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The Capitol Hill Declaration on Corridor Valuation: An Appeal for a Paradigm Shift from Monopolistic to Market Corridor Valuation Methods And Federal Rights-of-Way Rent Schedules

For consideration before
The Workshop on
Corridor Valuation Methods and Right-of-Way Fee Schedules
U.S. Bureau of Land Management (BLM)
and
U.S. Forest Service (USFS)
Phoenix Park Hotel
520 North Capitol Street, N.W.
Washington, D.C.
9:00 AM to 3:30 PM

Submitted by
The Ad Hoc Task Force on Corridor Valuation

December 4, 2001

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Abstract

Many of the conventional methods we have historically used to value corridor real estate and property rights therein ("corridors within corridors") are beginning to look questionable - and most certainly, severely limited -in light of recent market developments in the deregulation of "network industries" (railroad, electric power, telecommunications, natural gas). In today's deregulated economy, the value of secondary uses in corridors have become uncoupled from land-based valuations and reflect enterprise value and the cost of capital. Miniaturization of fiber optics and wireless technologies, and new fractional property rights, have resulted in the capability, for example, of "co-locating" fiber optic conduit in transportation corridors without any discernible impact on the highest use or special use of corridors. *Federal land management agencies would likely realize significantly higher rents and easement values from enterprise-based valuations rather than from traditional land-based valuations in rural areas where most government lands are situated. Much like harvesting timber on Forest Service lands, the underlying land value is immaterial to the market value of the trees.*

In a deregulated economy "seller's market" prices (aka "across-the-fence" or "land based" values) for non-damaging secondary use rights within corridors, or potential corridors, no longer comport with the definition of "fair market value criterion." We contend that "buyer's market" prices (aka "going prices" or "alternate route" values), while still one-sided, offer the closest approximation to the "fair market value criterion" within limited and closed market corridor properties where all transactions are unavoidably one-sided. Both law and government appraisal standards are averse to the use of "seller's market" values (e.g., hold-out value, captive market value, value to owner, sentimental value, distressed sales, related-party transactions).

Without a postulate of choice there is no such thing as fair market value. Rental schedules and administrative protocols for the appraisal of easements should conform in concept to what is called the Coase Theorem in economics that incorporates a postulate of choice or flexibility into the valuation equation, as restated below.

> ***A Proposed Corridor Valuation Corollary to the Coase Theorem****: The secondary user of a corridor may be able to eliminate or reduce the cost of assemblage of a corridor by selection of an alternate route or a minor, non-interfering property interest(easement, lease, license). Without such choice there is no such thing as fair market value (i.e., The*

Coase Theorem Proposed Corollary).

We are doubtful that corridor "sellers" will accept "buyer's market" prices or appraisals in limited to closed market corridor properties especially where the seller remunerates the appraiser. Nonetheless unlike private sector valuations and appraisals, government corridor rental schedules should uphold the higher "fair market value" standard reflected in "buyer's market" price as there are no pure "open and competitive" markets in corridor properties. A major impediment to resolving the problem of equitable rental schedules and easement values for use of Federal lands is that whatever thin market data is available almost entirely reflects "seller's market" (ATF) prices. The use of "going prices," percentage rents, and auction prices (buyer's market prices) for corridor rents comes nearest the "fair market value" criterion rather than land-based values and corridor premiums (seller's market prices) that are predicated on the unavailability of an alternate route. For easement "corridors within a corridor," alternative route adjusted values and/or fair division algorithms to allocate the "buyer's gain" may serve as the best proxy for fair market value.

Salient Quotes

"The seller's capacity to control prices is constrained by the availability of an alternative or substitute to which the buyer can turn. This is the key idea in understanding monopoly: availability to customers of alternatives or substitutes." Excerpt from Charles E. Lindblom, Professor Emeritus of Economics, Yale University, *The Market System: How It Is, How It Works, and What To Make of It* (2001): 156.

"In the absence of prices, there are no obvious choices, and choices become irrational in their ignorance of (alternative) costs….prices must measure cost. It is implicit in what has been said that prices pulled out of a hat will not do, for prices must in some sense measure value. But since nothing is of value except as someone puts a value on it, we must ask whose values are to be represented in prices (e.g., buyers or seller prices)…There exists no correct value, no correct estimate of cost, no one maximally efficient choice, no correct price. It all depends on whose values are to count." Charles E. Lindblom, *The Market System* (2001):133-134.

"In the real world, pricing has little to do with cost, since entrepreneurs will charge whatever price they can get away with," Geoff Mulgan**, "***Cost and Prices: Whatever You Can Get Away With*," Paper presented at the International Communications Society Meeting, Cambridge, Massachusetts, 1988, cited in Lee W. McKnight and Joseph P. Bailey, *Internet Economics* (MIT Press, 1999): 191.

"The principle of substitution affirms that when several similar or commensurate commodities or goods, or services are available, the one with the lowest price will attract the greatest demand and the widest distribution. Opportunity cost, a related concept, is the cost of options foregone or opportunities not chosen." Appraisal of Real Estate, 10th Ed. (1992): 65.

"Fair value for purposes of the award is the loss to the owner of the easement, not the gain on the other side of the extinguishment." Redevelopment Agency vs. Tobriner ("Toberiner II") 215 California Appeals Court, 3d 1099, footnote 7 (1989).

"All comparables are sales, but not all sales are comparables." Common phrase used by real estate appraisers.

"If among a nation of hunters…it usually costs twice the labour to kill a beaver which it costs to kill a deer, one beaver should naturally exchange or be worth two deer." Adam Smith, The Wealth of Nations (Random House, 1937): 47.

"If the individual hunter knows that he is able, on an outlay of one day's labor, to kill two deer or one beaver, he will not choose to kill deer if the price of a beaver is three deer, even should he be a demander of final purchaser of a deer alone. He can 'produce' deer more cheaply through exchange under these circumstances…Nothing is said or implied to the effect that market price should equal cost of production…The labor input that measures the cost of a beaver is that required to produce an alternative, two deer…'The cost of beaver is deer and the cost of deer is beaver, and that is the only objective and scientific content in the cost notion. The opportunity cost of a commodity is measured in units of alternate or displaced product'…'The cost of any alternative chosen is the alternative that has to be given up; where there is no alternative to a given experience, no choice, there is no economic problem, and cost has no meaning'. Economic cost, then, consists in the renunciation of some 'other' use of some resource or resource capacity in order to secure the benefit of the use to which it is actually devoted." James M. Buchanan, Cost and Choice: An Inquiry into Economic Theory (Liberty Fund, 1996): 1-15. Mr. Buchanan is a recipient of the Nobel Prize in economics.

Synopsis of Propositions

Proposition 1 – The current state of the art of corridor valuation is methodological chaos.

Proposition 2 – Conventional corridor valuation methods reflect a market cultural lag.

Proposition 3 – The secondary user of a corridor may be able to eliminate or reduce the cost of assembling a corridor by selection

of an alternate route or a minor property interest (easement, lease, license; without such choice there is no such thing as fair market value (i.e., Proposed Corridor Value Corollary to Coase Theorem).

Proposition 4 – The "highest and best use" of adjacent land applies in those situations where full fee replacement of the corridor is called for, while the least cost concept contained in the "Principle of Substitution" most pertains in those situations where a non-damaging and non-replaceable "corridor within a corridor" is sought.

Proposition 5 – In a deregulated environment, secondary use rights in corridors have become uncoupled from land-based (ATF) values and imputed corridor premiums predicated on the unavailability of alternate routes. Instead such rights derive from enterprise value and the cost of capital as measured by fluctuating "going prices," percentage rents, and auction prices.

Proposition 6 – A corridor "buyer's calculus" ("going price") is the best proxy for fair market corridor rent in closed or limited markets where few, if any, transactions meet the tests of an open and competitive market. *The Federal government is likely to realize significantly higher rents from "going prices" in rural areas where most of their properties are located than from land-value based rents; and, conversely, "going prices" would likely result in lower rents in urban areas.*

Proposition 7 – Sometimes corridors impart cost savings or opportunity costs to new users without imposing any costs on corridor owners.

Proposition 8 – To comply with the fair market value criterion, any use of ATF values for establishing easement values need to hypothetically assume the availability of an alternate route that is competitive to the proposed route across Federal lands or rights of ways even where no such route exists.

Proposition 9 - Undervaluation of corridor use rights may result in the tragic overuse of the corridor commons. Overvaluation of corridor rights may result in the inefficient use of corridors for both corridor owners and the larger economic welfare.

Proposition 10 – Appraisers and government agencies can no longer ignore the inconsistency between government appraisal standards that require treatment of "navigational servitudes" as reflecting a nominal valuation in governmental acquisition, and conversely appraise high values for the same property when the government seeks to lease or license it.

Proposition 11 – Corridors are multi-dimensional properties and must be appraised as such.

