

**Memorandum**

**March 4, 2004**

**To:** Steve Endsley, Fort Ord Reuse Authority (FORA)

**From:** Ron Golem, Bay Area Economics  
Suc Buske, The Buske Group  
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**re:** Implementation strategy for former Fort Ord telecommunications action options

**Executive Summary**

*The Need for Action by FORA Land Use Jurisdictions*

A key goal of the FORA Base Reuse Plan is to develop approximately 4.5 million or more square feet of office and light industrial space to replace the jobs lost when Fort Ord closed. Many of the prospective tenants for such space will need advanced telecommunications services that require fiber optic connections. However, the availability of fiber optic connections and even basic broadband service in and around former Fort Ord is spotty, a problem which the current plans of SBC and Comcast are unlikely to correct. The likely resulting lack of adequate telecommunications services may significantly decrease tenant interest in the new space and consequently the realization of the Base Reuse Plan's economic development goals.

There are a range of action options for increasing the number of future telecommunications providers and types of advanced telecommunications services. However, any action to increase access to advanced telecommunications will have to be implemented by the FORA land use jurisdictions because: (1) they will involve agreements with the jurisdictions rather than FORA; (2) FORA's existing funding sources cannot provide additional funds for implementation; and (3) there is a need for ongoing management that continues beyond the "sunset" of FORA. However, the FORA land use jurisdictions are challenged by significant fiscal constraints and limited staff resources to address this issue, suggesting a need for closer cooperation on this matter.

Through work with FORA staff and a Communications Task Force with representatives of the FORA land use jurisdictions, the consultant team evaluated the full range of action options that could enhance future telecommunications services at former Fort Ord. Based on a lack of interest in expensive or complex options, we recommend two lesser cost and simpler near-term action options that have a strong potential to meet the objective of increasing the availability of advanced telecommunications services. Should these two action options not satisfy this objective, we recommend in the longer-term two additional action options that are likely to increase the availability of advanced telecommunications services but involve greater expense and complexity. All four recommended action options are complementary and can be implemented in various combinations.

### ***Recommended Near-Term Options for Implementation***

The two near-term action options that we recommend involve the following:

1. Coordinated action by the FORA land use jurisdictions on Comcast franchise agreements and system build-out to ensure that cable service is available throughout former Fort Ord, including service to commercial areas and business tenants; and
2. Development of a coordinated telecommunications duct network through the FORA Capital Improvement Program and developer road improvements that will reduce the cost of providing fiber optic service. Depending on how much of this work is shifted to developers, the FORA land use jurisdictions will need to formulate a funding strategy that can generate additional non-FORA funds in the range of an estimated \$550,000 to \$1.1 million.

Successful implementation of these near-term actions requires coordination between the FORA land use jurisdictions, who should contribute at their discretion a total of \$25,000 to negotiate a Memorandum of Agreement (MOA). A lead jurisdiction should be selected to arrange staff and other resources. This action will leverage the jurisdictions' negotiating strength with Comcast, as well as ensure coordinated development and management of a telecommunications duct network. Coordinated action may also result in economies of scale and cost savings for each jurisdiction.

### ***Recommended Longer-Term Options for Implementation***

Should these near-term action options fail to result in widespread availability of advanced telecommunications services, we recommend that the FORA land use jurisdictions then consider the following additional action options:

3. Create a new "access non-profit" corporation to acquire connections between former Fort Ord and the national backbone telecommunications network, either through arrangements to use the high capacity fiber optic network now being extended to CSU Monterey Bay, or arrangements with other telecommunications providers; and
4. Enter into an agreement with a third-party telecommunication provider to offer advanced telecommunications services (including voice, video, and data services) to all residential and commercial users in former Fort Ord. This agreement will likely require a significant public contribution to the upfront cost of constructing a network to provide such service.

The MOA recommended as an implementation action for the near-term action options could provide a vehicle for implementation of these two longer-term action options. The capital and other needs associated with these longer-term options may necessitate creation of a Joint Powers Authority (JPA) that has the ability to issue debt along with other enhanced capabilities.

