



**Public Notice**  
**Technical Committee Agenda**  
***Public Notice for the Policy Committee***

**Regular Meeting**  
**July 19, 2011 – 3:30 PM - City of Champaign Council Chambers**

1. Call to Order
2. Roll Call
3. Approval of Agenda
4. Approval of Minutes
5. Policy Committee Updates
6. Action & Discussion Items:
  - a. Policy Committee Deliverables
    - i. none
  - b. Engineering Update and Issues (Paul Duke)
  - c. Construction RFP Update
  - d. Subcommittee Reports and Actions
    - i. OSS/BSS RFP (Fred)
      - i. Review report
    - ii. Marketing and Outreach (John Kersh)
    - iii. IRU/Transport Contracts & Adoption (Bill DeJarnette)
  - e. Preparation and Development of FTTP Installation RFP
    - i. defer
  - d. Review and Update Project Schedule, as needed
7. Discussion items:
  - a. Tasks or Items for the next meeting
  - b. Next Meetings:
    - August 2, 2011 City of Champaign Council Chambers, 3:30 PM
    - August 16, 2011 City of Champaign Council Chambers, 3:30 PM
8. Audience Participation – 5 minute limit per person
9. Committee Member Comments and Announcement
10. Adjourn

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# UC2B

## MINUTES

6-14-2011

3:30 P.M.

CHAMPAIGN COUNCIL CHAMBERS

MEETING CALLED BY	Tracy Smith
TYPE OF MEETING	UC2B Technical Committee
GENERAL ITEMS	<ul style="list-style-type: none"> <li>Tracy Smith called the meeting to order.</li> <li>Quorum was verified – Verbal Roll call was taken (see Roll Call sheet).</li> <li>Approval of Agenda. Fred Halenar made motion. Mike Vrem 2<sup>nd</sup>. Approved.</li> <li>Approval of 5/17 Minutes. Fred Halenar made motion. Tony Vandeventer 2<sup>nd</sup>. Approved.</li> </ul>

#5. & 6A.

POLICY COMMITTEE REPORT & DELIVERABLES

MIKE VREM

DISCUSSION	<ul style="list-style-type: none"> <li><b>Policy Report</b> - Mike Vrem reported that the status of non-voting members was moved to the next meeting, there was no NTIA report, they will begin meeting weekly and the lead management decision was made that Champaign will be the lead agency.</li> <li><b>Core Site Recommendations</b> – Fred Halenar reported that they have had discussions and it would have to be a Change Order after the proposals are received. The maps and the descriptions have not been finalized; there is a memo that does address it that is prepared for when the time comes. Mike Smelter reported that NTIA would view this as a change of scope and would want to wait until after the first construction season, see what the money looks like and where they are in year two. No urgency at this point.</li> <li><b>FTTP Construction and/or Management (1 or more firms)</b> – Discussion ensued at length on this item. Tracy Smith summarized and the group agreed that focus should be to complete the construction piece and later work on the operational component.</li> </ul>
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#6B.

ENGINEERING UPDATE AND ISSUES

BOB MILES

DISCUSSION	<ul style="list-style-type: none"> <li>No new update</li> </ul>
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#6C.

CONSTRUCTION RFP UPDATE

MIKE SMELTZER

DISCUSSION	<ul style="list-style-type: none"> <li>Mike Smeltzer reported that the University bid responses will be open tomorrow at 2 p.m. and Champaign on Friday @ 2 p.m. and Urbana on Tuesday @ 2 p.m.</li> </ul>
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#6D.

