*Intelligent Transportation Systems*

# Shared Resource Projects:

## *An Action Guide*

Telecommunications Infrastructure
In Transportation Right-of-Way

ITS America

ITS America

*The Intelligent Transportation Society of America (ITS America) is a non-profit, scientific and educational society that also serves as an official utilized federal advisory committee to the U.S. Department of Transportation. The goal of ITS America, which began operations in 1991, is to coordinate and accelerate the development, deployment and acceptance of advanced trasnportation technologies in the United States. ITS America is a public-private partnership with more than 1,000 member organizations drawn from all levels of government the private sector, academia and the intelligent transportation systems (ITS) international community. For more information, call (202) 484-4847.*

***Shaved Resource Projects: An Action Guide for Telecommunications Infrastructure in Transportation Right-of-Way*** is published by the Intelligent Transportation Society of America.  Editors: Roger W. Gilroy and Craig Roberts.

*"The Arizona Department of Transportation wishes to accelerate highway construction projects, provide timely facilities maintenance and expand intelligent transportation systems capabilities through revenues derived from the lease of highway rights-of-way"*

From Arizona Department of Transportation Proposal No. 97-04, *Lease of Areas Above and Below Highways for Privately Financed Communications Facilities.*

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Dear Policymaker:

Intelligent transportation systems (ITS) use advances in communications, computer and information systems to create technologies that can improve traffic, transit and commercial vehicle operations. Essentially, ITS provides the right people in the transportation arena with the right information at the right time. Those people can be commuters, or truckers, or traffic engineers, toll authority personnel, managers at state departments of transportation, or emergency vehicle and transit operators. Achieving those connections between people and information can be hard work. That is why we are excited about a new opportunity for public-private partnerships known as shared resource projects.

Shared resource projects site telecommunications facilities on publicly controlled right-of-way in arrangements that benefit both the private telecommunications company and the public agency.

The Intelligent Transportation Society of America (ITS America) and the U.S. Department of Transportation (U.S. DOT) have set ambitious goals for deployment of ITS nationwide by 2005. At a minimum, U.S. DOT wants to deploy an intelligent transportation infrastructure to improve the transportation environment in 75 of the nation's largest metropolitan areas. And ITS America believes the nation can have basic ITS services in place for consumers of passenger and commercial transportation within that same time frame.

Shared resource programs can help achieve these worthwhile goals.

This deployment guide was created for you. It will help you understand the challenges and opportunities surrounding shared resource projects. It includes case histories, interviews with leading experts from the federal government and the private sector, procedural tools to consider when developing your options as well as a section containing "real" language drawn from actual documents used to develop a shared resource approach.

The approximately 1,000 members of ITS America deal with the technical and societal implications of ITS on a daily basis. As such, we are here to help you realize the benefits of Intelligent Transportation Systems.
Please contact us if you need further assistance.

Sincerely,

James Costantino
President
ITS America

When considering using a shared resource approach to deploy telecommunications networks, leaders should:

- champion public goals,
- support creative alliances with the private sector, and
- negotiate what is to be offered in exchange for access to right-of-way.

The benefits are:

- improved transportation services,
- additional compensation - from payments or in-kind services, and
- expanded intelligent transportation systems (ITS) and telecommunications capacity.

"ITS depends on a robust telecommunications network in order to gather the data, manage the transportation facilities as well as disseminate the data to the traveling public or other agencies."

*Bill jones technical director, ITS Joint Program Office, federal Highway Administration (FHWA)*

**Shared -- the public and private sector benefiting jointly from what they bring to the partnership.**

**Resource -- public sector assets and private sector expertise.**

**Intelligent -- people gathering and analyzing real-time information then making the right decisions.**

**Transportation -- choices affecting airports, urban and rural highways, ports, public transit, railroads and waterways.**

**Systems -- solutions linked together to benefit the traveling public and the commercial sector.**

# Shared Resource Projects: A Public-Private Partnership.

The United States is experiencing a boom in the use of advanced telecommunications.

There are more providers, equipment and services than ever before. And the 1996 Telecommunications Act, which made it much easier for companies to participate in a significantly deregulated marketplace, is responsible for much of this activity.

These new providers of telecommunications services need a path for their networks. Many transportation agencies now realize they control just such an asset - convenient right-of-way in desirable locations. And some agencies are using this asset in a public-private partnership that integrates the latest telecommunications technology more fully into their transportation management systems.

The process is called shared resource partnering. Simply put, it means placing privately developed telecommunications networks along publicly controlled land.

Both the U.S. Department of Transportation (U.S. DOT) and the American Association of State Highway & Transportation Officials (AASHTO) have adopted utility accommodation policies that support the shared resource approach to building advanced telecommunications networks and improving intelligent transportation systems (ITS) services.

## Compensation is at the heart of a shared resource program.

For instance, transportation agencies can:

- barter right-of-way access for fiber optic conduit or cable, or towers and tower space,
- barter for telecommunications equipment, operations and maintenance agreements plus systems upgrading,
- receive a lump-sum payment, a percentage of revenue derived from the new network or an annual fee for providing access to the site, or
- receive a combination of cash and services.

In other cases, the public agency owns the network on its right-of-way and leases space to other public agencies or to service providers, including long-distance telephone companies or cable television operators. Traditional telecommunications companies, however, generally view publicly owned networks as direct competitors that are subsidized with taxpayer money. Also, some economists believe this is not a legitimate function of government.

*"In many cases, the type of compensation received by a public agency - in-bind telecommunications capacity or cash - is governed by its ability to receive and/or earmark compensation for access to its right-of-way* "From the U.S. Federal Highway Administration's July 1995 interim report: Shared *Resource Projects: Selected Issues and Case Studies.*

## Limited Window of Opportunity

Many experts say there is a limited window of opportunity for transportation-related agencies to secure the highest compensation for access to their right-of-way. Installing fiber is very expensive and providers are likely to move quickly in the most desirable markets.

Similarly, wireless service providers also want to move quickly in securing site leases for infrastructure. In 1996, wireless providers purchased access to certain wireless-dedicated portions of the spectrum at an auction conducted by the Federal Communications Commission, and they are anxious to recoup their initial investments.

Also, the growing list of service providers can once again turn to alternative sites in utility- or railroad-controlled right-of-way.

But the essential fact is that it is not too late to join a growing number of state leaders who are determining that they can find common benefits in a shared resource program.

*"With the AASHTO policy change in October, 1995, Mn/DOT thought it would be best to just jump right into a shared resource effort, taking full advantage of the value of our right-of-way and learning the 'how to' of this effort in the most pragmatic way, on the job. We felt there was nothing to lose by taking u shared resource approach as quickly us possible. If we got no proposals or did not like any of the proposals received, we could abandon the effort and try something else."*

Jerry Skelton, program manager, Office of Alternative Transportation Financing, Minnesota Department of Transportation (Mn/DOT).

Transportation agencies face many challenges:

*from adding more* **bandwidth**

*to managing* **infrastructure**

*from building public-private* **partnerships**

*to adding* sources *of* **revenue**

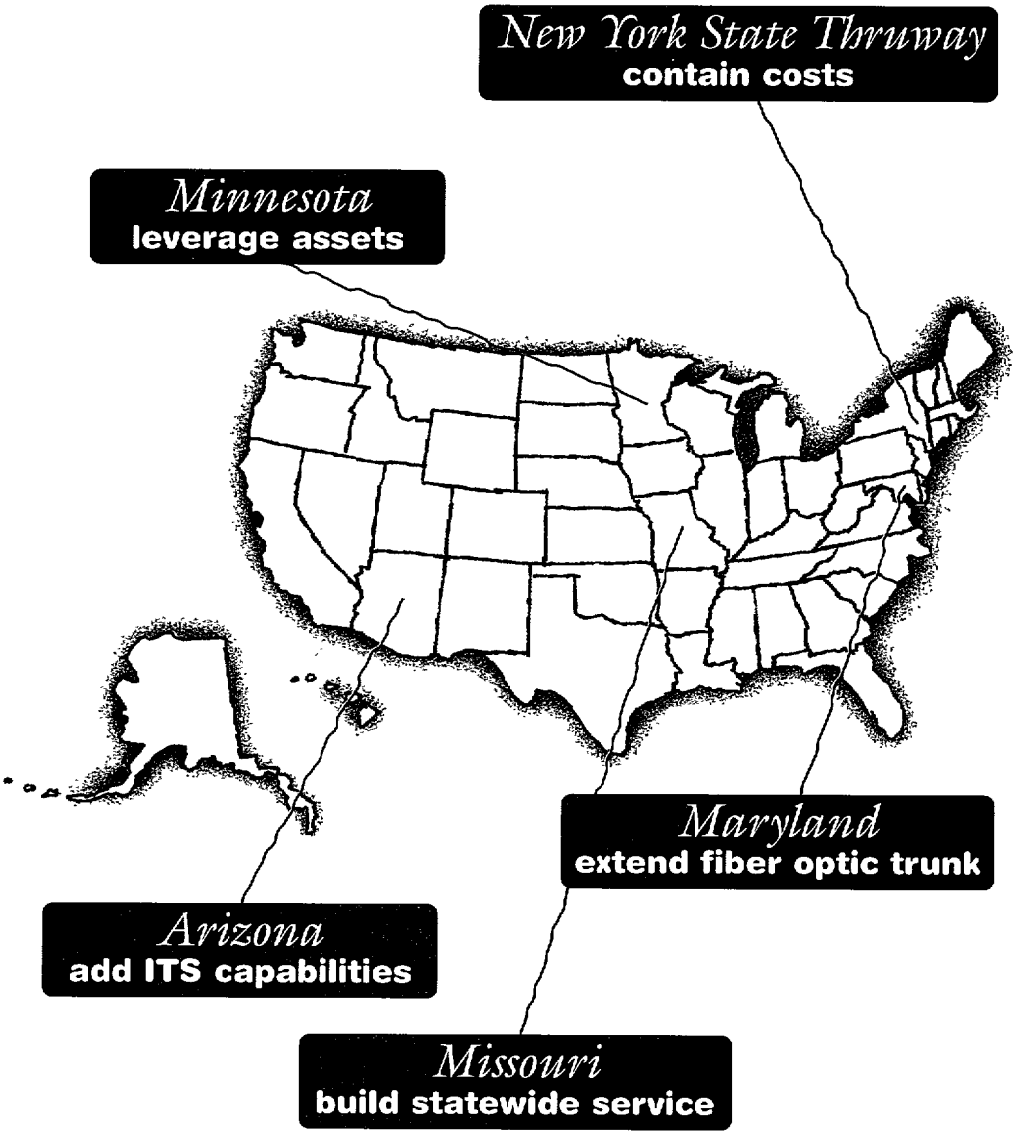
*from maximizing* **right-of-way**

*to addressing* **congestion**

***'A shred resource project in this context has four specific features:***

- *Public-private partnering:*
- *Private longitudinal access to public roadway right-of-way;*
- *Installation of telecommunications hardware;*
- *Compensation granted to the right-of-way owner over and above administrative costs. "*

From the Federal Highway Administration's April 1996 final report: Shared *Resources: Sharing Right-Of- Way For Telecommunications - Identification, Review and Analysis of Legal and Institutional Issues.*


New York State Thruway
contain costs
Minnesota
leverage assets
Maryland
extend fiber optic trunk
Arizona
add ITS capabilities
Missouri
build statewide service

# Arizona

**Need:** The Arizona Department of Transportation (ADOT) wanted to increase the money available for highway projects, provide timely facilities maintenance and expand its Intelligent Transportation Systems (ITS) capabilities using advanced telecommunications - especially for freeway and traffic signal management and improved incident management.