Executive Summary

Capitol Hill Corridor Valuation Declaration
An Appeal for a Paradigm Shift from Monopoly to Market
Corridor Valuation Methods
And
Federal Rights of Way Rent Schedules

Synopsis In Question and Answer Format
Posed by BLM/USFS

The Workshop on
Corridor Valuation Methods and Right-of-Way Fee Schedules
U.S. Bureau of Land Management (BLM)
and
U.S. Forest Service (USFS)
U.S. Capitol Building
Washington, D.C.
November 26, 2001

- ***Do conventional appraisal methods provide a reasonable approach for estimating market rent? If not, what appraisal methods or approaches would be more appropriate, if any?***

Condensed Answer: Conventional corridor valuation methods (e.g., Across-The-Fence (ATF) Method, Reproduction Cost Method, Liquidation Value Method, Value for Non-Corridor Use), and legal case law

approaches such as the Nominal Method, are both self-interested and polarizing approaches that do not solve the corridor fair market rent valuation or easement valuation problems at hand in a "new economy" in a deregulated environment. Deregulation of the natural gas, telecommunications, and regional electric utilities requires consideration of alternative methods that reflect "buyer's market" value that assumes the availability of an alternate route in contrast with "seller's market" value (ATF value, corridor premiums) that are predicated on no alternate route:

- *The **Going Rate Method** (based on a buyer's calculus) for estimation of fair market corridor rents;*
- ***Percentage Rents and Auction Prices** uncoupled from land-based valuations.*
- *The **Alternate Route Method** for estimation of the fair market value for compatible use easements within existing corridors or Federal lands;*
- ***Fair Division Algorithms** for estimation of easement percentage interests;*

The recommended change from conventional corridor valuation methods, that worked in a monopolistic regulated environment, to the emerging market based methods in a partially deregulated environment, reflects a paradigm shift:

- *From "cost-driven" to "market-driven" going prices and rents,*
- *From "Across-The-Fence" prices to "Across-The-Board" Prices,*
- *From "seller's market" values that are predicated on no choice, to "buyer's market" prices that assumes the availability of alternate routes,*
- *From a Loss Paradigm and a Gain-Capture Paradigm to a Cost Avoidance and Fair Division Paradigm.*

The shift from conventional to emerging methods of corridor valuation is based on the Coase Theorem in economics, adapted from Nobel prize winning economist Ronald Coase, restated and applied below to the problem of the valuation of a "corridor within a corridor":[1]

> ***A Proposed Corridor Valuation Corollary to the Coase Theorem.** The secondary user of a corridor may be able to eliminate or reduce the cost of an easement or rent within a pre-existing corridor by selection of an alternate route or a non-interfering property interest therein (e.g., permanent easement, lease, license, relocatable easement). If no cheaper alternate route is available, an appraiser must assume one or otherwise the valuation produced will not reflect fair market value because market value is indisputably predicated on a postulate of choice (syllogism: if no choice, then no market value). If a cheaper and lesser property interest can be acquired without the need for replacement corridor by the corridor owner, then such lesser interests should be valued based on the appraisal **Principle of Substitution** that assumes several similar or commensurate routes or property rights are available and the one with the lowest price will attract the greatest demand and highest distribution.[2]*

In principle, the most feasible route would be less costly than an alternate. One of the frequent oversights of right of way acquisition appraisal is the time value of money. It has little bearing in government corridor acquisitions where orders for possession can be judicially obtained and where the all-in acquisition cost is rarely given much consideration and, in any event, may be judicially determined. However, with market-driven acquisition of property interests within corridors or Federal lands, the most feasible, direct route may have a higher cost than alternatives because of the greater time necessary to assemble an alternative and the associated cost of capital. Another variant on this theme is that a more circuitous alternate route may have a lower true, all-costs-included, capital price and thus be more attractive than the shortest distance between two points. Permits and licenses within Federal lands and utility corridors typically have arduously long processing times compared to similar private properties; but offer the opportunity to deal with only one property owner and may avoid private property "hold-out" prices.

Setting rental or easement compensation based on the highest and best use as a corridor as measured by ATF values only comes into play when there is need for replacement corridor. Any **cost savings** that accrue to the secondary user of the corridor by avoiding the higher cost of real estate "across-the-fence" (**surplus value or side-benefit**) should not be the basis of monetary consideration for a lease or an easement unless deemed legally permissible. An exception could be where the seller's calculus of across-the-fence value approximated the buyer's calculus of alternate route cost. It is conceivable that such a price could be freely bargained for based on some fair division formula (algorithm) for just and equitable distribution of the surplus between the parties.

It should be noted that the value of rights of ways in a partially deregulated environment might permanently decrease just as the prices of economic goods produced under deregulation are meant to decline in a more competitive environment (e.g., natural gas, electricity, communications, airline fares, trucking rates). On the other hand, deregulation may manifest more efficient and intensive use of utility corridors than the economic barriers to entry imposed in the past, and thus, a higher and better economic use for corridor owners and the general economic welfare of all may result (i.e., a win-win solution).

- ***What appraisal methodology or service could appraisers provide in assisting Federal agencies in developing a regional right-of-way schedule to establish fair market rent?***

Condensed Answer: The Going Rate Method (or Across-The-Board Approach), although unavoidably one-sided, as are conventional corridor valuation methods, is believed to come nearest to the fair market value criterion (i.e., open and competitive markets) in closed or limited corridor markets where few, if any, of the transactions meet the requisite tests of fair market value (i.e., the rule of "second best"). Going Rates are flat rental rates per linear mile of corridor that reflect the "law of one price" in economics that says that identical goods will sell for identical prices. Uniform rents prevent what is aptly called "rent seeking" in economics; or the exploitation of profit opportunities by arbitrageurs where two identical goods are sold at different prices. "Going Rates," although expressly precluded under the Uniform Appraisal Standards for Federal Land Acquisitions, should be the preferred appraisal methodology for establishing corridor use rental schedules, as it comes closest to the fair market value standard.

Appraisers could render valuable services where there is a corridor rent dispute because of an appraiser's use of transactions that do not meet the fair market value criterion or that come closest to meeting such a standard by a "buyer's calculus" that is preferred under the law as shown in the table below:

Numerical Market Contingency Table

		No. of Sellers	
		1	**2+**
No.of Buyers	**1**	1-1 **"1-Buyer/1-Seller" or "Captive Market"** (No substitution)	2-1 **"Buyer's Market"** (supply-side substitution)
	2+	**1-2** **"Seller's Market"** (demand-side substitution)	**2-2** **"Open & Competitive Market"** (full substitution)
		Captive Market Value Or Monopoly Value	**Market Value or Fair Market Value**
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*Corridors are special use properties and corridor transactions typically reflect closed-market or limited market conditions of sale. Typically **"one-buyer/one-seller" or "captive market"** (Cell 1-1) or **"seller's market"** (Cell 2-1) transactions prevail in corridors and result in hold out values or value premiums being extracted from secondary corridor users by corridor owners that do not reflect the legal fair market value criterion. Credible fair market rent or easement corridor appraisals must either rely on market data from **"buyer's market"** (Cell 1-2) transactions, as often preferred by law; or must hypothetically assume "market value" or "fair market value" transactional conditions which would require substantial adjustment of market data from "one-sided" or **"seller's market"** transactions. Ideally, open and competitive market transactions should be sought but are unlikely to be found in closed and limited corridor markets (Cell 2-2). Where "one-sided" or "seller's market" transactions are the only transactional market data available and were predicated on ATF base land values,*

substantial adjustments using "fair division algorithms" are believed the only way to arrive at a "just and equitable" result. Such adjustments should be predicated on the "postulate of choice" contained in the definition of market value and the hypothetical assumption of the availability of an alternate route to secondary corridor users.

Appraisers could perform a valuable service by collecting and verifying rental "going prices" for secondary use of Federal rights of ways and lands that meet the minimum criterion of a "buyer's market"; or ideally an "open and competitive market" however unlikely in closed and limited corridor markets. Conversely, appraisal and appraisal review services should be provided to screen and purge market data from appraisals that reflects "captive market" ("one-buyer/one-seller") or "seller's market" conditions of sale or lease. The all-important role for appraisers, for which there is no adequate substitute service, is the ascertainment and discernment of whether market data meets the fair market value standard, or comes closest to meeting the "buyer's market" conditions minimally required/preferred by law.

The continued use of the ATF Method, although appropriate for appraisal purposes where ***replacement*** *of full fee or exclusive easement interests is required, is not preferable unless there is no "fair market" transaction market data available for setting rental fee schedules. ATF values are believed to be inappropriate for setting fair rent schedules where corridor "going rental rate" market data is available because it measures an inequitable natural advantage to the seller and can reflect the side benefit or avoidance cost of having to pay for much higher external land, or discontiguous land under multiple ownerships, rather than the actual "fair market rent" of a corridor.*

Appraisal review services are also needed to cull out "equivalency appraisals" that, for example, assume that ocean bottom land for undersea fiber optic cable routes is of equivalent value to the value of terrestrial corridors through dense urban areas. Such "equivalency appraisals" fail to consider alternate route cost savings. Moreover, using "comparable" rental transactions based on one-sided "seller's market" (ATF) transactions would not meet the requisite test of fair market value.

Where a modified ATF Method may be indicated is for valuation of easements within Federal lands or corridors. However, Federal land management agencies must provide instructions to appraisers to consider the hypothetical availability of a more advantageous alternate route so as to comport with the central Principle of Substitution incorporated into the definition of fair market value (e.g., assuming available alternatives so that neither party has a natural advantage over the other, the alternative with the lowest price attracts the greatest demand). Market value means voluntary choice. Without an assumed choice of an alternate route, there is no market value.

Most importantly, where no replacement corridor is required, Federal corridor rent schedules should not inadvertently include the value of positive side-benefits (e.g., benefit transfers from avoided cost of higher-priced external land) that are often indirectly conferred on secondary users by joint use of Federal corridors and lands as reflected in appraisals employing the Across-The-Fence (ATF) Method of corridor valuation. Where replacement corridor is unnecessary and there are no discernible damages, basing the value of rents or easements on land values "across-the-fence" is charging for an external side-benefit, or avoided cost, that does not inhere from the value of the corridor itself.

However, if extra monetary consideration beyond the annual land rent is sought by Federal land management agencies for the conferral of positive side-benefits (i.e., positive externalities) to secondary users of Federal corridors and lands, such consideration can usually only be bargained between nominal value and ATF value, rather than valued by a point-estimated appraisal. Appraisers could render valuable services in such cases where extra compensation for positive externalities is sought by recommending "fair division algorithms" (i.e., formulas) to arrive at a "just and equitable" division of avoid costs (e.g., 50% rule, Lesser-Of Rule, Benefit Offset Rule, etc.). Alternatively, should such positive externalities, side-benefits, enrichments, or benefit transfers be legally deemed to be excluded from an appraisal, appraisers should adeptly identify and separate out such avoided costs or opportunity costs for non-consideration. For example, in the State of California case law has specifically prohibited the valuation of easements appurtenant based on side benefits or cost savings that derive from the transaction (see Redevelopment Agency vs. Tobriner ["Tobriner II"] [1989] 215 Cal. App. 3d 1087).