SUBCOMMITTEE REPORTS & ACTIONS

DISCUSSION	<p><b>OSS/BSS RFP and Evaluation Criteria (Fred, Chair)</b></p> <ul style="list-style-type: none"> <li>Fred Halenar reported they are having a 2<sup>nd</sup> meeting tomorrow &amp; a software component demonstration and will determine what it will integrate with and how much it would cost; then they will meet again to discuss it further.</li> </ul> <p><b>Marketing &amp; Outreach Subcommittee (combined with Open Network &amp; Network Offered Services) (John Kersh, Chair)</b></p> <ul style="list-style-type: none"> <li>The Policy Committee approved a set of recommendations - 2 general categories: the process for hiring canvassers and developing a plan to deploy canvassers. A list of items has been created for the subcommittee to work on over the summer. They met today and 2 main time sensitive items are planning and preparations for a technology demo (electronics demo) to invite people from different anchor institutions and the community considering one for advanced users and one for beginners (deciding a venue/time/place). Community Events – soliciting participants to man a booth at all community events in Champaign &amp; Urbana (requesting all members of UC2B) to volunteer time. They have a list of materials to provide people that stop by the booth, information about UC2B, and they are looking at funding sources, needing a budget to possibly get money from UC2B &amp; or other sources to get this material. Tracy Smith asked that the Community Events be posted (on a calendar) to know when they take place.</li> </ul>
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	<p><b>IRU/Transport Contracts &amp; Adoption (Bill DeJarnette, Chair)</b></p> <ul style="list-style-type: none"> <li>○ Fred Halenar reported that they are on their 3<sup>rd</sup> revision/document and they will have one more meeting.</li> </ul>
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#6E. PREPARATION & DEV OF FTTP INSTALLATION RFP TRACY SMITH

<b>DISCUSSION</b>	<ul style="list-style-type: none"> <li>○ Tracy Smith, Chair suggested splitting off another subcommittee to begin work on this; Mike Vrem suggested the basics and clear understanding of the construction be explained so there is a defined scope and direction.</li> <li>○ Mike Smeltzer said that sample products could be brought in to get the committee up to speed.</li> <li>○ Mike Smeltzer volunteered to prepare a draft document to explain the phases of the construction.</li> <li>○ The committee tabled this item until next meeting to allow for more time for research.</li> </ul>
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#6F. REVIEW & UPDATE PROJECT SCHEDULE AS NEEDED

<b>DISCUSSION</b>	<ul style="list-style-type: none"> <li>○ No new update</li> </ul>
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7. DISCUSSION ITEMS

<b>DISCUSSION</b>	<p><b>Tasks or Items for the next meeting:</b></p> <ul style="list-style-type: none"> <li>○ None</li> </ul> <p><b>Audience Participation:</b></p> <ul style="list-style-type: none"> <li>○ None</li> </ul> <p><b>Committee Member Comments or Announcements:</b></p> <ul style="list-style-type: none"> <li>○ None</li> </ul> <p><b>Tony Vandeventer motioned to adjourn. Mike Vrem 2<sup>nd</sup>. Meeting adjourned.</b></p> <p><b>Next Meetings:</b></p> <ul style="list-style-type: none"> <li>○ June 21, 2011 City of Champaign Council Chambers, 3:30 PM – meeting was canceled.</li> <li>○ July 5, 2011 City of Champaign Council Chambers, 3:30 PM</li> </ul>
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# Report on Use of Existing Infrastructure

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*From the Infrastructure Reuse and IRU Study Subcommittee of the Technology Committee of the Urbana-Champaign Big Broadband Project (UC2B)*

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## Executive Summary

The following information provides an in depth review of the available capacity, the challenges with reuse of existing infrastructure, and this sub-committee's recommendations to the Technical and Policy Committees regarding "Existing Infrastructure"—components of network infrastructure that already exist in our community, that could reduce the amount of new construction that UC2B would need to complete by 2013. This document is presented as the foundation for the creation of a recommended standard that clearly identifies a multi-step process to analyze the specific benefits a property would provide UC2B if it were purchased or leased.

This sub-committee recommends:

1) Standard method for receiving offers

That Policy guidelines define a standard method for receiving offers and proposals for review. (Within today's organizational structure the proposals should be received by the Policy Committee, who should direct a structured analysis be completed by the engineering firm and submitted to the Technical Committee for possible recommendation to the Policy Committee.)

2) When should UC2B build, or buy, or lease infrastructure?

That UC2B develop ownership of its network to the extent possible with capital assets that it acquires or constructs (and reserve leasing for short-term needs).

3) What contractual terms are acceptable for purchased and leased infrastructure

That value given for acquired assets be calculated based on project costs (including engineering fees, easement acquisitions, and construction costs) for similar assets constructed by UC2B. This provides a mechanism that is simple, fair to all parties, and relieves members of UC2B Committees from conflict of interest as both committee members and infrastructure providers.