### ***Additional Considerations***

There may be near-term or long-term opportunities for coordination with other efforts to improve telecommunications service in the region. The Association of Monterey Bay Area Governments (AMBAG) is currently leading an initiative to test telecommunications provider interest in potential public/private partnerships that could expand the availability of fiber optic service in the region, including areas of former Fort Ord such as the East Garrison.

This memorandum discusses strategies to implement the action options and related issues; the last section outlines an action plan. It also evaluates the likely outcome of a "no action" option. Two previous memoranda describe our work with FORA staff and the Communications Task Force on an analysis of all potential options, including those considered but not recommended.

## **Purpose of this Memorandum**

This is the final memorandum in a series of memoranda exploring issues associated with future telecommunications services at former Fort Ord in Monterey County. These memoranda have been prepared by a consultant team retained by FORA to work with it, consisting of Bay Area Economics (BAE), real estate and urban economists with expertise in telecommunications business planning; The Buske Group, experts in the cable industry and negotiation of franchise agreements; and Spiegel and McDiarmid, attorneys at law specializing in telecommunications policy and regulatory matters.

The consultant team has over the last several months worked with FORA staff and a Communications Task Force consisting of representatives from FORA members to evaluate options for increasing access to advanced telecommunications services and strategies to implement selected action options. Previous memoranda, and the consultant team's work with the Communications Task Force and Administrative Committee, have included (1) a strategic assessment of all potential telecommunication service options; (2) identification of the five options (including a "no action" option) considered most appropriate for consideration by the FORA land use jurisdictions; and (3) a detailed analysis of those options.

This memorandum presents the results of that work and outlines an implementation strategy for the recommended action options, as well as identification of implementation barriers and other challenges with recommended measures to address them.

## **Targeted Options Overview**

The recommended action options are not mutually exclusive, and a telecommunications implementation strategy for former Fort Ord could include various combinations of the action options:

1. Enforcement of cable franchise agreements to ensure universal access by residential and commercial customers to cable service;
2. Development of a duct network to lower the cost of installation for existing provider networks and the entry into former Fort Ord of new service providers;
3. Agreements with third party service providers (i.e. in addition to SBC and Comcast) to provide telecommunications services in former Fort Ord; and/or
4. Creation of a former Fort Ord "Access Non-Profit" to facilitate access to advanced telecommunications services.
5. The final option is for "no action", i.e. accept whatever decisions existing telecommunications service provider make regarding network deployment and services, even if it results in many areas lacking access to fiber optic connections and advanced telecommunications services.

The following paragraphs provide an overview of each of these options.

***Option 1: Cable Franchise Agreements Enforcement***

The strict enforcement of current franchise standards including, but not limited to, construction and connection standards, should be a primary objective in order to benefit new development in former Fort Ord.

The FORA land use jurisdictions (Monterey County, City of Marina, City of Del Rey Oaks, City of Seaside, City of Monterey) have franchise agreements under which the cable operator is subject to local cable franchise/contract agreements that require the cable operator to comply with certain terms and conditions. Proactive enforcement of "build out" requirements -- through a notification and inspection regime -- will ensure that newly built areas, including residential and commercial areas, are provided service within an early timeframe. The essential objective should be for Comcast to extend its service to commercial areas and business users, something it does not typically do. Comcast is anticipated to offer business broadband services within the next several years, and if Comcast's network is already connected to businesses in commercial areas of former Fort Ord, there will be ready and universal access to fiber optic and advanced telecommunications services.

The local franchise agreements already contain requirements as well as the authority to insist on network construction and service documentation from cable operators to all residential and commercial customers. The Marina and Seaside agreements also provide the opportunity for Comcast to access city-provided trenches but does not make such use mandatory.

Currently most FORA land use jurisdictions regulate cable as a second or third level priority. A regulatory scheme that includes responding to complaints, occasionally auditing fee payments, and receiving an annual communication from cable operators can suffice when the basic elements of a cable system have been in place for years. However, in newly developed and changing territory, a reactive relationship with cable operators is insufficient. Communities that vigorously pursue and monitor the obligations of their franchised cable operators have been shown to produce more timely and positive results for subscribers and businesses.

