

NEW MEXICO DEPARTMENT OF TRANSPORTATION

## RESEARCH BUREAU

Innovation in Transportation

### **Cost Benefit of Privatizing Wall Barrier**

Prepared by:  
Research Bureau  
New Mexico Department of Transportation  
7500B Pan American Freeway NE  
Albuquerque, NM 87109

August 2007

Prepared for:  
New Mexico Department of Transportation

In Cooperation with:  
The US Department of Transportation  
Federal Highway Administration

**Project NM05MNT-01**  
AUGUST, 2007

<b>1. Report No.</b> NM05MNT-01		<b>2. Government Accession No.</b>		<b>3. Recipient's Catalog No</b>	
<b>4. Title and Subtitle</b>  Cost Benefit of Privatizing Wall Barrier				<b>5. Report Date</b> August 2007	
				<b>6. Performing Organization Code</b>	
<b>7. Author(s)</b> Jon Woodland, Research Analyst				<b>8. Performing Organization Report No.</b> NM05MNT-01	
<b>9. Performing Organization Name and Address</b> Research Bureau New Mexico Department of Transportation 7500-B Pan American Freeway N.E. P.O. Box 94690 Albuquerque, NM 87199-4690				<b>10. Work Unit No. (TRAIS)</b>	
				<b>11. Contract or Grant No.</b>	
<b>12. Sponsoring Agency Name and Address</b>  New Mexico Department of Transportation				<b>13. Type of Report and Period Covered</b> Final	
				<b>14. Sponsoring Agency Code</b>	
<b>15. Supplementary Notes</b>					
<b>16. Abstract</b> This project began as an attempt to perform a formal comparative cost benefit analysis of privatized wall barrier purchase/management and NMDOT wall barrier purchase/management in order to answer the question "What are the costs and benefits of privatizing portable concrete highway wall barrier?" Attempts to model private and public costs were hampered by lack of data. As a result, data research was replaced by policy research. Informational interviews and surveys were performed, a policy discussion meeting was held, and a set of policy recommendations was arrived at.					
<b>17. Key Words</b> privatization, concrete wall barrier				<b>18. Distribution Statement</b> Available from NMDOT Research Bureau	
<b>19. Security Classi. (of this report)</b> None		<b>20. Security Classif. (of this page)</b> None		<b>21. No. of Pages</b> 24	<b>22. Price</b>

# **Cost Benefit of Privatizing Wall Barrier**

By

Jon Woodland  
Research Analyst  
NMDOT Research Bureau

Prepared for:  
Joe Garcia, NMDOT Construction Bureau Chief

Project Number: NM05MNT-01

A Report on Research Sponsored By  
New Mexico Department of Transportation, Research Bureau

In Cooperation With The  
U.S. Department of Transportation, Federal Highway Administration

August 2007

NMDOT Research Bureau  
7500-B Pan American Freeway  
Albuquerque, NM 87109

## **PREFACE**

The research reported herein describes the process of answering the question: “What are the costs and benefits of privatizing portable concrete highway wall barrier?” It presents opinions from Area District Engineers and Area Maintenance Engineers and provides a set of policy recommendations. A short description of NMDOT data availability issues is offered.

## **ABSTRACT**

This project began as an attempt to perform a formal comparative cost benefit analysis of privatized wall barrier purchase/management and NMDOT wall barrier purchase/management in order to answer the question “What are the costs and benefits of privatizing portable concrete highway wall barrier?” Attempts to model private and public costs were hampered by lack of data. As a result, data research was replaced by policy research. Informational interviews and surveys were performed, a policy discussion meeting was held, and a set of policy recommendations was arrived at.

## **ACKNOWLEDGMENTS**

The researcher would like to acknowledge the following individuals who assisted in carrying out this research: Robert J. Salazar, Joe S. Garcia, Tom Raught, Leland Riley, NMDOT Area District Engineers and NMDOT Area Maintenance Engineers.