4) How should the transfer of assets proceed?

Incorporating an asset into the UC2B infrastructure must create an orderly transfer of ownership from the current owner (in this transaction, referred to as "the Grantor), to UC2B (referred to as "the Grantee") funded by the Grant. This subcommittee recommends the following steps to accomplish the transfer:

- 1) Identify the assets under question
- 2) Define the value based on project costs as known at the time construction bids are awarded
- 3) Create and agree to a transfer process that will meet the Grantor's and the Grantee's needs
- 4) Execute a structured agreement, and
- 5) As required, execute IRU's or other agreements to return operational resources back to the Grantor.

This sub-committee has reviewed the existing infrastructure proposals as detailed below and believe the Policy Committee should move forward with their acquisition.

## Use of Existing Infrastructure

### Existing infrastructure summary

One of the roles of this subcommittee was to inventory existing infrastructure that had potential of being incorporated into UC2B's building of the network and to contact those carriers with known infrastructure to determine each carrier's willingness to discuss how UC2B can acquire (or acquire use

of) these resources. UC2B would have to set criteria to judge whether or not a resource is usable, up to UC2B defined standards, and whether or not the infrastructure would bring value to UC2B.

AT&T, Comcast, Paetec, CenturyLink, Kentucky Datalink, NextG Networks, Sprint, Volo Broadband, the Illinois DOT, the Illinois Century Network, the City of Urbana, the Urbana Schools (USD116), the City of Champaign, and the Champaign County administration, were all contacted regarding infrastructure.

Of those, Paetec, Volo Broadband, the City of Urbana, the Urbana Schools, the City of Champaign, and the Champaign County administration responded with information about infrastructure that might be committed to the project. These include:

<u>Existing Conduit Summary</u>					
Owner	Section	Diameter	Length (mi)	Qty	Fiber ct
Urbana	Original	2"	2.39	1	36
Urbana	USD116 Projects 1-3	1.5-2"	5.52	1	84-288
Champaign	Downtown Conduit	2-4"	0.66	1	36 or less
Champaign	John St. Conduit	2"	0.89 (4.45)	5	0
Paetec	Vacant Conduit	2"	3.49	>1	0
Volo	Cooper Conduit Core	1.5"	7.84	>1	0-360

“Urbana” indicates conduit that is owned jointly or in part by Urbana, USD116, and/or the County.

In some cases, these conduits include cable of sufficiently high count to be useful, in others there is either no cable installed or a cable with too few fibers. The standard conduit size for UC2B construction is 1.5”.

Most of the Urbana fiber lies on routes that are not proposed as “backbone” routes. Champaign, Paetec, and Volo conduit lies on or near proposed “backbone” routes.

Urbana conduit does not cross challenging obstacles, but Champaign and Volo conduits cross railroad tracks, with Paetec and Volo Broadband conduits crossing Boneyard Creek.

### **Existing infrastructure tradeoffs (background)**

Reusing existing infrastructure could save time and/or money, but it could also bring unforeseen costs and challenges. Each section of existing infrastructure will have a different set of tradeoffs, and those tradeoffs will weigh differently depending on where in the network the infrastructure would be used.

Below is a non comprehensive list of engineering and technical questions that may arise when considering building vs. buying or leasing infrastructure. This information is presented as educational background information:

- Can the proposed infrastructure meet the engineered lifecycle without substantial make-ready or upgrade costs to UC2B?
- Does the proposed infrastructure agreement imply ownership (to qualify as a capital purchase)?
- Will the proposed infrastructure allow for a significantly shorter overall project implementation timeline? (where time is money)
- Will maintaining the proposed infrastructure present special monetary or legal challenges?
- Does the proposed infrastructure meet acceptable construction standards?