**Solution:** ADOT issued a request for proposal (RFP) that would allow wireless providers to lease state and Interstate right-of-way (ROW), on a non-exclusive basis, in exchange for a payment scenario that could include fees, equipment or services, such as ADOT putting its own equipment on private-sector towers. Relocation costs would be the responsibility of the telecommunications provider. Meanwhile, a similar RFP covering access for fiber optic services is contemplated, with the goal being to expand the department's freeway management system without expending state dollars. ADOT is watching what other states do with fiber optic networks.

**Result:** Four wireless proposals were submitted on Sept. 23, 1996 -three include coverage of most of the state and the other covers only the Phoenix area. By April, ADOT was in the contract stage with the carriers.

**Contact** :Sabra Mousavi, ADOT, (602) 255-6840; Todd Daoust, AT&T Wireless Services, (602) 423-4000; Ted Miller Jr., Castle Tower Corp., (713) 789-7651; Larry Hughes, Cellular One, (602) 302-9882; and Glen Groenewold, Sprint Spectrum L.P., (602) 651-2100.

**Background:** Arizona proposed a shared resource project for wireless access to its state and Interstate right-of-way (ROW) first because, "basically [the cellular] industry had been talking with our district engineers about gaining access to our highway right-of-way, and now was knocking on our door," said Sabra Mousavi, with ADOT's Office of Privatization and the project manager for the program. Fiber optic wireline providers have been less assertive, she said.

State law requires a competitive bid for access to the ROW unless it is a government entity or public service corporation

(Continued)

requesting access, so ADOT published a RFP for wireless providers in late July 1996. ADOT designated telecommunications as a utility to ensure uniform compliance with requirements in the American Association of State Highway & Transportation Officials' Utilities Accommodation Policy the department has adopted. Additionally, designating telecommunications infi-astructure as a utility simplified how lease fees will be accounted for on highways where federal funds (Title 23) have been expended.

The term "wireless communications" as used in the RFP included, but was not limited to cellular, wide-area specialized mobile radio transmitters and broadband personal communication service. The eventual provider will design, own and maintain the wireless facilities. The term of a lease is negotiable, but most are expected to run for a total of 20 to 25 years. ADOT is requiring all leases be renewed every five years with the same terms and conditions of the initial lease, except for rent, which shall be adjusted as provided in the lease. The Consumer Price Index is currently being used to determine the amount of the increase in fees. If a provider wanted to install ADOT equipment on towers as part of the lease terms, the department would consider that, Mousavi said.

In an effort to be open to all proposals, ADOT did not place limits on the location, number or size of site locations a proposer may submit; but the proposers had to identify sites that were critical to their efforts as well as the other types of compatible uses for the sites they were interested in. Alternative sites were identified, too, in order to help evaluate proposals when non-compatible users were interested in the same location.

And while the wireless providers will have to conform to the requirements of the local jurisdiction, ADOT said it would assist the providers "to the extent possible" through the required application, license and permit processes.

Also, "It is envisioned that several additional RFPs will be issued, but the formats to be used have not been determined," Mousavi said.

One constant, though, will be the state's periodic review of the need to increase fees in order to ensure receiving an acceptable level of revenue over the life of the lease.

# Maryland

**Need:** Maryland wanted to expand beyond the state's existing 75-mile fiber optic long-haul telecommunications trunk. Also, it needed to develop a network architecture that would explore the various design options including a SONET ring, analog or digital video or local devices connected to existing fiber strands, In all, the heavily traveled state intends to install a telecommunications network covering 546 miles of state highway and Interstate.

**Solution:** The Maryland State Highway Administration (MSHA), contracted for a study on the state's additional telecommunications needs and options. Then, in cooperation with the Department of General Services, and following the 1996 Telecommunications Act (TCA), it published a shared resource telecommunications solicitation to deploy the next stage of a statewide telecommunications network. The solicitation is open-ended, running until January of the year 2000. The state agency made sure the solicitation abided by the TCA requirements covering non-exclusivity. Interacting with state law meant MSHA must protect the agency's mission - to build and maintain a safe and efficient highway system. "We were concerned that a shared resource arrangement for telecommunications would open the door for all utilities to come and share our the right-of-way," a MSHA official said. To prevent that, the agency developed a resource sharing policy that is based on sharing the right-of-way only if the state has a concurrent need for the resulting telecommunications capacity.

**Result:** The initial deployment by MCI/TCG gave the state connectivity and telecommunications capacity along a heavily traveled transportation corridor. The subsequent needs-study gave MSHA a much clearer understanding of the state's options regarding telecommunications facilities. That knowledge was reflected in the subsequent solicitation in 1996. In keeping with CFR Title 23, any funds generated by the latest solicitation would revert back to the state's transportation trust fimd.

**Contact:** Alisoun Moore, MSHA, (410) 865-1040;Bruce Valliant, MCI/TCG, (410) 649-0324; Preston Dillard, Department of Budget and Management, (410) 767-4647. *(Continued)*

**Background:** Maryland has one shared resource agreement in place that covers the Baltimore-Washington, D.C. corridor. In preparation for expanding its telecommunications network, the state recently analyzed its emerging telecommunications needs outside its major transportation corridor. The result showed that building its own system was twice as expensive as leasing services during a 10-year agreement.

"Building our own was not the most cost effective, leasing was better and shared resource is the best approach," said Alisoun Moore, with MSHA.

In the existing agreement covering 75 miles, MSHA provided MCI/TCG with a 40-year permit on Interstate right-of-way. In exchange, MSHA received 48 unlit strands of fiber optic cable from the companies in addition to $1 million to offset the cost of the agency's need for equipment to connect to the network.

Also, the partners share joint responsibility for relocation costs: MSHA will pay for the additional conduit for fiber optic cable, while the providers pay for relocating and reconnecting the technology.

So far, the fiber optic strands from MCI/TCG are only used by the state for long-distance learning projects. MSHA has just finished an architecture study intended to guide the agency in finding the best use of existing fiber. "We want to make sure we used the fiber in the most cost-efficient and technically advantageous way, both in the short and long term," Moore said.

Looking ahead to the impending project, "Compressed video is 60 percent of the bandwidth we need to transport," she said. The images as well as data and voice will be transported via a backbone network capable of multimedia network traffic that links the statewide communications center, satellite operations centers and other MSHA facilities.

# Minnesota

**Need:** The Minnesota Department of Transportation's (Mn/DOT) general goals include developing public-private partnerships to help remedy a lack of funding to address fully the state's transportation needs. Mn/DOT and the state also are looking for innovative ways to curb the expense of its fast-growing communications needs. In short, transportation-management programs (including ITS, a traffic management center, and roadway/weather information systems data collection and reporting) triggered a vast need for communications capacity and access.

**Solution:** Mn/DOT viewed leveraging its freeway right-of-way assets as a way to meet those goals. Mn/DOT did not perform a detailed, technical-needs study, however, but was keenly aware of the department's and state's fast-growing need for increased communications capacity. As a result, Mn/DOT issued an RR for a public-private partnership to develop communications infrastructure that would barter right-of-way in exchange for telecommunications bandwidth. Under the agreement, a telecommunications provider would sell services to other companies, primarily long distance telephone carriers. State law was not a hindrance to this approach.

**Result:** A team was selected to install and maintain a fiber optic communication system network over 1,000 miles of freeways and much of the state's 12,000-mile trunk highway right-of-way for both linear and spot location use by the private sector. In addition, the department is making available two abandoned rail lines as right-of-way. Mn/DOT chose the team headed by International Communication Services (ICS) and Stone & Webster. The length of the contract is likely to be between 15 and 30 years, but negotiations were under way as this guide went to press. Although there have been no formal challenges to the RFP, the Minnesota Telephone Association, representing regional and sub-regional telephone companies that have enjoyed years of monopolistic markets, talked with state legislators about the competitive threat the agreement poses to them. *(Continued)*

**Contact:** Jerry Skelton, program manager, Office of Alternative Transportation Financing, Mn/DOT, (612) 297-5205. Herb Lindsay, ICS, (303) 427-0223.

**Background:** Mn/DOT started its shared resource program one month after passage of the 1996 Telecommunications Act, "but would have done it anyway," said Jerry Skelton, program manager, Office of Alternative Transportation Financing.

Mn/DOT created an RFP where the goal and objectives were kept simple, general and flexible. The RFP was more permissive than directive, and encouraged the private sector to be creative. Part of this was intentional from what the agency had learned from other states' efforts being so prescriptive that they got no bidders.

Also, part of this lack of prescription was because Mn/DOT did not want to take the time and effort to articulate technical needs fully because it believed that it was not necessary to understand the technology fully in order to prepare an RFP Mn/DOT said its experience now supports this assumption.

Mn/DOT was looking for communications networks that provided service to as much of the state as possible, and provided access and bandwidth to Mn/DOT and other government entities. Previously, it was generally assumed that M.n/DOT's and the state government's growing communications needs would be accommodated with increased expenditures through the state's telecommunications network (MNet).