***Option 2: Telecommunications Duct Network***

The duct network option addresses the fact that a significant portion of the cost of providing fiber optic service is the physical construction of conduits to run the glass fibers (the other major cost being for electronics to "light" the fiber). By installing ducts in conjunction with road improvements or other trenching projects, the cost of future installation of fiber optic lines is greatly reduced, either for service providers or for users seeking to obtain service. There is also a potential to charge for the use of ducts in order to recover their construction cost. This is a much-discussed concept, with the primary example Stokab in Stockholm, Sweden.

FORA's Capital Improvement Program calls for the construction of a system of "backbone" or primary road improvements. Incorporating telecommunications duct in key unbuilt segments could support creation of a duct network crossing former Fort Ord. If developers are required by the FORA land use jurisdictions to install ducts in secondary roads they build as part of their required off-site improvements (i.e., the roads and rights-of-way that connect to the primary network pursuant to FORA's future Utilities Master Plan), and then dedicate the use of those conduits to the local agencies, a complete duct network could be created that provides ready access for fiber optic service to individual parcels. This network could potentially link to a larger regional network if the jurisdictions adjacent to former Fort Ord incorporate telecommunications ducts into their future road improvements and development projects.

To date, FORA has installed telecommunications duct in completed road improvements at UC MBEST and is expected to install duct in the new 2<sup>nd</sup> Avenue, using grant funding sources that are not part of the Community Facilities District (CFD) funding source for CIP road improvements. FORA policy adopted as part of the Base Reuse Plan anticipates that the cost of telecommunications facilities upgrades and expansion to be financed through rate-based mechanisms or other sources such as developer financing. Accordingly, FORA does not currently plan to install ducts in its remaining road improvement projects, although the design of the improvements includes the location for future ducts to be installed by others. See Figure 1 attached to this memorandum for more information on road improvement projects.

***Option 3: Third Party Service Provider Agreements***

There are several types of third party service providers:

- Business service providers, who contract with individual company customers to provide negotiated levels of telecommunications services. These providers typically operate in larger metropolitan areas where they have access to their own fiber networks or those of other providers.
- Fiber-to-the-Home (FTTH) providers, who work with new subdivision developers to provide a range of voice, video, and data services. These providers depend on the ability to access to non-SBC fiber lines. Only a minority of developers are putting FTTH into their projects, although the proportion is likely to increase over time (current and proposed residential developments in former Fort Ord are not expected at this time to include FTTH).
- Municipal-level providers, who typically work with local jurisdictions, typically in rural areas lacking access to broadband or high-speed fiber optic service, to develop and operate an advanced fiber system. These companies tend to be small with limited capitalization, and seek to work with jurisdictions that can provide tax-exempt or other public financing to cover build-out costs. Given the existence of two telecommunications providers for former Fort Ord (SBC and Comcast), and the minimum 25 to 35 percent market penetration required to recover investment, there would be at most an opportunity for one additional former Fort Ord-wide telecommunications provider.

The availability of a former Fort Ord duct network would facilitate access for third-party providers because it would greatly reduce the costs of their providing service to specific customers or developments. This would be enhanced even further if non-SBC backhaul connections were made available to connect to backbone networks such as Level 3's Point of Presence (POP) in Soledad or the numerous POPs in the San Jose area.

***Option 4: Former Fort Ord "Access Non-Profit"***

A new 501(c) non-profit corporation established and controlled by the FORA land use jurisdictions could conduct several activities to facilitate access to high-speed fiber optic service in former Fort Ord. One action could include entering into an agreement with the Corporation for Education Network Initiatives in California (CENIC), the university-controlled non-profit

organization that is currently constructing a Gigabit Ethernet connection to CSU Monterey Bay<sup>1</sup>. The access non-profit could acquire capacity for its own network from CENIC and use the future 2<sup>nd</sup> Avenue telecommunications duct to resell it to other entities, including commercial service providers. This could provide the critical backhaul connection that would enhance the feasibility of other third party service providers serving new businesses at former Fort Ord.

If a connection to CENIC proves infeasible, the access non-profit could pursue construction or lease of a fiber optic line connecting the former Fort Ord area with the national backbone network at the nearest POP in Soledad or San Jose or at another point along the Highway 101 corridor.

An access non-profit could also serve as the manager of a former Fort Ord or larger regional telecommunications duct network and/or act as a third-party service provide as described in the preceding section.