- ***An appraiser when adjusting comparable easements or leases should consider (or not consider) what factors?***

Condensed Answer: An appraiser should consider the following factors in adjusting comparable easements or leases for secondary corridor uses of Federal lands and rights of ways:

- ***Seller's vs. Buyer's Market Value****. Above all, comparable corridor rental data needs eliminated, weighted, or adjusted based on whether the transaction approximated the requisite criteria of fair market value. The problem with the reliability of corridor rental market data is who established the price: the seller, the buyer, or an appraiser based on prior "hold-out" prices from the "old monopoly economy" perpetuated into the present deregulated market? Appraisals should not set market values; they should reflect them. The law prefers buyer's market prices over seller's market prices (e.g., hold-out prices, sentimental values, hypothetical values, related party transactions). Every comparable may be a transaction, but not every transaction is a market value comparable. Unless auctions are held for use or Federal lands or corridors, similar to the auctions held for radio spectrum under the 1996 Telecommunications Act, the property transactions typically encountered in Federal lands and corridors do not closely approximate open and competitive market value conditions. Merely because a private property owner or another public agency obtained many times over the amount of compensation for use of their property than the Federal government derives may mean nothing from a market value perspective.*

- ***Enterprise-Based Rents vs. Land-Based Rents****. Federal land management agencies are likely to realize significantly higher rents for secondary uses of their corridors and lands from enterprise-based rents than from land-value based rents especially in rural areas where the bulk of its properties are located. Based on widely-advertised going rents from major fiber optic companies it is roughly estimated that average rural land values would have to exceed $21,780 per acre to be equivalent to quoted "going rents" in the fiber optic industry. This is believed a highly unlikely scenario given that most Federal lands under control of the BLM and U.S. Forest Service probably have average unit values from say $100 to $500 per acre.* ***In other words, land-based values would likely yield rents from around 2% of what enterprise-based values might generate in rural areas; but may yield less than land-value based compensation in urban areas (see table below)***

Comparison of 1-Time Going Prices with Land-Based Easement Values

Rural	***Price Per Lin.Ft.***	***Price Per Sq.Ft.***	***Equiv. Value Per Acre***	***Typical Market Value Land Per Acre***	***Ratio of Land Value to Going Price***
Williams Com	***$0.50***	***$0.05***	***$21,870***	***$500***	***2%***
Urban					
Broadwing (LA) [source: Robert Ball, Qwest]	***$10.42***	***$1.04***	***N/A***	***$5-$15 per SF***	***7% to 20%***

- ***Reseller or Carrier****? Communications companies such as Williams Communications, Petronet, and Telecom Cubed are "real estate businesses" that assemble, develop, and market rights of ways and conduits to communications carriers. They are wholesalers not retailers and the prices paid for easements or leases may accordingly reflect the price of a wholesale middleman rather than the price to a carrier.*

- ***Mainline or Redundant Route?*** *Fiber optic carriers often construct redundant fiber optic systems in the event of failure of the primary system. Reportedly, all things being roughly equal fiber optic companies are willing to pay the same price for property rights for mainline or redundant routes. However, fiber optic companies are not willing to pay an annual rent for "dark" fiber optic lines and instead prefer to make a one-time payment for a permanent easement.*

- ***Co-Location or Stand-Alone****? Fiber optic cable co-located on an underground pipeline and "Skywraps" of fiber cable on electric transmission line towers avoid the assemblage cost of the right of way and the full installation cost of conduit.*

- ***Liability or De Minimus Use****. A distinction may be made by corridor owners between secondary uses that present clear and present liabilities and/or interference with corridor use or highest and best non-corridor use of corridor property, possibly such as energy-related facilities (e.g., power lines) and those secondary uses that can be reasonably co-located or compatibly accommodated within a corridor without significant liabilities, such as fiber optic cable conduit or wireless antenna sites (de minimus uses).*

- ***Exclusion/Inclusion of Side Benefits.*** *Any side-benefits, value transfers, or enrichments resulting from joint use of a corridor (where no replacement corridor is required) should be separated from the rental valuation estimate for separate bargaining or non-consideration as law or public policy dictate. However, where secondary use of operational corridor property will entail acquisition of replacement corridor, the ATF Method must be used to estimate the internal value of the corridor based on external land values ("internalization of externalities").*

- ***Cost of Capital****. In a deregulated economy, the price of natural resources varies with the overall enterprise value and the cost of capital. The market value of the business enterprise and the cost of money vary with a multitude of sensitive conditions (time, supply, demand, weather, consumer confidence, inflation, regulation, etc.) such as in the stock and bond and commodity markets. Thus, one of the major adjustment factors in corridor rents are the market conditions under which a transaction was consummated. For example, fiber optic corridor rents prior to the crash of the "Dot-Com" economy in the year 2000 were established on a different cost of capital than that prevailing in the low interest rate environment of the now apparent economic recession of 2001 in the post WTC new world order.*

- ***Market Conditions****. A problem with using land-based values for secondary use rents within corridors is that such rents do not change with the volatility of prices in the communications industry. After the recent past crash of the Dot.Com industry, many fiber optic communications companies are either insolvent, restructuring, or in a liquidation mode. In such a market scenario, the value of corridor easements may be nominal or only a fraction of what they were acquired for. The volatility of markets begs for "non-linear pricing" of corridor use rights wherein a base rent is charged possibly predicated on nearby land values and an additional percentage rent is charged when the industry is in a profit making situation.*

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John Wright, MAI, MBA, Independent Appraiser/Expert Witness, Chatsworth, California
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A task force facilitated by The American Society of Appraisers (ASA) desires to participate in helping guide the substance of discussions regarding appropriate corridor valuation methods and the establishment of Federal rights-of-way user fee schedules for linear uses of its lands and rights of ways.

The statement herein below reflects the opinion of the co-signatories and does not necessarily reflect the official position of any governmental agency, professional association, education institution, or affiliated organization.

Background (by BLM/USFS)
"Federal law generally requires private individuals and corporations to pay fair market rent for right-of-ways crossing Federal lands. Right-of-ways, similar to long term leases, are grants conveying the right to construct, operate, maintain, remove and terminate facilities used for transportation, generation, transmission and distribution of oil and gas, electric energy, electric signals, and other means of communication.

Recently, a public policy dispute developed between users of Federal right-of-ways and the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). The BLM and USFS adopted by regulations in 1986 a rental schedule for linear right-of way uses on National Forest System and public lands. The schedule provides a rental fee for linear uses by zones (State and county), and type of linear uses (energy and non-energy). The original rates adopted in 1986 have been indexed annually using the Implicit Price Deflator, Gross Domestic Product (IPD-GDP).

A provision in the 1986 rental schedule required both agencies to review all aspects of the rental schedule when the cumulative IPD-GDP index exceeded 125.45. This threshold was exceeded in 1995 and has prompted the BLM and USFS to work together in addressing current rental values for linear right-of-way uses.

This workshop will provide guidance on the appropriateness of market based appraisal methodologies and could serve as a guide for assisting the Federal agencies in developing a rental schedule. The workshop will allow for open exploration on the appropriateness of various right-of-way valuation methods. It would allow for the Appraisal Institute to participate in a public policy issue and help guide the course of discussion. The workshop will also facilitate continuing dialog between Federal agencies and impacted users of Federal right-of-ways. Upon conclusion of the workshop, the Appraisal Institute will summarize and reach conclusions regarding the appropriateness of the various appraisal methodologies for purposes of Federal agencies setting rental value.

Appraisal Issues
Appraisers use a variety of appraisal methods to estimate the value of lands acquired to establish a right-of-way. Estimating the rental value for a public land right-of-way is a unique assignment since there is very limited market evidence of comparable leases. Consequently, appraisers have relied on different ways to set the value of the land crossed or the interest conveyed and applied a percentage to estimate a market rent.

There are two basic approaches to this. The Land Value/Rental approach attempts to arrive at the market rental value by estimating rent as a percentage of land value. Land values are established and predetermined adjustments are made to account for the degree of land encumbrance and the percentage of the rights and interest conveyed by the right-of-way. The adjusted value of the right-of-way is converted to a rental by applying an interest rate.

The second method is called the "going rate" approach. The appraiser obtains information on the recent purchases of rights-of-way and determines if there is any relationship to a value per mile, per foot or per rod. If there is a

relationship, the appraiser will evaluate the data and apply appropriate adjustments. The adjusted value for the right-of-way is converted to an annual rent by applying an interest factor.

Appraisal-Related Questions

This workshop will foster discussions of the following questions:

- *Do conventional appraisal methods provide a reasonable approach for estimating market rent? If not, what appraisal methods or approaches would be more appropriate, if any?*
- *What appraisal methodology or service could appraiser provide in assisting Federal agencies in developing a regional right-of-way schedule to establish fair market rent?*
- *An appraiser when adjusting comparable easements or leases should consider what factors?*

Participants include:

- *BLM and USFS officials*
- *Appraisers specializing in corridor valuation*
- *Users of Federal rights-of-way*
- *Legislative Branch participants*

The above workshop description is excerpted from *Appraisal Methodologies and Right-of-Way Fee Schedules – A Capitol Hill Workshop* prepared by BLM and USFS.

Propositions

Proposition 1 – The current state of the art of corridor valuation is methodological chaos mainly due to a prevalent misunderstanding as to what fair market value is in the changed regulatory environment in the "new economy". [3]

The current state of the art of partial interest corridor appraisal reflects legal, methodological, and theoretical

confusion mainly as to what "fair market value" is as a consequence of the deregulation (i.e., de-monopolization) of network industries such as electric power, railroad, natural gas, and telecommunications.[4] *The prevailing legal "loss paradigm" and dominant "Across-the-Fence" (ATF) Method no longer solves the issue of what to fairly pay Federal land-management agencies and private property owners for linear easements and leases that do not result in discernible property value diminution or damage.*

The Telecommunications Act of 1996, the regional deregulation of the electric utility industry, and the privatization of municipal water agencies have given cause to reexamine the paradigms and assumptions shaping corridor valuation methods. Previously, the encumbrance of oil, gas, and electric transmission line easements within corridors (easements within corridors) were considered to diminish the value of land principally due to their larger physical profile and right of way envelope. However, miniaturization of fiber optic cable conduit, co-location of fiber optic cable on existing electric transmission lines, the proliferation of wireless path ways for cellular telephone and commercial communications, and undersea cable alignments have minimal to no discernible physical impact on use of the land in which they are located.