- Does the proposed infrastructure meet acceptable warranty documentation?
- Will the 'Grantor' for the proposed infrastructure negotiate in a timely manner?
- Are there existing physical or legal encumbrances that could hamper negotiations or future operations?
- Are there any identifiable legal issues that could cause an infrastructure agreement to be challenged through a future judicial ruling?
- Which solution does the Total Costs of Ownership (TCO) analysis promote? Does the analysis demonstrate a savings or other tangible benefits that would recommend an alternative to new construction?
- Is the assigned pricing acceptable by both parties?

## Existing Infrastructure Policy Recommendations

The value UC2B will place on a specific piece of infrastructure is dependant both on answers to the above objective questions, and on coherent policies or standards for how to weigh the results. The questions, as listed above, would quantify many of the technical, legal and financial concerns related to reuse of existing infrastructure prior to a formal recommendation.

### 1) Standard method for receiving offers

Policy guidelines should define a standard method for receiving offers and proposals for review and obtaining a non-biased recommendation based on an objective structured analysis. (A structured analysis identifies areas of risk that may be overlooked using an evaluation method that focuses on one factor, be it financial, or technical.)

Within today's organizational structure the proposals should be received by the Policy Committee. The Policy Committee should direct a structured analysis be completed by the engineering firm, and submitted to the Technical Committee for possible recommendation to the Policy Committee.

### 2) When should UC2B build, or buy, or lease infrastructure?

This subcommittee believes that the Policy Committee should discuss these issues and develop policies along the lines of the following, or give guidance to the Technical Committee for further research to answer remaining questions they may have.

This subcommittee recommends that UC2B establish a policy of:

- Purchasing infrastructure that meets relevant business imperatives, such as: demonstrating acceptable construction practices, meeting or exceeds the engineered lifecycle requirements (e.g. capacity for anticipated growth), demonstrating acceptable documentation, does not impose legal encumbrances (e.g., non-transferable easements), and demonstrates good financial responsibility using a Total Cost of Ownership (TCO) model to demonstrate significant savings over the expected asset life span.
- Build new infrastructure when the proposed infrastructure does not meet the relevant business imperatives, as listed above.
- Reserve leasing for a means to meet temporary needs when neither of the above options are feasible, (e.g., a temporary facility for use while a new facility is being designed and built) or for other short term opportunities that may present themselves throughout the life of this network.

For comparing a purchase versus a build, a total cost of ownership (TCO) model provides a valid means for determining the economic value of this investment. The TCO analysis would quantify the



financial impact over the anticipated life cycle. The TCO exercise for a purchase or a new build would include construction costs and/or the make-ready cost for the proposed purchase. The costs for both options would be provided by the engineering team, and designed to meet the same anticipated needs. With the TCO purchase model, maintenance costs should be assumed the same for a new build or a retrofit option, as both would be managed by UC2B. A TCO for comparing a short-term lease and new construction would differ, based on a monthly recurring charge associated with a lease, and possibly by including fees for maintenance, if maintenance is not included as part of the lease. The last item for review is time versus capital. This would be a situation where the cost for a purchase or lease would need to be measured against the benefits created by this recommendation. In this situation, the design engineers should complete a benefit analysis, as the basis for a documented recommendation to both committees.

This subcommittee reserves leasing for extraordinary circumstances because: 1.) leasing is an expense item; 2.) NTIA grant funds cannot be used for expense items; and 3.) UC2B does not have an expense budget. Leases should remain an available option once UC2B is operational, but only to resolve short-term situations where new construction or purchases cannot be completed prior to the eminent time of need.

The Policy Committee should generally follow the recommendations of the engineering firm with respect to time vs. capital reviews. This process would apply only to situations where a project timeline could not be met by normal or accelerated construction schedules.

### **3) What contractual terms are acceptable for purchased and leased infrastructure?**

The subject of contractual terms is a sensitive area that needs to be addressed between UC2B and each entity offering existing infrastructure based on the assets involved, while delivering equitable value to all parties and protecting the current owner's operating infrastructure.

This sub-committee recommends establishing value based on project costs (including engineering fees, easement acquisitions, and construction costs) for similar assets constructed by UC2B. This provides a mechanism that is simple, fair to all parties, and relieves members of UC2B Committees from conflict of interest as both committee members and infrastructure providers.