The American Association of State Highway & Transportation Officials' October 1995 policy permitting buried fiber optics cable on freeway right of way convinced the agency, however, to try a shared resource approach as quickly as possible, while assets to be leveraged (right-of-way) had the greatest value.

*(Continued)*

Other state DOTS had told Mn/DOT that their biggest hurdle was opposition from within their DOT or state government. As a result, Mn/DOT put a lot of effort in educating and involving both its own department and some other state agencies. It even partnered with the state's Department of Administration (responsible for government communications) for this project. Despite the agency's best efforts and strong support from the commissioners of the two partnered departments, other state agencies expressed some opposition, misunderstanding and feelings of not being sufficiently involved - all of which took some time and care to address, Mn/DOT said.

While the actual benefits will not be known until an agreement has been negotiated, the potential benefits are:

- Mn/DOT's 17 district and maintenance offices will all be directly connected to the proposed network with as much bandwidth as needed for free.
- State and local governments will also have free use of as much bandwidth as needed, but they will still incur costs to access this free trunk fiber optics network.
- High-capacity fiber will be available for the first time to much of Minnesota, promoting economic development opportunities, capacity, lower costs and telecommuting opportunities statewide.

# Missouri

**Need:** The Missouri Department of Transportation (MoDOT) began to explore a statewide shared resource approach to telecommunications at the urging of a real estate developer who mentioned the idea during a regularly scheduled development committee meeting between the agency and the developers. At the same time, MoDOT was in the process of "farming out" an ITS early deployment study. It approached the shared resource suggestion with an open mind even though the department immediately saw some initial complications such as how to handle the cost of relocating telecommunications infrastructure when widening roads.

**Solution:** MoDOT issued a shared resource RFP Subsequently, it agreed to let Digital Teleport Inc. locate its fiber optic facilities on 1,204 miles of Missouri's Interstate right-of-way in exchange for the exclusive use of three lighted and maintained pairs of fiber optic cable in the system. The state would pay the cost of relocation along the Interstate, in most instances. "We get service. They get locations," a MoDOT official said.

**Result:** MoDOT estimates it will save $45 million in construction costs and $100 million, over 40 years, in maintenance and operational expenses with its shared resource agreement. In addition, the value of the access to the right-of-way was set at $30 million, which the U.S. Department of Transportation will allow as matching funds for future projects. MoDOT decided on the value of the right-of-way by figuring what it would have spent if it installed the same telecommunications facilities (excluding the cost of the land).

**Contact:** Tom Dollus MoDOT, (573) 751-2845; Richard Weinstein, Digital Teleport, (314) 253-6600.

**Background:** Once it had decided to investigate a shared resource approach, MoDOT went to the state Public Service Commission (PSC) to get the names of telecommunications companies working in the state. Other outreach efforts led the agency to arrange a series of private exploratory meetings with interested

*(Continued)*

parties, which eventually included cable television companies. "We found a mixed bag. Most were only interested in a certain segment [of a possible network], especially the commercial triangle around St. Louis on I-70, I-270 and I-64," said MoDOT's Tom Dollus.

"All of them told us if we didn't move within a year or two, we would be beyond their plans," Dollus said.

MoDOT went ahead, but spent six months ironing out the process with the PSC and the state Office of Telecommunications and Data Processing. Then a pre-bid conference was held with 22 parties, Dollus said. MoDOT posed a series of general questions along the lines of 'Does anybody have difficulty with this?' As a result of the ensuing discussions, MoDOT increased the duration of the lease from 20 years to 40 years. Also, someone else asked if the companies had to be "certificated" with the PSC. MoDOT said no.

Finally, two bids were submitted. One proposed that a consortium, similar to an existing state commission that was created to allow local communities to develop infrastructure such as bridges, work with MoDOT to build and co-own the fiber optic system on the Interstate right-of-way. That plan was rejected. "If we wanted to get into the business, we would have laid our own cable," Dollus said. In addition, if the department had taken that consortium approach it would have faced the possibility of becoming a regulated utility.

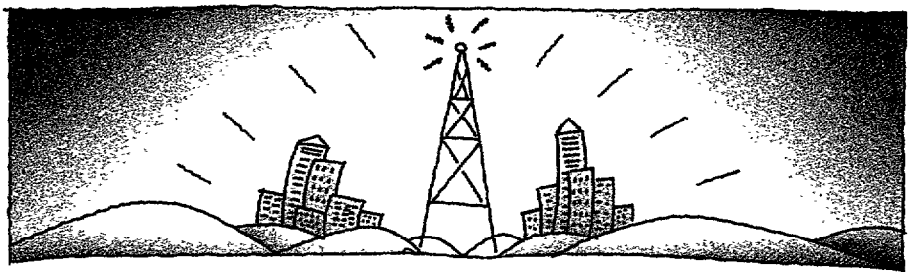
Digital Teleport Inc., a St.Louis-based firm, submitted the winning bid. The first phase is budgeted at $4 million and includes traffic surveillance and incident management applications in the St. Louis area. Once the overall fiber optic trunk is in place, they will bring "other things to fruition," Dollus said.

For instance, they could be used to bring better weather-related information to certain airports and gather data from road weather information systems. The applications could be used to develop one-stop shopping for commercial vehicle operators and relay information to weigh stations. "Then we have a radio system the state is looking to upgrade." *(Continued)*

MoDOT has begun to explore the uses for wireless telecommunications facilities, too. "Another advantage of our early deployment study is that it provided insight into what the wireless could be used for." Possible uses include locating MoDOT cameras on telecommunications company towers, using cars with cell phones turned on as traffic probes or providing cellular traffic alerts.

"What this type of telecommunications provides us is a rapid deployment. We have an informed driver who can make alternate plans. Later, the data can be used for historical or planning purposes," Dollus said.

For its part, Digital Teleport is developing innovative financing arrangements with counties and municipalities located off the fiber trunk. The company will barter fiber optic connections in exchange for a local government waiving its franchise fee. For instance, connecting a jurisdiction's City Hall and Maintenance Department in exchange for using right-of-way along a utility corridor.



# New York State Thruway

**Need:** The New York State Thruway Authority (NYSTA) has significant telecommunications expenses due to its size, recent upgrades of its toll collection and reporting systems, and implementation of automated toll collection (E-ZPass). Other planned intelligent transportation systems initiatives such as variable message signs, slow-scan and real-time video and automatic vehicle identification will require additional telecommunications capacity.

As NYSTA leased services from private telecommunications companies for its own operational needs, it began exploring a shared resource approach through a public/private partnership that would provide additional capacity for the authority's own telecommunications needs while containing costs and providing a source of revenue.

**Solution:** NYSTA issued a request for proposal (RFP), which follows the longitudinal occupancy guidelines found in New York State's Federal Highway Administration-mandated "Accommodation Plan." There were two responses to the RFP.

The authority reached agreement with MFS Network Technologies that allowed the company to develop, install, market and operate a fiber optic network within NYSTA-controlled ROW in exchange for a percentage of the fees collected from third-party users of the fiber optic network as well as an "Authority Telesystem" that includes 16 fibers at the OC-3 level and all necessary equipment. Also, MFS will operate and maintain the entire network over the 20-year life of the agreement.

The second proposal did not address the issues raised in the RFP and, instead, offered additional leased telecommunications services - not a shared resource approach. *(Continued)*

**Result:** The authority got its own fiber optic network covering approximately 521 miles and a share of the lease revenues. The network's capability will result in immediate telecommunications cost savings and allow NYSTA to pursue its planned ITS applications. Also, New York state would benefit from a state-of-the-art fiber optic network infrastructure for use by third parties such as telecommunications providers that want to link up to existing cables or create a new network in the state. The fiber optic network will follow the mainline Thruway - from New York City north to Albany then west passing through Syracuse and Rochester to Buffalo before heading southwest to the Pennsylvania border.

Both dark fiber and empty ducts will be available through MFS Technologies for sublease to third parties.

**Contact:** Michael Keogh, director of general services, NYSTA, (5 18) 436-2762; Robert Eide, senior vice president of sales, MFS Network Technologies, (402) 233-7587.

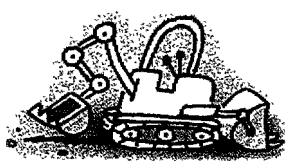
**Background:** NYSTA is a public benefit corporation that is responsible for the operation and maintenance of over 640 miles of toll and Interstate highways. As a result, it is empowered to issue bonds, acquire property right-of-way (ROW), enter into contracts, and collect tolls and fees for road and ROW use. NYSTA is the only transportation authority in the state with continuous secure ROW from New York City through Albany to both the Massachusetts state line and the Pennsylvania state line (southwest of Buffalo). Authority facilities include 61 toll plazas, 31 travel plazas, 25 maintenance facilities, 11 divisional administrative facilities, three state police barracks and the NYSTA headquarters building in Albany.

NYSTA also is responsible for operating and maintaining the 524-mile New York State Canal System, part of which parallels the highway and part of which reaches into the northern regions of the state. *(Continued)*

Although the current shared resource agreement was the culmination of a concentrated two-year effort, the authority has been exploring the use of its right-of-way for development of a fiber optic network since 1986.

The project has gone through some evolution. The shared resource project was structured initially so that construction of the network would only begin after a certain number of third-party subleases had been negotiated. This changed, however, as a result of the increased competition created by the 1996 Telecommunications Act.

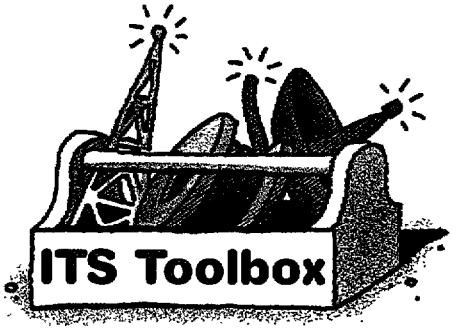
"At first we were planning to build the facilities on a segment-by-segment basis depending on what the customers needed; but we learned that most users wanted access to the whole network at once," said Michael Keogh, NYSTA's director of general services. "The original approach would have ended up delaying construction, but now we are on track to break ground in March 1997 and complete construction in December 1997." MFS Network Technologies is moving ahead with surveying and engineering work in preparation for construction.



*Remember that a shared resource plan is an iterative process involving stakeholders - both public and private.*

# Before the RFP:

**As you review your telecommunications needs, think of the process as a chance to develop ITS, public-private partnerships and telecommunications capacity - not long-term studies.**




- Realize that the best market opportunity (the highest value of freeway right-of-way) may not wait until you fully identify and prioritize your department's or the state's future communications and network needs. But doing a preliminary analysis of your needs is still important.

