agencies.** Affecting the type of changes that the study group has identified will require actions that are above the pay grade of most of the people who have been involved in the effort. Some agency policies may have to be altered, policies that are controlled by more than one part of the agency, or other state agencies. A significant outreach effort will have to be made to the trucking industry. An outreach effort will be needed in several states to legislators so that rules can be modified. In many cases, significant resources will have to be allocated to the permitting function. None of these can be accomplished without the input and support of senior management.
   The people who have been involved in the effort are very knowledgeable and dedicated. They know the business, and they want to see it improved. They are not generally empowered to undertake the tasks outlined in the above paragraph. Even as this effort began more than two years ago, it was apparent that not all of the members of the NW Passage Steering Committee had communicated the reasons or the source of the effort with the permitting offices. Success depends on better communication within each of the agencies and better support and involvement from senior levels of management.
2. **Continue the dialogue.** Changes will be made only if the right people discuss why the rules of each agency are as they are and seek harmony. Discussion takes time. Time must be made available to those who are best placed to initiate change. As this phase of the effort progressed, participation was excellent, when it occurred, but many people

were pulled in other directions and were not able to participate regularly. If this is a priority, it must be given priority.

3. **Define a vehicle for that dialogue.** The telephonic discussions we have had have worked well. They should be continued. Other forums should also be considered. For example, WASHTO—the AASHTO group, not the compact—was raised a number of times as a possible forum. It is much broader than the states in the I-90/94 corridor, and Minnesota is not a member, but a subgroup of WASHTO might be defined to include Minnesota so that a face-to-face forum could be found for regular discussions.
4. **Appoint a topic monitor.** The reason for the dialogue is not talk. It is to make progress. In keeping with the first point, a senior person from one of the agencies should be appointed as the monitor or sponsor of the effort. That person's role would to ask the appropriate questions, to coordinate efforts, and to serve as liaison to his or her peers in other agencies. For example, appropriate questions that might be asked now are: After we have spent more than $60,000 on the topic, what have we accomplished? What is being done to make the changes needed to bring about harmonization of rules? The answers to those and other questions should be shared with peers.
5. **Initiate regional dialogue with the trucking industry.** The impression one gets after dealing with permitting issues for some time is that communication between the agencies and the trucking industry is excellent in some states and much less so in others. In more than one instance the researchers had issues raised from the industry that agency people said they had not heard. A regional communication effort would tend to bring all the states up to a reasonable level of communication. It would also serve to increase communications within the industry. This is obvious across state lines. But it will help within states. For example, in some states significant users of permits are not members of the trucking associations. Rather they are in the construction industry. These various industries that use and benefit from oversize/overweight permits will benefit in hearing their respective concerns.
6. **Initiate the changes needed for harmonization of rules.** Through this effort agreements have been reached on a number of issues:
    a. Permit information required
    b. Lighting
    c. Signing
    d. Escorts
    e. Hours of operation
    f. Holidays

    In most states the changes will require adjustments in administrative rules. This means legislative and industry involvement. In some cases it will mean controversy. An effort must be made to reach out to the industries and to legislators to help them understand the rationale for the proposed changes and the value that changes will bring.
7. **Modify websites to improve communications and reduce confusion.** A major source of information from the agencies to the industry is the collective presence of the states on the web. With some exceptions, the current state of the state websites as they relate to permitting is not good. They need to be modified to provide common and consistent information in a manner that is easy for the user to access. This will require

some coordination. Providing that coordination could be a good role for the monitor or sponsor, discussed above in #4.

8. **Begin the process of designing and building the permitting systems that will support a more robust, technologically sound, regional permitting system.** We have spent time discussing the merits and attributes of a potential regional permitting system, known alternatively as the virtual system or the XML system. The basic notion of this regional approach is to build a system that will interface electronically with individual state systems to produce regional permits that are touched by staffers only in extreme (superload) conditions that require detailed analysis. Such a system would provide 24/7 access for truckers; it would be quick; it would provide routing; and it would reduce state workload. But it will only interface with systems that actually do the tasks with which it must interface. If a state does not have a routing system or a load analysis system, the interface will not replace those individual pieces. Those underlying state systems have to be brought to a common level of function for a regional interface to work effectively. To make this happen a number of things need to occur:

    a. A conceptual design for the interface system has to be agreed upon. This will require involvement of state permitting and IT staff.

    b. The functionality that is necessary in the underlying state systems will have to be defined and the gap between those requirements and the individual state systems will need to be measured.

    c. An outreach effort will be required with the industry to find support both politically and financially. That outreach might be expanded to the industries that move oversized or overweight products in the corridor. For example, the shippers who use the ports of Seattle-Tacoma or Duluth-Superior probably have an interest in making the permitting faster and less expensive. The developers of the oil fields along the US-Canada border also probably have such an interest.

    d. Federal agencies with programmatic interest or possible financial support should be involved. For example, the FHWA administers a corridors program that could provide some funding for the effort. The FMCSA has a deep interest in all things related to the trucking industry and might be a key supporter with the USDOT.

    e. Joint funding and procurement efforts will have to be made.

All of these efforts will require coordination, another good assignments for the topic monitor or sponsor.

All of the items listed above are detailed in the balance of the final report. Most of them will not be easy to accomplish. All will require effort and coordination. All will enhance the movement of goods along the corridor and contribute to the economic growth of the region.

Summary of State Permit Requirements

What follows is a side-by-side comparison of the requirements of the states related to oversize/overweight permits.

Rule/State	MN	SD	ND	MT	WY	ID	WA
Permit information required							
Account number, if you have one.	*	*		*		*	
Name the permit will be issued to (Permittee), address, city, state, and zip code.	*	*	*	*	*	*	*
What is being moved? Load make, serial number, model number, and net weight of load	*				*	*	*
For each vehicle or combination of vehicles: vehicle make, license plate number, empty weight, axle width.	*	*	*	*	*	*	*
Dimensions of load: width, height, length, and amount of overhang (front and rear, side to side, if any).	*	*	*		*	*	*
If overweight, provide the load weight, total gross vehicle weight.	*	*	*		*	*	*
Kingpin setting if the trailer is more than 48 feet in length.	*						
Starting and ending location, Trunk Highways requested and junctions to them if getting off system.	*	*	*	*	*	*	*
Proof of insurance or bond		*		*			
Certification that load is not divisible						*	*
Federal ID number		*		*	*		
USDOT Number				*	*		*
Bridge Number					*		
Estimated mileage in state					*		
Federal safety record					*		
Tires per axle	*	*	*		*	*	*
Tire width	*	*			*	*	*
Dates of proposed move		*	*			*	
Type of permit applied for		*					
Temporary credentials required		*					

Preferred route		*					
Estimated miles of travel					*		

Time/State	WA	ID	MT	WY	ND	SD	MN
Night							
Not exceeding 12’ wide. 14’ 6” high, 105’ long	*						
Interstate: Not exceeding 10’ wide, 14’ 6” high, 120’ long		*					
Not exceeding 10’ wide, 14’ 6” high or 110’ length.			*				
Not exceeding 10’ wide on interstates, if all other dimensions are legal				*	*		
No night operations							
Not allowed if: An escort is required. Cannot maintain posted speeds. Wider than 10’. Higher than 14’ 6”. Single unit longer than 45’. Multiple units longer than 110’. Two units with one longer than 60’. Operating on a non-interstate or beyond two-mile radius of an Interstate interchange.						*	
Between 10’ and 12’ 6” wide. Between 12’ 6” and 14’ 6” wide and one escort required. One escort and police officer escort required beyond 14’ 6”.							*

Time/State	WA	ID	MT	WY	ND	SD	MN
Rush Hour							
Routes in major cities	*	*					*
None			*	*	*	*	
Weekend							
None	*	*		*	*		
Restricted for loads exceeding 18’ wide, 120” long or 18; high			*				
From Memorial Day weekend through Labor Day weekend, NO travel after 2PM on Fridays and Sundays							*
Noon on Saturday thru Sunday						*	

Time/State	WA	ID	MT	WY	ND	SD	MN
Holidays							
New Year's Day	*	*	*		*		*
Memorial Day	*	*	*		*		*
Independence Day	*	*	*		*		*
Labor Day	*	*	*		*		*
Thanksgiving Day	*	*	*		*		*
The day after Thanksgiving	*						*
Christmas Day	*	*	*		*		*
At noon of the day preceding holidays	*						
If holiday falls on Friday, Saturday or Sunday, no travel on Saturday, Sunday or Monday.			*				
No Holiday restrictions						*	
Indicated holidays restricted for loads over 16' wide					*		
No overwidth permit exceeding 16 feet will be valid from 12 noon the day before the holiday until sunrise the day after the holiday.					*		
When any above named holiday is on a Sunday, the following Monday shall be the holiday. When any above named holiday is on a Saturday, the preceding Friday shall be the holiday.					*		
Opening fishing season weekend							*
Escorted vehicles restricted for major holidays				*			
If Holiday falls on Tuesday, Wednesday, or Thursday, no travel from 2PM the day before until 2AM the day after the holiday. If Holiday falls on Friday or Saturday, no travel from 2PM Thursday until 2AM Monday after the holiday. If Holiday falls on a Sunday or Monday, no travel from 2PM Friday until 2AM Tuesday after the holiday. Travel allowed between 2AM & 5AM on morning of the holiday and holiday weekend days.							*