### **4) How should the transfer of assets proceed**

Incorporating an asset into the UC2B infrastructure must create an orderly transfer of ownership from the current owner (in this transaction, referred to as "the Grantor), to UC2B (referred to as "the Grantee") funded by the Grant. This subcommittee recommends the following steps to accomplish the transfer: 1) Identify the assets, 2) Define the value based on project costs as known at the time construction bids are awarded, 3) Create and agree to a transfer process that will meet the Grantor and the Grantees needs, 4) Execute a structured agreement, and 5) As required, execute IRU's or other agreements to return operational resources back to the Grantor.

## **Existing Infrastructure Deal Proposals**

USD116 is operating under a letter of support that their contribution will be in kind to UC2B. The letter indicates that USD116 expects UC2B to dramatically reduce their fiber implementation timeline, and provide additional integration with community partners and parents. They valued their contribution in 2009 at \$298,075.

The City of Urbana and the City of Champaign through Council Resolutions and Intergovernmental Agreements have committed cash or services as their contribution. The values have changed from the initial grant applications because only one of the grants was approved. Current value of contributions for Urbana is \$345,675 and for the City of Champaign is \$498,070.

The City of Urbana, USD116 and Champaign County share ownership in the existing infrastructure in Urbana. Champaign County has no current agreement with UC2B but all three entities have been operating under the assumption that along with USD116 contribution they will receive compensation for infrastructure purchased. The City of Champaign similarly expects to contribute existing infrastructure and receive compensation. Compensation may be in the form of IRUs.

Paetec has provided verbal acknowledgement that they will negotiate for underutilized assets in the Campustown area, but initial "quoted pricing" is of substantially higher prices than preliminary estimates of constructing new infrastructure. Paetec has stated that its terms would include complete access to conduit purchased, but would require UC2B to install its own handholes for splicing and conduit access. Paetec has also requested that there not be a monetary exchange, but an exchange for "future" undetermined services.

Volo Broadband has proposed for Volo to install cable in relevant conduit to UC2B's specifications, and then sell conduit + cable at the average per-foot price of similar infrastructure that is constructed on the project. Volo has offered and is willing to negotiate exchanges to mutual gain for UC2B and Volo.

## Appendix A Further Reading

Pages 250-261 from the initial UC2B application section 5-1

## Glossary of Terms

**As-Built Drawings:** The phrase "as-built" in construction is equivalent to "as-is." Drawings deemed "as-built" are thus drawings that show the EXISTING conditions as they are or "as-is" — these are the actual existing conditions as opposed to designs or proposed conditions, which are more common for the content of drawings.

**Backbone Ring:** a high-speed ring topology network that connects a number of smaller ring topology networks

**Capital purchase:** An acquisition in which the expected lifespan of the asset purchased exceeds one year (normally, substantially).

**Construction costs:** The cost to build an asset. This may include only the incremental cost of construction, or may include other related costs (engineering, etc).

**Construction Standards:** The construction standards are the construction guidelines created by members of UC2B (both cities and University) that compiles a common body of construction standards that contractors and designers must follow for the construction and restoration of communications facilities within the project Rights of Way (ROW).

**Grantee:** One to whom a grant is made, in this case, this applies to use with an IRU agreement granting ownership rights to conduit or fiber optic strands.

**Engineered Lifecycle:** The expected operational lifespan during which repairs are presumed to be worth making; the basis for cost amortization.

**Grantor:** A legal term conveying, for the party, a grant of title or encumbrance, as it applies to an IRU granting title to conduit or fiber optic strands to or from UC2B.

**Indefeasible Rights to Use (IRU):** Indefeasible right of use (IRU) is a contractual agreement between the owners (Grantor) of a communications facility, such as conduit or a fiber optic network, and a client (Grantee). IRUs are often designed to convey ownership of a portion of an asset, with some restrictions on right to and methods of access.

**Internet Service Provider (ISP):** An ISP is a company that offers its customers access to the Internet. The ISP connects to its customers using a data transmission technology appropriate for delivering Internet Protocol packets or frames, such as dial-up, DSL, cable modem, wireless or dedicated high-speed interconnects.