- Determine how other organizations have completed similar projects, including how they adapted technical specifications to fit wireline and wireless networks and how they valued their right-of-way.

- How you determine the value of your right-of-way is crucial to launching the project. The valuation can be done by competitive auction, researching what similar projects in similar areas have been worth, researching the cost of adjacent land to your right-of-way, figuring just the value of your telecommunications needs and proceeding accordingly or with a survey-style approach to determine what the market will bear.

- Other issues that must be explored and resolved before moving forward with a shared resource program are: tax liabilities, trust fund regulations, policies on utility accommodation, control of the compensation, valuing the private-sector resource, multi-agency use of the networks and intellectual property provisions.

*(Continued)*

- Also, regulatory implications could arise if a state is deemed to be providing "telecommunications services," which, under the 1996 Telecommunications Act is defined as "offering of telecommunications for a fee directly to the public . . . ."

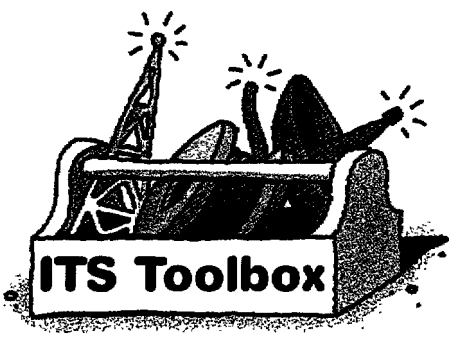
- You may want to issue a request for information to provide you with baseline data on your ITS goals or other issues.

- You can draft an RFP and hold informal discussions with potential vendors in an open forum, schedule preproposal conferences or invite federal input. Some agencies use consultants to interview vendors, which keeps the agency at arm's length. The consultant presents the results without names or ID.

- Remember that a shared resource plan is an iterative process involving stakeholders - both public and private.

# Structuring the RFP:

**A request for proposal (RFP) for shared resource is different than other RFPs. It is a hybrid - it produces a signed contract designed to meet your needs as well as the requirements of the telecommunications provider. With such a partnership arrangement, the final contract should be flexible enough to accommodate changing technology and future needs.**




- If you know little about RFPs or telecommunications, you can prepare a short, in-house draft-RFP outlining whatever objectives, parameters and timeline that seem appropriate. The draft is not expected to be complete or accurate at this point. The draft-RFP is used as a way of involving the agency in the process. Remember, people are more likely to react to something than to contribute original thought.

- Use a broad-based, policy-level steering committee and any appropriate technical office as a sounding board for a draft-RFP?. The review comments prove invaluable in fleshing out and improving on the final product. You can go through a couple of drafts before deciding on a final RFP.

- Be clear and concise about what your organization expects to accomplish through the RFP; include both general and specific criteria for the proposal evaluations.

- Identify who is responsible for each aspect of the project.

- Develop preliminary plans and design, construction, operation and maintenance specifications for the network. These plans and

*(Continued)*

specifications are provided in the RFP so the proposer can provide an estimate for the project.

- Include a statement of qualifications requiring details on experience and capabilities.

- Require a technical proposal where the proposer provides a clear analysis of the project objectives, operational parameters and management solutions. The proposal should present the specifications in a narrative and an outline.

- Require a business plan that is of sufficient detail so that you can evaluate the level of relevant business knowledge, expertise and experience of the proposer in the telecommunications environment. Require sufficient detail so you can evaluate the completeness, thoroughness and reasonableness of the business development, implementation planning and overall market projections. It should include an estimate of the aggregate capital costs, revenues and rate of return.

- Require a financial plan that addresses cost of design and construction of the network, the ongoing operations and maintenance expense and the plans to compensate you for the benefit received from use of the right-of-way.

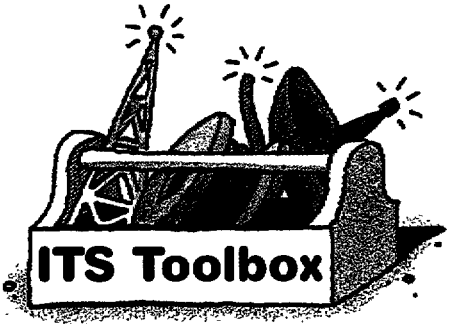
- Encourage all parties to propose a payment plan and lease agreement that meets their needs as well as yours.

- Provide the framework for a business relationship with the successful proposer using a draft of the contract to give the proposers an understanding of their contractual relationship with the agency for the project.

- Consider using a consortium to develop wireless and wireline networks in order to reduce the administrative costs of processing multiple applications.

# After the RFP: Negotiating an Agreement

**Go into negotiations having done your homework. Know the value of what you have (right-of-way) and what you want from the private sector. This step is the climax of having analyzed your needs.**




- Put together a negotiating team composed of legal, financial and engineering staff and specify the responsibilities of the partners for design, construction and operation of the network.

- If you have not already done so, determine what in-kind services would be acceptable to your organization, and determine your organization's bottom-line financial position.

- You might issue an RFP to hire a consultant to assist and advise you in negotiating an agreement. This additional cost can be rationalized for two reasons. First is the great benefit you receive using consultants in executing other major public private partnerships. You will feel much more secure that you will not "lose out" at some time during or at the end of the contract. Secondly, using a consultant will be helpful if you have not gone through a study of existing and future communications needs and technologies prior to initiating a shared resource project and want to maintain as much flexibility as possible to react to developing needs and changing technology.

*(Continued)*

- When getting ready to announce which proposer has been selected to enter into negotiations, it is necessary to not only have a press release and Q&A briefing package available for the media, but to actually conduct as many briefings as possible for likely affected or interested groups near/following the announcements.

- Use other state agencies, governmental communications committees, legislators and/or staffs, and city and county organizations as a starting point for briefings. This gives these groups information to deal with possible negative reactions they might receive by telecommunications companies that had not participated (or were not the selected team), or from small telephone companies fearful of being adversely affected by competition.

*'My particular view is tlmt the valtie of Right-of-way is really market driven. Go out fov bid and see who offer the most, and then you can negotiate some things. The value of I-95 is different from the valueof I-81 or I-5"*

**Bill Jones FHWA**

*"State DOTS need to speed the process up and be less demanding in what they get, and create an open architecture to allow multiple companies to use the same infrastructure. If they do that, everybody is going to win"*

**Bob Eide, MFS Network Technologies**

# Q&A:

*Bill Jones, technical director, ITS Joint Program Office, Federal Highway Administration (FHWA)*

## Q. What are the most frequently asked questions on this policy that you receive?

A. Most people are not familiar with the 1996 Telecommunications Act (TCA) and how it might affect what they are doing. They ask us, 'Is this permitted under the act?' Or 'Can I do this with my right-of-way?' Our answer is usually yes. They ask about the use of excess capacity or receiving money and 'if I do, do I have to use it for Title 23 purposes?' We tell them they don't have to use it that way. Really, I think the TCA has very little effect. States still have the same basic rights and responsibilities for managing their fi-eeways and highways as they had before. As long as you are operating in an open and competitive environment, it is our opinion that that satisfies the spirit of the act.

## Q. What is the FHWA's policy on use of Title 23 federally funded right-of-way for shared resource purposes?

A. Title 23 is the federal aid program for highways. It is the law that says whatever Congress appropriates will be divided up and given to states. Basically FHWA leaves it up to the states to decide what they want to spend their money on. FHWA does not have a policy, *per se,* on shared resource projects. FHWA does, however, actively encourage innovative financing and public-private partnerships to achieve transportation objectives. Shared resource projects fall into this category and a number of them have been successll.

*(Continued)*

## Q. What is federal policy on the use of federal funds for communications infrastructure?

A. Telecommunications is a candidate for federal aid funds just like any other infrastructure project. In fact, the 1995 National Highway System (NHS) Act makes it easier to use federal aid dollars for telecommunications in that telecommunications typically involves substantial operations dollars as well as capital. The act allows federal aid funds to be used for operations, and there is no time limit on it as there was previously.

## Q. Ooes FHWA alert the states to the various possibilities?

A.Yes. We have been sponsoring workshops across the country in 18 states, basically, on request. The other thing we have been doing is that Apogee Research Inc. [a FHWA contractor studying shared resource applications] has spoken at about 20 conferences trying to get the word out that this is a possible alternative for telecommunications for states and local communities. Aside from the Apogee activity, we have another workshop that the state of Maryland is putting together for FHWA. It will talk about the state's experience when it did a telecommunications-needs analysis. Also, we will be sponsoring two telecommunications courses as part of our professional capacity-building effort. One is a one-day overview of telecommunications issues for management personnel. The other will be a five-day, in-depth technical course for engineers on telecommunications - not to make telecommunications engineers out of them, but to get them familiar enough so that they can deal with telecommunications companies.

## Q. How crucial are wireline and wireless shared resource ventures for expanding the public sector's use of ITS?

A. Telecommunications is essential because it is an enabling technology. ITS depends on a robust telecommunications network in order to gather the data, manage the transportation facilities as well

*(Continued)*

as disseminate the data to the traveling public or other agencies. But shared resource projects are really very time-sensitive. A few years ago they weren't viable because nobody wanted right-of-way to put in new facilities. Now there is a substantial increase in competition in the telecommunications industry. Everybody wants to get into the business - utility companies as well as a variety of new companies. They need infrastructure of one form or another. Some of them lease that infrastructure. Others are installing cables. There will come a time in the next few years, though, when most of that installation will have been completed one way or another, with highway median or railroad easements or private property as right-of-way. The window is a few years long only, and it varies from community to community. But there are opportunities now because of the turmoil in the telecommunications industry, and that is the important thing states have to realize.

## Q. Isn't it true, shared resource projects can provide matching funds for some later project?

A. Yes. When a state consummates a shared resource project, it will generally put a value on the contribution of the private partner. And that can be used as matching funds, later on.

## Q.There are many ways to determine the value of right-of-way. Does FHWA have a position?

A. My particular view is that the value of right-of-way is really market driven. Go out for bid and see who offers the most, and then you can negotiate some things. The value of I-95 is different from the value of I-81 or I-5. It depends on how much business providers can glean using that right-of-way. But keep in mind, beyond a certain point providers will say 'No. That costs too much I can go get the right-of-way by using another form of access.'