***Option 5: "No Action"***

There is always an option for the FORA land use jurisdictions to take no further action regarding future telecommunications service at former Fort Ord. Based on existing regulatory and franchise agreement requirements, SBC and Comcast will provide a variety of voice, video, and broadband services (the latter up to 1.5 - 3 Mbps or faster), although specific services will vary by customer and location. Developers of subdivisions will likely work with SBC and Comcast to bring service to their sites as part of "joint duct" designs they implement to bring utilities to sites. Similarly, commercial developers will work with SBC to bring its service to their sites. However, Comcast is unlikely to provide service in commercial areas except as a result of negotiations with individual commercial customers.

SBC will use copper lines to bring service to nodes near development projects that are within 16,000 feet of an existing SBC Central Office; otherwise new fiber optic runs will be installed to nodes that are further away. Service to individual developments and customers is planned to be via copper lines except for those customers who negotiate other arrangements<sup>2</sup>. SBC currently has run fiber along Reservation Road to an entry point to the UCMBEST project, as well as to an entry point at CSUMB, and also has fiber near the Ryan Ranch development on the south side of former Fort Ord. See Figure 1 appended to this memorandum for the location of office and industrial areas as well as approximate locations of SBC Central Offices. The use of copper (both residential and commercial) limits broadband speeds to 1.5 Mbps unless a separate arrangement is made between a customer and SBC to bring fiber service to the location, which can be prohibitively expensive. The availability of DSL service at up to 1.5 Mbps may be limited<sup>3</sup>, even in areas with nearby fiber optic lines, by the lack of DSL equipment at SBC's Central Offices (for example, much of Salinas lacks SBC DSL service because the necessary equipment has not been installed in SBC's Central Offices).

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<sup>1</sup> A non-profit is recommended because direct purchase and resale by a local jurisdiction to a telecommunications provider may trigger "private business use" provisions that could affect all of a jurisdiction's tax-exempt financing.

<sup>2</sup> SBC will not negotiate installation of fiber optic with developers; it only negotiates directly with customers.

<sup>3</sup> SBC's DSL service is asymmetrical, meaning upload speeds are much slower (up to 128 Kbps). This is problematic for some business users. Symmetrical 1.5 Mbps service via a T1 line from SBC is often cost-prohibitive for many small businesses.

Comcast has deployed business voice and broadband data services in several markets in the U.S., and within the next several years is anticipated to do so in the Monterey Peninsula. Comcast is also able to lease capacity on its fiber network to users requiring high speed service (e.g., DS-3 service at 45 Mbps, or faster), provided that users can pay for the cost of a connection between Comcast's fiber network and their location.

The primary limitation of the no action option is that it is unlikely to result in the widespread availability of high-speed fiber optic service to future businesses at former Fort Ord. Large businesses will be less affected because the size of their telecommunications requirement enables them to negotiate with SBC or other providers favorable terms for service, including extension of fiber optic lines to their premises (for example, hotels and resorts are experienced in arranging high speed service to new locations in unserved areas). Small- and medium-sized businesses, however, are more severely impacted because SBC is not as aggressive in negotiating terms for fiber optic service to them, and more likely to shift the costs of extending fiber optic lines, which can be prohibitively expensive if there is no adjacent service. Since small- and medium-sized businesses are likely to represent the largest share of potential future employers at former Fort Ord, the lack of readily available fiber optic service may have a significant negative effect upon their interest in locating in new development projects and creating the new jobs called for in the Base Reuse Plan.

Recently, SBC in partnership with Verizon and BellSouth has announced plans to set common standards and conduct joint purchases of fiber optic equipment for an up to \$100 billion initiative to provide fiber-to-the-curb (FTTC) throughout their areas. FTTC would not provide fiber optic service to all buildings, but would provide it close enough that users could readily take advantage of it. This FTTC initiative is spurred by the competitive threat posed by Comcast and other cable companies that now provide voice services on their newly rebuilt digital networks, and the rise of Voice over Internet Protocol (VoIP) telephone service that digitizes telephone calls and bypasses telephone company switching centers (and as a data service may be exempt from taxes and regulations levied on communications services, depending on future legislation and/or Federal Communications Commission actions). SBC is currently conducting two test deployments of this new technology in major metropolitan areas, but does not have a near-term plan for more widespread installation. Local SBC representatives do not believe that this technology will be deployed in the Monterey Peninsula area for many years.