Today there is chaos and confusion in the legal and real estate professions as to proper corridor valuation methods, especially for valuation of novel partial property interests and land rents. Some examples of the current chaos in the field of corridor valuation are:

- A recent class action lawsuit known as the Telecom Cubed case involve some 50,000 property owners in 16 states who will receive base compensation of $6,000 per linear mile plus a share of the revenues from the fiber optic business up to $31,875 per mile as a court ruled that the fiber optic company was a real estate business not a communications carrier and, thus, could not invoke condemnation powers.
- In Berkeley, California, a U.S. District Court struck down the city's telecommunications ordinance, stating that local moratoriums and fees and rents charged for placing cable lines in public street rights of ways were unrelated to public safety and therefore violated public law.
- In Pasadena, California, the local cable franchise operator levies a 5% surcharge on its customers bills as a "pass-through" allowed under the Cable Act of 1984, for "rent" of public streets rights of ways.
- The California State Board of Equalization has denied a request by the Los Angeles County Assessor to tax satellites orbiting over the county that provide wireless cable TV and telephone communications to residents.
- In the City of Burbank, California, the City has exacted a one-time fee of $177,000, plus an annual fee of $5,000, from a major fiber optic company for the first phase of its cable installation through out the City within the public street rights of ways. Additional annual fees are exacted for each additional phase of installation. In the neighboring City of Glendale, California the same rights can be obtained for a $150 permit fee, which includes all plan check costs as State law provides for "free" use of the public streets as a public franchise (source: Qwest Communications).
- The Supreme Court of the State of Illinois has struck down a 2% fee charged by local municipalities imposed on "wireless internet" companies.
- The U.S. Army Corps of Engineers has commissioned a "market value study" concluding that undersea cable licenses are approximately $100,000 per linear mile, or about three times the mainland Telecom Cubed case cited above, despite the fact that Federal land appraisal standards specifically prohibit compensation for a taking of property rights in a "navigation servitude."[5]
- A municipal water agency in the South Bay area of the City of Los Angeles commissioned a panel of three real estate appraisers to determine the market value of a relocatable pipeline license to be co-located within an electric transmission line corridor that would not interfere with any uses of the corridor and would result in no damages. Nonetheless, the electric utility company demanded annual rental compensation of 10% to 12% per annum on a base value of $15 per sq. ft. of land area without any discount because the license was revocable on short notice and/or the burden of relocation was assumed by the water agency.
- A study conducted by the U.S. General Accounting Office in 1996 concluded that current fees for rights or way for oil and gas pipelines, power lines, and communication lines frequently do not reflect fair market value.[6] Specifically, charges for linear use of Federal lands were found to be "all over the map". For example, the charge for a 10-year fiber optic cable license on Forest Service in the State of Colorado land would have been equivalent to a present value of $202 per acre, while the same property rights would have

cost $791 per acre on state-owned land. Such value discrepancies are reported as demonstrating that Federal agencies are not deriving "fair market" compensation for use of their rights of ways. However, we have no way of knowing if Federal agencies are receiving fair market compensation for property rights within their lands and corridors unless appraisals distinguish market value transactions from non-market value transactions. Presently, "transaction price is king" no matter whether the transaction meets the requisite conditions of market value or not.

The moral of the story of the above unrelated vignettes might be "Reality is What You Can Get Away With" to borrow from the title of an unrelated book by Robert Anton Wilson.[7] One may even question whether there is such a thing as a "fair market value" for partial and/or periodic interests in utility corridors. Perhaps the legal environment is so complex and contradictory and markets are so unpredictable and one-sided that "fair market value" is an artifact of the appraisal profession.[8] We think not, and below offer a possible "numerical market value framework" as a possible tool in distinguishing which market rent transaction data most closely approximates the requisite conditions of market value and which do not.

Numerical Market Contingency Table

		No. of Sellers	
		1	**2+**
No.of Buyers	**1**	1-1 **"1-Buyer/1-Seller Market"** (no substitution)	1-2 **"Buyer's Market"** (supply-side substitution)
	2+	2-1 **"Seller's Market"** (demand-side substitution)	2-2 **"Open & Competitive Market"** (full substitution)
		Unbalanced Bilateral Market Value Or Monopoly Value	**Market Value or Fair Market Value**
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One-Buyer/One Seller (Cell 1-1). Economists refer to this case as a "bilateral" (two-sided) monopoly. The problem with valuing a partial interest in a monopoly property is that the situation does not meet any of the classic tests of legally defined market value wherein there are willing parties, neither of which have an undue advantage over the other. Corridors are monopoly properties and because of this often command "holdout" prices (premium prices) fore their primary or secondary use. Another interpretation of this is that the seller is not especially motivated to sell at any lower price, which implies that asset management is either inefficient, that the holdout price increases dramatically over time, or that the rate of return of the monopoly is low. If the latter, one wonders what benefit the monopoly confers to the monopolist.

Buyer's Market (Cell 2-1). With two or more substitute properties available, but only one buyer, who may be able to play one seller off against the other, the situation does not reflect full substitution of buyers (i.e., two or more rival buyers). Nonetheless, a buyer's market situation is typically considered to reflect "market value" because there is rivalry and both sellers still can refuse to sell unless their price is met. Moreover, appraiser's do not typically rule out "buyer's market" transactions as bogus or non-compliant with the definition of fair market value.

Seller's Market (Cell 2-1). When two or more buyers seek to acquire only one property, the seller is likely to demand a "hold out price" or premium price because there are no substitute properties. A seller's market cannot be appraised for fair market value because legal definitions of market value necessitate the availability of at least two or more rival properties on the open market. Moreover, the legal system usually takes a dim view of a seller's value as representative of fair market value (e.g., hold-out value, sentimental value, speculative value, reserved value, etc.).

Open/Competitive Market (Cell 2-2). Only where there are two or more buyers and two substitute properties available is there a pure market. This situation is typically considered to reflect "fair market value" because it generally meets the requisite tests of no natural advantage to either party, rivalry, and knowledgeable and prudent parties by virtue of having alternatives available to them.

A perplexing problem encountered in valuing rents or setting rent schedules in corridor properties is that the monopoly scenario depicted in the one-buyer/one-seller case must be appraised as if the conditions needed for an Open

and Competitive Market, or the Buyer's Market, have been met, when in reality, they have not and cannot be met. The process is like putting a square peg into a round hole. Because real estate appraisers assigned to value market rents in corridors are unlikely to find transactional evidence that conforms to the legal definition of market value, they must minimally simulate the conditions of a buyer's market in an appraisal even when such conditions may not exist; or at maximum an open and competitive market however unlikely. One attempt to square this circle is to assume that value is proportional to ATF in all cases, which was relevant in the pre-deregulated economy but is no longer as viable in the current environment.

Proposition 2 – Conventional Corridor Valuation Methods Reflect a Market Cultural Lag.

Conventional corridor appraisal methods that "worked" in the pre-deregulation economy no longer are fully relevant in the context of deregulation. Both the Nominal Valuation Theory espoused by some lawyers,[9] and the Across-The-Fence (ATF) Method espoused by corridor owners and appraisers, are self-interested, polarizing, and do not solve the valuation problem posed by granting partial interests in monopoly transportation, communications, utility corridors, and navigation servitudes. The "loss paradigm" ("what the owner lost") incorporated into eminent domain law for partial property acquisitions no longer solve the valuation problems at hand. The Across-the-Fence Method (ATF) for corridor valuation is not well suited for valuation of partial interests or ground rents in Federal corridors and lands where there is little to no discernible need for replacement land.

Similar to the emergence of new theories in science, a new paradigm is believed needed in response to the methodological crisis in the appraisal industry and the many anomalies from conventional appraisal theories with the current market and legal environment. This "paradigm shift" can be analogous to the change from Ptolemaic astronomy where the earth was believed the center of the universe, to the heliocentric view of Copernicus where the sun was found to be the center of a small solar system in a galaxy.[10] Like the Ptolemaic astronomical system, the prevailing "loss paradigm" in just compensation law and the "Across-the-Fence" (ATF) Method in corridor valuation no longer rationally answer the valuation questions posed from minimal partial linear interests in rights of way and lands which have little or no discernible negative impact on the highest and best use of the corridor or the larger land parcel. But why did the "loss paradigm" work in the first place? Because the condemnee's loss was, more or less, the only independent measure of value. Once the fee interest or exclusive easement was purchased, whatever price paid simply became a component of the rate base on which the condemnor, a regulated monopoly, was entitled to a rate of return.[11]

Moreover, the Replacement Cost and ATF corridor valuation methods came into being on railroad corridor takings cases where the losses sustained were full ownership interests (i.e., fee-simple) and/or exclusive easements whereby there clearly was full removal of the highest and best use of the corridor which most often required replacement corridor; or compensation for excess corridor land with potential assemblage to abutting lands.[12] The ATF Method was extended to what might be called "subordinate interests" or "subjugated interests" such as compatible use easements, leases, or licenses within corridor properties because there formerly were no markets on which to predicate the values of such lesser interests.

There are many in the appraisal profession who contend that there is only one universal and correct method for all types of corridor valuations, to wit, the "Across-The-Fence" (ATF) Method. The central tenet of the ATF Method is "that corridor land should be worth as least as much as the land through which it passes." An analogous doctrinaire statement from conventional appraisal is, "cost represents the highest approach to value." While exceptions to this assertion are easy to articulate, there are similar objections to the ATF Method in that "cost" does not always reflect "market" value, especially in a deregulated market. The ATF appraisal method uses a replacement theory; i.e., since there are typically no sales of similar partial property interests for new corridors or for rights within existing corridors. As with most cost approaches, replacement presumes that the proposed use is the highest and best, which also usually presumes that it is a new use. The connectivity use offered by railroad corridors may become obsolescent resulting in the corridor becoming less valuable than the surrounding land uses. There are any numbers of lines that have been abandoned. Eventually, after "dis-assembly" they are often sold to adjacent owners for some function of across-the-fence value, so their immediate, as-is, value as corridors is a smaller fraction of ATF.

Replacement cost prevailed in the past as a measure of market value when there were no competitive markets

for natural gas, electricity, or telecommunications. Cost is often the only basis of value where there are no markets, or where there are limited and sporadic markets, such as corridors for rail lines or electric transmission lines. However, with the recent emergence of competitive markets in the natural gas, electrical utilities, and telecommunications industries an accompanying market has manifested for linear fiber optic easements, line-of-sight telecommunications hops, cable licenses in public rights-of-ways, fiber optic "skywraps" co-located on electric transmission line towers, and relocatable pipeline licenses in electric powerline corridors. The cultural lag in real estate appraisal methodologies has not kept pace with this transformation from "cost" to "market" and with some of the newer partial property interests crafted for secondary use of corridors.