*(Continued)*

## Q. Sometimes only one company answers a request for proposal (RFP). What then?

A. There are not dozens and dozens of telecommunications companies that want to run fiber optic cable between cities or within a city, but there are a few. We have seen a couple of shared resource RFPs go out that have been very demanding, and they got no response. Every company has its own marketing strategy. If you get only one bid, however, the project can still be viable.

## Q. So what kind of deals do you foresee?

A. I think there are not very many states where you will get a shared resource project like Missouri's - 1,200 miles of freeway for fiber optic cable. I think that is probably the exception. Instead, you will most likely get certain corridors. One of the problems I have seen is that most states have not done a good analysis of their network requirements before they go out for shared resource bids. There are a lot of devices on the roadway, a lot of facilities that have to be served and different data that need to go different places. Unless you have done a very thorough network architecture, you could lay cable in the wrong place. So we have been encouraging states to do a good network analysis before embarking on shared resource approaches. It doesn't take very long - three to six months depending on what you do. It is not very expensive, and it can save you millions of dollars.

## Q. Can federal aid dollars be used to pay for the study?

A. Sure. The thing I do not quite understand is that whenever a state decides to go build a road, it does exhaustive analyses on all of the alternatives that are available to them in terms ofplacement of the road, the design of the road, what it costs and what materials to use. The process is a major undertaking from a trade-off stand point. Yet, when they go to telecommunications, which is a major cost, they don't seem to follow the same procedures or process that they do for building a highway. And they need to. Or else you could end up with fiber that is not the best utility for your network.

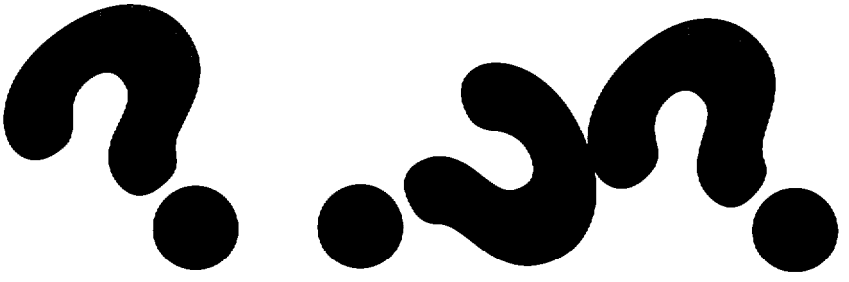
(Continued)

## Q. That sounds like a hiring-call for consultants. Is it?

A. One of the things we are recommending is that states, when they get into this telecommunications area, need to hire different kinds of consultants. The traditional transportation consultants that states turn to, quite honestly, do not have the in-depth, telecommunications knowledge required to do this kind of analysis. These networks are very complex. It is not as simple as running a telephone line around traffic signals into your computer. It is not that simple any longer - you need a company whose fundamental expertise is in telecommunications networks.

## Q. You have emphasized the need for more public-sector agencies to monitor and comment on rulemakings implementing the 1996 Telecommunications Act. Why?

A. There are a couple of selections that have the potential to impact state and local departments of transportation. One is Section 253 covering barriers to entry and managing the right-of-way. The Federal Communications Commission (FCC) does not plan any rulemaking, per se, on access. But the FCC will get queries and maybe even be asked to give opinions on whether a state or local department may be violating the barriers-to-entry clause. When appropriate, FHWA will provide comments. Cities and states, however, should pay attention to this class of issues and arguments.



# Q & A:

*Bob Eide, senior vice president of sales, MFS Network Technologies, a competitive access provider that has built over 250,000 fiber miles and is a subsidiaryy of MFS Communications Co., which is publicly traded and approaching a billion dollars a year in revenue*

## Q. What makes highway right-of way attractive to telecommunications companies?

A. In general, highway right-of-way only has value to a telecom company today if it meets two criteria. The first is the cost-effectiveness of using that right-of-way versus an alternative right-of-way. Secondly, speed and timing. One of the things that has happened, and it continues to happen at an even more frantic pace, is change in the industry.

## Q. Isn't change the historical norm, though?

A. Yes. We really have quite a history of that. In the 1980s, the first long distance networks were put primarily with railroads and pipelines. And the reason was the railroads and the pipelines were able to react quickly and allow people to negotiate agreements and infrastructure quickly.

## Q. What was the Federal Highway Administration's (FHWA) position at that time?

A. FHWA said 'You aren't going to put telecommunications in the roads.' So consequently the industry went out and built at the cost-effective point of least resistance. Now with competitive access, there is a new need to build rapidly and cost effectively. Not only in the long distance market but also in the competitive access or local-service market.

*(Continued)*

## Q. What other factors are at work?

A. When the Regional Bell Operating Companies [RBOCs] and GTE came into being, they had utility corridors set aside for them all over the place. And because they were *the* public utility it wasn't a question of whether they could be there or what they would be asked to pay. Shared resource projects were unheard of. So now you have a situation in the industry where the little guys, compared to the RBOCS, are being asked to pay more than the RBOCS were and even are today because the RBOCS continue to have the ability to go in these public utility corridors. So the little guys who have the least amount of money are being asked to pay the most. These days speed is almost as important as cost.

## Q. Why?

A. The competitive companies are trying to gain market share. They have gone out on the financial markets and sold stock and borrowed money. And the investors are clamoring for development and return. Once a competitive access provider [CAP] approves an investment plan that says 'We are going to invest in the city of Shangrila' they are going to go out and do it as quickly as possible. They do not have a year to wait for a request for proposal [RFP] to come out because the CAP has got to go build it somewhere.

## Q. Where will the most right-of-way activity occur?

A. I would say at least 50 percent of the new long distance networks planned over the next two years are going to be on rail, in terms of mileage. At least half. That is the cost-effective and fastest right-of-way to get, especially when you are going over long distances. And I don't think the state departments of transportation (DOTS) will get the other 50 percent. So county roads and uncontrolled access roads win out, in some cases.

*(Continued)*

## Q. Why do you say the railroads are easier to work with than a state DOT?

A. The railroad is a private-sector company so you can negotiate rather than go through the whole procurement process. We have too many public agencies demanding too much. I've seen a lot of consultants running around the country trying to put a value on right-of-way that says 'This land is worth $200,000 an acre and you are going to occupy this much. So the value is X.' They try to base it on the value of the land. The value of the right-of-way is not the value of the land. It's the cost-effectiveness of using that right-of-way versus an alternative right-of-way, and the way the right-of-way helps the speed and timing of the process.

## Q. What is at stake for transportation agencies?

A. Every day they are losing opportunities because they are busy studying, hiring consultants, having meetings and issuing RFPs that no one is going to respond to. Every day the right-of-way is going down in value.

## Q. Is there a downside for the private sector in not doing shared resource agreements?

A. You potentially pay more to go somewhere else because the timing issue is not there. Secondly, I think the private sector suffers, indirectly, because the advanced services that could be provided on the highway are not there. We all suffer from that.

## Q. How many shared resource projects have gone on state DOT right-of-way in the last couple of years?

A. If you mean in terms of freeway and toll roads, it is less than a dozen.

*(Continued)*

### Q. How important are shared resource ventures to your long-range plans?

A. Other than the speed-to-market factor and potential cost savings, they are not critical. The information highway is going to be built with or without the state DOTS.

### Q. What improvements are needed in the shared resource process?

A. State DOTS need to speed the process up and be less demanding in what they get, and create an open architecture to allow multiple companies to use the same infrastructure. If they do that, everybody is going to win.

### Q. So it is not too late?

A. No, no. There are still good projects out there.

### Q. Using a baseball analogy, where are we?

A. In the long distance networks, we are at least on second base and probably heading to third. In the local market, we are maybe between first and second and moving very quickly.

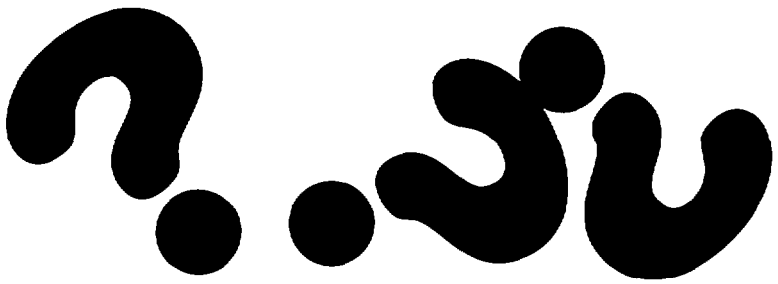
### Q. Will there be a next generation of these projects?

A. There is going to be some activity all the time because by the time you finish you'll need to start all over again. If nothing else, just to upgrade. But that is mostly in small areas, certainly not large projects.

*(Continued)*

**Q. What does this do to the timetable to bring ITS applications to the public?**

A. I think it already has delayed ITS projects because there are a number of states that have hung their hat on right-of-way revenue to pay for ITS applications. While they were studying shared resource projects and putting procurements together, some of the world passed them by.



*"ADOT is looking for innovative ways to finance highway projects. Leasing of state and interstate highway right-of-way sites for wireless communications facilities is one of the methods ADOT feels will be mutually beneficia to the Department and the communications industry."*

rom Arizona Department of Transportation Pr al No. 97
*Lease of Areas Above and Below Highways for P ely Finan*
*Communications Facilities.*

**REQUEST FOR PROPOSAL FOR PUBLIC-PRIVATE PARTNERSHIP IN THE DEVELOPMENT OF COMMUNICATIONS INFRASTRUCTURE**

**This request does not obligate the State of Minnesota Department of Transportation to complete the work contemplated in tbis notice, and the department reserves the right to cancel this solicitation at any time prior to execution and approval of a contract. All expenses incurred in responding to tbis notice shall be borne by the responder.**

**Minnesota Department of Transportation**
The Minnesota Department of Transportation (Mn/DOT) through its public-private initiative program (TRANSMART) requests proposals from communications firms interested in partnering with the State of Minnesota.

**Goal**
Mn/DOT wants to develop a public-private partnership venture with communications infrastructure providers and operators to exclusively enter, install and develop communications primarily within state freeway right of way, in exchange for providing operational communications capacity to the state.

**Objectives**

**a)** Construct and maintain a communication network for as much of the area of the state as possible.
b) Provide Mn/DOT with communications capacity for the future.
c) Provide communications access to other government entity locations throughout the state.
d) Provide the successful bidder exclusive rights to Mn/DOT freeway right of way for commercial communication infrastructure purposes.