**Lateral:** A telecommunications term defining a conduit path extension, extending from a backbone (ring), and linking to multiple entrance facilities along a street or ROW, providing customers access (i.e. FTTH) connectivity to the UC2B network.

**Managed Transport Service:** Managed - transport service identifies a bundled digital delivery facility (fiber optic) with electronic equipment managed by UC2B, to the site and/or customer. UC2B is accountable for the functionality and performance of the service, as well as delivery of other applications over this facility, which may be provided through multiple, Retail Service Providers (RSP), to this customer or site.

**Make-ready costs:** The costs of adding to or repairing a potential network component, in order for it to meet the specifications desired for incorporation into the network.

**Optical Time Domain Reflectometer (OTDR):** A device that measures distance to a reflection surface by measuring the time it takes for a light wave pulse to reflect from the surface. Reflection surfaces include the ends of cables and breaks in fiber. The reflectometer measures the ratio of incident and reflected light power, or backscatter. By using this device, you can precisely calculate (in feet) where is fiber optic link is broken.

**Right of Way (ROW):** Right of way is in most cases a strip of land bordering streets or roads that is controlled by: in this case, the Cities, University or State of Illinois Department of Transportation. It is within this strip of property where UC2B will locate underground conduit and access points for the distribution and maintenance of fiber optic facilities that will encompass the UC2B network.

**Structured Agreement:** An agreement that lays out the payments and other requirements for orderly transfer of an asset from one party to another

**Total Costs of Ownership (TCO):** the economic value of an asset over its Engineered Lifecycle. For a purchase or a new build, this would include construction costs, and long-term maintenance costs including easements and other ongoing costs to keep the asset in usable condition, discounted as appropriate given the present value of future expenses. For an acquisition, this would include the make-ready cost for the proposed purchase, the purchase price, lease terms, and maintenance costs as in the new build case.

**Upgrade costs:** The cost of improving a network component, after it has been incorporated into the network, to meet capacity needs that arise in the future.

# Report from the IRU Study Subcommittee

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## Executive Summary

Beyond the questions and objectives of IRUs is the treatment of network expansion in the form of customer entrances. This will involve new construction and as such require Outside Plant (OSP) engineering and design processes to integrate new construction into the UC2B infrastructure management systems. These mini projects must be designed to UC2B standards as most will become UC2B assets. Questions remain on how lateral extensions and entrances will be financed, who will maintain them and who will manage service delivery? Suggestions for managing these complex issues are discussed in depth in this document.

## Last Mile Connectivity

The final challenge is connectivity to the homes and businesses. This last mile remains a complicated and challenging mystery for those many locations that are not currently listed as an Anchor Institution, FTTP, or IRU holder. How can these new structures become access points to UC2B, and paying customers? Let's examine what may be required to attract new building connections:

1. Market the value of an "Open Network" attached building:
  - a. Every building attached to an "Open Network" could become more valuable to the existing and future owners than a building with fiber access provided by a "closed network service provider" (i.e. AT&T). *It is possible that the cost of installation may be off-set by the increased value of the building.*
2. Create Easy Finance Options for Building Owners to Invest in Network Entrances
  - a. Many small business and residential owners will require "easy terms" for financing entrance construction. Easy financing will be the single most effective tool for increasing member connectivity to UC2B. *An operations model that would allow UC2B to become a bondable utility would create an opportunity for bonding. Bonding might be a way for UC2B to fund end-user expansion beyond the Anchor Institution list, with long-term, low-interest loans that could be attached to the property.*
3. Respect the Commitments for Funding Lateral and Entrance Facilities by Private Investors (IRU Holders and/or Banks).
  - a. When a "for profit investor" (IRU Holder/Bank) funds the construction of building entrances and laterals a multitude of challenges are created:
    - i. Who owns the new pathway? *UC2B's goal should be complete ownership control of network rings, laterals and entrance conduits for the central purpose of managing and maintaining the infrastructure. The temporary exception to "complete ownership" would be laterals and entrances paid for by private investors. Listed below are several scenarios that may contribute to these challenges:*
      1. *A private investor coordinates the design and build of new construction to add a building to the network. The design includes an entrance facility*