Corridor Valuation Paradigm Shift

Paradigm	**Monopoly**	**Market**
Regulatory Policy	Regulated natural monopoly industries	Partially de-regulated industries
Typical property interest	Full ownership (fee) "Corridor"	Fractional interests (easement, lease, license) "Corridor within a corridor"
Assumptions	1. Replacement required 2. No alternate route available	1. No replacement required 2. Alternate route available
Basis of value	Cost	Price
Whose value?	Seller	Buyer
Damage/liabilities	Impacts reserved route value	Co-locate with negligible liability to corridor owner
Valuation Methods	1. Across-The-Fence Method 3. Corridor Premium 4. Reproduction cost 5. Liquidation value 6. Value for non-corridor use	1. Going-prices (aka "across the board rents") 2. Percentage lease rents 3. Auction prices 4. Alternate route cost savings 5. Fair division algorithms

New paradigms emerge in science when the older paradigms present anomalies that cannot be resolved.[13] There are four major anomalies with the predominant ATF Method that have not been addressed in the professional literature.

The first fatal flaw with the ATF Method that is mostly not addressed in the professional literature is that a corridor often cannot be legally put to the same use as land across the fence from its boundaries. Consistent use is "the concept that land cannot be valued on the basis of one use while the improvements are valued on the basis of another."[14] Similarly, the highest and best use of corridor land cannot be predicated on the value of adjacent land unless their legally permitted uses are the same or a corridor owner must replace existing corridor property taken by eminent domain with adjacent but legally dissimilar property. ATF is a superficially reasonable tenet that assumes that the use included within the corridor yields a value equal to that without. As with most rights and use questions there is no necessary equality of value when the rights and the use are not identical.

Another contradiction of the ATF Method is that the value of corridors emanates from its ability to connect two points as aptly pointed out by many proponents of the ATF Method (i.e., connectivity value). By logical extension if connection of the end points is what is valuable, the value of the underlying land as measured by land "across-the-fence" may be immaterial to the valuation problem at hand. Moreover, fiber optic easements that do not affect the highest and best use or an existing use of a corridor do not interfere with the underlying land value.

Third, an incurable difficulty with the ATF Method might be called "false substitution" whereby corridors are measured by the value of the highest price land "across the fence" assuming no availability of alternate routes rather than the lowest price among alternatives assuming the availability of an alternate route as stipulated in the "Principle of Substitution" and the Fair Market Value criterion of Federal land appraisal standards. Consider the Principle of Substitution cited below:

> **Principle of Substitution**. The appraisal principle that states that when several similar or commensurate commodities, goods, or services are available, the one with the lowest price will attract the greatest demand and distribution." [15]

Under the mantra of "highest and best use" the ATF Method ignores the availability of less costly routes, or hypothetically less costly routes. Fair market value includes the notion of choice, or in corridor real estate terms, an "alternate route." Thus, the appraised valuations produced by the ATF Method that ignore the hypothetical or real availability of less costly routes do not reflect fair market value but monopoly value or government controlled prices. [16] Corridor appraisals that selectively rely on only the highest price alternative available to a corridor buyer/user under the rationale of "highest and best use," and ignore a real or assumed least costly alternative, are prone to the justified criticism that they reflect "bias" and/or are misleading in contravention to appraisal standards.

Lastly, over a century of property law has asserted that government can acquire a lesser or partial interest in private property without having to pay for the entire property (e.g., easements, leases, licenses). To contend that private commercial interests cannot also do so would result in incoherent and capricious law.

Proposition 3 – The secondary user of a corridor may be able to reduce or eliminate the cost of assembling a corridor by selection of an alternate route or a minor property interest (easement, lease, license). Without such choice there is no such thing as fair market value (i.e., A Corridor Valuation Corollary to the Coase Theorem).

The call for a shift from conventional to emerging methods of corridor valuation is a proposed corollary to the Coase Theorem in economics, adapted from Nobel prize winning economist Ronald Coase, restated and applied below to the problem of the valuation of a "corridor within a corridor":[17]

> **A Proposed Corridor Valuation Corollary to the Coase Theorem.** The secondary user of a corridor may be able to eliminate or reduce the cost of assembling a corridor by selection of an alternate route or a non-interfering property interest therein (e.g., permanent easement, lease, license, relocatable easement). If no cheaper alternate route is available, an appraiser must assume one or otherwise the valuation produced will not reflect fair market value because market value is indisputably predicated on a postulate of choice (syllogism: if no choice, then no market value). If a cheaper and lesser property interest can be acquired without the need for replacement corridor by the corridor owner, then such lesser interests should be valued based on the appraisal **Principle of Substitution** that assumes several similar or commensurate routes or property rights are available and the one with the lowest price will attract the greatest demand and highest distribution.[18]

In principle, the most feasible route would be less costly than an alternate. One of the frequent oversights of right of way acquisition appraisal is the time value of money. It has little bearing in government corridor acquisitions where orders for possession can be judicially obtained and where the all-in acquisition cost is rarely given much consideration and, in any event, may be judicially determined. However, with market-driven acquisition of property interests within corridors or Federal lands, the most feasible, direct route may have a higher nominal cost than alternatives because of the greater time necessary to assemble an alternative and the associated cost of capital. Another variant on this theme is that a more circuitous alternate route may have a lower true, all-costs-included, capital price and thus be more attractive than the shortest distance between two points. Permits and licenses within Federal lands and utility corridors typically have arduously long processing times compared to similar private properties; but offer the opportunity to deal with only one property owner and may avoid private property "hold-out" prices.

Setting rental or easement compensation based on the highest and best use as a corridor as measured by ATF values only comes into play when there is need for replacement corridor. Any **cost savings** that accrue to the secondary user of the corridor by avoiding the higher cost of real estate "across-the-fence" (**surplus value or side-benefit**) should not be the basis of monetary consideration for a lease or an easement unless deemed legally permissible or bargained freely among the parties. In the State of California for example, it is legally impermissible to consider the avoided cost of higher priced land as the basis of the value of an easement.[19] An exception could be where the seller's calculus of across-the-fence value approximated the buyer's calculus of alternate route cost. However, it is conceivable that such a price could be freely bargained for based on some fair division formula (algorithm) for just and equitable distribution of the surplus between the parties.

Proposition 4 – ***The "highest and best use" concept applies in those situations where full fee replacement of the corridor is necessary, while the "least cost" calculus of the appraisal Principle of Substitution prevails in those situations where a "corridor within corridor" is sought.***

ATF Method proponents invoke the **"highest and best use"** concept to support their contention that any and all uses, even a compatible secondary use, of a corridor must be valued based on the highest (non-competitive) price of substitute land adjacent to the corridor. Conversely, those who advocate "going prices" and alternate route values invoke the appraisal **Principle of Substitution** to support their assertion that the lowest price among competitive alternatives best reflects fair market value. Who is right in this contested theoretical and methodological issue? The answer is "it depends," but in most cases the Principle of Substitution prevails for valuation of a "corridor within a corridor" in a deregulated competitive economy.

In those infrequent situations where replacement corridor is required by the granting of a "corridor rights within a corridor," ATF is congruent with fair market value. However, in most cases where secondary use rights are granted in a corridor, or prospective corridor, no replacement corridor is warranted and there are only negligible severance damages to the remainder of the corridor. Thus, in most cases where secondary rights in a corridor are granted the fair market compensation has nothing to do with the underlying or across-the-fence land value. In such cases, the "going price" that buyer's are willing to pay for secondary corridor rights is the better proxy for fair market value than the seller's hold-out ATF value. Unless the buyer's flexibility to avoid higher cost corridor real estate by selection of an alternate route, or a non-interfering property interest (e.g., permanent easement, lease, license, relocatable easement), is considered in an appraisal, there is no market value in the economic sense of the term. This is the essence of the Coase Theorem in economics which makes a distinction between a "pricing system with liability for damage" and a "pricing system with no liability for damage."

The flexibility of the buyer ("buyer's calculus") is more important in appraisals conducted for the acquisition of secondary use rights across Federal lands where there is an assumed obligation of a public entity to deal fairly and equitably with both corridor owner and user. Prior to deregulation there was no "pricing system" in place for linear secondary use rights within corridors and government lands. However, now that "markets" for such rights have emerged, appraisal methods should follow the market rather than "make the market."

Proposition 5 – In the deregulated environment, the market value of secondary use rights in corridor properties results in an uncoupling or loose coupling of price with land-based valuations (ATF values) and the basis of price has become uncertain. But free markets need a degree of uncertainty and adaptability. This does not mean that prices are unpredictable, but that market data, based on "old economy" ATF land values, is obsolescent. In deregulated markets corridor rental values can be best understood and predicted as part of the overall value of the enterprise as measured by buyer's "going prices" and percentage rents, and easement values based on alternate route costs and fair division of the buyer's gain, rather than in land values or imputed corridor premiums which presume no available substitute route. Conventional land-based appraisal methods (ATF values) result in more certainty of valuation, but are not a reflection of market value in a deregulated economic environment.

In a deregulated economy, prices shift from a cost-basis to a market-price basis. With the recent past deregulation of the telecommunications, natural gas, and electricity industries, and partial privatization of some municipal water and sanitation services, volatile market prices have supplanted the cost of production as the measure of value. Deregulated industries can no longer afford to pay the highest price for land as a factor of production. Formerly, natural monopolies desired to increase their rate base on which it was entitled to a rate of return.[20] Thus, regulated utilities had an economic incentive to pay the "highest price" based on the "highest and best use" of land. Now the incentives are reversed. It must now look for the cheapest available corridor routes among plausible alternatives in order to stay competitive. For fiber optic cable companies, for example, this often means putting conduit in the free public franchise of a street right of way. Such "no-cost" non-transactions reflect shadow prices that compete with the price of locating facilities within corridor properties. In other words, competition results in lower consumer prices for such commodities as electricity, natural gas, and communications, partly as a result of decreased real estate costs. This is even more pronounced in wireless communications technologies where the cost of transmission line rights of ways has been eliminated altogether except for interspersed base station costs.