Rule/State	WA	ID	MT	WY	ND	SD	MN
Escort							
In daylight, one escort if between 14’6” and 16’ wide on divided highways							*
between 14’6” and 16’ wide two escorts on non-divided highways.							*
Escort required between 12’6” and 14’6” wide on non-divided.			*				*
In daylight, one escort between 95’ and 110’ long on all highways.							*
Two escorts required over 110’ long on all highways.							*
Lead Peace Officer escort required whenever the permitted vehicle cannot stay on its own side of the centerline.							*
At night an escort OR state approved LED package is required for dimensions between 10’ and 12’6” wide and/or when length exceeds 95’. Over 12’6” wide requires a Peace Officer escort.							*
2 lane>12', 1 front > 14', 1 front & 1 rear		*					
4+ lanes: 15'-18' = 1 rear >18' = 1 front + 1 rear		*					
> 16' height =1 front		*					
2 lane> 100' length=1 front > 120' length=1 front & 1 rear		*					
4+ lanes >120’=1 rear		*	*		*		
2 lane > 14’ 6” wide 1 front & 1 rear			*				
Multi-lane > 16' 6” width=1 rear			*				
Permittee is responsible to determine the height of all structures			*				
2 lane > 120 length = 1 in rear			*		*		
2 lane-14’ 6” - 16' width=1 front; 16' - 18' width=1 front & 1 rear					*		
Multi-lane >16’ width= 1 rear					*		
>18’ height=1 front					*		
>16' I-state & >20' state hwy=1 front; or if 2' into adjoining lane						*	
No requirement for height or length						*	
2 lane >11’ wide =1 front & 1 rear	*						
Multi-lane->14’ wide = 1 rear	*						

> 14’ 6” height = 1 front w/ height pole	*						
2 lane >105’ length = 1 rear	*						
Multi-lane > 125’= 1 rear	*						
2 lane >14’ wide = 1 front & 1 rear				*			
Multi-lane >15’ wide = 1 rear				*			
>= 17’ 6” height = 1 front w/ height pole				*			
2 lane >110’ length = 1 front & 1 rear				*			
Multi-lane length at the discretion of issuing person				*			

Rule/State	WA	ID	MT	WY	ND	SD	MN
Signing Requirements							
Yellow background		*					*
18” red flags on all four corners and extremities		*				*	
18” red, yellow or orange flags on the corners and widest point of the load. If over-length, a flag must be on the tip of the front and the tip of the rear (must be red in rear) overhang, as well as a flag every 20’along the side of the load.							*
Escort vehicle must have 18” square red flag on each corner of the front bumper							*
Sign dimensions of 7’ wide 1.5’ high	*	*				*	
Sign dimensions of 6’ wide 1.5’ high							*
Front sign dimensions of 6’ wide 16” high							
Rear sign dimensions of 8’wide 1.5’ high							
12 x 60 inches. Transport and escort					*		
1 5/8 inch stroke black letters 10 inches high		*					
8 inch dark letters on light background, transport & escort			*				
10 inch letters	*						
10 inches X 5 feet				*			
Escort-10 inches high by 5 feet wide, type standard series B, 8 inch high letters, 1 inch stoke width and black letters on yellow background		*					

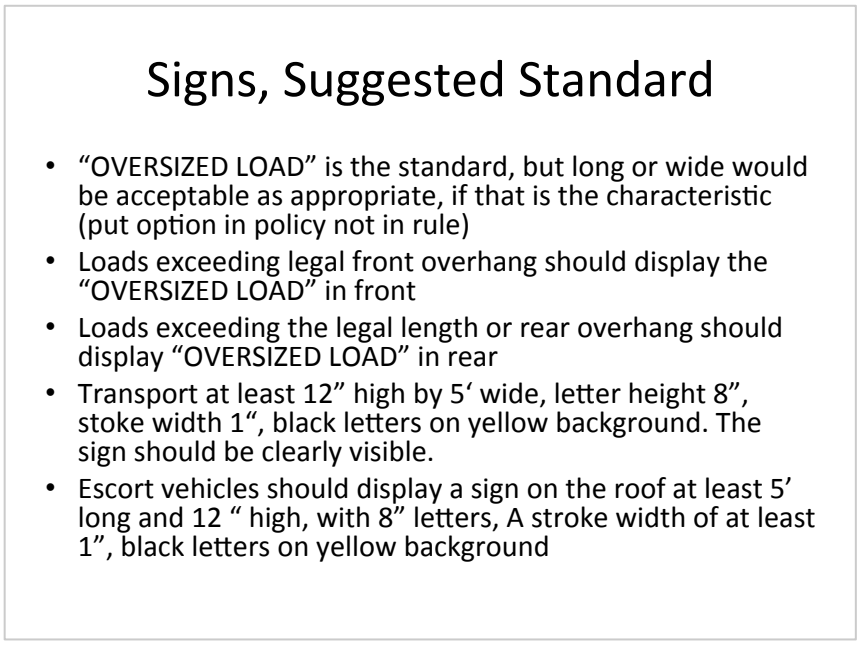
Escort-10 inches x 5 feet					*			*
Escort letters 12 inches high							*	
Escort-5'x10' with 8 " letters		*						
"Oversized Load"		*	*	*	*	*	*	*
"Wide Load" accepted		*		*				*
"Long Load" accepted				*		*		*

Rule/State	WA	ID	MT	WY	ND	SD	MN
Maximum Permitted Weights							
600 lbs per inch tire width	*				*	*	*
800 lbs per inch tire width		*					
Steering axle 750 lbs.per inch of tire width, all other axles 600 lbs. per inch of tire width.				*			
Single- 20,000						*	*
Single- 22,000	*						
Single- 24,000					*		
Single- 25,000				*			
Tandem-34,000						*	
Tandem- 40-46,000							*
Tandem-43,000	*						
Tandem- 45,000					*		
Tandem- 55,000				*			
Tri- 60,000					*		*
Tri- 65,000	*			*			
Quad-68,000					*		
Quad- 72,000							*
Quad-74,000				*			
Quad-75,500	*						
Quad- 80,000						*	
Quad- 90,000							
Depends on the route of travel		*	*			*	
Depends on axle configuration		*	*			*	

Harmonization of Rules

The group discussed a range of issues related to the requirements that accompany permits and agreed to recommended standards.

Signing



Signing was the first topic considered. The group agreed to the following standard. The message is what all states either require or suggest. Since some allow other messages, the suggestion was to continue to allow those other messages, if they describe the load, but to make it clear to permit applicants that other messages may not be accepted in other states. Other characteristics mirror AASHTO or the practice of several of the states. To reflect the practices of several states, it was agreed that the sign on the transport vehicle should be stated as at least the size of that on the escort. This allows for more flexibility in placing the sign, particularly for smaller vehicles like pick-ups towing oversized agricultural equipment.

Escorts

Escorts, Suggested Standards

- Width, 2-lane: 12'-14', 1 front; 14'-16',1 front & 1 rear
- Width, Multi-lane: 14'-16', 1 rear
- Length, 2-lane: > 100', 1 front; > 120', 1 front & 1 rear
- Length, multi-lane: >120', 1 rear
- Route-specific more restrictive standards are allowed

The next topic was the requirements for escorts. Again, AASHTO and the practices of the states were considered. The suggested standard is compatible with AASHTO and several of the states.

Warning Lights

Warning Lights, Suggested Standard

AASHTO

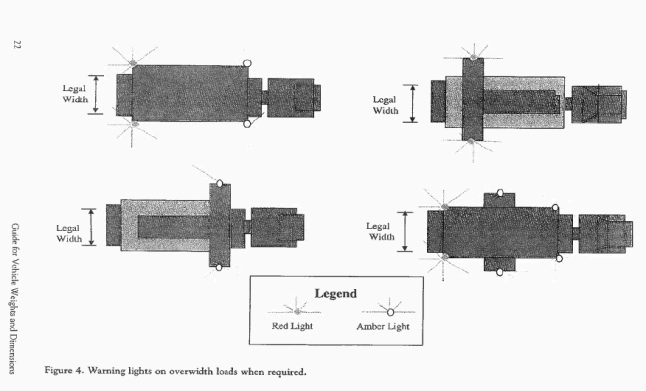


Figure 4. Warning lights on overwidth loads when required.

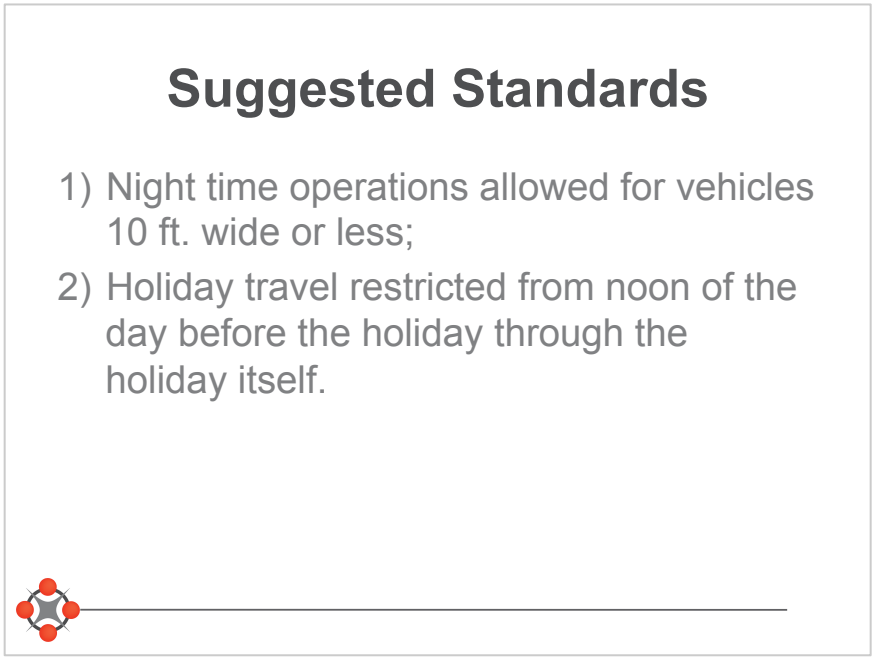
Warning lights was the third topic. The group suggests a combination of AASHTO requirements and WASHTO requirements. These requirements are:

Transport Vehicle:

- At nighttime, steady burning light marking the extremities
- A rotating or flashing light mounted above the cab/towing vehicle visible for 500 feet

Escort Vehicle: One to three flashing lights mounted above the roof visible for 500 feet

Hours of Operations



After some discussion, the group agreed on suggested standards for hours of operation. Both ID and SD had some concerns with the holiday standard, since it represents a tightening of standards from current practice. They see difficulty in getting approval through their rules process. But all agreed that it was a good guideline to strive for.