### **Evaluation of Options and Implementation Timing**

The following criteria for setting priorities for telecommunications action options were identified through our work with the Communications Task Force:

- Likelihood that it will increase access to fiber optic service in the near-term for small and medium-sized businesses;
- Minimizes cost of implementation to the FORA land use jurisdictions;
- Level of effort, complexity, and risk associated with implementation by FORA land use jurisdictions; and
- Avoids reliance upon FORA budget or staff resources that do not exist or are unlikely to become available.

The identified options were evaluated against these criteria to sort them into near-term and longer-term priorities. The “no action” option is not considered a valid option because it is likely to result in limited and uneven access to fiber optic service in those areas where office, industrial, and other commercial users with advanced telecommunications needs are likely to concentrate. The four action options were then sorted into those which should be implemented in the near-term, and those which should be considered in the longer-term if previously implemented action options do not result in the desired level of service.

#### ***Recommended Near-Term Actions***

The following action options are recommended for near-term implementation:

1. Enforcement of cable franchise agreements to ensure universal access by residential and commercial customers to cable service; and
2. Development of a duct network to facilitate the installation of existing provider networks and the entry into former Fort Ord of new service providers.

#### ***Recommended Longer-Term Actions***

The following action options are recommended for longer-term implementation, contingent upon the failure of near-term action options to provide the desired level of access to fiber optic service:

3. Agreements with third party service providers (i.e. in addition to SBC and Comcast) to provide telecommunications services in former Fort Ord; and
4. Creation of a former Fort Ord “Access Non-Profit” to facilitate access to advanced telecommunications services.

### **Implementation Strategy for Recommended Near-Term Options**

This section outlines an implementation strategy for each of the targeted action options. It provides the greatest detail for the two action options that are recommended for near-term implementation: enforcement of Comcast franchise agreements; and development of a former Fort Ord-wide duct network.

#### ***Enforcement of Comcast Franchise Agreements***

Cable franchises are currently in place for the majority of the jurisdictions that will annex areas of former Fort Ord, with the existing agreements requiring service to be provided in newly annexed areas. The challenge is to strictly enforce and, when possible, improve standards and the availability of cable communications services.

#### ***Implementation***

In order to implement a more proactive approach to cable contract enforcement there are several strategies that might be considered. One approach would have each local government assigning a specific staff person to be responsible for cable contract enforcement and assuring that this person can spend an average of about 25 percent of their time on these duties. There would be occasions during the life of the cable franchise when significantly more time would need to be spent on cable franchise monitoring and enforcement, such as during franchise renewal, transfer of ownership, or when a significant upgrade or rebuild of the cable system is undertaken. A second strategy would have some or all of the FORA land use jurisdictions working together in a collaborative form to assure more thorough and proactive cable franchise monitoring and enforcement.



*Intergovernmental Coordination of Franchise/Contract Enforcement*

Intergovernmental cooperation regarding cable franchise monitoring and enforcement, particularly in adjacent communities that are all served off the same headend, is a practice that has proven successful in cities and counties across the United States over the past 25 years. Sometimes such cooperation evolved when franchises were first granted. In other cases, it evolves at the point of franchise renewal or at a time when the neighboring local governments recognize that such cooperation will result in better service to residents, public agencies, community groups, business, or the local government organization.

Some of the critical elements affecting newly developing portions of the Monterey County cities and unincorporated areas within former Fort Ord include:

- Quality of typical cable service,
- Timeliness of connections to the new cable system,
- Ability to access services other than video through the cable system (e.g., cable modem service), and
- The ability to access enhanced video services (e.g., local cable access programming).