Under deregulation land, as one of the four elements of production (land, labor, capital, and coordination), must

be tied to the overall profitability of the business enterprise and the time sensitive cost of capital (i.e., interest rates).

This leads to a mistaken notion among some real estate professionals and government land management agencies that land rents and monetary consideration for easements cannot be based on "business value" or the value of the "going concern." Certainly, prevailing law and the appraisal "Principle of Contribution" militate against pegging land rents on business value. But retail building space rents are conventionally predicated on percentage rents, which typically fluctuate with the fortunes of the business rather than reproduction costs. Thus a degree of uncertainty and price volatility is a necessary and sufficient condition of choice and competition, the defining attributes of a market.

We are doubtful that corridor "sellers" will accept "buyer's market" prices or appraisals in limited to closed market corridor properties, especially where the seller remunerates the appraiser. Nonetheless, wherever possible government corridor rental schedules should conform to a higher "fair market value" standard reflected in "buyer's market" price as there are no "open and competitive" markets in corridor properties.

Proposition 6 – A Corridor "Buyer's Calculus" ("Going Price") is the best Proxy for Fair Market Rent in Closed or Limited Corridor Markets where Few, if any, Transactions Meet the Tests of an Open and Competitive and Two-Sided Market. *Alternatively, in the absence of proving any demonstrable damages from a lease or license interest in a corridor, the uncoerced prices freely paid by corridor buyers, rather than seller-controlled prices of corridor owners, although still one-sided, offer the closest reflection of the Fair Market Value standard in a closed or limited market where there are no bilateral corridor transactions that would meet the requisite legal tests of open and competitive market value.*[21]

Today there is ample market data of what fiber optic carriers, bandwidth wheelers, and wholesale fiber optic route resellers are willing to pay for cable easements, and what municipalities charge for cable leases within public street rights of ways where there is no demonstrable negative effect on the special purpose use, highest and best use, or alternative use of the corridor. We can call these "going prices," also sometimes called "Across-the-Board" (ATB) prices because they set a flat price affecting all classes or categories. Such market evidence could put us on the right track in solving the dilemma of appraising the partial property rights for underground cable in corridor properties.

Summarized below are the "going prices" (or ATB Prices) for fiber optic cable line easements and leases converted into price per square foot of land area excerpted off the Internet for two of the major fiber carriers and wheelers.

Fiber Optic Route "Going Prices"

	Williams Companies	**Petronet**
Property Rights	Easement	Easement
Charge	One-time payment	One-time payment
Geographic Routes	Long-haul routes	Urban routes
Rural Route Unit Price • **Per Linear Foot** • **Per Square Foot**	 $0.50/LF $0.95/LF	 $0.05/SF $0.095/SF
Urban Route Unit Price • **Per Linear Foot** • **Per Square Foot**	 $2.00/LF $18.90/LF	 $0.20/SF $1.89/SF

Source: Vicky Uhland, "The Big Fiber Pull," ZDNet, Oct. 22, 2000 (http://www.zdnet.com/wweek/stories/main)

The difference in the reported unit prices shown in the chart above may attributed to whether the cable is located in private property or is "co-located" with other utilities, such as in the partnership of Petronet with Buckeye Pipe Line Company to "piggyback" on their pipelines. While a co-located use may enhance the total corridor value, it may not do so to the extent of the cost of a new corridor. This would be a natural concomitant of the feasibility analysis suggested above. The unit values have been transformed from a price per linear foot basis to a price per square foot basis so they could, in turn, be compared to ATF prices. By using this admittedly highly selected and limited sample, we can get a tentative indication of whether fiber optic carriers and resellers base their prices on ATF Value, Alternate Route Value, Nominal Value, or something else.

Below is an ATF sensitivity chart where the above unit values is compared with benchmark ATF land unit values. For purposes of comparison, unit values of $0.25, $0.50, and $1 per square foot have been used as representative of "rural" land values adjacent to corridors; and unit values of $5, $10, and $15 per square foot representative of "urban" land values abutting corridors. A comparison of the easement prices to benchmark ATF values paid/charged for fiber optic cable easements and leases is shown in the sensitivity table below:

Sensitivity Price Check of Going Prices to ATF Land Values (% of ATF Value)

Rural "Across-The-Fence" Land Values			
ATF/$/SF Land	►$0.25◄	►$0.50◄	►$1.00◄
• Williams Companies • Petronet	$0.05/SF 20.0% $0.10/SF 38.0%	$0.05/SF 10.0% $0.10/SF 19.0%	$0.05/SF 5.0% $0.10/SF 9.5%
Urban "Across-The-Fence" Land Values			
ATF/$/SF Land	►$5.00◄	►$10.00◄	►$15.00◄
• Williams Companies • Petronet	$0.20/SF 4.0% $1.90/SF 38.0%	$0.20/SF 2.0% $1.90/SF 19.0%	$0.15/SF 1.0% $1.90/SF 12.6%

The results shown in the above table reflect what is called the "law of one price" in economics, which says that identical goods will sell for identical prices. Williams Communications pays a flat $0.05 per sq. ft. for underground cable easements in rural areas and $0.20 per sq. ft. for urban areas. Similarly, Petronet pays a flat $0.10 per sq. ft. for cable easements in rural reaches of its cable alignment, and $1.90 per sq. ft. in highly urbanized areas.

One may draw a number of inferences from the above table concerning the prices or charges for fiber optic cable rights:

- Going prices, or ATB prices, for underground cable easements are not based on ATF values, Alternate Route Values, or Nominal Values.
- Going prices, or ATB prices, for fiber easements reflect "across-the-region" value not "across-the-fence" value.
- Going prices, or ATB prices, are flat use values mostly likely based on a pro forma business case. It is possible to envision acquisition/service expansion decisions based on the availability of corridor for the target price.
- Different cable easement prices for rural or urban areas are likely predicated on the expected volume of bandwidth communications business in these areas.

It can reasonably be inferred from the above that what makes fiber optic routes valuable isn't the "in-between land" that it runs through, but the end points it connects. Fiber optic leases that do not affect the highest and best use of the corridor, or its special corridor use, are unconnected to the underlying value of the land. Thus, "going prices," or "across-the-board" prices, are appropriate compensation for fiber optic easements within existing corridors even though what is called "going prices" are expressly prohibited under Federal land appraisal standards in favor of a "before and after" appraisal method.[22] However, where no diminution or damages are estimated after a "before and after" analysis, "going prices" are believed relevant to the valuation of easements and are especially relevant to the valuation

of land rents. Before and after is particularly insensitive to measuring the foregone value attributable to the creation of a new use.

Proposition 7 – Sometimes Corridors Impart Cost Savings or opportunity costs to new users without imposing any extraordinary costs on corridor owners. *Corridors are non-market or limited-market properties and, as such, must be considered as having the potential to create cost savings (i.e., side benefits, wealth transfers) whose value is not entirely reflected in their market value (e.g., the conferral of windfall benefits to users co-located within corridors from avoiding relatively higher external land costs, longer route alignments, and delays).*

Unequivocally, one of the most neglected aspects of corridor real estate in the professional literature is its ability to throw off cost savings to abutting or nearby property owners or for secondary users of the corridor from avoiding the cost of higher price real estate external to the corridor. .

Plottage value, or the "increment of value when two or more sites are assembled or created to produce a greater utility"[23] is a real estate example of the creation of a surplus productivity. But to whom does the positive increment of value by assembling two land parcels accrue, the buyer or the seller? In the private market, buyers often realize the benefit of assemblage because it is a part of their entrepreneurial reward.

ATF Value proponents believe that all of the surplus value, or avoided cost, of having to buy higher priced land external to the corridor must accrue to the corridor owner. ATF Value proponents go even further and contend that "corridor premiums" inhere to corridors despite that such "premiums" are in practice nearly indistinguishable from "hold out prices" given that corridor transactions are bilateral transactions where the seller typically demands a "take-it-or-leave-it" price. If valid, corridor premiums would have to result from a highest and best use being higher and better than the ATF.

We believe much of the controversy surrounding proper corridor valuation methodology revolves around a tug-of-war for cost savings, non-market externalities, enrichments, or value transfers between the buyer and the seller, landlord and tenant. But the buyer's corridor rental bid in a deregulated environment cannot exceed its profit based on a pro forma business value. Thus, an astute corridor assembler or co-user will also consider the economic advantages offered by alternative routes. Today those routes might either be any of the following:

A Corridor Typology

Corridor Type	Examples
Partially Deregulated Market Corridors	
Market Utility Corridors	Rail, power line, natural gas
De Novo Liquidated Corridors by distressed or defunct competitors	Abandoned rail corridors, for rails now trails
Commonly-Owned Corridors	
Commonly-owned Corridors	Water aqueducts, light rail and subway lines, flood control channels
Rights of ways wherein utilities can often be located free of charge within the public franchise	Highways
Navigation or Avigation Servitudes	Ocean, river bottom land, airspace for propagation of radio signals
Potential or Incipient Corridors	
Latent Corridors where a large stretch of land is under one or few continuous ownerships that offers potential for a corridor without or with little need of assemblage	National forests, BLM reserves, military ranges, Tejon Ranch, Kern County, California, etc.
Non-Corridors	
Dissembled parcels of land that require assemblage into a contiguous corridor	Residential tracts, small farm tracts, mixed use urban land, etc.

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The above corridor typology is suggestive of differential rents for various types of corridors. Certainly, rental market data derived from "market utility corridors" (e.g., rail) should not be applied for valuation of "latent corridors" (e.g., raw corridors); just as finished residential subdivision lots should not substitute for raw land. Federal land appraisal standards and case law prescribe that linear "navigation servitudes" reflect a nominal valuation. The Highway Acts in many state jurisdictions provides for placement of public utilities within the public franchise of a state

highway without compensation (other than processing and plan check fees). Flood control channel corridors often cannot substitute for land values "across-the-fence" because they are unbuildable natural watercourses, FEMA floodways, or riparian habitats. And the rent-free use of air space for transmission of radio waves reflects what might be called an "above-the-fence" value. Substitution of corridors no longer solely reflects one-sided seller values, monopoly prices, or the "across-the-fence" (ATF) market.