Permit Information Requirements

The following was agreed to be necessary information to be requested from each permit applicant.

1	**Account number, if you have one.**
2	Name the permit will be issued to (Permittee), address, city, state, and zip code.
3	What is being moved?
4	For each vehicle or combination of vehicles, vehicle make, license plate number
5	Dimensions of load: width, height, length, and amount of overhang (front and rear, side to side, if any).
6	If overweight, provide the load weight, total gross vehicle weight.
8	Starting and ending location, Trunk Highways requested and junctions to them if getting off

	system.
9	USDOT Number
10	Tires per axle
11	Tire width
12	Start date
13	Type of permit applied for
14	Temporary credentials required
15	Preferred route

Weight Rules

The final topic of discussion was a review of the weight rules.

Rule/State	WA	ID	MT	WY	ND	SD	MN
Maximum Permitted Weights							
600 lbs per inch tire width	*				*	*	*
800 lbs per inch tire width		*					
Steering axle 750 lbs.per inch of tire width, all other axles 600 lbs. per inch of tire width.				*			
Single- 20,000						*	*
Single- 22,000	*						
Single- 24,000					*		
Single- 25,000				*			
Tandem-34,000						*	
Tandem- 40-46,000							*
Tandem-43,000	*						
Tandem- 45,000					*		
Tandem- 55,000				*			
Tri- 60,000					*		*
Tri- 65,000	*			*			
Quad-68,000					*		
Quad- 72,000							*
Quad-74,000				*			
Quad-75,500	*						
Quad- 80,000						*	
Quad- 90,000							
Depends on the route of travel		*	*			*	
Depends on axle configuration		*	*			*	

The consensus of the group was that maximum load weights were becoming somewhat irrelevant as more states move to a stricter analytic approach, which looks at specific route

concerns and the configurations of the loads for permitting. The group also agreed that the topic should remain on the agenda to keep a focus on moving toward greater uniformity.

XML or Virtual Permitting Conclusions

Summary

XML or virtual permitting systems are intended to offer many of the advantages of a regional permitting system while retaining the independence of state issued permits. Using an open language system such as XML (which Wikipedia defines as: **Extensible Markup Language** (**XML**) is a set of rules for encoding documents in machine-readable form), various permitting systems might be made to talk with each other. Conceptually, an interface would be constructed that would serve as the user (permit applicant) access point to two or more state permitting systems. Information would be entered into the interface, which would interact with the various state systems and produce a permit. It is possible to accomplish. MN and WI have for their own purposes pursued the concept. WA has also explored the concept. None of the three states is now actively engaged in making a virtual permitting a reality.

The problems involved in making the system real are basically two: the current state of existing systems and the degree of service to be expected from the virtual system. Both issues have to be addressed and the necessary resources—dollars and staff time—must be devoted to the effort to make it happen.

Potential Benefit

In Phase 1 of this project and again in the conversations with the trucking industry that were a part of this project, the primary benefits of a fully automated permitting system for the industry are speed and accessibility. It is worth quoting some of the motor carrier concerns from the phase one report:

> One trucking executive cited three issues they look for in permitting: accessibility, speed, and routing. He noted that in the current economic environment, truckers are often asked to respond to a load on short notice. To be able to respond reasonably and legally, they need to have access to a permitting system that operates 24 hours a day, 7 days a week. If they do not have that access, if they have to wait until office hours, or if they have to wait for days before a permit issued, they run the risk of losing the job to a competitor who may not be as careful about permitting issues. In this regard the permitting process may also have an impact on compliance, putting truckers who try to comply at a disadvantage to those who are willing to risk a fine.
>
> Another perspective on the accessibility issue came from a small trucker. He noted that a driver sometimes gets a backhaul that requires a permit. Without reasonable access to permitting sites, that driver may not be able to respond in a timely manner.
>
> Many truckers echoed the routing issue, noting the problems of getting single permits from multiple states. As one put it: “It’s not unusual during the construction season to get a permit from one state only to find the route is restricted in a neighboring state.” Another told the story of a move over several states that took a number of routing iterations before it could be completed.
>
> Yet another trucker looked at some of the details of permitting when he lamented the complexity of having to learn many systems. Each state is different and truckers have to learn to interact with all of them. Different system structures and different data requirements make the process much more complex than it should

be. On the positive side, it's possible that years of experience learning multiple systems have resulted in something of a competitive advantage.

The issue of the complexity and confusion associated with the varying permit systems was made more specific by a trucker who told of applying for a permit in a state that only accepted online applications. He noted that his permit application was rejected several times until he discovered the very specific formatting requirements of the system. No guidance was provided for applicants before or during the application process. The system's quirks had to be learned by trial and error.

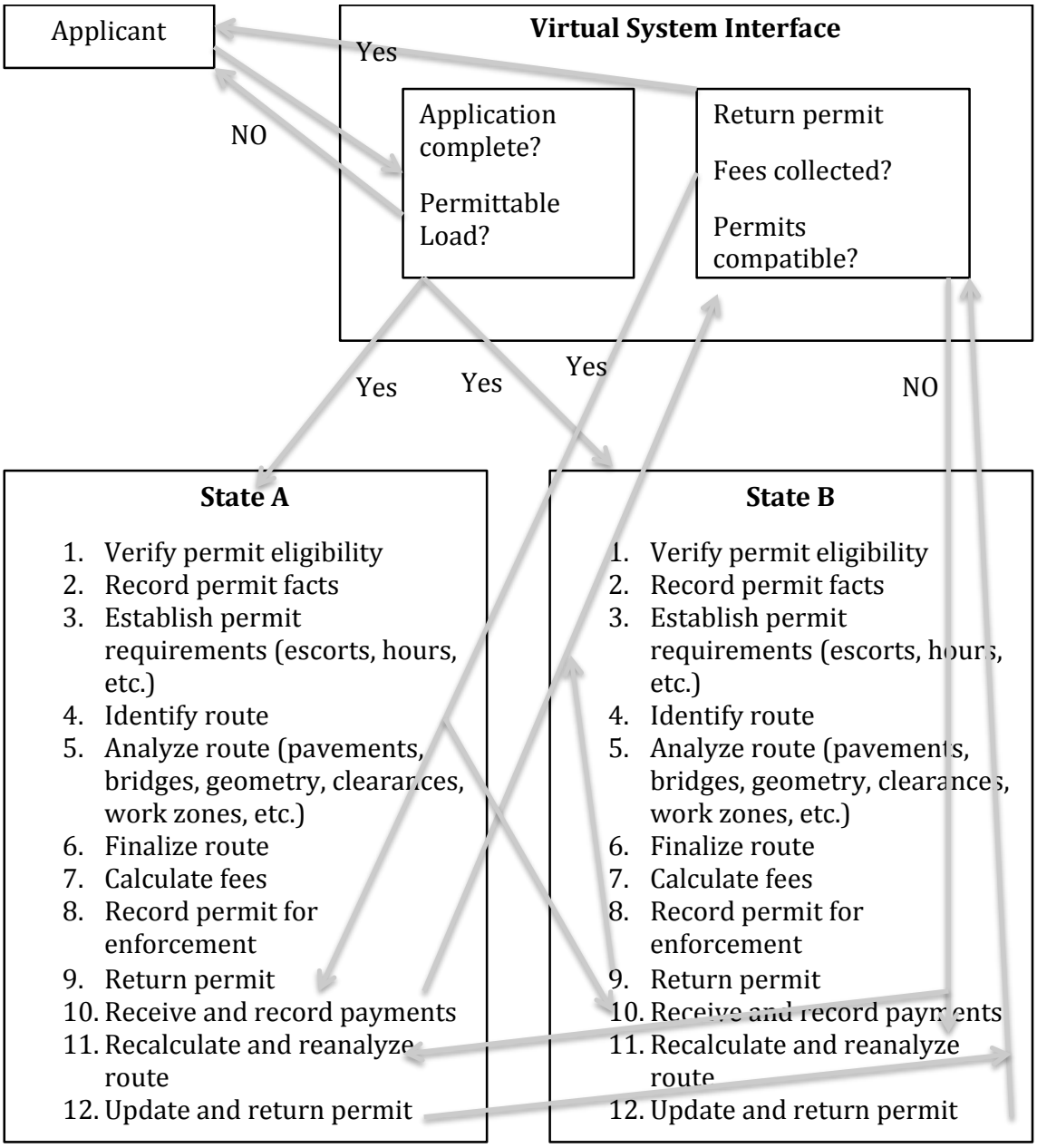
Essentially this translates into the ability of the applicant to apply for and receive a permit online anytime 24/7, with an approved route. While truckers recognize that some permits may require more time and analysis, they hope is to keep that number to a minimum.

In many ways the comments from the agencies have paralleled those of industry. The benefits to the agencies are automating workload to meet increasing demands with level of fewer staff members and level or declining budgets.

Translating these potential benefits into a regional or corridor system means the ability for a trucker to apply for and receive compatible permits from two or more states online 24/7. From an agency perspective, it means being able to issue compatible multi-state permits without the need to maintain and review paper files on route restrictions or other state-specific issues.

Functionality

While the system envisioned could be structured in any number of ways, the following graphic provides a summary of the functionality that would have to exist and where it might lie.



In the concept outlined above, the permit applicant would enter information for the permit into the virtual system interface. The interface would determine if the application was complete and if the application fell within broad parameters of an acceptable permit. If either of these conditions were not met, the application would be returned to the applicant. If the conditions were met, the application would be forwarded electronically to the involved states, in the example states A and B.

Each state permitting system would then carry out a number of tasks:

1. Verify permit eligibility
2. Record permit facts (load, origin destination, carrier, etc.)
3. Establish permit requirements (escorts, hours, etc.)

4. Identify route
5. Analyze route (pavements, bridges, geometry, clearances, work zones, etc.)
6. Finalize route
7. Calculate fees
8. Record permit for enforcement
9. Return permit

With the completion of these tasks, the system would electronically return the permit to the interface where it would be compared to the permit(s) from other states, primarily to ensure route compatibility. If a problem exists with the routing, the interface would return the permit to one or more of the states for the route to be recalculated and analyzed. The modified permit would then be returned to the interface system.