## TABLE OF CONTENTS

PREFACE.....	i
ABSTRACT.....	ii
ACKNOWLEDGMENTS .....	iii
TABLE OF CONTENTS.....	iv
1.0 INTRODUCTION .....	1
1.1 Problem.....	1
1.2 Objectives and questions.....	1
2.0 METHODOLOGY .....	2
3.0 RESULTS .....	2
3.1 Topical summary of results.....	2
3.2 Interview summaries.....	4
Within New Mexico.....	4
Other States.....	6
4.0 CONCLUSIONS, RECOMMENDATIONS AND IMPLEMENTATION .....	7
APPENDIX A. POLICY RECOMMENDATIONS FOR OUTSOURCING .....	9
APPENDIX B. SUMMARY OF RESEARCH PROJECT ACTION PLAN .....	10
APPENDIX C. NMDOT MAINTENANCE ENGINEERS WALL BARRIER SURVEY .....	11
Abel Esquibel.....	11
Fernando F. Trujillo.....	13
Kathy Trujillo.....	15
Lisa Vega .....	17
Miguel Gabaldon .....	19
Ralph Meeks .....	21
APPENDIX D. SCENARIOS WORKSHEET .....	23

## **1.0 INTRODUCTION**

### **1.1 PROBLEM**

The issue of wall barrier privatization has been discussed in NMDOT over the years without resolution. There are diverse opinions on when privatization creates benefits and when it creates problems. Is a one size fits all standard approach feasible?

### **1.2 OBJECTIVES AND QUESTIONS**

This project began as an attempt to perform a data driven formal comparative cost benefit analysis of privatized wall barrier purchase/management and NMDOT wall barrier purchase/management in order to answer the question “What are the costs and benefits of privatizing portable concrete highway wall barrier?” and “is total privatization a solution?” Attempts to model private and public costs were hampered by lack of data. As a result, data research was replaced by policy research.

## 2.0 METHODOLOGY

Attempts to model private and public costs were hampered by lack of data. As a result, the project's data focus was replaced by a policy focus.

Informational interviews and surveys were performed, a policy discussion meeting was held, and a set policy recommendation was arrived at.

## 3.0 RESULTS

### 3.1 TOPICAL SUMMARY OF RESULTS

Respondents spoke about purchase, storage and management configurations that varied depending on the needs of overall management, project location, project requirements, and unforeseen contingencies. Thus, configurations of private and public management schemes varied. Respondents forced with a choice between private or public management made them with caution: one or the other choice would require compromises. Respondents talked about how cost savings were not always synonymous with efficiency, practicality, anticipation of future needs and safety. Overall, the NMDOT respondents were willing to allow privatization if it meant that they could focus on more critical project issues.

Respondents listed several operational impacts of NMDOT purchased/managed wall barrier:

- Risks and liabilities - injury; workers' comp; insurance rates; wall barrier in bad shape. General Counsel voiced the opinion that privatization of wall barrier does not necessarily reduce the NMDOT's liability regarding the motoring public;
- Overhead – extra hours worked; salary; benefits; training; extra supervision; safety equipment; safety protocols; operation equipment depreciation; operation equipment availability; operation equipment damage; office supplies;

- FTE issues - need for increased FTEs to manage the barrier; loss of personnel for more critical issues; inability to successfully manage all wall barrier needs because not enough personnel;
- The economy - increasing and unpredictable costs for fuel and materials;
- Inspection activities and wall barrier replacement - inspection of wall barrier and replacement of wall barrier that has failed inspection; replacing obsolete regulation wall barrier with barrier meeting new federal standards; replacing barrier damaged by contractors;
- Inventory – keeping track of our wall barrier: where it is, how much we have, what shape it is in, availability, transport/hauling issues, where to distribute, where to store;
- Contractor treatment of barrier - State furnished wall barrier is not treated well by the contractor and thus needs to be disposed of prematurely. Repair and disposal of wall barrier costs money. Contractor would have a vested interest in taking care of their own wall barrier. Consequently, researcher suggests that private contracts should have consequences for wall barrier that is out of specification for quality and use;
- Other costs – There are disposal costs for non-salvageable barrier.

According to NMDOTs *Average Unit Bid Prices*, contractors charge more for wall barrier that they buy and keep, less for the barrier that they buy and give back to us, and even less for wall barrier that we supply and keep.

There are issues associated with revised quantities of wall barrier during a project. If the revision is upward, and if NMDOT owned and stored wall barrier

is available, then the revision is not such a big deal. If the contractor has to supply the additional wall barrier then problems may emerge. If the revision is downward and the contractor has already purchased the wall barrier then no cost saving may be realized.