A corridor can in infrequent cases internalize ("capitalize") land values external to the corridor under those circumstances where fee-simple replacement of the corridor is required. In such rare cases external values are internalized, or capitalized, into the corridor. The ATF Method originated in such cases where full replacement in fee-title was indicated. It has historically and unfortunately been extended to the valuation of partial interests and corridor rents only because without viable competitive markets monopoly corridor owners could charge one-sided prices. More recently, deregulated natural gas, electricity, and telecommunications companies have, where possible, sought alternative routes for their linear infrastructure in public highways where such rights can often be obtained for nominal consideration. Likewise, telecommunications carriers have circumvented paying monopoly prices for property rights within existing utility corridors by deploying wireless microwave networks so as to remain competitive in their industry. Some fiber optic carriers have sought undersea and river bottom licenses to lay conduit to circumvent the cost and delays with terrestrial based routes. Other quasi-public fiber optic carriers have exercised their powers of eminent domain to condemn permanent easements for a small fraction of the annual rental fees imposed by local municipalities for use of street rights of ways. The emergence of such alternate routes and alternative rights has brought into awareness that there are now competitive markets for corridor routes that previously only remotely existed. To assert, as many appraisers do, that all corridors have an equivalent price is to deny the reality of substitution, alternate routes, and price discrimination. Moreover, such equivalency values would nullify the need for appraisals altogether.

The full emergence of competitive market rents and prices for secondary use of corridors has been thwarted partly because of what might be called "equivalency appraisals" that, for an extreme example, estimate the value of marginal land under the ocean as equivalent to urban main land without considering the availability of an alternate route. Such appraisals have defeated the entire purpose for which deregulation was established (i.e., to bring about lower consumer prices by competition). The rationales for such "equivalency appraisals" are often ersatz and mistaken conceptions of "highest and best use" as elaborated upon elsewhere in this document.

The use of the term "Across-The-Fence" and the acronym "ATF" is problematic and confusing. Under certain infrequent situations where full replacement of a corridor is needed ATF is appropriate. However, ATF can also mean an "avoided cost," an "opportunity cost," or a "side benefit" that accrues to a secondary corridor user by averting the higher cost of land adjacent or nearby to the corridor. We believe ATF is a "double loaded" term and can mean different things. We propose to use the term "avoided cost" when a "corridor within a corridor" causes no damage to the underlying corridor property. The value of a secondary property right within a corridor (e.g., lease, license, permit) is mostly dependent on whether such lesser interests result in the need for replacement of equivalent corridor property or not. ATF has no bearing on the valuation of a "corridor within a corridor" unless there is need of replacement corridor. ATF is a professional acronym or "buzzword" that requires renaming and refinement within the context of a wider body of accepted terminology within the appraisal profession.

Nonetheless, in transactions among purely private entities where the loss sustained by the corridor owner is nominal, but the avoided costs to the corridor user are substantial, it is inconceivable that corridor owners would not confer windfall gains on others without at least bargaining for "fair division" of the surplus value. However, it is questionable that a government entity can demand an unreasonable share of the avoided cost created by joint use of a corridor.

Proposition 8 – To comply with the fair market value criterion, any use of ATF Values for Establishing Rent Schedules Needs to Hypothetically Assume an Alternate Route that is competitive to the proposed route across Federal lands or rights of ways even where no such route exists. Otherwise, fair market value cannot be estimated because market value presumes at least a limited choice available to the buyer. Without a postulate of choice, at minimum to the buyer, only monopoly value or "hold-out" prices can be estimated or gleaned from bilateral (one-sided) corridor transactions.

In the purest economic sense of the term, fair market value presumes there are alternative properties available to

a buyer and a plurality of buyers with effective purchasing power who are ready, able, and willing to purchase. Eminent domain law, however, has preferred to define fair market value as any transaction with willing and knowledgeable parties and without fraud, force, compelling circumstances, love-and-affection, or a less than arm's length relationship between the parties. An open and competitive market is not necessarily a prerequisite in the "fair market value" criterion contained in the Uniform Appraisal Standards for Federal Land Acquisitions,[24] nor in other governmental appraisal problems such as taxation. Nonetheless, without incorporating an assumption of choice into a corridor appraisal what invariably results is one-sided, hold out values by corridor owners. Seller control of corridor prices illustrates the "mono" in monopoly.

Corridors are special use properties. Corridors are frequently owned by railroads, by quasi-public entities, and by government agencies. Corridors are defined as "a strip of land between two designations where traffic, topography, environment, land uses, and other characteristics are evaluated for transportation purposes."[25] But transport of goods and people are only one use requiring corridors. Corridors can be distinguished from the term "right of way", which is defined as a "privilege to pass over the land of another in some particular path; usually an easement over the land of another."[26] Many corridors are public goods for which there is no market value because they never transact in the market place (e.g., public roads, flood control channels, navigation servitudes, airspace for air plane travel, etc.). Privately owned corridors only sell infrequently and have a limited market value to a narrow range of buyers. Corridors are a classic example of why real estate is often termed an imperfect market in that the properties are unique and illiquid.

In an economic sense, the general category of corporate assets constitutes a means of production, with the possible exception of corporate headquarters. Corridors are, in themselves, included in the larger class of productive corporate assets, the independent market value of which is difficult to ascertain from the overall enterprise value. Corridors have a cost new, and a liquidation value at the end of their economic life. Their sale during their useful lives is rare, typically fused with the value of the business, and often difficult to interpret.

What makes corridors "special" is their use for connectivity between two geographic points, unique linear shape, and scarce availability. In built-up urban areas, co-location of utilities in transportation corridors is typically the only practical solution available. In many cases, local municipalities force cable companies to co-locate cable in electric transmission line rights of ways or in rail corridors to avoid tearing up the streets or interrupting businesses in a commercial district. Because corridors are scarce, corridor owners hold a monopoly position over those who desire to use their property for linear transportation purposes. Monopoly properties typically reflect highly polarized values: "hold-out" values by owners or nominal values often sought by public or quasi-public secondary users through the use of eminent domain. The reason that corridors reflect highly polarized values is that they often reflect "one-buyer/one-seller" transactions as illustrated in the following market value numerical contingency table borrowed from microeconomic game theory:

As Emeritus Professor of Economics Charles E. Lindblom of Yale University has aptly stated:

> "The seller's capacity to control prices is constrained by the availability of an alternative or substitute to which the buyer can turn. This is the key idea in understanding monopoly: the availability to customers of alternatives or substitutes….a sheep rancher may be only one of thousands of enterprises offering the same product to buyers. Competition holds the rancher in a vise, with no power over price…Enterprises also create or fall into cartels – explicit or tacit agreements on price and other policies that restrain them from competing with each other to the degree that would push them strongly to efficiency prices. Patents also permit price manipulation, as do many licensing laws and other legally imposed constraints on trade."[27]

Thus, ATF Value can reflect an economic barrier to entry, or a cartel price imposed by monopoly corridor owners. This distorts the market to the extent that it either exceeds the actual value of a corridor, or more perniciously, that it exceeds the cost of an alternate route. In the first case of price distortion, the principle sufferers are the seller

that is not optimally utilizing their property; and the public, which is denied for a time the service requiring a corridor. In the second case, the sufferer is the public that either pays for the higher price, and/or is delayed in the enjoyment of the new service.

Furthermore, in assuming the availability of an alternate route for establishing corridor values or corridor rental values across Federal lands, an appraiser must assume that this is a less costly and/or more expeditious and convenient route. To assume the reverse (that the alternate route is more costly and the appraised route less costly) would be to assume that the government was in a monopolistic position or had an undue natural advantage as to location, circuity of travel, or could exert undue delay to exact a higher price. Thus, the appraisal of corridors or interests therein in government lands may be the opposite to that of the real world where the benefit transfer from an avoided cost possibly may result. This may create a "double-standard" for government appraisals versus private property appraisals. But the alternative would lead to unjust enrichments and coerced rents by government (i.e., "rent seeking") for which, by definition and constitutional charter, there is no competitor. A development of alternate routes is not only an appraisal exercise, of course. An astute corridor acquirer will examine the possibilities in the same manner as a feasibility determination. What is the legal, possible alternative with the lowest cost in time and money? Appraising the selected route would necessarily consider the alternatives that are part of the acquirer's analysis. If the selected route achieved its benefit because of a legal presumption of nominal value, then the market value might readily exceed cost.

Proposition 9 – Undervaluation of Corridor Use Rights may result in the tragic overuse of the corridor commons. Overvaluation of Corridor Rights may Result in the Inefficient Use of Corridors for both Corridor Owners and the Larger Economic Welfare of all.

Nominal or marginal valuation of partial interests within Federal lands or Federal utility corridors, or private utility corridors, may result in tragic overuse whereby corridors held for corporate or collective use will be exploited for the gain of one at the expense of all. Unpriced or low-priced access to transportation corridors may result in what is called the "tragedy of the commons" by destroying a valuable resource due to over-use. Corridors are a hybrid between a fully publicly owned property and a private property. Rail, electric, and gas line corridors are typically privately owned but are commonly used by a variety of ancillary users. The calamity of commonly-owned real estate, in contrast with private property, is analogous in real estate to what is called a "land rush," "squatters rights," and homesteading. The concept of "tragedy of the commons" was popularized by biologist Garrett Hardin with the analogy of an overgrazed commonly-owned pasture, quoted below:

> "The tragedy of the commons develops in this way. Picture a pasture open to all…As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks: 'What is the utility to me of adding one more animal to my herd?' This utility has one negative component and one positive component…Adding together the component utilities, the rational herdsman conclude that the only sensible course for him to pursue is to add another animal to the herd. And another…But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all."[28]

This tragedy would occur in a corridor by burdening a corridor owner to the extent that maintenance could not be undertaken, replacement of the pipe, power line, or rail track could not be undertaken without an enormous increased expense and/or it became dangerous to co-locate an ancillary user within the corridor. However, in most cases we are dealing with a voluntary transaction where a willing corridor owner has agreed to accommodate a second user with the requirement that their facilities will be placed in the corridor in such a fashion as to result in negligible liability or damages to the owner. This might also be called a "nested use" like a bird's nest that co-exists on the roof of a house. To claim that replacement corridor is required "across-the-fence" for lesser property interests within corridors doesn't usually square with the facts. In the "new economy" miniaturization is the operating concept with fiber optics, wireless, and satellite communications. It is literally and figuratively like raising millions of cattle on a one-acre pasture of commonly owned land without discernible harm or exhaustion of the land resource. Nonetheless, there is a limit as to how many fiber optic conduits, wireless sites, or satellite dishes can be accommodated in a given property or corridor. Placement of fiber optic lines in public highways can often be done for a nominal charge. But the maintenance costs, limited accessibility, relocation costs, and constraints on expansion often compel fiber optic carriers or re-sellers to search for corridors other than highways.