Using an account or credit card system, the interface would collect fees and return the approved permits to the applicant. The interface would also return the fees to the appropriate state.

In this example, the entire process would be automated. Obviously, the system could have some thresholds for size or weight over which some personal review would be needed.

This is the concept that would provide the benefits desired by the industry and the agencies. It is also the robust system that those agency people who responded to a survey seemed to indicate was desired.

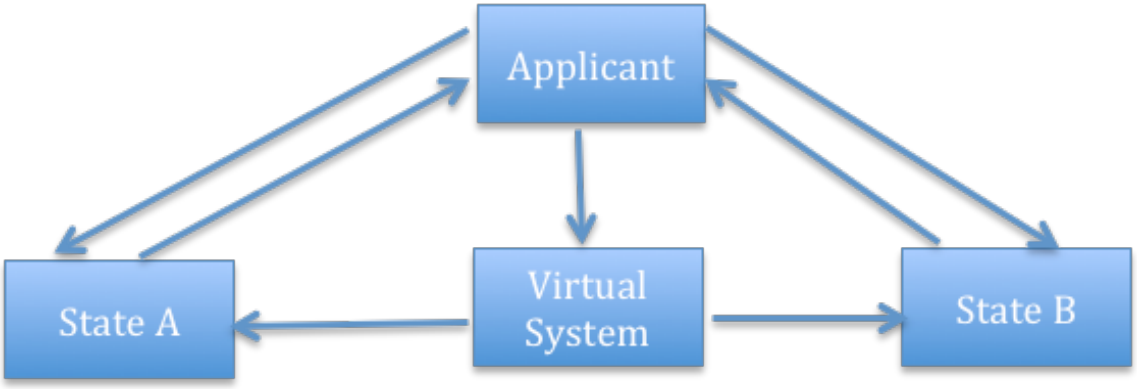
The feasibility of such a system is largely dependent upon the ability of underlying state systems to perform the tasks required. That ability basically deals with an intelligence that would allow the system to:

1. Determine permit eligibility
2. Define permit conditions
3. Calculate fees
4. Select routes
5. Analyze routes
6. Define alternative routes

Currently, only one state of the seven along the corridor has a system with the intelligence listed above. Others vary widely, with routing and route analysis being the major weaknesses. Bringing all states up to the needed level of system intelligence will be the fundamental challenge. Once that is accomplished the interface itself will be—not easy—but doable.

Possible Next Steps

The states of the NW Passage have a basic choice of approaches if they pursue a virtual or XML system. The first could be described as revolutionary, which is building the robust system that would provide the benefits outlined above. The second is a more evolutionary approach. This would entail developing a much less robust system, which in the extreme might be little more than a document transfer system, outlined in the graphic below:



Following this approach, a start could be made, but it would have limited benefit. The industry would have a single point of entry for interstate permits, but once the application is filed, the states would interact with the applicant in exactly the same manner that they would if the application had been emailed or faxed directly to them. While it would provide some functionality and it would carry minimal costs, the short-term benefits would also be minimal. It could be the first step in a longer-term development process, with enhancements being added over time as underlying systems evolve and resources become available.

Since the evolutionary approach would likely be result in a twenty-year plan for real benefits and since it would carry with it the problem of keeping technologies compatible, the more revolutionary approach seems preferable.

Several steps might be followed in pursuit of the more robust system in a more revolutionary manner:

1. **Gain agency policy maker support:** Agency heads and their direct reports typically spend little time on truck permitting, unless something major goes wrong. The type of systems development envisioned for this effort will require funding and the dedication of staff time. To gain that support, policy makers will have to understand the benefit to the trucking industry and the economy of the region. They will also have to understand the benefit to the agency: an ability to meet workload with constant or shrinking resources while providing an improved service.
2. **Engage the trucking Industry:** The trucking industry has a deep interest in improvements to the permitting system. In light of the bridge nature of traffic in all of the states along the corridor, it has an interest in regional solutions to the permitting process. In WI, SD, ND, KS and other states the industry has stepped forward and advocated for improvements to the permitting systems. In all states the trucking industry has influence in the legislative process, where major funding decisions are made. In several cases, they have volunteered to accept fee increases if those additional revenues were used to make system improvements. They could well become advocates for a regional system. Without their support, the changes will not happen.
3. **Seek alternative funding sources:** It is difficult to estimate the cost of the system being discussed. Since it would entail a major overhaul of the systems in some states, the experience of other states that are currently implementing new systems might provide an indication. Kansas is such a state; they expect to spend $1.5 to 2.0 million to implement a new automated system. One can hope that economies of scale might come into play if six or seven states undertook a joint development, but the cost will be significant. Some ideas that might be considered for funding include:

a. **Industry supported fee increases:** As discussed above, the trucking industries in some states have agreed to fee increases to support system development. This could be a significant source that would not compete with other budget priorities.

b. **Federal highway research funds:** This funding source is not usually thought of for this type of application, but it has been used by at least on state in the region.

c. **Federal corridor funds:** FHWA has funding available for the development of applications that improve the flow of commerce on major corridors. Applications are taken cyclically, so the region would have to be prepared with a specific plan when the next cycle takes place.

d. **Federal freight funds:** All versions of federal surface transportation reauthorization have some programs to assist in the movement of freight. Most would allow this type of systems activity to be pursued.

4. **Develop a regional concept:** Success will depend upon a well thought-out and supported regional plan. A key part of such a plan will be implementation of the harmonization efforts that are another part of this total project. Eliminating some of the differences between the states will make it much easier to fashion a system that is compatible with all. The next step must be an orderly process to define the functionality that is really required and desired. Kansas, as they approached their system implementation, engaged a consultant just to guide them through the planning process. The states of the NW passage might consider doing the same.

5. **Consider a joint procurement:** Clearly a joint procurement would be needed to create the XML interface system. This suggestion is that the joint procurement be extended to improving the underlying systems. Such an approach might solicit a response to bringing all of the systems in the corridor up to a defined level of functionality. For some states this may be a very large undertaking. For others it may be slight. The cost of the underlying system improvements would have to be allocated to the states in proportion to the effort involved. This approach should reduce the overall cost as the scale of the total effort is increased. It will also increase the probability of achieving interoperability, see the next point.

6. **Specify interoperability of systems:** A major benefit of some type of regional planning effort will be the ability to specify interoperability when systems are procured and the ability to define that term rather specifically. File structures, languages and data definition have to be reasonably compatible so that an interface system, such as XML, can be made to work. Therefore, defining a vision for regional inactivity and specifying how it is to be made interoperable is an important step in the effort.

7. **Consider the broader application:** As the system is being developed, an ongoing conversation should be held with other potential users. While the focus is and should remain the states of the NW Passage, other potential users such as those states of the I-80 corridor, or those on the North-South routes that intersect I-90/94 should be considered. If the benefit is demonstrated, those states might be brought aboard, reducing the cost of maintaining the system and making its benefit much greater.

Conclusions

The concept of a virtual or XML system is not difficult. It could be done. The keys are improving the state of the underlying state systems, agreeing on the functionality that is to be expected from the interface system, and dedicating the needed resources.

Reducing Confusion of Regulations and Requirements Between Jurisdictions

Introduction

Varied and inconsistent rules governing the movement of oversize/overweight loads across the NW Passage states are a source of frustration, inefficiency, and costs to the motor carriers and businesses who carry and ship those loads, but they seem not to be a source of confusion. Five of the seven state trucking associations in the region agreed that the firms engaged in the business know the rules as well as anyone. (The other two state associations have yet to return several calls.) This does not necessarily mean that some need for better communications. For example, one association official, after saying that his members knew the rules well, pointed out that his association hears of a couple drivers a month who enter the state and find that they are not incompliance with the rules of that state. He did not know how many truckers had this experience but did not bring it to the association's attention.

If the states of the region chose to address this issue, they face two basic choices: 1) attempt some single information source; or 2) do a better job of sharing information as individual states and make an effort to link those efforts.

Industry Comments

The five state trucking association officials who were interviewed all agreed that their members who are in the business of moving oversized/overweight loads know the rules that apply to those loads in each of the states in which they operate. They also said that those truckers who only occasionally move such loads may be in a different situation.

They also offered several other comments:

- The preferred source of information is a solid website. While some may use other media, it was agreed that a good website was best.
- The person in the company who should be the target for improved communications ranges from drivers to dispatchers, operations managers, or owners. In one case even owner-operators where mentioned as a people who needed better information. One suspects that this may be the result of companies of various sizes and business models. Obviously, a small company might combine several of those titles into the role of the owner. A company that relies on owner-operators has different needs from one that owns its own power units and employs drivers. Generally, the feeling seemed to be that a focus on the driver was secondary, since nearly all trucks have communication devices that will allow drivers to get information and direction from office staff.
- At least one interviewee urged that the states look at the current state of communications technology and use it. He specifically pointed to his smart phone, listed some of the many things he could do with it and concluded with: But I can't get a permit or and up to date report on travel restrictions along the route.
- All interviewees also pointed to rule harmonization as a goal that would make things much easier. Most also agreed that for the industry harmonization meant moving to the least restrictive rule, rather than finding a mid-point between the extremes. Two suggested that a compromise might be the use of parallel standards, one for defined interstate travel corridors and another for purely intrastate movements. They noted that

this approach would make the interstate operators lives easier without penalizing those who worked purely intrastate.

- Two existing forums were mentioned in which this type of issue might be resolved. The first was the WASHTO group, which all know about. The second may be new to some. It is the Western States Transportation Alliance, which is made up of North Dakota, Montana, Wyoming, Utah, Oregon Idaho, Nevada, Arizona, New Mexico and Colorado. Quoting from the "What is WSTA" portion of its website, the purpose of the alliance is:

  In the years between 1978 and 1981, several western states formed an alliance designed to foster cooperation on a variety of highway-related issues including truck size and weight, highway safety, cooperative state highway administration and improved commercial vehicle safety inspections.