### **3.2 INTERVIEW SUMMARIES**

#### **Within New Mexico**

Allen Stott, James Hamilton Construction Co. – Would privatization end up creating one concrete wall barrier contractor for the whole state?

Anonymous – NMDOT has a difficult time of keeping wall barrier inventory and there are stories of contractors that have sold our wall barrier to other contractors. This might be an argument in favor of privatization.

Farzad Omidvaran – Need some privatization, some state owned. Privatize on a project by project basis. Or privatize wall barrier for bigger cities that have contractors nearby. Big companies in District 3 have the ability to stockpile and mobilize easily, especially if the project is nearby. But in District 1, such as in Lordsburg, there are no contractors so the contractor has to haul in the wall barrier and the cost is high. In the Lordsburg situation it might be more effective to buy our own and store it somewhere nearby. However, how often do you need wall barrier in Lordsburg? We may have saved on transportation of the barrier back to Las Cruces but now there is that wall barrier that is probably not going to be used very often. It really depends on our construction plans, and, in regard to labor costs, it really is as full time job for one person to manage all the wall barrier for the NMDOT including equipment and materials issues and costs.

State furnished wall barrier is not treated well by the contractor and thus needs to be disposed of prematurely. The repair and disposal costs money. About 5 to 10% of wall barrier gets damaged just by the contractor moving it. There are no liquidated damages attached to wall barrier. Contractor takes care of wall barrier if it is their own. Contractor would have a vested interest in taking care of their own wall barrier. Estimated that 1/3 of contractor utilized DOT owned wall barrier becomes unusable by end of the project.

In the future, if we use candle sticks and raised pavement marking to separate traffic more often, then we will need wall barrier less. On one project, the FHWA gave us a design exception to not use wall barrier; however, we had to reduce the speed in the work zone. Call Frank Lozano for information on that. The biggest factor here is safety. If someone gets hurt, than the contractor is more liable if they own the barrier.

If it has to be an all or nothing situation, then privatize.

Frances Castillo of Ready Mix - With some bids 6 months in advance, it is becoming more difficult to predict the cost of materials in 6 months time. Because of higher gas prices, the cost of sand and gravel freight goes up and the cost to crush sand and gravel goes up. Steel has gone up – it tripled in price about a year ago.

Ishmael Dominguez – For the most part, our wall barrier is contractor supplied because we don't use much wall barrier ourselves. Recommend that we keep contractors supplying and managing it. However, there is the interesting issue of whether the wall barrier should be wall barrier company supplied or contractor supplied. The barrier we do have gets damaged eventually and then we have to deal with inventorying damaged wall barrier or trying to get rid of it and buying new barrier.

James Gallegos, ADE District 5 – Privatization might save us time and administrative hassles.

Ken Baca, NMDOT General Counsel – It is difficult to guess at the liability issues or dollar amounts connected to auto accidents and improperly maintained and/or improperly placed wall barrier. It is unclear whether privatization would shift risk away from the NMDOT – this is a grey area. Person injured is not bound by shifting of responsibility for wall barrier worthiness to the contractor, even if specifications are changed to state that. The shift, even if stated in specifications does not necessarily clear NMDOT of tort liabilities. Both the contractor and NMDOT can be sued for negligence. You can only determine this on a case by case basis.

Miles Sweeny – Private overhead includes insurance on personnel, office overhead, fuel costs, depreciation on transport vehicles, safety and contract bonding costs, workers' compensation, equipment wear and tear such as moving cranes, maintenance costs on wall barrier for breaks and cracks, and storage costs. If all wall barrier was privatized, then bid prices would have to go up. The bid would go down some when enough of a stockpile was created.

Rick Padilla - Hassles with managing wall barrier include keeping track of inventories, knowing how to distribute stockpiles, knowing how to make purchases including knowing what we've come to accept from bid history. Hauling is the most expensive part of the wall barrier issue.

Robert Garcia - When state owned wall barrier is near a construction location, especially in remote locations, costs for the state decrease because the contractor does not include the price of new wall barrier and transport in the cost of the contract. However, it is difficult to account for contractor damaged wall barrier. Resetting and poor treatment damages barrier that the state has to pay for. Contractor would have had to haul wall barrier from their yard and bid price would go up - we buy at inflated cost from the contractors. During one project a change order went in for an extra 3.5 miles of NMDOT supplied wall barrier in order to speed up a project. Originally the plan was for 3 miles and the use of staging. This increased costs but cut back on time in terms of staging and increased work zone safety. The contractor could not have supplied the extra 3.5 miles of wall barrier. If we privatize, we should maintain a small supply.