There is a legal approach to the valuation of partial property rights, buttressed by considerable case law, which contends that where such rights create no loss to the property owner its value for purposes of just compensation is nominal.[29] This approach may have bearing on minimal partial property rights where there is no going commercial enterprise, such as a small sewer line, irrigation line, or undersea cable that has no bearing on the highest and best use of the parent corridor. However, taken to its logical extension it might result in the tragic overuse of valuable corridor real estate by "free riders" for a multiplicity of uses such as equestrian, bicycle, and hiking trails, linear parks, underground public utilities, windbreaks, and so on ad infinitum.

Conversely, the "tragedy of the commons" has a reciprocal – the tragedy of the uncommons" that "results from use limitations that prevent over-exploitation by being too restrictive, leaving socially valuable uses unrealized."[30] Services that could be provided consumers are prevented, lowering the general social welfare and gross domestic product. Charging indiscriminate ATF prices for any ancillary use of corridor real estate can become an economic barrier to entry or a "cartel" price that only allows the highest price users into the corridor; or charges everyone the highest price no matter what the use or the liability imposed on the corridor owner. ATF value is understandably often charged as a way to possibly prevent against the destruction of the integrity and value of the corridor. However, when ATF prices are used as rationing devices, other criteria fill the void. Secondary corridor users may gain valuable licenses within restricted entry corridors by "free access" legislation, by case law precedent for nominal valuations, by exercising powers as a semi-public utility to condemn such property interests, wireless technologies might be favored over ground-based communications, or by forcing legislators to use auctions to end "rent seeking" by monopoly corridor owners.[31]

The economically efficient alternative to avoid "overuse" or "underuse" of corridors is to exclude only those uses whose added costs exceed added value. This is called marginal analysis in economics in contrast with opportunity cost or highest and best use in real estate terminology. A voluntary transaction for secondary corridor rights presumes that an optimal use and a reasonable price. Ultimately, it is generally conceded that the most efficient way to allocate resources is through the action of competitive markets. In sum, basing fair market compensation for rents on ATF values may result in inefficient use of the corridor, or a "lower and worst use."

Proposition 10 – Appraisers and government agencies can no longer ignore the inconsistency between government appraisal standards that require treatment of "navigational servitudes" as reflecting a nominal valuation in governmental acquisitions, and conversely appraise high values for the same property when the government seeks to lease or license it.

Navigable waters have long been considered commonly owned property rather than private property.[32] It is axiomatic that without private property there is no such thing as property value or market value. Case law has failed to honor port site value, riparian rights of access, irrigation, boating, fishing, and hunting as compensable uses of property within navigable waters. An overlay designation has been placed in certain areas as part of the National Marine Sanctuaries Program. These preserves have mainly been put into place to preclude oil drilling in areas where there are pristine bay and ocean viewsheds (e.g., Monterey Bay, California). However, the "new economy" often attributes value to fractional rights therein such as for undersea cable.[33] Moreover, states often charge "rent" for docking rights, pier construction rights and recreational uses within publicly-owned oceans, bays, rivers, and lakes (all of which are taxed as a possessory interest based on the market value of the private uses).

Many of the real estate appraisals for subterranean rights conducted for Federal agencies or state lands commissions within various jurisdictions are based on "ATF Value," where the land "across-the-fence" used to measure the subterranean land is distant dry main land in urban areas. This appraisal practice is prone to the justified criticism that appraisers are "reaching" for the highest dry land values and that government agencies are "buying low and selling high." Such "equivalency appraisals" equate the value of ocean or river bottom land as equal to dry land and reflect a highly improper appraisal practice of "false substitution." The problem with such "equivalency appraisals" is pegging the value of a possessory interest on the value of the so-called substitute land. We believe the Alternate Route Method, where the cost difference between a dry land route and a subsea route is estimated, is a better valuation method for easement rights within navigational servitudes. Alternatively, where market data is available for undersea cable license transactions, such data should be considered primary. However, we are skeptical of such

undersea license transactions where they were originally derived on ATF dry land alternative values, on rent comparables based on ATF dry land alternative values, and "seller's market" hold out values (as elaborated upon hereinabove). Where corridor rents are predicated on such dry land ATF values, ATF could be said to reflect what is called "public interest value" (PIV) of a marine preserve or estuary. While theoretically consistent, public interest values present their own problems and have elsewhere been officially prohibited by both the appraisal profession and government land management agencies when it comes to the issue of compensation for environmental preservation purposes.

If government agencies are to continue to extract significant rental charges for undersea cable rights, docking rights, preferential docking rights, auctioned mineral rights, recreational rights, and so on, independent appraisers and legal counsel may no longer be able to reconcile the inconsistency with the admonition contained in Federal land appraisal standards that no compensation shall be paid for property within "navigational servitudes."

Proposition 11 – Corridors are Multi-Dimensional and must be Appraised as such. *Corridors are multi-faceted properties whose valuation for partial interests therein is complex and dependent on the contingent circumstances at hand.*

Corridors are multi-faceted properties and have many different values to corridor owners, corridor users, adjacent property owners, and the public. A decision-making framework for the proper valuation methodology for corridor valuation should consider the property interest appraised (e.g., easement or license) juxtaposed to the type of alignment sought (e.g., longitudinal or crossing). Specifically, the acquisition of property interests within corridors should not be valued by the ATF Method unless full fee replacement of the encumbered area is required. Below is a suggested decision making framework for proper valuation of different interests in different types of corridor uses. Across the top of the grid is the type of use (i.e., lateral or longitudinal). Down the left side of the grid is different property interests (e.g., fee, fee with no replacement, exclusive easement, non-exclusive rights, relocatable rights).

Multi-Dimensional Framework for Corridor Valuation (Proposed)

	Lateral Use	**Longitudinal Use**
Full Fee Rights Necessitating Replacement	Reproduction Cost	Reproduction Cost
Full Fee Rights Not Necessitating Replacement	ATF Method	ATF Method
Exclusive Rights	% ATF + Damage Premium	% ATF + Damage Premium
Non-Exclusive Rights	Nominal Value	Alternate Route Value "Going Prices"
Relocatable Rights	Nominal Value	Alternate Route Value "Going Prices"

The above grid is for dissemination among professional and government agencies for discussion and possible refinement as a tool for unscrambling the methodological chaos in the issue of corridor valuation. Like the parable of the blind men and the elephant, corridor valuation is a problem of elephantine proportions. Many different entities and individuals advocate different solutions and there is no coherent framework from which to sort out proper methodology. Below is a table of the various corridor appraisal methods compared and contrasted for educational purposes. The multiple perspectives on the valuation of corridors are all correct given some limited situation or undisclosed assumption. The issue before the Federal government is to sort out the confusion and static on the issue and come up with a coherent basis for valuation of lease and easement interests in corridors. Whatever methods are adopted will have bearing on the larger economy, the confidence in the real estate profession to competently handle the issue, and will set a standard that may likely be emulated in the private sector.

Conventional and Emerging Corridor Valuation Methods *(under deregulation)*

Method	**Purpose**	**Highest Use**	**Larger Parcel**	**Legal Interest**	**Value Increment**
Conventional Corridor Appraisal Methods					
Value as linear Corridor	Disposition	Transportation	Stand-alone Linear corridor	Fee-simple; Exclusive easement	Adjustment Method
Value for Non-Corridor Use	Disposition	Excess land	Stand-alone Parcel	Fee-simple; exclusive easement	Subdivided value
Value across the Fence	Acquisition	Transportation uses	Assemblage parcel	Fee-simple; exclusive easement	Plottage Premium
Liquidation Value	Disposition	Speculation	Stand-alone parcel	Fee-simple; Exclusive easement	Below Market Discount
Federal Rule	Partial Acquisition	Transportation Use or across The fence use	Zone of value or stand-alone Use	Fee-simple or Exclusive Easement	Diminution in land value
State Rule	Partial Acquisition	Corridor use or ATF use	Zone of value or stand-alone use	Fee simple or Exclusive easement	Part Take + Damages – Benefits
Emerging Corridor Appraisal Methods					
Nominal Method	Partial Acquisition	Secondary use	Corridor within a corridor	Subordinate interest	Nominal value; no liability
Alternate Route Method	Partial Acquisition	Secondary Corridor use	Corridor within a corridor	Subordinate Interest	Bargained Cost Differential
"Going Rates" Across-The-Board Method	Fair Market Rents	Secondary Corridor use	Corridor within a corridor	Subordinate Interest	Uniform rents per linear mile
Fair Division Methods or Algorithms	Side-Benefits	Non-corridor use	Allocation to buyer or seller parcel	External Interests	Inducement or cake-cutting algorithm
Risk Option Model (usually not compensable under Federal standards)	Ameliorate Probable Future Loss or "reserved value"	Replacement or Lost Opportunity Of Future Corridor Use	Corridor within a corridor	Fee simple or exclusive easement	Risk-Option premium

Definitions and Terms

Monopoly – The term "monopoly" is not used in this document in the literal or formal economic sense of the term. Rather, the term monopoly is used to generally describe the natural advantage held by the corridor owner in one-sided one-buyer/one seller transactions (i.e., no substitution to buyer or seller) and/or seller's market transactions (no substitution to buyer). This term is used in the sense of a "paradigm" or model rather than a formal definition.

Market Value – The term "market value" or "fair market value" is not used herein in the conventional eminent domain sense of the term. Under most eminent domain law, fair market value for special use properties is typically determined by the Cost Approach which reflects the reproduction costs on the date of valuation. However under deregulation of network industries, the reproduction or replacement cost of the corridor is immaterial to the valuation issue unless the property right acquired within a corridor requires the corridor owner to purchase replacement corridor. Thus, the term

"market value" is used herein to reflect the position of "buyer's market value" wherein there is substitution and alternatives available to the buyer; and "fair market value" is used to reflect those situations where there are open and competitive market conditions, or substitution and alternatives available to both buyer and seller.

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