  The alliance, known as the Multi-State Highway Transportation Agreement (MHTA), recognized the unique transportation challenges faced by rural western states and was intended to improve communication between state legislators, state administrators and private industry. (http://mhta2.org/what_is_mhta)

- Association officials also pointed to some specific issues that should be addressed:
  - Defining a divisible load. Apparently some states have more stringent definitions of what is divisible, so that a trucker has to further divide a load when moving across state lines. Construction and oil field equipment were two commodities that were mentioned.
  - The application of the bridge formula was also mentioned as something that varied from state to state.
  - Finally, just the general variation in what loads could be permitted in the various states was raised as a point of some frustration.

Communication Options

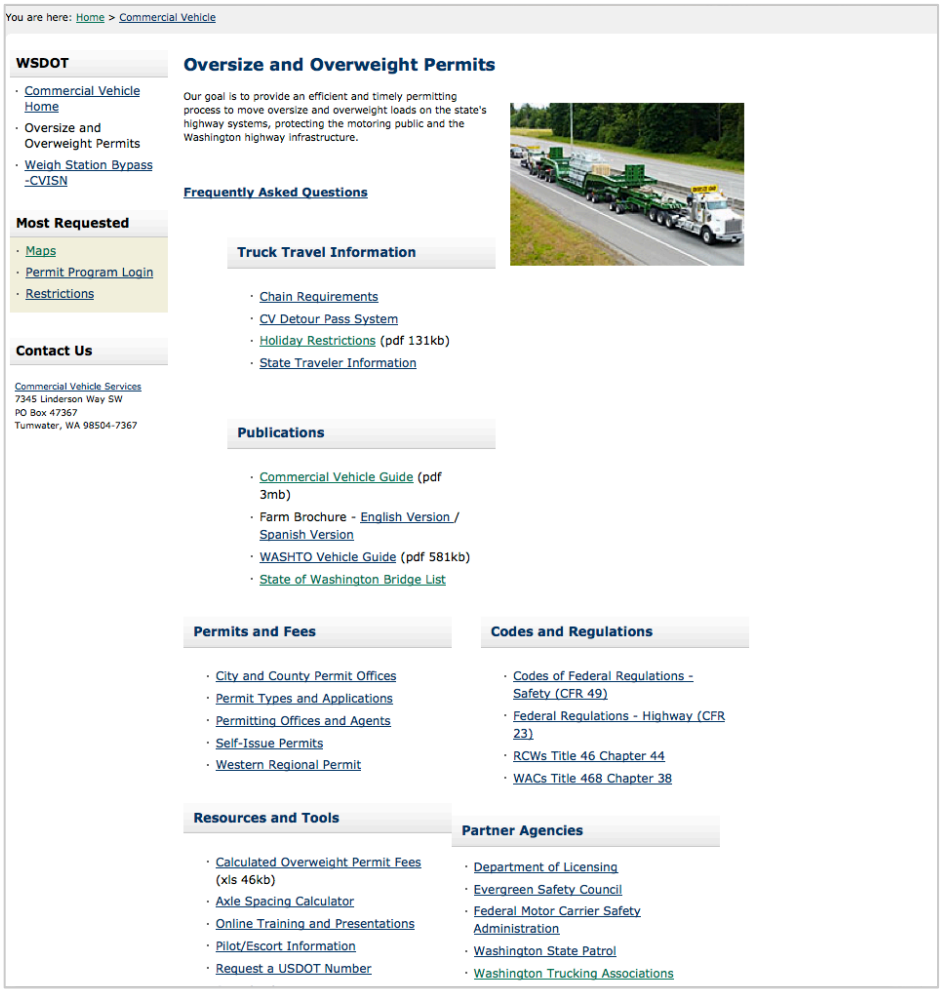
One response to the issue of communication would be to create a new website that included comparative information for all of the states. Such a site could be independent or it could be appended to an existing website, such as the NW Passage site. The approach depends on developing and maintaining useful comparative information. The experience of this project illustrates the difficulty in developing and presenting such information. The side-by-side comparison is seven pages long with charts that cannot be searched and are not annotated. As it has been reviewed, those who should know the rules most intimately have questioned whether it fully captures the desired information. Such a document would have to be made searchable. It would have to have annotations to make some of the points more clear. It would have to be maintained. Moreover, whatever site or page containing it would also have to be maintained. To be used it would have to be publicized and demonstrably more useful other existing sources.

Other sources do exist. The Riggers and Carriers Association publishes state rules. Several permit services also publish those rules. To some extent, those sources are used. Competing with those existing sources does not seem to be a productive undertaking, particularly in light of the effort that would be involved.

A more useful approach would be to focus on improving the efforts of the individual states to share information. State websites are the primary tool used. Through the course of this project, those sources have been used repeatedly. They could be improved.

The next several pages are the homepages of the several states.

Washington



Idaho


Trucking Resources for the State of Idaho
Home
Agency Directory
Contact Info
Idaho.gov
IDAHO Trucking
trucking.idaho.gov
Search
go
511 Traveler Info
Maps
Trucking Directory
Weather
Order Your Free Phone List Card
Permits
Hazardous Materials
Vehicle Registrations
Taxes
Commercial Driver's License
Rules, Regulations & Manuals
Safety & Statistics
Ports of Entry
Bordering States
State of Idaho
511
Permits
indicates an online service
Overlegal
Annual Overlegal Permits
» Overlegal Permit Procedures
» Overlegal Permit Conditions Manual [PDF]
» Legal Width, Height and Length Chart
» Western Regional Overweight/Oversize Single Trip Permit Info
» Bridge / Weight Tables - Legal Allowable Gross Loads
» Off-Track Calculator
» Maps and Attachments
129,000 lb Pilot Project
129,000 lb Trip Log Reporting
» 129,000 lb Trip Log [PDF]
Temporary
Temporary Registration
Temporary Fuel Permit
Temporary Increased Registered Weight
» 120-hour Trip Permits Examples [PDF]
Get it done online!
Permits
» *Order New Annual Overlegal Permits
» *Renew Your Overlegal Permit
» *Order Temporary Increased Registered Weight Permits
» *Order Temporary Idaho Trip Permits
Hazardous Materials
» *Purchase Your Hazmat Endorsements
» Look Up Your HazMat Endorsements
Vehicle Registrations
» *Renew Your Full Fee Registration
» Look Up Your Commercial Vehicle Registrations
» Unified Carrier Registration (UCR)
» Idaho (Intrastate) DOT Number PDF
Taxes
» Apply for IFTA
» File Your IFTA Return (FREE!)
» Renew Your IFTA License
» Order Additional IFTA Decals
» Form 2290 Federal Heavy Vehicle Use Tax (HVUT)
Driver's License
» *Search Driver License Records
» *Crash Reports
» Driver's License Reinstatement

Montana

mt.gov
Montana's Official State Website

MONTANA DEPARTMENT OF TRANSPORTATION

About MDT | Traveler Information | Public Involvement | Doing Business | Publications | Search/Index

Permitting

MCS is responsible for the State of Montana's oversize/overweight permit program. MCS administers all policies and rules governing the issuance of oversize/overweight permits and manages Montana's automated web-based permitting system.

If you are transporting a load or if you have equipment that exceeds the legal dimensions, over-dimensional permits for width, length or height or any combination of width, length and height are required.

For additional information, Monday thru Friday 8am - 5pm phone 406.444.7262 or see the Truckers Handbook.

Western Regional Permit Agreement - is an agreement with Montana, Arizona, Colorado, Idaho, Louisiana, Nevada, New Mexico, Oklahoma, Oregon, Texas, Utah, and Washington that allows a carrier to order a permit valid for 5 consecutive days from single jurisdiction and have all the member states included. These permits can be ordered from any jurisdiction along the route that is to be traveled. Each state has designated routes, which includes all interstate highways plus other specific routes.

Gross Vehicle Weight Fees - If you do not license under IRP and register your truck at the MT county in which you live, you may purchase gross vehicle weight fees (GVW) at the county when you license, or these fees may be purchased at a weigh station, from an MCS Patrol Officer or at the Motor Carrier Services Helena office. GVW fees may be purchased for a full year, a single month, or multiple months. The 35% GVW Farm Fees or the 100% GVW Fees, whichever is applicable, will assist you in determining full year fees.

Online Permitting New users must go through the application process. Once you receive notification from MCS with your user id and password you will be able to issue your own permits online.

Self-Issuing Internet Permit Application
System Requirements
MVS Support Reference

Commercial Motor Carrier Online Self-Issuing Permit Program
Use your user id and password that has been sent to you by MCS in order to gain access to the program.

www.mvs-e.systems.com

SERVICES
Overview
Vehicle Safety/MCSAP
Licensing/Registration
Permitting Information
State/County Services

PERMITTING
Online Permitting
Assisted Oversize/Weight

Automated Weigh Station Bypass

State Truck Activities Reporting System (STARS)

HELPFUL INFORMATION
Forms · Manuals
Getting Started
Federal Safety
PRISM
Trucker's Handbook

Cameras, Roads & Weather | Maps | Contracting/Consulting

mt.gov

Wyoming


Home
Contact WYDOT
Site Index
Search
511 NOTIFY
Sign up for e-mail/text road condition alerts
Road and Travel Information
Driver License and Records
Construction Projects
Titles, Plates and Registration
Economic Stimulus Projects (ARRA - TIGER)
News and Information
Business with WYDOT
Trucking / Commercial Vehicles
Transporters
Chain Law
Driver Licenses
Fuel Tax
International Fuel Tax Agreement (IFTA)
International Registration Plan (IRP)
Intrastate Operating Authority
Size and Weight Information
Width / Height Restrictions
Travel
Engineering and Technical Programs
Planning/Projects/Research
Human Resources
Wyoming Highway Patrol
Safety
Vehicle Business Regulation
Travel
Aeronautics
Trucking / Commercial Vehicles
Trucking/Commercial Vehicles
Trucks are a common sight on Wyoming roadway, particularly on Interstate 80, one of the nation's busiest highway routes for moving freight coast to coast. Commercial vehicles wrack up millions of miles daily across Wyoming, providing an important service to residents and not residents alike, and sustaining considerable employment and economic activity.
WYDOT and the Wyoming Highway Patrol have numerous responsibilities for regulating commercial traffic, collecting fuel taxes and permit fees and ensuring vehicle, driver and highway safety.
Wyoming ports of entry, located in 14 locations across Wyoming, are operated by the Commercial Carrier Program of the Wyoming Highway Patrol. These program can also be contacted at (307)777-4376 for information about overweight and oversize load permits.
In addition, a number trucking and commercial vehicle duties and responsibilities rest with WYDOT's Motor Vehicle Services Program. Offices are located at agency headquarters just off the Central Avenue Interchange (exit 12) in Cheyenne.
Use the links at left under 'Trucking / Commercial Vehicles' to access information related to regulations, licensing, permitting and host of other issues. Useful links related to trucking and commercial vehicles are also located under the 'Highway Patrol' tab at left.