Each of these important services can be most effectively ensured or monitored through one office dedicated to that function. Vesting all, or selected portions of, cable regulation authority in one office has produced positive results in many areas. If affected jurisdictions can agree, in spite of the hurdles to cooperation, to centralize regulatory functions in one existing or newly created office, the process of regulating critical functions is much healthier from both the cable operator and subscriber points of view. There are two potential strategies that can be used to implement a coordinated strategy to implement franchise agreements:

*Implementation Strategy One -- Coordinated Franchise Enforcement Efforts Related to Cable Operator "Build-Out" of Cable Plant in Former Fort Ord*

This strategy would have the jurisdictions that annex former Fort Ord lands coordinating only on the construction and "build-out" aspects of the franchise agreements. A designated person or office within one of the local governments acting on behalf of all or most of the FORA land use jurisdictions would provide Comcast and other cable operators advanced notice of construction activity so that the operator(s) can coordinate work with other utilities. In addition, the centralized cable construction coordination office -- in conjunction with local permit authorities -- would physically inspect and monitor cable activities in construction areas to ensure that all potential customer sites are built.

This centralized cable construction coordination office would provide reports to City and County managers of progress and alert them to potential problems. (For best results, it is important that these communications occur at the highest possible levels of jurisdiction staff -- e.g., City Manager/County Administrative Officer or their direct assistant.)

A basic interagency letter of agreement among participating jurisdictions, along with a small percentage of franchise fee funding, would be necessary. Jurisdictions would contribute funding proportional to the total participating subscriber base.

*Implementation Strategy Two -- Coordinated Franchise Enforcement Efforts*

Under this strategy all or most of the FORA land use jurisdictions would implement a joint cable franchise monitoring and enforcement office that would oversee all aspects of the cable franchise agreements. In addition to the basic construction and connection requirements in Strategy One, the central cable office would be assigned proactive customer service regulation (ensuring, for example, that outages are corrected within prescribed timelines), with delegated authority from each affected and/or participating jurisdiction. This (more fully funded) office could oversee many additional services (e.g., franchise fee collection, institutional network coordination, triennial performance reviews of the cable operator) as deemed appropriate by the jurisdictions.

Under this second strategy, the jurisdictions may also decide to combine resources and subscriber bases as they renew cable franchises, including the first two to expire -- Del Rey Oaks (February 2004) and Seaside (March 2005). Combining forces and subscriber bases as new franchises are negotiated will help ensure that the critical elements of enhanced cable services (as noted above) are provided inside former Fort Ord areas.

*Implementation Barriers*

It is often difficult for smaller jurisdictions to enter into joint regulation authority, sending scarce resources toward the regulation of services that have previously not been a priority. However, there is growing interest by Monterey County in entering into joint activities in cable issues. In addition, the forthcoming expiration of cable franchises for the City of Del Rey Oaks (2004), City of Seaside (2005), and the Cities of Monterey, Marina and Monterey County (2008), may make cooperation more attractive. This additional incentive should be a main point of any proposal for cooperation.

*Former Fort Ord-wide Telecommunications Duct Network*

There are a variety of factors that affect the option of a developing a former Fort Ord-wide telecommunications duct network.

*Cost*

The cost of a duct network that would be built in conjunction with the backbone road network is not included in CIP. The consultant team worked with Columbia Telecommunications Corporation (CTC) to develop a conceptual cost estimate for a backbone duct network at former Fort Ord<sup>4</sup>. CTC is an engineering consulting firm specializing in providing telecommunications engineering support to state and local governments as well as public, non-profit, and educational institutions, and does work in California. Based on a four-duct design using FORA's specifications<sup>5</sup>, for the remaining five to 10 miles of CIP road improvement projects that are projected at this time to be constructed by FORA (excluding the CIP road improvements

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<sup>4</sup> This is a conceptual cost number based on CTC's experience with many telecommunications duct projects, but is not based on any former Fort Ord-specific design or evaluation of site specific factors. As previously discussed, we expect that developers would pay for ducts under secondary roads that would be tied into the backbone road network. Their cost of installation in conjunction with road improvements is not included in this analysis, however it would be expected to be similar to the number presented here.