## 1. Overview

MnDOT recognizes that fiber optics and wireless transmission are alternatives that may meet various public network needs. Proposals which include either or both alternatives will be considered. Bidders must propose statewide access. Proposals for only one region or corridor in the state will not be considered.

Mn/DOT has not thoroughly explored the state's total communication needs. However, Mn/DOT is receptive to diverse communications technology proposals. Mn/DOT wishes to barter exclusive rights to freeway right of way in exchange for capacity to satisfy immediate and future state needs. In addition, private commercial use of some data collected on the state's roadway system may be considered.

Mn/DOT is soliciting proposals from the private sector to install and maintain a communication system network throughout the state. Mn/DOT will make available, by permit, its 1,000 mile freeway and as much of its 12,000 mile trunk highway right of way as it can for either linear or spot location use by the private sector. Freeways are state trunk highways that have controlled access (access is only via grade separated in interchanges). Mn/DOT freeways are shown on Attachments A and B. Freeway rights of way use for utilities has been restrictive in the past. Mn/DOT is now permitting exclusive access to its right of way as the incentive to private industry. However, in order to facilitate private industry addressing the needs listed below, Mn/DOT will attempt to make the trunk highway right of way available by permit. The trunk highway right of way may already contain various communications and utilities service, as it is not exclusively reserved. Some trunk highway right of way may also pose some ownership challenges.

Mn/DOT wishes to receive communications services in as much of the state as possible. The goal is to provide all geographical areas of the state with fiber optics access to maintain economic vitality and to promote telecommunications throughout the state. The following is a list of other service area objectives (not prioritized). Proposers should consider providing as many of these service objectives as possible.

- Intelligent Transportation System (lTS) use statewide
  Although Mn/DOT ITS architecture has not yet been developed, the proposed national architecture concept is now available. Mn/DOT plans to complete a portion of its ITS architecture yet this year.

- Fiber optic service to Mn/DOT District offices
  Mn/DOT District offices shown on Attachment C need fiber optic service.

It is understood that private proposers may provide only some of the expressed needs. Much of the selection criteria will be based on the number of statewide needs that may be met and on the quality and capacity provided.

In turn Mn/DOT is willing to consider providing:

- Long-term access to certain Mn/DOT right of way, including the exclusive access, for communications infrastructure purposes, to the 1,000 miles of freeway, both linear and spot location throughout the state.

- Possible access and use of transportation data collected via existing and future communications infrastructure.

Mn/DOT's Traffic Management Center (TMC) already operates an extensive fiber optics system in the metro area. Mn/DOT will also consider cost effective proposals that include the continued planned installation, use. management and/or the maintenance of Mn/DOTs traffic management communications system. Attachments D and E show existing and planned TMC fiber optics.

Proposers interested in including a metro traffic management fiber element should he advised that Mn/DOT will not compromise the integrity of its operations. Interested proposers should outline a service framework that would address system integrity concerns, including maintenance/response time and safety precautions that will avoid causing accidents.

Interested proposers could also gain access to and use of traffic data being collected. Mn/DOT's goal is to continue to provide traffic data to the public in a timely manner in **order to** improve traffic management.

Proposals will also be considered that include the use of rail corridor right of way Mn/DOT owns. These corridors are abandoned rail lines that are now part of the State Rail Bank Program. Interested responders should submit inquiries to the person identified in Section 7. These rail corridors are shown in Attachment F.

**2. Guidelines for Fiber Optics**

Mn/DOT will consider providing exclusive use of its freeway right of way to the successful proposer. No other private use fiber optic lines will be permitted on the freeways other than the system that now exists along I-94 between St. Cloud and Maple Grove. Responders may propose as a single or joint venture (with one entity as the prime proposer).

The successful proposer will be allowed to install fiber optic cable at a minimum depth of 36 inches (must be in conduit in the metro area). Fiber optic cable will be buried generally along the outer edges of Mn/DOT rights of way. Distribution nodes and their associated power needs will be allowed only at interchanges or crossroads where a service vehicle will be off of the roadway. Boring will be required under roadways and ramps in conduit. Crossing of the freeway will be only at existing structures. The location of all facilities on Mn/DOT right of way is to be approved by Mn/DOT and the Federal Highway Administration where appropriate. All work will be accomplished within Mn/DOT permit policies and regulations.

Except as noted below, fiber relocated due to construction, accidents, etc. will be the responsibility of the proposer. Mn/DOT will make available, on or about August, 1996, its State Transportation Improvement Program (STP) for fiscal years 1997-1999. Any Mn/DOT construction projects during this time period covered by the STIP that require fiber relocation and

are not in the aforementioned STP will be the financial responsibility of Mn/DOT. Fiber relocation required to accommodate projects in the STIP will be the financial responsibility of the proposer. After 1999, relocation for all projects will be the responsibility of the proposer in all cases.

The proposal should clearly define what the proposer is willing to provide to Mn/DOT as well as for statewide public access. Mn/DOT use of fiber optics is primarily for basic voice, data, video, video conferencing, ITS and CCTV. Mn/DOT has need of an unspecified size bundle of strands of fiber in a separate conduit or in a separate fiber cable on each freeway which the proposer intends to lay fiber. Mn/DOT would like to have some of these fibers lighted. These fibers shall be maintained by the proposer. Mn/DOT also requests fiber optic access nodes on freeways at each full or partial interchange outstate, and at one-half mile intervals on freeways within the Twin Cities metro area.

Mn/DOT is willing to consider making as much of its trunk highway right of way available **to the** proposer as possible for statewide fiber optic installation and maintenance needs outlined in Section 1. Proposed service capacity and considerations for other governmental access should be set forth in the proposal. Service to Mn/DOT district offices shown on Attachment A should be to the facility, not just to the city. Mn/DOT would like some of these fibers lighted. These fibers can be either purchased or installed by the proposer.

Mn/DOT fiber needs described above are difficult to quantify at this time; therefore, proposers are encouraged to suggest enhanced means of addressing Mn/DOT needs. Since Mn/DOT anticipated maintenance requirements will vary dramatically in terms of response time and hours/days needed based on the variety of uses, it is premature to prescribe maintenance requirements in this RFP.

Mn/DOT is willing to consider an agreement term for up to 30 years which could be renewed for an additional 20 years by mutual agreement.

### 3. Guidelines for Wireless Communications

The construction of towers necessary for wireless communications will be considered for all freeways. Only Mn/DOT owned towers can be on trunk highway right of way. Proposer tower needs can be accommodated by a build-transfer-operate (BTO) arrangement with Mn/DOT. This means the private sector builds and transfers ownership of the towers to Mn/DOT and receives a long term lease in return.

Mn/DOT must be assured of motorist's safety before permitting such tower locations. Service locations to towers and service buildings must be from outside Mn/DOT right of way.

4. Selection Criteria

Only one bidder will be selected. The evaluation of proposals will be based on the:

A. Extent of locations and quality of services offered to meet Mn/DOT and State of Minnesota service needs.

1. Number of places/extent of state service area
2. Number of fibers, number of lighted fibers
3. Maintenance framework

B. Knowledge of and willingness to meet Mn/DOT specifications, state law and practices as well as for those agencies affected (FAA for Tower construction for example).

C. Qualifications and communications experience of the proposer,

5. Proposals

The specific content of proposals is not described in this RFP due to the range of communication infrastucture types being so broad, and Mn/DOT needs being not well defined. Proposers are encouraged to work with Mn/DOT Office of Advanced Transportation Systems regarding its developing architecture, and to include in the proposal an lTS concept design envisioned for both the metro and outstate Minnesota. ITS contact is to be made through the person identified in Section 7.

Proposals shall not exceed 30 pages in length (typed, single spaced, 81/2 x 11 inches, no more than double columns and a type face no smaller than 12 point). Appendices to proposals are acceptable if bound in a volume separate from the proposal and do not cover information essential to the evaluation criteria. High cost printing and glossy materials are discouraged.

Bight copies of the proposals are required, sealed individually or collectively, each signed in ink by an authorized representative. Proposals are to be delivered to the person identified in Section 7.

**6.** Mn/DOT Rights Reserved

Mn/DOT reserves all rights available to it by law in administering this RFP, including without limitation, the right to:

- Reject any and all proposals at any time.
- Elect not to commence agreement negotiations with any proposer.
- Negotiate with a proposer without being bound by any provision in its proposal.
- Request or retain additional information for any proposals

Under no circumstances shall the state be responsible for costs incurred by proposer in delivering proposals or in negotiating agreements. Any and all information Mn/DOT makes available to the proposers shall be as a convenience to the proposers and without representation or warranty of any kind.

All proposals submitted in response to the RFP arc subject to the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13 (1994). Mn/DOT shall not be liable to a proposer for disclosure of all or any portion of a submitted proposal.

In accordance with the provisions of Minnesota Statutes, Section 363.073. for all contracts estimated to be in excess of $50,000, all responders having more than 20 full-time employees at any time during the previous 12 months must have an affirmative action plan approved by the Commissioner of Human Rights before a proposal may be accepted. A proposal will not be accepted unless it includes one of the following:

a. A copy of current certificate of compliance;
b. A motarized letter of affidavit certifying that your firm has not had more than 20 full-time employees at any time during the previous 12 months.

**7. Contract Person/Inquiries**

Adeel Lari, Director
Office of Alternative Transportation Financing
Minnesota Department of Transportation
MS 445, Room 214
395 John Ireland Blvd.
St. Paul, MN 55155-1899
(612) 282-6148
(612) 296-3019 FAX

Inquiries as to lTS and TMC plans and operations referred to in the RFP should also be directed to Adeel Lari Other persons are not allowed to discuss this RFP with responders before the proposals due deadline.

**8. Schedule** **Date**

| | |
|---|---|
| Notice in Minnesota- | 2/19/96 |
| RFP Release Date | 2/20/96 |
| Pm-proposal Conference | 3/21/96 |
| Proposals Due | 4/10/96 |
| Selection of Proposal for Negotiations | 5/24/96 |

The pre-proposal conference will be held on March 21 at 1:30 pm CST, in the Office of Aeronautics, 222 East Plato Boulevard (west of Lafayette Freeway - TH 52) in St. Paul. This conference is an opportunity to raise questions regarding the RFP. Attendance is not mandatory. Prepared written questions are preferred, and will be collected at the beginning of the conference.