North Dakota

South Dakota

SOUTH DAKOTA
DEPARTMENT OF PUBLIC SAFETY
prevention ~ protection ~ enforcement

DPS HOME | ABOUT DPS | CONTACT DPS | SD HOME

AGENCIES

Licensing
- Driver Licensing
- State Inspection
- Weights & Measures

Enforcement
- Accident Records
- Highway Patrol
- Highway Safety
- State Radio Dispatch

Emergency Services
- Emergency Management
- Emergency Medical Services
- State Fire Marshal

Homeland Security

Motor Carrier Services Information

Click Here for 2011 Harvest Information

For One-Stop Commercial Vehicle Information, click on this link:
http://www.sdtruckinfo.com

For information on a career with Motor Carrier Services, click here.

To view a photo of a load-damaged highway to accompany Motor Carrier news release of March 25, 2011 click here.

Motor Carrier Services comprises District Four of the South Dakota Highway Patrol. Four permanent Ports Of Entry on the interstate system provide carriers entering South Dakota with permit availability and information necessary to travel through the State. The Ports ensure that the carrier's paperwork, permits and necessary documents are in order. They also provide educational information to the public concerning motor carrier issues.

Another component of the District consists of the use of mobile scale teams. The mobile teams set up in vans and are responsible for roadside inspections. They inspect commercial vehicles traveling on all roads within the state. Each team consists of two inspectors that work together in a dedicated effort to guarantee the commercial vehicles using the State's roads are safe. Port inspectors also provide educational information to the public concerning motor carrier issues.

- Highway Patrol Home Page
- About Us
  - Department History
  - Special Services & K-9
  - Recruit Academy
- Travel
  - "511" Safe Travel Info
- Laws
- Work for SD Highway Patrol
- Motor Carrier Services Information
- Call To Honor
- Links
- FAQs
- News Room
- Patch Request
- Contact Highway Patrol

Minnesota

The most obvious thing that you find after looking at these pages is that no commonality exists. The format, organization, location, and information on the various pages are all different. This means that someone going to several sites for information must search and hope to find what is needed.

The second thing that is common is the difficulty in finding answers to specific questions. Most of the sites require the user to download a manual or guide and then search for the answer.

Related to this is the heavy use of PDF and DOC files, which are basically methods of delivering what will become paper documents. The following is an example from Minnesota. It is a listing of permanent restrictions on Minnesota routes (page 1 of 3).

Highway	Status	Description
MN1		Bridge at North Dakota line maximum permitted height is15'6''.
MN1		If Peace Office escort is required when traveling on MN1 or MN89 within the Red Lake Indian Reservation, only Reservation police can fulfill that requirement.
US2		Bridge at 1.7 miles E of Jct MN33 DM & IR railroad - maximum permitted height is 14'0".
US2		5.2 miles S of MN194 - maximum permitted height is 14'8''.
MN3		Bridge 0.5 miles E of Jct MN21 I & M railroad - maximum permitted height is 13'6''.
MN3		Bridge at 5.6 miles N of Rosemount CP Rail - maximum permitted height is 13'10''.
MN3		In Farmington, 3 miles N of MN50 – max permitted is 12'6'' wide, 85'L- due to **Roundabout**.
MN4		Bridge in Sleepy Eye, DM & E railroad - maximum permitted height is 13'9''.
MN5		Between MN41 & MN25 at Norwood, over 12'6" up to 14'0" wide, lead & rear escort. If over 14'0" wide, move only from midnight to 5am, with lead & rear escort.
MN7		Bridge 1.5 miles NE of Jct I494 - maximum permitted height is 14'2''.
MN7		Bridge 0.9 miles SW of Jct MN100 - maximum permitted height is 13'8''.
MN7		Bridge 0.9 miles SW of Jct MN100 (CP railroad) - maximum permitted height is11'11''.
MN7		At Jct MN25, N of Mayer – max permitted is 12'6'' wide, 95' long - due to **Roundabout**.
MN7		N of Waconia at Jct Carver CR10, 2.5 miles E of MN25 - max permitted is 12'6'' wide, 95' long - due to **Roundabout**.
MN7		Between CR92 in St Bonifacius to MN41 in Shorewood, 14'0" wide with maximum 2'3" overhang left side of an 8'6" wide vehicle(s).
MN7-US59		Railroad underpass, 1.3 miles NW of Milan - maximum permitted height is 13'8''.
US8		Between Forest Lake at US61 and Jct US8 MN95, approx. 2 miles SW of Taylors Falls, all loads wider than 12 ft. 6 in wide allowed only to move from midnight to 5AM with lead and rear escort.
US10		Bridge in Moorhead (BNSF railroad) - maximum permitted height is 13'3''.
US12		Railroad underpass, 0.15 mi W of Maple Plain between CR90 & CR83 - maximum permitted height is 15'8''.
US14		Bridge #4909, DM & E RR 2.1 miles W of Jct MN42 - maximum permitted height is 13'3".
MN15		At Jct McLeod CR12 near N limits of Hutchinson at 0.8 mile N of Jct MN15 MN7 MN22 - max permitted is 14'6'' wide, 110' long - due to **Roundabout**.
MN23		Bridge #5247, CP Rail 0.7 miles E of Paynesville - maximum permitted height is 14'1''.
MN23		In St Cloud Bet NE Jct MN15 & Jct US10, 9'0" wide & legal length (75' combination, 40' single motor vehicle, 48' mobile crane).
MN25		At Jct MN7, N of Mayer – max permitted is 12'6'' wide, 95' long - due to **Roundabout**.
I35E		In St Paul between Jct MN5-W 7th St-Fort Rd & Jct I94, also known as the I35E Parkway – No permits loads allowed.
I35E		In St Paul between Jct I94 & Maryland Ave – For loaded sizes that exceed 10' wide, 14' high & legal length, including 75' combination length, travel is only allowed between 12:01 am & 5 am weekdays. In addition, overweight loads that exceed "A" Class overweight are prohibited at all times (BR # 6515, # 6516, # 62857).
I35W		(BR # 27V98). At 76th St over I35W in Richfield – max permitted height northbound is 15'6"; max permitted height southbound is 16'2'' high.
I35W		Between I494 in Bloomington/Richfield and University Ave-4th St SE in Minneapolis – For loaded sizes that exceed 10' wide, 14' High, & legal length, including 75' combination length, travel is only allowed between midnight & 5:00am weekdays. In addition, overweight loads that exceed "B" Class overweight are prohibited at all times (BR # 27848, # 27879, # 27879A).

The document does provide the needed information, but it makes use of none of the technology that is now available to make it easy to locate information. It cannot be searched. It provides only part of the issue for restriction. Bridge weight limits are in another file. With geographic information systems, this information could be made much easier to use. It could all be provided on the computer screen in an interactive manner.

Minnesota is not alone in using this approach. The following is page one of North Dakota's Vehicle Legal Size and Weight Guide. It is a PDF.

NORTH DAKOTA VEHICLE LEGAL SIZE AND WEIGHT GUIDE
NDHP Motor Carrier Operations
Ref: 9-1 (10/07)

A. Legal Width

1. 8 feet 6 inches on all highways.

2. Exceptions.

   a. Construction and building contractors' equipment and vehicles used to move such equipment which does not exceed ten feet in width when being moved by contractors or resident carriers. Nighttime travel is allowed provided moving equipment is properly lighted.

   b. Implements of husbandry being moved by resident farmers, ranchers, dealers, or manufacturers or government entities between sunrise and sunset. Nighttime travel is allowed provided the implements are properly lighted and not being moved on the interstate highway system.

   c. Hay in the stack being moved along the extreme right edge of a roadway between sunrise and sunset by someone other than a commercial mover. Commercial haystack movers, overwidth self-propelled fertilizer spreaders, overwidth self-propelled agricultural chemical applicators, hay grinders, grain cleaners, and forage harvesters if the owners have seasonal permits.

   d. All vehicles exempt from width limitations are subject to safety rules adopted by the Highway Patrol.

B. Legal Height

1. 14 feet whether loaded or unloaded, unless routes of travel include structures such as bridges and underpasses that are not 14 feet in height.

2. Exception.

   a. Implements of husbandry may not exceed 15 feet 6 inches in height when being moved by resident farmers, ranchers, dealers, or manufacturers between sunrise and sunset. The distance traveled cannot exceed 60 miles and travel on the interstate system is not allowed.

C. Legal Length

1. A single unit vehicle with two or more axles including the load thereon shall not exceed a length of 50 feet.

2. A combination of two, three, or four units including the load thereon shall not exceed a length of 75 feet on non-designated highways. Three and four unit combinations are subject to safety rules adopted by the NDDOT Director.

3. A combination of two, three, or four units including the load thereon may exceed 75 feet in length but shall not exceed 95 feet or 110 feet in length when traveling on four-lane divided highways and those highways designated by the NDDOT Director and local authorities as to the highways under their respective jurisdictions. The NDDOT designated highway map identifies those designated state highways. All such combinations are subject to safety rules adopted by the NDDOT Director.