Robert Salazar – Maybe we should consider privatizing by project. Some projects don't need barrier and some do. There are situational factors that require wall barrier. For instance, even in a smaller project, if there is a one foot drop off on the side of the pavement, then we need wall

barrier there. There are other situational factors such as an interstate down to two lane traffic, glare of headlights, weather, trucks, pavement condition, traffic volume, type of arterial, duration of project, urban versus rural and speed.

There are costs to store and maintain our own wall barrier. Sometimes our wall barrier stock is in such so poor condition that it is difficult to install per our own specifications. And then there are issues of the wall barrier quality when we first buy it – is it made to section 510 specifications for Portland Cement and we have to verify that.

We have downsized so much that we don't have the person power or facilities to manage wall barrier.

Also, what can we expect from FHWA in regard to this issue?

If it is an all or nothing situation, then privatize. Then we'll have more control over quality of wall barrier.

Sayed Aafsar, A.S. Horner – There should be a combination of privatized and state managed wall barrier. There are problems with the quality of the wall barrier made in state. Maintenance engineers in each district know where wall barrier is. Costs for wall barrier relate to how close to source that project is: Unit material cost; haul costs, setting costs, resetting costs, haul back to storage costs. Closer to source, the cheaper it is for both contractor and NMDOT. Another cost is for state inspectors to inspect and re-inspect wall barrier on-site. Contractor folds transport costs (as well as many other costs) into the cost of the CWB bid item.

Small contractors probably cannot and do not store wall barrier. In situations like this it is most cost effective when the state has the wall barrier.

In situations where wall barrier is privatized, the 606.33 specification needs to be changed to say that the contractor is responsible for screening and assuming liability for wall barrier.

Steve Hemphill – We should keep some of our own around for maintenance. Need to consider if the district construction engineer or district engineer want privatization or not. One problem is that we don't know the contractor's location pre-bid. If they are close then perhaps it would be better for them to have it, if they are not, it would be better if we had some stored in the project location. Recommend a job to job decision between construction and maintenance engineer and that unusable wall barrier be disposed of by contractor.

Ted Barela – If we privatize, we don't need to worry about repairs and replacement or liability in regard to failure to perform. We are not in the business of providing wall barrier. We are in the business of managing projects. The way the contractors currently treat NMDOT owned wall barrier, a wall barrier section is good for only 3 to 4 jobs until it needs repairing or patching. Contractors will come up with better methods of managing and taking care of wall barrier if it is privatized. In addition, the shortage of concrete and the rising cost of fuels are an added burden to providing the barrier.

## **Other States**

Texas DOT, Robert Steward - Never wanted to completely privatize. There is a need for small stockpiles. However, if the DOT buys it all, they can end up with a huge surplus of wall barrier.

Utah DOT, Tim Biel - UDOT owns some wall barrier that is used mostly by maintenance. For construction projects, they require the contractor to supply the CWB. UDOT does inspection of this wall barrier. UDOT got out of CWB management because 1) the requirement for storage space; 2) liability; 3) the resources required to manage it; 4) the resources required to keep up with crash standards.

Wyoming DOT, Mark Isenhardt - CWB is mostly supplied from contractor. Occasionally, the Wyoming DOT supplies the CWB from old stockpiles. Advantage of contractor supplying: the DOT could not keep up with design changes or crash standards.

## **4.0 CONCLUSIONS, RECOMMENDATIONS AND IMPLEMENTATION**

The Wall Barrier Privatization Technical Panel agreed that:

1. The most effective methods of supplying and managing wall barrier may not be cost-beneficial. In the same vein, the most cost-beneficial method may not be the most effective. Each project situation requires a unique response.
2. The best supply and management methods are of hybrid public/private arrangements made on a project by project basis, based on district level policy decisions.
3. Each district should determine how they inventory/track portable wall barrier.
4. Each district should determine the amount of working inventory they want to have.
5. The Quality Assurance Bureau should develop a tracking and evaluation system for the hybrid public/private wall barrier supply and management approach. The Bureau will evaluate a cross section of urban and rural projects for a 24 month period. The Quality Assurance Bureau will work with the Construction Bureau to choose which projects to compare and evaluate.
6. The Quality Assurance Bureau evaluation of the hybrid approach will be used to develop a Blue Book specification for wall barrier replacement.