<sup>5</sup> The design uses 4-inch Schedule 40 PVC pipe. It does not include interducts to allow multiple users within a single duct, nor does it include access points (vaults, handholes, etc.) that would need to be installed based on provider requirements at their expense. Since each duct can accommodate up to four interducts, this design can accommodate up to 16 telecommunications providers.

projected at this time to be built by developers pursuant to their agreements with local jurisdictions), the construction cost is estimated as shown in Figure 2:

**Figure 2: Estimated Cost for Former Fort Ord Telecommunications Duct Installation**

	<b>New Duct with Road Improvements</b>	<b>New Duct as Stand-Alone Project</b>
Hard & Soft Construction Costs (a)	\$ 8.75 per LF	\$ 18.75 per LF
Duct - Materials	10.00 per LF	10.00 per LF
Contingency at 25% of Hard Construction Cost	<u>1.75</u> per LF	<u>3.75</u> per LF
<b>Total Cost per Lineal Foot (LF)</b>	<b>\$ 20.50 per LF</b>	<b>\$ 32.50 per LF</b>
<b>Cost Per Mile</b>	<b>\$ 108,240 per mi.</b>	<b>\$ 171,600 per mi.</b>
<b>Total Cost - Up to 10 Miles of CIP Roads Still to be Built by FORA (b) up to</b>	<b>\$ <u>1,082,400</u></b>	<b>not applicable</b>
<b>Total Cost - Install Duct in Completed CIP Road Projects</b>	<b>not applicable</b>	<b>to be determined</b>

(a) Includes costs of trenching, labor, related work, as well as 25% soft cost allowance

(b) Figure provided by FORA, does not include road improvements to be built by developers with jurisdiction-required telecommunications ducts

Sources: CTC; FORA; BAE, 2004.

The trench that will be dug for streetlighting as part of CIP financed road improvement work is not large enough to allow the addition of telecommunications ducts. Adding telecommunications ducts requires digging a deeper and wider trench, with more compaction, and more complicated staging and equipment needed by the road contractor. According to FORA's CFD counsel, the provisions of the CFD agreement does not include telecommunications improvements and therefore another funding source besides FORA's impact fees must be provided to finance the installation of telecommunications ducts<sup>6</sup>. Based on an initial discussion with FORA staff, potentially no more than 10 percent of the cost of a larger trench sized for telecommunications ducts could be allocated to the streetlighting project.

Another funding option applies to development projects where developers would seek to construct CIP road improvement projects in lieu of payment of the transportation-related portion of the FORA fee. The conditions of project approval could include construction of duct networks in developer road improvements to FORA's specifications, and dedication of the duct to the local jurisdiction.

Discussion with the Communications Task Force established to work with the consultant team identified the potential for reuse of some of the former Army and other existing ducts at former Fort Ord, including ducts near Ryan Ranch and Highway 218. Information will need to be gathered from parties with knowledge of these ducts, combined with physical assessment of their

<sup>6</sup> Counsel believes that an amendment to the CFD agreement would require approval at an election and the likelihood of approval would be problematic.

condition, to determine if their interconnection with a new duct network could enhance the reach of the network and/or lower development costs.

*Potential Revenues*

A single telecommunications provider installing one duct at former Fort Ord would not experience the economies possible if it is built in conjunction with road improvements, and its costs would be similar to the stand-alone project cost shown in Figure 2. This means that a one-duct system for a single user could cost approximately \$25 per lineal foot or \$132,000 per mile. Thus a duct system that is shared by multiple telecommunications providers, even if they must pay for part of its cost through a user fee, could be much more cost-effective for each provider than constructing its own duct. One challenge for the user fee concept is that SBC does not pay for telecommunications rights-of-way since it is not required to by law, and Comcast has a stated preference for financing and building its own ducts. However, the availability of a duct network could provide Comcast with costs savings to offset some of the additional cost of extending its service to commercial areas and businesses. Other third-party service providers would likely be very interested in such a lower cost solution.

An illustrative example of the total annual user fees that would need to be collected on a cost-reimbursement basis to fully finance telecommunications duct construction, assuming typical tax-exempt debt financing assumptions, and an allowance of \$90,000 for annual management expenses, is shown in Figure 3:

**Figure 3: Illustrative Example of Revenue Needed to Finance a Duct Network**

	<b>New Duct with Road Improvements</b>	<b>New Duct as Stand-Alone Project</b>
Total Development Cost (a)	\$ 20.50 per LF	\$ 32.50 per LF
Annual Debt Service (b)	\$ 1.88 per LF	\$ 2.99 per LF
Operating Cost Allowance (c)	<u>0.46</u> per LF	<u>0.46</u> per LF
<b>Annual Total Cost Recovery</b>	<b>\$ 2.34 per LF</b>	<b>\$ 3.45 per LF</b>

(a) Based on calculation in Figure 2

(b) Based on 20-year bond, 4.5% tax-exempt interest rate, 1.1 debt coverage ratio, 10% bond reserves

(c) Allowance based on annual management cost of \$90,000

Source: BAE, 2004.