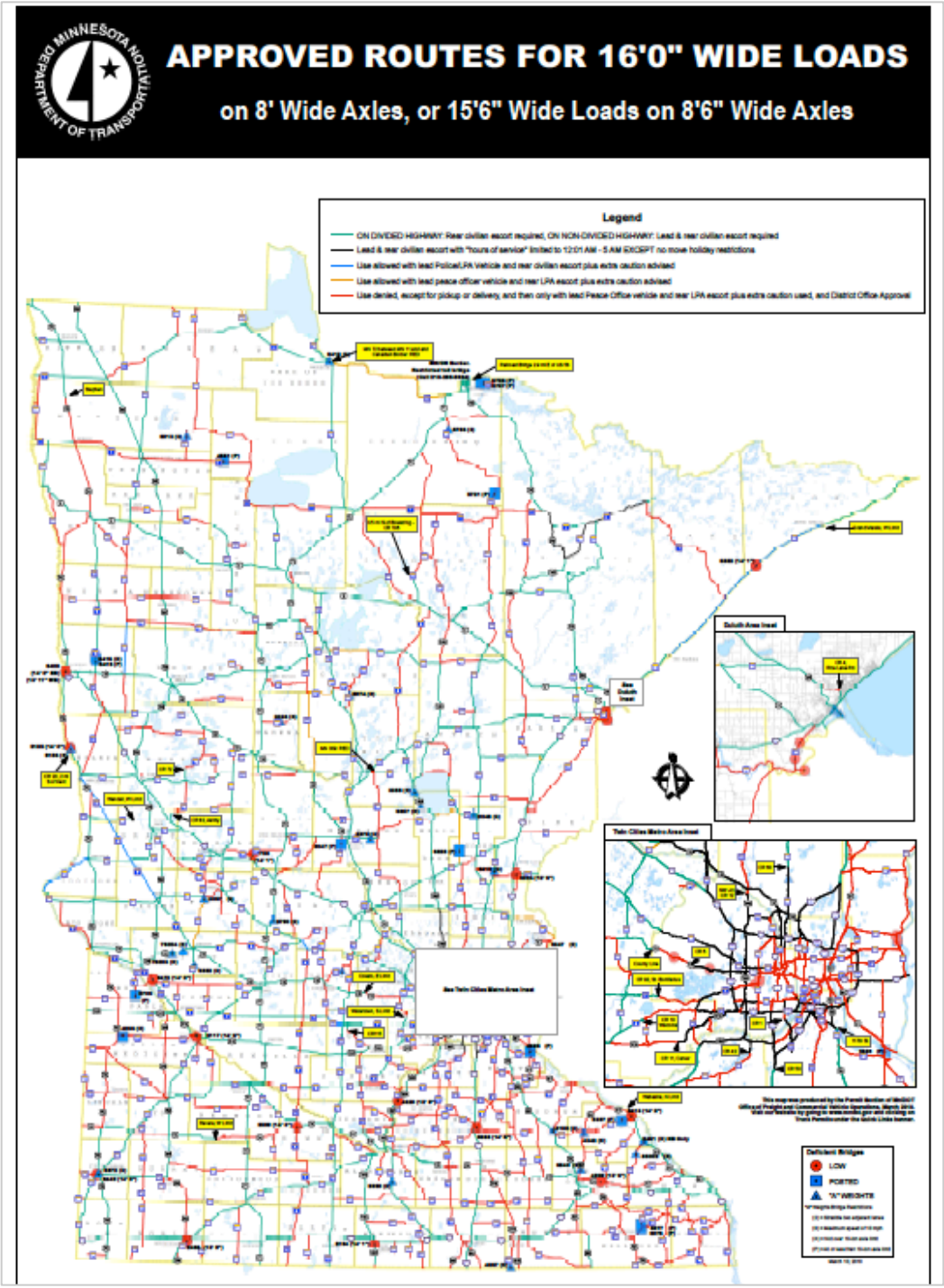
4. The length of a trailer or semitrailer including the load thereon may not exceed 53 feet; however, trailers and semi-trailers titled and registered in North Dakota prior to July 1, 1987, and towed vehicles may not exceed a length of 60 feet.

5. Exceptions to length limitations.

   a. Building moving equipment.
   b. Emergency tow trucks towing disabled lawful combinations of vehicles to a nearby repair facility.

Again, the information is there, but it is a paper document delivered electronically. It could be made much more interactive and much easier to use.

Even when graphics with much potential are used, they are delivered essentially as paper files. Another MNDOT example is below.



This is about 25 percent of actual size. Even on a 24-inch screen, it is difficult to use. If a full size plotter is not available, it could not be printed in a useful manner. Again, thinking of a GIS application, this could be made very usable with a click on the route approach. It could also be coupled with a routing application to identify the useable routes connecting two points.

Yet another approach that is often used is referencing and hot-linking other sites to provide information. For example, construction information, bridge restrictions or seasonal weight restrictions might be at other sites. Again, this does get you to the information. But it can be

cumbersome. It moves the user out of the primary site and requires that they return to it, perhaps easily, in some cases not so much.

Finally, useful links to other relevant organizations are rare. Only MnDOT provides links to other states. Even that simply takes the user to an FHWA site that provides hot-links to every state DOT. If you are looking for truck permitting, it will not be found in many DOTs. It may be in public safety, revenue or other agencies. None of the sites link to other states in the corridor, except for some links to the WASHTO permitting process.

Suggestions

All of the states along the corridor could make major improvements in their websites. Such improvements could go a very long way toward reducing confusion about the requirements for permits. It would also be a help to the various organizations that make part of their business sharing information with the industry.

The first step in making the improvements should be a simple step-back to consider what information is needed by the industry. The next step is to consider the range of tools and techniques now available to deliver that information in the most efficient manner, both for the agency and for the user. The third step involves considering the issues from a multi-state perspective: How can information be provided in similar formats, how can sites be linked, and what common information is relevant?

All of these steps might require some process of consulting with the industry, but with the benefit of several months of effort in trying access information, some thoughts can be offered.

Information

The information that should be available should include the following:

1. What information is required on a permit application?
2. What is a legal load?
3. What is the fee structure?
4. What payment options are available?
5. How is a permit applied for? How is the system used? Who can you talk to?
6. What are the allowed hours of operation?
7. What are the holiday restrictions?
8. What are the escort requirements?
9. What special requirements might come into play, for example chain laws?
10. What weights, dimensions, and configurations can be permitted?
11. What are signing and lighting requirements?
12. How is a divisible load defined?

The list does not include any mention of route restrictions, since the assumption is that the states will define the route to be used. Therefore, the permit applicant has no need for such information.

Obviously, conversations with truckers might produce other information needs. This is simply a suggested starting point. It is also a manageable list.

Tools

A goal for the efficient use of the sites should be to provide most answers within the site itself. For example, if you have gone to websites to find contact information, you may have encountered the three basic approaches:

1. The phone guide that provides numbers for specific programs, which is useful if you are interested only in programs. It is not helpful if you are looking for a specific person.
2. The PDF phone book, which must be downloaded and then searched. Sometimes it is even presented in two columns so that to find a name you often must scroll through the same list twice.
3. The searchable site where the name is entered and the number is search out and presented.

From a user efficiency perspective, the first or the last is preferred, depending upon what the users objectives are perceived to be. From the agency perspective, simply putting up a PDF might be quicker, but will that approach encourage the use of the site or will it encourage more calls or incomplete information? The efficiency must be evaluated based on the total impact.

Considering the information listed above, simple pull-down menus could be used to present nearly all within the website. It would be easily used. If some feel the need to present a document, for example, an existing manual or guide, this could also be made to be accessible using a linked table of contents. In this approach a click on a line in the table of contents brings the user to the information that is needed.

In a similar fashion, if some feel the need to provide maps or other geographically located information, a GIS-enabled intelligent map should be considered. Such an approach might allow a click on a pull down menu to display one type of information, for example, route restrictions. A click on a route or a specific location could then be used to provide specific information on the restrictions at the site or on that route.

The recommended approach of keeping the user within the site with accessible information will make the experience easier for the user who is seated at a computer. For those who are using a mobile device, it may make the experience possible.

Multi-State Perspective

Making the total system more friendly for the user involves three things: 1) providing common information; 2) using a common feel within the sites; and 3) providing links between sites.

Common information has already been discussed.

A common feel simply involves having a common set of navigational features and a common approach to design. This does not preclude having a message from a Director or Superintendent. It does not preclude having unique pictures or even color schemes. It does mean that common navigational approaches are used and that they are organized in a common manner. For example the use of commonly defined pull-down menus, with those menus organized in a similar fashion, for example, horizontally across the top of the pages or down the right or left side. This will allow the user of several sites to not have to learn the unique features of each site.

Links should take the user directly to the page they will need, that is the page that deals with permitting. Links to agency home pages will force the user to navigate deeper to find what is needed. Sometimes that is easy, more often it is not.

Conclusions

Communications can always be made better. The industry answered quite clearly that web-based information was preferred. Therefore, the choice is between creating a single website containing information for all of the states or doing a better job on each state website. The second approach is recommended. Making these improvements should involve several things:

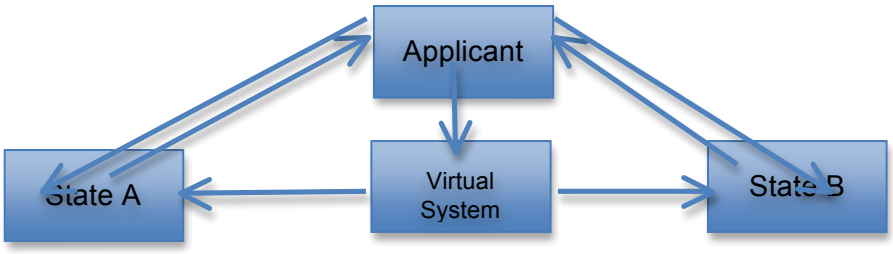
1. Working with the industry to better define what information is needed.
2. Organizing and providing that information in a manner that is most efficient for the user and for the agency. Typically, this will mean providing the information within the website. It should also involve evaluating the impact on total operations of increasing the use of the website.
3. Providing a common feel for all of the related websites, to reduce the need for learning on the part of the user of several sites.
4. Providing links between the sites that take the user directly to the needed page.