## **APPENDIX A. POLICY RECOMMENDATIONS FOR OUTSOURCING**

1. The Department outsourcing process should be integrated with other primary management initiatives such as Total Quality Management.
2. The outsourcing process should begin with as commitment to Department employees: “If you do good work, you will have a job”.
3. The Department outsourcing process should be characterized by identification of core and non-core services, a single outsourcing cost analysis model, and should be directly related to employee training and incentives.
4. Department-provided non-core products and services will be competed with other providers without regard to classification or status of Department employees.
5. The Department outsourcing policy and procedures provide a reference for discussion of outsourcing within the executive branch of state government and in discussion of enabling legislation with the New Mexico State Legislature

Source: *Outsourcing Policy and Procedures for the New Mexico State Highway and Transportation Department* by the NMDOT Research Bureau, August 1998.

## **APPENDIX B. SUMMARY OF RESEARCH PROJECT ACTION PLAN**

*Research Question:*

What is the cost and benefit of privatization of highway wall barrier construction?

*Objective:*

Determine the cost of requiring contractor furnished wall barrier vs. department furnished barrier including storage costs and impacts as well as liability of state furnished barrier.

*Action Items:*

Perform information search on wall barrier privatization. Conduct survey of vendors and department. Conduct survey of other state DOT practices.

*Product or Service to be Delivered:*

Cost benefit analysis.

*Desired Result:*

The analysis will serve as a basis in determining if our specification requirements for furnishing wall barrier needs to be revised.

*Tool to Measure Impact:*

The analysis should help make an informed decision on the best and most economical method of supplying wall barrier.

*Standard for Success:*

Accurate analysis including all impacts of either approach.

*Quarterly Progress:*

Fiscal Year 2005

Second Quarter

This project was recommended to continue with new direction at the 2004 RQI. There was unanimous decision to re-direct this project in to two separate areas: one that addresses internal communications and one that addresses external communication.

First Quarter

Setup a NewsServer. This will provide NMDOT employees the ability to post questions and review other employee postings.

# APPENDIX C. NMDOT MAINTENANCE ENGINEERS WALL BARRIER SURVEY RESPONSES

## Abel Esquibel

Esquibel, Abel, NMDOT

1. What would be the impact of total wall barrier privatization on your operations, both pros and cons?

Cons

- Less flexibility to take care of emergency situations that may arise.
- Less flexibility to plan projects since will have to consider availability of wall barrier.
- Increased cost for more rural areas.
- Permanent or prolonged installations of wall barrier may be more expensive.

Pros:

- Fluctuations in the amount of wall barrier needed has potential of being met.
- Replacement of wall barrier could be more frequent.

2. What would be the impact of situational (example: project to project or locality to locality) privatization on your operations, both pros and cons?

Cons:

- Increased cost for more rural areas for trucking between locations.
- Ability of contractor to keep up with needs across the state which may negatively impact District projects.

Pros:

- Moving and installation of wall barrier could be the responsibility of the private contractor rather than the patrols.

3. What configuration of wall barrier private/public management and purchase is best for your operations? Describe the benefits.

Public management of wall barrier has been meeting most needs currently. The District does experience the occasional shortfall of wall barrier that could be supplemented by private management. Benefits of public management are the District has the flexibility to utilize the wall barrier as needed based on needs. The inventory of available wall barrier is known when planning projects. Prolonged or permanent installations are not costly when repairs cannot be made quickly due to budget or manpower shortfalls.

4. What existing systems could be used to create a wall barrier inventory system?

A wall barrier inventory system for the Districts or Statewide?

The Maintenance Patrols have small quantities that they are responsible for keeping track of. Possibly SHARE or HMMS can be utilized to keep track of stockpiles of wall barrier.

5. What issues should be considered when thinking through the privatization of wall barrier issue.

Availability of wall barrier would become a statewide issue rather than a District issue. Trucking costs when delivering to rural areas which would cause increases in wall barrier costs yearly for fuel escalation. Would the Department allow stockpile locations in each District? Development of plan for replacement since wall barrier gets damaged with each move. Also, would the awarded contractor be solely responsible for moving and installing wall barrier for projects?