**Proposal No. 97-04**

**Lease of Areas Above and Below Highways**
**for**
**Privately Financed Wireless Communications Facilities**

## GENERAL INFORMATION:

Ms. Sabra Mousavi of ADOT's Office of Privatization is the Project Manager for ADOT.

Questions regarding this Request for Proposal (RFP) package should be directed to Susan Tellez, Engineering Consultants Section, 205 South 17th Avenue, Room 293E, Phoenix, Arizona 85007, Telephone: (602) 255-7720.

Any **oral** statements **or instructions received by proposers regarding this solicitation, which may conflict with the written terms and requirements set forth herein, shall not be considered unless** formalized **by a written solicitation addendum.**

A pre-proposal meeting will be held at ADOT's Human Resource Development Center, 1130 North 22nd Avenue, Phoenix, Arizona, on August 2. 1996, from 9:00 a.m. to 12:00 p.m. All technical and contractual questions will be addressed at this meeting, no prior or subsequent contact with the Privatization/Alternative Financing Office will be permitted. Additionally, ADOT will consider any direct contact and/or communication with the review panel members or the State Transportation Board to be a conflict which will result in disqualification.

## PROPOSAL DELIVERY:

Sealed proposals will be received until 4:00 P. M. Arizona Time, August 23.1996 at the following location:

Engineering Consultants Section
Arizona Department of Transportation
205 South 17th Avenue, Room 293E (Mail drop 616E)
Phoenix, Arizona 85007

Timely receipt of proposals will be determined by the date and time the proposal is received at the address specified. Receipt of proposals in the ADOT Mail Room or any other ADOT office shall not be considered timely Hand delivery is encouraged to assure timely receipt. No proposals will be accepted after the time indicated. Proposals received afler the deadline will be stamped for time and date, and returned unopened.

Fifteen (15) copies of the proposal are required. They should be packaged in such a manner that the outer wrapping clearly Indicates the following information.

Request for Proposal No. 97-04
Lease of Areas Above and Below Highways for
Privately Fmanced Wireless Communications Facilities

To be opened: August 23, 1996 at 4:00 P M

All proposals must be prepared entirely in English and be signed by, or include letters of intent from all representatives and principals of the Proposer.

**ADOT reserves the right to modify specified deadlines and to reject any or all proposals at any time and for any reason without incurring any cost or liability thereto.**

All material submitted in accordance with this solicitation becomes the property of the State of Arizona.

**PROPOSAL CONTENT:**

The proposal must be in the following format and include all specified information. The type should be clearly legible and be no smaller than standard elite type. Single space all material. In the interest of saving paper, reducing mailing costs, and ease of handling, it is desired that proposal pages be printed on both sides whenever appropriate lo do so. All pages should be numbered, including appendices.

There are no page limitations to specifically respond to the following three areas.

- Section D - Response to evaluation criteria
- Section E - Proposal requirements
- Section F - Additional supportive information

A. Cover Letter which contains an expression of the proposer's qualifications for the project and a brief summary of the information contained in their submittal.

B. Identification title sheet or equivalent which includes a short title for the proposal, names and business addresses of all the organizations that will conduct the work as identified in the proposal: name, title. mailing address, and telephone number of the principal Proposer.

C. Table of Contents.

D. Response to Evaluation Criteria - Additional detail is obtained in the Evaluation Criteria Section of this document.

1. Experience and Qualifications to perform project(s) proposed.
2. Capability and Capacity 10 deliver and finance project(s) proposed, including a preliminary timeline for construction.
3. Commitment to and plan for joint facilities use including a list of potential joint uses.
4. ADOT ITS program enhancement and/or financial benefit to ADOT.

E. ProposalRequirements: – This section sets forth the minimum requirements for any proposal submitted under this solicitation. Proposals must demonstrate compliance with the minimum requirements identified below. Inability lo demonstrate a willingness lo comply with these requirements will result in the rejection of your proposal as unacceptable.

All wireless facilities will be placed in a location acceptable to both the Proposer and ADOT. ADOT may reject individual facility locations without rejecting the proposal. Therefore, Proposers should identify all desired locations and alternative sites in the proposal. It is important for proposers to identify both critical and non critical sites. This information will be necessary in evaluating proposals when non compatible users are interested in the same sites.

ADOT reserves the right to negotiate the lease and its term. Proposals should define the length of lease required and the reasons associated with that requirement. Because ADOT must ensure receiving an acceptable level of revenue over the life of the lease, periodic reviews will be required with the possible need to increase fees. In anticipation of this, it is requested that proposers offer possible solutions and/or an appropriate lease escalator to equitably deal with this requirement.

Joint use of any wireless facilities constructed within ADOT rights-of-way is desired but not required if operationally compatible uses do not exist. Provide a plan for joint use including a list of potential shared uses Please provide examples of similar arrangements for existing or planned shared use of wireless facilities.

The State reserves the right to call for best and final offers from any or all proposers. The State also reserves the right to reject any or all proposals and advertise again.

Identification of Proposed Project: This is meant to be indicative of the project and type of facilities the proposer is prepared to construct. A description of the project in sufficient detail to provide a clear understandmg of the physical and operational nature of the project to permit evaluation of the proposal is required.

Examples of the type of information to be provided are

1. Ownership
2 Management
3 Estimated value of any services or equipment ( if any) offered as part of the lease payment
4. Value of the lease agreement per year and over the life of the agreement
5 Joint facility use plan (including details on how the Department is to be compensated by additional tenants)
6. Desired highway locations and total sites per route
7. Total number and type of facilities to be Installed
8 Complete preliminary schedule (including all phases of the project)
9. Identifv critical facility site locations and routes
10. Connectivity with other carriers
11. Time frame for and description of expected future site modifications
12. Expected positive and negative impacts to the public
13 Environmental impact on the proposed locations
14 Previous experience with similar projects

F Additional supportive information you feel will assist the Department in understanding the importance of the project in helping to reach ADOT objectives of Increasing revenue to the State Highway Fund while providing enhanced telecommunications services within the State.

G As a part of its evaluation process, the Department reserves the right to request oral presentations, from any or all proposers, within 72 hours notice of contact Presenters from the firms must include key members of the proposed project team Discussions may be conducted with proposers who submit proposals determined to be reasonably considered for selection.

**Proposal No. 97-04**

**PROPOSAL EVALUATION CRITERIA**

**CRITERIA EXPLANATION**

**1. EXPERIENCE AND QUALIFICATIONS TO PERFORM PROJECT(S) PROPOSED**

* Identify the Primary Proposer, the Project Manager, Key Staff and other members of the proposing team, their qualifications and experiences as it relates to the project proposed under guidelines set forth in Section E.

Explanation:

This criteria relates to the Primary Proposer. the Project Manager, Key Staff and other members of the proposing team. The basic question is how well do the team members' qualifications and experience relate to the specific project proposed.

Elements to consider are:

- Specific demonstrated experience with wireless facilities and/or other communications networks.
- Demonstrated experience in public-private projects.
- Qualifications and relevant individual team member experience.
- Team experience on similar or related projects.
- Qualifications and relevant Sub-Consultant experience.
- Organizational Chart (Project Team).

**PROPOSER' S2.**
**PROPOSED INCLUDING A PRELIMINARY TIMELINE FOR CONSTRUCTION**

* Discuss the project requirements and the general plan for accomplishing the goals outlined in the timeline. Provide information on the proposers reputation and internal capability to meet the scheduled completion date.

**Explanation:**

The criteria relates to the proposers knowledge and experience in delivering projects on time and within budget. This criteria relates to the proposer's capabilities regarding the project(s) proposed.

Elements to consider are:

- What resources will be available to perform the work for the duration of the project.
- Describe internal methods which will be employed for schedule control.
- Identify policies/procedures for quality control.
- Identify the type and location of similar/related work performed within the last five (5) years.
- What contribution are expected from ADOT to facilitate development of the proposed project.
- Financial capacity sufficient to allow for unforeseen contingencies. (e.g. delays in receiving necessary governmental approvals, failure of a team member, withdrawal of a funding source, etc.)
- A written commitment to initiate work on the project within 60 days afler approval.
- Internal measure prepared to ensure timely completion.
- Person(s) responsible for commitment to maintaining the proposed schedule.

- Reputation for timely project completion
- Does the proposal address all of the requirements of federal and state statute, and local zoningregulations?
- Does the proposal address all of the requirements of the ADOT Policy dated November 17. 1995, in sufficient detail to provide a clear understanding of how and when each item will be addressed. (See Section titled Reference Materials)?
- Has the proposer provided sufficient information on design and construction standards to ensure compliance with ADOT Policy requirements?
- Does the proposal clearly address construction start and completion time frames?
- What is the proposer's plan to manage traffic control issues during construction?
- What is the proposer's plan to handle traffic safety issues for scheduled routine mamtenance, for unscheduled maintenance requirements?
- Is the proposed project legal under the federal and state provisions?

3. COMMITMENT TO AND PLAN FOR JOINT FACILITIES USE INCLUDING A LIST OF POTENTIAL JOINT USES

It is important to assure the best use of ADOT resources and to create an equitable negotiating environment for all wireless communications service providers Joint use of facility sites equates to a greater revenue generator for ADOT. Therefore, it is Important that a process for shared use be a part of the lease agreement.

Explanation:

This criteria relates to the proposer's ability to partner with other wireless communications providers for the best use of available facilities This can be demonstrated by providmg examples of compatible uses with those of the proposer for shared facilities and a plan for how this may occur

Elements to consider are:

- What Innovation has the proposer demonstrated in the past to effectively share facility sites with other wireless communications providers.
- How would ADOT (lessor) be notified of a request for shared use
- How would you propose compensation for use of the facility be determined for subsequent users.

4. MEETING STATED GOALS INCLUDING FINANCIAL BENEFIT TO ADOT AND PROVIDING ENHANCED WIRELESS SERVICES WITHIN THE STATE

* ADOT is looking for innovative ways to finance highway projects. Leasing of state and interstate highway right--of-way sites for wireless communications facilities is one of the methods ADOT feels will be mutually beneficial to the Department and the communications industry.

EXPLANATION:

This criteria relates to the importance of providing additional dollars to finance highway projects and possibly services and equipment to enhance existing or create the opportunity for new ITS programs

Elements to consider:

- What is the estimated amount and duration of income to the State Highway Fund from your proposal.
- What additional economic benefit will ADOT receive from the project.
- What public benefit will be served by the prospective project.