Following these steps will significantly improve the flow of information from the agencies to the users. While the effort may seem to be significant, the benefit of having users relying more heavily on web-provided information can also produce a major benefit for the agencies.

Appendix A: Requirements for a Virtual or XML Multi-State Permitting System

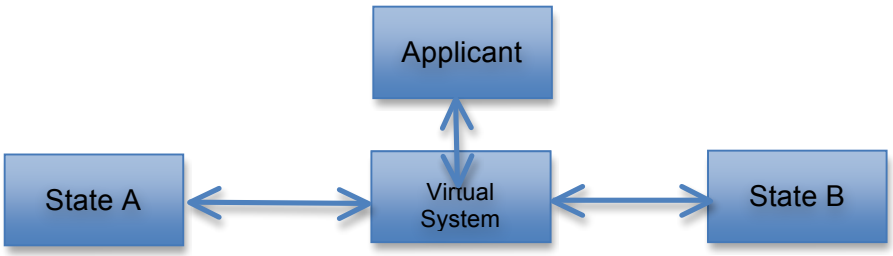
An element of the Northwest Passage oversize/overweight permitting project deals with some evaluation of the potential for developing what has been referred to as a virtual or XML permitting system. The concept of such a system is that permit applicants would go to one site to apply for a permit covering two or more states. The site, and the software supporting the site, would move the permit request to the involved states and somehow interface with existing state systems to produce a single or several permit(s), which would be returned to the applicant. The keys to this type of system are a clear understanding of the functionality that will be desired from the virtual system and a clear understanding of the underlying systems with which it will interact.

You can consider two very different ways in which this functionality can be implemented. At the first extreme, the virtual system would be nothing more than a device to transfer electronic information. The flow of information, documents and funds would look something like the following:



Under this approach, the system would convey information to the individual states. The states would then interact with the permit applicant in exactly the same manner as they would if the application had come directly to them. Issues like route compatibility would be the problem of the applicant.

This can be contrasted with a more robust virtual system that would interface electronically with the various states, doing route checks, calculating fees and all of the other required tasks and returning information and permits to the applicant. It is depicted in the following:



The feasibility of the more robust system is dependent on the state of the underlying state systems, the desire of the states and the resources available within the states to invest in systems development.

Conceptually, a permitting system can be divided in to several parts. Each of those parts can have a range of functionality. The following illustrates system functionality.

System Element	Functionality
User interface	• Define information requirements • Define applicant requirements • Convey information and requirements to states • Interface directly with state systems • Return information from those systems to the applicant • 24/7 availability
Financial	• Calculate permit fee • Allocate fee to appropriate state • Transfer fee to appropriate state
Administrative	• Record permit applications • Record permit actions • Record permit O/Ds • Record permit detail (size/weight, etc.)
Analytic	• Determine permit eligibility • Determine permit restrictions (signing, escorts, travel times, etc.)
Routing	• Determine preferred route • Determine alternative routes • List route temporary restrictions (work zones, etc.) • Analyze route conditions related to permit request • Determine route specific permit restrictions • Determine cross-state boundary route continuity • Recalculate routes based on interstate route continuity
Enforcement	• Determine applicant compliance history • Notify state(s) enforcement personnel of permit • Record enforcement actions • Notify other states of enforcement actions

Survey

In order to determine the requirements for a virtual permitting system, the following survey was distributed to relevant stakeholders.

In light of the options available, please complete the following survey to help better understand the importance of having the various functions available within the virtual system and the state

of automation of existing state systems. As you rate the importance of each function, think in terms of the more robust version of a virtual system. If a feature is critical for the virtual system, rate it a 5; if it is totally unimportant, rate it a 1. If your existing system is fully automated in this area, rate it a 5; if it is not automated all in the area, rate it a 1.

1. **User Interface:** To initiate the permitting process, an applicant will sign into a website to prepare a permit application. Please rate the importance of including each aspect of functionality in the virtual system on a one to five scale, with five being absolutely important, and the state of your current system in terms of its degree of automation, also on a scale of one to five, with five being completely automated.

    a. Define information required of the applicant & applicant requirements for the permit

Importance	1	2	3	4-1	5-2
My current system's level of automation	1-1	2	3	4	5-2

    b. Convey the permit application to the concerned states

Importance	1	2	3	4	5-2
My current system's level of automation	1	2-1	3	4	5

    c. Interface electronically with state systems to enter data, update files or do calculations, perhaps to the point issuing permits

Importance	1	2	3	4-1	5-2
My current system's level of automation	1	2	3-1	4-1	5

    d. Return information (either the permit itself or requests for needed clarifying information) from state systems to the virtual system and to the applicant

Importance	1	2	3	4	5-3
My current system's level of automation	1	2	3-2	4-1	5-1

    e. Available 24/7 for the permit applicants to request self-issued permits

Importance	1	2	3	4-1	5-2
My current system's level of automation	1-1	2	3-1	4	5-1

2. **Financial:** Any system must be able to deal with collecting, recording, allocating and depositing fees. In a virtual or xml system, this could be done within each state system with some use of credit cards, charge accounts or bills. It could also be done through the virtual system. Think about the virtual, or xml, system and rate the requirements in terms of the importance of having them within the virtual system and your system's level of automation on the following functionality, as you did with the first question.

a. Calculate fees, states have many ways of assessing permit fees and many different fee structures. Should the virtual system have the ability to calculate a fee or to interact with state systems electronically to calculate fees in a manner that is transparent to the applicant?

Importance	1	2	3	4	5-3
My current system's level of automation	1	2	3	4	5-3

b. Allocate fees to appropriate states, should a virtual system have the ability to allocate assessed fees to the states for which they were collected in an automated fashion?

Importance	1	2	3	4-1	5-2
My current system's level of automation	1	2	3-1	4	5-1

c. Transfer fees to appropriate state, should a virtual system have the ability to conduct electronic transfers of fees to the states for which the fees were assessed?

Importance	1	2	3-1	4-1	5-1
My current system's level of automation	1	2-1	3	4	5-1

3. **Administrative:** A system typically accumulates some base of information for management and policy analysis. Please rate the importance of each aspect of administrative information within a virtual system. Also rate the automation status of your state systems in each area, as you did in # 1 & 2.

a. Record permit applications to record the numbers of permits requested through the virtual system

Importance	1	2	3-1	4	5-2
My current system's level of automation	1	2	3-1	4	5-1

b. Record permit actions, such as the number of permits issued

Importance	1	2	3-1	4	5-2
My current system's level of automation	1	2	3	4-1	5-2

c. Record permit origins and destinations

Importance	1	2	3-1	4-1	5-1
My current system's level of automation	1	2	3	4	5-3

d. Record permit details, such as the commodity moved, the routes taken, the date, or conditions applied to the permit

Importance	1	2	3-1	4-1	5-1
My current system's level of automation	1	2	3	4	5-3

4. **Analytics:** A system should have some intelligence to deal with routine issues such as eligibility or standard permit restrictions. Please rate the importance of each of the following in terms of the analytic ability of a virtual system and the state of your current system.

    a. Determine permit eligibility, is the application one for which a permit can legally be issued?

Importance	1	2	3	4-1	5-2
My current system's level of automation	1	2-1	3-1	4	5-1

    b. Determine permit restrictions such as signing, escorts, travel times, etc. that should be applied to the type of permit being requested

Importance	1	2	3	4-1	5-2
My current system's level of automation	1-1	2	3	4	5-2

5. **Routing:** Selecting the routes that are appropriate for a load and conducting some analysis of those routes is a key permitting function. Please rate the importance of each of the following for a virtual system.

    a. Determine preferred route for the origin, destination and the type of load being moved

Importance	1	2	3	4-1	5-2
My current system's level of automation	1-1	2	3	4	5-2

    b. Determine alternative routes in light of the O/D, type of load, work zones or other temporary constraints.

Importance	1	2	3	4-1	5-2
My current system's level of automation	1-1	2	3	4-1	5-1

    c. List route temporary restrictions (work zones, etc.)

Importance	1	2	3	4-1	5-2
My current system's level of automation	1-1	2	3	4	5-2

    d. Analyze route conditions such as highway geometry, bridge heights, or weight restrictions, related to permit request

Importance	1	2	3	4-1	5-2

My current system's level of automation	1-1	2	3	4-1	5-1

e. Determine route specific permit restrictions, such as escorts requirements related to a narrow or curved route

Importance	1	2-1	3	4-1	5-1
My current system's level of automation	1-1	2-1	3	4-1	5

f. Determine cross-state boundary route continuity, does the recommended route work for the entirety of the permitted trip, including all states?

Importance	1	2	3-1	4-1	5-1
My current system's level of automation	1-1	2	3-1	4	5

g. Recalculate routes based on interstate route continuity, if cross-border issues are found, should the system be able to recalculate a recommended route?

Importance	1	2	3-1	4-1	5-1
My current system's level of automation	1-1	2	3-1	4	5

6. **Enforcement:** A system should have some ability to gather information from and provide information to enforcement agencies. Please rate the following aspects of enforcement functionality in a virtual system.

a. Determine applicant compliance history, does the applicant have a history of compliance with permit restrictions or a good safety record?

Importance	1-1	2	3-1	4-1	5
My current system's level of automation	1-1	2-1	3	4	5

b. Notify state(s) enforcement personnel of permits issued, permit restrictions and conditions

Importance	1-1	2	3-2	4	5
My current system's level of automation	1-1	2-1	3	4	5

c. Record enforcement actions to build a base of information for future permitting actions

Importance	1-1	2	3-1	4-1	5
My current system's level of automation	1-2	2	3	4	5

d. Notify other states of enforcement actions so that actions taken in one state can be enforced in another or inform actions taken in another

Importance	1-1	2	3-2	4	5
My current system's level of automation	1-1	2-1	3	4	5

7. **Other Comments:** What other comments do you have that will inform this discussion of a virtual or xml system? (add as many pages as you like)**.**

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