*on the building owner's property and requires the construction of a substantial lateral extension. The building owner desires services, but can not afford the investment. The private investor is financially willing to support the project but wants assurance that their investment is protected. The investor's requirement is the ability for full repayment for all related costs of construction and a profit.*

2. *With the project involving both entrance (private property) and lateral (public ROW) construction, there are two parties representing the physical property where infrastructure is placed, plus the investor and UC2B, representing infrastructure ownership and control. Each of these parties must be represented in an agreement and possibly with the following goals:*
  - a. *Investor – financial protection for return on investment, first right of refusal regarding service delivery (e.g. term services agreement with building owner including early termination penalty)*
  - b. *Building owner – access to services, financial responsibility to repay a fair share of construction costs for the project to the investor through a contracted services agreement with early termination language*
  - c. *Other properties along the lateral – access to services with financial responsibilities to share entrance construction and a fair share of the lateral extension paid by the private investor. The fair share costs associated with lateral construction may be paid directly to the private investor that financed the construction of the lateral*
  - d. *UC2B – Design, management and maintenance control from the beginning, gaining ownership rights for the lateral as customers purchase entrances and repay the private investor. Once the private investor has recovered their investment, UC2B shall have full ownership of lateral and entrance*
- ii. *If another building along the lateral adds an entrance, does the investor who paid for lateral construction receive a portion of their construction fee returned? It is recommended that investors be provided fair share compensation for new attachments to any lateral constructed through private funding. If UC2B were financially strong, it would be advantageous for UC2B to be the investor in lateral construction from the very beginning, but at this time is likely to be a goal.*
- iii. *What if a competing RSP wants to deliver services over a fiber entrance that a private investor paid to construct? The responsibility for allowing competitors to use infrastructure funded by a private investor must be agreed upon by the private investor and the building owner before the RSP may have access. The investor shall have the contractual right to protect their investment until such time as financing has been recovered. Control of the entrance shall include both lit and dark fiber strands, the implementation of VLANs, and/or VPN applications*

*that allow the delivery of all service using these facilities. A service agreement between the private investor and the building owner shall assign responsibilities. If a building owner requests another service provider to use the facilities constructed by a private investor for service delivery, the building owner must follow the contracted terms for early termination, or agree to repay financing costs and any contractual responsibilities that were outlined in their agreement with the party financing their entrance construction. Their request should not preclude other arrangements, if the arrangements are agreed upon by both the building owner and the financier.*

*iv. Investors who put in laterals and entrances want their investment protected and to be able to get back their investment. However, if the investors use any UC2B infrastructure to deliver services, UC2B should have the same right to protect its rights and network ownership, even if it is in the future. The basic principal is that UC2B, as a utility, needs to own all of the network and the UC2B provided services. UC2B must have the right (contractual and implied) to own the network. Second, if a RSP is involved, UC2B needs to be part of the approving process, not just the original investor and building owner.*

*b. The challenge to the Policy Committee will be the creation of fair entrance rules to allow investors an opportunity to receive a return for their investments. Using the above scenarios as examples, the emphasis is to direct the responsibility of resolution to the building owner and investor, allowing them to resolve any remaining financial claims an investor may have, and likely this is best handled through a contract. If the entrance was for a community owned building, the responsibilities and approvals may be very different than a privately held building.*

4. Who will own the lateral/entrance conduit and fibers?

*a. Multiple-ownership is not a desired position for UC2B to manage from. The best option is for UC2B to follow a management model similar to Public Utilities. Owning and managing the network as a unit creates a single entity, allowing UC2B to maintain infrastructure records, control the interface to RSPs, manage locates, and dispatch service restoration for all users through a central operations infrastructure. Using this model, UC2B's network operations platforms (OSS/BSS) can centrally manage and simplify the structure for daily operations and management.*

A policy for entrance facilities requires a thorough analysis as this policy will have great impact on attracting new building additions to the network. Preparing for this policy may require scheduling additional sub-committee discussions. Any entrance policy UC2B implements must preserve network assets and establish a platform for long-term growth while meeting the requirements of the Federal Government for an "open access" network. With a focused entrance policy, UC2B will be positioned to meet the market demands for a wide range of big broadband services.