**ARIZONA DEPARTMENT OF TRANSPORTATION**
INTERMODAL TRANSPORTATION DIVISION
**ENGINEERING CONSULTANTS SECTION**
205 South 17th Avenue-Room 293E. Mail Drop 616E
Phoenix, Arizona 85007

FIFE SYMINGTON
Governor

LARRY S. BONINE
Director

THOMAS G. SCHMITT
State Engineer

August 2,1996

**TO:** ALL INTERESTED PARTIES

SUBJECT: AMENDMENT NO. 1

REFERENCE: REQUEST FOR PROPOSALS NO. 97-04
Lease of Areas Above and Below Highways for
Privately Financed Wireless Communications Facilities

The following revisions are made to the referenced Request for Proposals package:

1. **Section VI, Reference Material, Exhibit C -Draft Lease Agreement – Replace Paragraphs 2, 4, 5, 11, and 21 with the following :**

DRAFT LEASE AGREEMENT

2. Rental Rate
The rental rate shall be _____, as herernafter defined.
In accepting the Lease, the LESSEE agrees to pay all taxes of any kind which may be levied against the Premises. The initial payment of rent will be due and payable commencing. All subsequent payments shall be due and payable _____ in advance, on the first day of each successive thereafter. The rent shall be paid by check or cashier's check payable to the Arizona Department of Transportation. The rent will be subject to periodic review and adjustment by LESSOR every —— years. LESSOR agrees to noufy LESSEE by certified mail sixty (60) days prior to the effective date of any adjustment in the rent. Upon termination of this Lease, LESSOR will refund. without interest. the unused portion of any pre-paid rent, if any remains owing after deducting appropriate fees and other costs. Prorated rents shall be calculated on a _____day basis. LESSEE shall be in default hereunder if rent is not paid within_____days after such rent is due. LESSEE shall pay$_____ per day as a late charge for each day the rent remains unpaid after the seven day period.

4. Use of Premises
The LESSEE has the right to use the Premises only for the construction, installation, and maintenance therein of the facility described in Exhibit __(the "Facility"), which is incorporated herein by this reference. The LESSEE shall not use the Premises for any other purpose without the specific written pnor permission of the LESSOR Any other use of the Premises shall constitute a material breach and default of the Lease.

Said use shall be operated in accordance with prevailing standards and criteria established by the applicable governing agencies and without creating or causing to be created, nuisances or hazards to the public health or safety or interfering with the rights of business activities of other tenants. This shall be the only use permitted on the Premises during the term of this Lease. LESSEE further agrees not to commit, or permit the commission of, any act or thing on the Premises which is a violation of any local ordinance or of any law of the State of Arizona or the United States. LESSEE shall access the leased Premises from access points as directed by the LESSOR'S District personnel. Normally, LESSEE shall not be given access to the leased Premises from the highway or interfere with the operations of the highway facility without the express permission from LESSOR and providing appropriate traffic control approved by LESSOR'S District personnel.

5. Maintenance of Premises

LESSEE shall maintain the Premises in good repair and condition during the term of the Lease LESSOR shall have the right to enter the Premises at reasonable times for the pm-pose of making necessary inspections repair sand performing maintenance of LESSOR equipment. if any. The LESSEE shall provide detailed plans to LESSOR describing how the Facility will be maintained including its proposed schedule for both routine and emergency maintenance.

LESSEE will be responsible for maintaining the Premises. LESSOR will not participat in any costs for said maintenance, unless otherwise stated in writing. In the event that LESSEE, its agents. representatives. employees or invitees damages any property or facilities owned or maintained by LESSOR LESSEE shall immediately pay for the costs of repairing or replacing the damaged property or facilities. Should the facility extend outside the leased area. and be damaged by another entity dunng excavation and/or maintenance of another facility, LESSEE will be responsible for all costs of repair or replacement of its damaged line. Except under emergency conditions, LESSEE shall give at least forty-eight (48) hours notice of its intent to enter the right of way for installation or maintenance of the facility. LESSEE shall complete all emergency repairs immedicately

LESSEE shall maintain the leased Premises in a neat, clean and orderly condition at all times and shall not permit debris to accumulate at any time. LESSEE shall not commut. suffer, or permit any waste of said property or any acts to be committed in violation of any laws or ordinances,. LESSEE shall provide adequate weed and dust control on the leased Premises LESSEE shall close and lock all gates whenever entering or exiting the leased Premises.

11 Zoning and Permits Required

LESSEE shall obtain proper zoning clearance and/or budding permits as applicable from all governmental agencies having jurisdiction over the Premises prior to the start of activities ADOT District personnel must be notified prior to performing any Facility work on the Premises. LESSEE shall have maintenance plans approved by the LESSOR and make them a part of this Lease agreement. ADOT Permits will be issued for each job site upon application by LESSEE and approval by LESSOR'S District personnel

The LESSEE shall provide construction plans and specification for each site or site type to the LESSOR for approval. ADOT Permits will be issued for each Job site upon spplication by LESSEE and approval by LESSOR'S District personnel. The LESSEE shall submit "as-built" plans for the Facility to ADOT within six (6) months of its completion

ADOT may rely exclusively on the as-built plans to locate the Facility in conducting any excavation in the Premises for transportation purposes. The LESSOR and Federal Highways Administration specifically reserve the right to enter the leased Premises at any and all reasonable times for survey or preliminary rngineering studies,

Before any work may be done, Permits must be obtained from the appropriate ADOT District.

21 Return of Leased Premises to Lessor

Upon vacating the leased Premises. LESSEE agrees to leave the leased Premises in as good a condition or better than existed on the first day of occupancy, allowing for ordinary and normal usage, and to reimburse LESSOR for any damage done to said property caused by LESSEE'S occupation or tenancy, other than due to normal use LESSEE acknowledges that this tenancy is temporary by reason of the fact that LESSOR has acquired the leased Premises for transportation pm-poses. LESSEE, at LESSEE'S expense, shall vacate the leased Premises within (30) days after receipt of a notice to vacate or sooner, if necessary in LESSOR'S discretion, Nothing herein shall be deemed a waiver of LESSOR'S right to demand and obtain possession of the leased Premises in accordance with the law in the event of a violation of part of LESSEE of any of the terms or conditions hereof

The lease agreement shall not establish prior rights benefits for the Lessee, or their assigns. Alterations to the facility, shall be at Lessee's sole expense. All I- are subject to cancellation at will by the Department, after reasonable notice, to provide for use of the area for highway purposes. Relocation costs due to construction or reconstruction of the roadway, shall be the sole responsibility of the Lessee.

**If you should require any further information, please feel free to give me a call at (602) 251-7720.**

*Susan Tellez*
**SUSAN TELLEZ**
**Contract Management Specialist**
**Engineering Consultants Section**

**AN OFFEROR MUST ACKNOWLEDGE RECEIPT OF THIS AMENDMENT BY SIGNING BELOW AND SUBMITTING THIS DOCUMENT ALONG WITH THE REQUEST FOR PROPOSAL. FAILURE TO DO SO MAY RESULT IN THE REJECTION OF THE PROPOSAL.**

**Consultant Name** _____ **Signature** _____

As approved by the AASHTO Board of
Directors on October 29. 1995

POLICY RESOLUTION PR-2 l-95

**Title: Installation of Fiber Optic Facilities**
**on Highway and Freeway Rights-of-Way**

WHEREAS, AASHTO has long maintained a policy in opposition to the longitudinal use of freeway way for utilities; and

WHEREAS, there has been and will continue to be rapid growth in telecommunications applications occasioned by and utilizing fiber optics technologies; and

WHEREAS, buried fiber optic cable can be installed with minimal disturbance of existing traffic, require infrequent access for maintenance purpose, can usually be sited to even further minimize disruption or hazard to vehicular freeway users, and in other ways can be distinguished from other types of utilities such as pipelines and electrical transmission facilities; and

WHEREAS, fiber optic technology can be used to enhance Intelligent Transportation System programs and projects; and

WHEREAS, the U.S. Congress is nearing completion of a telecommunications act which inter alia will likely enable the owners of freeway and highway rights-of-way the ability to receive cash and non-cash compensation for the use of such rights-of-way for installation of fiber optic cable, and further will likely provide for preemption by the Federal Communications Commission of any state or local laws or regulations which inhibit or deny such use except in defense of tbe public safety and welfare; and

WHEREAS, at its April, 1995 meeting the Standing Committee on Highways (SCOH) established a Task Force on Utilities in Highway Right-of-Way to evaluate and advise on issues raised by the pending legislation and the subject of fiber optics in highway rights-of-way; and

WHEREAS, the task force and SCOH have further reviewed this subject and believe that formal action by the Board of Directors is in order;

NOW, THEREFORE, BE IT RESOLVED that the AASHTO Board of Directors acknowledges the distinction between buried fiber optic cables and other types of utilities, wherein it is deemed permissible to permit the longitudinal use of freeway rights-of-way for the former under appropriate guidelines while retaining existing policy in opposition to the longitudinal use of freeway rights-of-way for other utility types: and

BE IT FURTHER RESOLVED that the AASHTO Board of Directors requests the Standing Committee on Highways, in consultation with the task force, its affected Subcommittees and other AASHTO Committees as appropriate, to prepare appropriate guidelines on the technical, operational, economic and financial aspects of the placement of fiber optic cables in highway and freeway rights-of-way for eventual adoption by the Board of Directors and publication by AASHTO

# Bibliography

*Shared Resource Projects: Selected Issues and Case Studies, Interim Report,* Federal Highway Administration, July 1995

*Shared Resources: Sharing Right-Of- Way For Telecommunications - Identification, Review and Analysis of Legal and Institutional Issues, Final Report,* Federal Highway Administration Publication No. FHWA-JPO-96-0014

*Shared Resources: Sharing Right-Of Wuy For Telecommunications - Guidance on Legal and Institutional Issues,* Federal Highway Administration Publication No. FHWA-JPO-96-0015

*Guidance on Sharing Freeway and Highway Rights-Of- Way for Telecommunications,* American Association of State Highway and Transportation Officials, September 1996

*ITS Telecommunications Planning and Decision-Making: An Issue* Paper, Federal Highway Administration and the Intelligent Transportation Society of America, May 1996

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