6. How does your maintenance operation currently use the wall barrier inventory?

- Rock fall locations
- Access prevention
- Drop-offs (instead of metal barrier)

7. Are other areas of District operation using the existing wall barrier inventory? Who and for what?

Construction projects use state furnished wall barrier, normally to separate two-way traffic on Interstate routes. (Example: construction of westbound lanes while two-way traffic is on the eastbound lanes).

*Fernando Trujillo*

1. What would be the impact of total wall barrier privatization on your operations, both pros and cons? Understandably in the Maintenance operations and emergency response it could cause quite a stir. The CWB is also used for correcting some maintenance issues for flooding, protecting drop-offs and not allowing entry to areas (temporary or permanent). The cost of CWB could increase through privatization and it could probably fluctuate from year to year. Delivery and maintenance of the CWB would be an advantage if the vendor is willing to replace any CWB in place upon request. Currently the need for CWB from project location to project location is not easily foreseeable for planning purposes.

2. What would be the impact of situational (example: project to project or locality to locality) privatization on your operations, both pros and cons? It seems that the Urban areas (Albuquerque especially) would benefit more from privatization more so than rural areas because of shorter haul distances and probably an increased availability. If a vendor has a shortage of CWB, how would prioritization take place?

3. What configuration of wall barrier private/public management and purchase is best for your operations? Describe the benefits. Unsure what is meant by configuration. Privatization of a commodity could have some affects that cause issues.....hard to answer without guidelines for privatization. Public management is works when CWB is available in which the need varies thus creating stockpile in different locations. Response from private vendors may be slow in rural areas. A combination of private/public CWB management may work.

4. What existing systems could be used to create a wall barrier inventory system? In D6 the District stores inventories the ones in District complex and each patrol inventories the pieces they have (these are available for use) For the ones in place the Road Features Inventory may be able to give us a number of what is perm or temp on the roadway.

5. What issues should be considered when thinking through the privatization of wall barrier issue. Quick response, availability, cost, set up and replacement, acceptance specs for quality, liability of improper placement (if placed by the vendor), service life, warranty, delay costs if not available for emergencies.

---

6. How does your maintenance operation currently use the wall barrier inventory. Emergencies, drainage corrections, impeding traffic movements.

7. Are other areas of District operation using the existing wall barrier inventory. Who and for what? Used for Construction projects, stores for delineating loading docks, barricade entrance points from patrol yards to deter thieves.



1. What would be the impact of total wall barrier privatization on your operations, both pros and cons?

Cannot House it  
Need to maintain minimum 30 stored at each patrol

CWB is a critical item to have at the districts for emergency use during floods, fires and possibly other disasters. Should a state of emergency be declared by the Governor, then it would also be critical for use with the agency affected, for instance the flooding that occurred in the Alamogordo area. Several joint of CWB were used to channelize flood water from damaging property.

2. What would be the impact of situational (example: project to project or locality to locality) privatization on your operations, both pros and cons?  
P.A. is in place (close by)

Obviously there is a cost for relocating CWB from project to project, should it be privatized, it would increase the cost of doing projects (funding) as it is now the cost is absorbed in our field supply and we have the equipment to move the CWB. Privatization would be an additional cost.

3. What configuration of wall barrier private/public management and purchase is best for your operations? Describe the benefits.

P.A. with local or multiple vendors  
Don't want to manage – just lease or purchase  
They transport and set

They both have their place as long as the district has CWB available.

4. What existing systems could be used to create a wall barrier inventory system?

N/A in Maintenance However, Construction does inventory  
Call Ted: What system does he use to inventory?

A spreadsheet

5. What issues should be considered when thinking through the privatization of wall barrier issue.

Accessibility to meet statewide/ District needs Contractors/ Vendors need to know how much the DOT needs.

6. How does your maintenance operation currently use the wall barrier inventory.

Mostly for emergency use and projects done in house.

We coordinate with Construction Personnel who oversee the CWB inventory in the District. They inventory on the continual basis.

7. Are other areas of District operation using the existing wall barrier inventory. Who and for what?

The district will get a better cost on construction projects if the CWB is furnished by the state, and on some projects where very little is required this is a better option.

Construction – For Construction projects

*Lisa Vega*

1. What would be the impact of total wall barrier privatization on your operations, both pros and cons?

Cons

- Less flexibility to take care of emergency situations that may arise.
- Less flexibility to plan projects since will have to consider availability of wall barrier.
- Increased cost for more rural areas.
- Permanent or prolonged installations of wall barrier may be more expensive.

Pros:

- Fluctuations in the amount of wall barrier needed has potential of being met.
- Replacement of wall barrier could be more frequent.

2. What would be the impact of situational (example: project to project or locality to locality) privatization on your operations, both pros and cons?

Cons:

- Increased cost for more rural areas for trucking between locations.
- Ability of contractor to keep up with needs across the state which may negatively impact District projects.

Pros:

- Moving and installation of wall barrier could be the responsibility of the private contractor rather than the patrols.

3. What configuration of wall barrier private/public management and purchase is best for your operations? Describe the benefits.

Public management of wall barrier has been meeting most needs currently. The District does experience the occasional shortfall of wall barrier that could be supplemented by private management. Benefits of public management are the District has the flexibility to utilize the wall barrier as needed based on needs. The inventory of available wall barrier is known when planning projects. Prolonged or permanent installations are not costly when repairs cannot be made quickly due to budget or manpower shortfalls.

4. What existing systems could be used to create a wall barrier inventory system?

A wall barrier inventory system for the Districts or Statewide? Currently, the District Warehouse keeps an inventory on the majority of the wall barrier available. The Maintenance Patrols have small quantities that they are responsible for keeping track of. Can SHARE or HMMS be utilized to keep track of stockpiles of wall barrier?

---

5. What issues should be considered when thinking through the privatization of wall barrier issue.

Availability of wall barrier would become a statewide issue rather than a District issue. Trucking costs when delivering to rural areas which would cause increases in wall barrier costs yearly for fuel escalation. Would the Department allow stockpile locations in each District? Development of plan for replacement since wall barrier gets damaged with each move. Also, would the awarded contractor be solely responsible for moving and installing wall barrier for projects?

6. How does your maintenance operation currently use the wall barrier inventory. Emergency situations including flooding and rock fall locations, blocking or preventing access to areas, and protection from road side hazards.

7. Are other areas of District operation using the existing wall barrier inventory. Who and for what?

Construction projects using state furnished wall barrier.

Miguel Gabaldon

District Five Response

1. What would be the impact of total wall barrier privatization on your operations, both pros and cons?

Cons

- Less flexibility to take care of emergency situations that may arise.
- Less flexibility to plan projects since will have to consider availability of wall barrier.
- Increased cost for more rural areas.
- Eliminate surplus CWB inventory often utilized by Local Entities.
- Permanent or prolonged installations of wall barrier may be more expensive.

Pros:

- Fluctuations in the amount of wall barrier needed has potential of being met.
- Replacement of wall barrier could be more frequent resulting in first quality wall barrier without have to resolve quality issues during construction.
- Eliminate need to identify stockpile locations after project has been completed.

2. What would be the impact of situational (example: project to project or locality to locality) privatization on your operations, both pros and cons?

Cons:

- Increased cost for more rural areas for trucking between locations.
- Ability of contractor to keep up with needs across the state which may negatively impact District projects.

Pros:

- Moving and installation of wall barrier could be the responsibility of the private contractor rather than the patrols.
- If CWB is available nearby cost for state furnished would be reduced. If CWB not available nearby, contractor could provide new CWB or transport from stockpile site.

3. What configuration of wall barrier private/public management and purchase is best for your operations? Describe the benefits.

- Public management of wall barrier has been meeting most needs currently. Public management allows the District to maintain an inventory of CWB for District use as well as for project use, when necessary. Also, with an inventory of CWB the District can make available CWB for local entity use when the needs arise. When a construction project utilizes new CWB, the Department can specify that the CWB will become the property of the Department after project completion. This can then provide an inventory of CWB for a future project and provide a savings at that time.

4. What existing systems could be used to create a wall barrier inventory system?

A wall barrier inventory system for the Districts or Statewide?

- Currently, Maintenance Patrols are responsible for providing an inventory of CWB to the Maintenance Management Unit for inclusion in the District Five Operations Handbook.

5. What issues should be considered when thinking through the privatization of wall barrier issue.

- Increased cost for new CWB for all projects.
- Elimination of inventory of CWB for Districts to use on maintenance projects, emergency response situations, and providing for local entity use.

6. How does your maintenance operation currently use the wall barrier inventory?

- Emergency situations including flooding and rock fall locations, blocking or preventing access to areas, and protection from road side hazards.
- Utilized in traffic control plans when providing drop off protection on special maintenance projects.
- Providing material to local entities.

7. Are other areas of District operation using the existing wall barrier inventory. Who and for what?

- Construction projects using state furnished wall barrier.

**Ralph Meeks**

*Ralph Meeks*

1. What would be the impact of total wall barrier privatization on your operations, both pros and cons?

CWB is a critical item to have at the districts for emergency use during floods, fires and possibly other disasters. Should a state of emergency be declared by the Governor, then it would also be critical for use with the agency affected, for instance the flooding that occurred in the Alamogordo area. Several joint of CWB were used to channelize flood water from damaging property.

2. What would be the impact of situational (example: project to project or locality to locality) privatization on your operations, both pros and cons?

Obviously there is a cost for relocating CWB from project to project, should it be privatized, it would increase the cost of doing projects (funding) as it is now the cost is absorbed in our field supply and we have the equipment to move the CWB. Privatization would be an additional cost.

3. What configuration of wall barrier private/public management and purchase is best for your operations? Describe the benefits.

They both have their place as long as the district has CWB available.

4. What existing systems could be used to create a wall barrier inventory system?

A spreadsheet

5. What issues should be considered when thinking through the privatization of wall barrier issue.

?

6. How does your maintenance operation currently use the wall barrier inventory.

Mostly for emergency use and projects done in house.

7. Are other areas of District operation using the existing wall barrier inventory. Who and for what?

The district will get a better cost on construction projects if the CWB is furnished by the state, and on some projects where very little is required this is a better option.

## APPENDIX D. SCENARIOS WORKSHEET

Item no.	Spec year	Description	Average Unit Price in Bid	Comments
<b>Scenario 1: Contractor buys and uses wall barrier and NMDOT keeps that wall barrier</b>				
606600	01	Temporary Concrete Wall Barrier (meter)	\$111.86	For contractor no future profit may be realized unless reused; NMDOT loses bid discount rate
<b>Scenario 2: Contractor buys and uses wall barrier and contractor keeps wall barrier</b>				
606610	01	Temporary Concrete Wall Barrier Retained by Contractor	\$98.43	Can utilize on other project and earn a profit on it; they have to restock and transport back to central location. If contractors handled the whole thing, bid price might go up because costs for the contractor would go up. For us, less time and labor and all the overhead in that, less liabilities like workman's comp.
<b>Scenario 3: Contractor uses state furnished wall barrier</b>				
606620	01	State Furnished Concrete Wall Barrier	\$39.65	Contractor costs and overhead: truck transport, crane pickup and set, workman's comp (overhead)
606619	01	Resetting of Concrete Wall Barrier	\$14.11	
<b>Contractor</b>		<b>NMDOT benefits</b>		
<b>Factors for cost</b>		no disposal (sometimes, though)		
Depreciation of wall barrier		mute	less administrative labor	

depreciation of vehicles used to move wall barrier - are there rent or own issues?	Yes	less manual labor					
hidden costs		no overhead costs on labor					
bonding costs	yes	no fixing and repairing					
workman's comp	yes	no workman's comp injuries on this					
incentive to reduce resets	nope	no depreciation issues					
taxes	if contractor keeps, yes.	possibly less liability, but not necessarily					
higher fuel costs	yes	no training costs?					
office overhead	yes	risks?					
shortage of concrete	yes	uncertainty?					
insurance	yes	discount rate					
salvageable material - disposal fees	yes, can be	our main hassle is keeping track of inventory					
their main cost is initial cost for purchase and hauling/ labor/equipment	yes						



**Types of cost benefit**

- Cost-effectiveness: Cost-effectiveness measures outcome against cost—usually the prevention effect
- Cost-benefit: Costs and benefits, unlike cost-effectiveness, are expressed in terms of dollars. They are expressed as a ratio with both the benefits (the numerator) and the costs (the denominator)
- Cost-offset: have to measure costs of not treating the problem—not that easy to do. Estimating the costs of intervention versus cost-savings.