The actual figure would depend on what portion of the network was debt financed versus provided by developers as part of their CIP and other road improvements, and the proportion of the network built in conjunction with new road improvements versus retrofitted to the existing road network. Actual fee revenue would depend on the number of participating providers and the timing of their network development. That in turn depends on the rate of development of former Fort Ord lands, which is subject to market conditions and other factors. A more refined estimate would also need to provide an allowance for early years of the network where user fee revenues may not fully cover debt service and operating costs.

*Phasing*

For the duct network to help facilitate access to early former Fort Ord commercial tenants, it needs to be put in place prior to the redevelopment of areas of former Fort Ord. The current

Capital Improvement Program (CIP) phasing times completion of road improvements so that it occurs prior to property transfer and subsequent development.

#### *Users*

While a duct network may generate substantial long-term benefits by facilitating the entry of a number of service providers, the cost of its construction will be easier to justify in the short-term if it is immediately used. "Anchor" users should be sought for the duct network, primarily SBC and Comcast. Because use of the duct network can save SBC and Comcast significant costs in providing new service, there may be a potential to negotiate a mutually beneficial agreement. It should be recognized, however, it may take some time after construction of a duct network before there is entry by new third-party telecommunications providers interested in benefiting from its availability.

#### *Regulatory Considerations*

If an underground duct network is installed by, or under the auspices of, the FORA land use jurisdictions, standards and criteria for use will need to be developed either in a statement of rules or policies or in a prototype agreement. It would be difficult, and perhaps impossible, to require that all providers use the duct network rather than constructing their own ducts, although it may be possible to develop requirements that the duct network be used unless a provider can show that it would be more costly to use the duct network than to construct its own duct. This conclusion results from a provision of the federal Telecommunications Act of 1996, 47 U.S.C. 253, which provides in Section (a): "No State or local regulation, or other State or local legal requirement, may prohibit or have the affect of prohibiting the ability of an entity to provide any interstate or intrastate telecommunications service." It is not clear what "telecommunications service" is, however: it includes switched telephone service but not cable services, and may or may not include Internet access, which determination is the subject of pending proceedings before the Federal Communications Commission.

The matters to address in rules, policies or an agreement would include pricing (which should probably be on the basis of a ratio of the amount of capacity being used to the capital cost of the duct and operating and administration costs), nondiscriminatory access, requirements of a showing that all required regulatory approvals have been obtained, liability and indemnification, protection against bankruptcy, default provisions, bonding and/or letter of credit requirements, provisions for removal of facilities, and dispute resolution provisions.

Many of the considerations, particularly those related to Section 253, would apply also to any developers seeking to install facilities. Thus, for example, the FORA land use jurisdictions cannot grant exclusive rights to use former Fort Ord property (including rights-of-way) to a developer and would be constrained in making any special arrangements with a developer that would not be available to others. Section 253(c) provides, for example:

"Nothing in this section affects the authority of a State or local government to manage the public rights-of-way or to require fair and reasonable compensation from telecommunications providers, on a competitively neutral and nondiscriminatory basis, for use of public rights-of-way on a nondiscriminatory basis, if the compensation required is publicly disclosed by such government."

Section 253 has been the subject of considerable litigation and some courts (in particular, the U.S. Court of Appeals for the Ninth Circuit and federal district courts within that circuit) have applied

constrictive interpretations of what degree of local regulation or control is permissible. Thus, the FORA land use jurisdictions need to consider policies that provide for nondiscriminatory access and that do not favor (or have the appearance of favoring) any particular provider or developer.

#### *Implementation Barriers*

The most significant barrier to a duct network is obtaining the additional financing. The terms of the CFD does not allow the addition of telecommunications ducts to its work, so any additional cost must be covered by another source. FORA does not currently have sufficient financing to implement its CIP, and there is significant pressure to invest any additional available funding in other priorities, such as workforce housing.

Tax-exempt bond financing would offer one source, however it would likely require some type of credit enhancement, and there may be a significant period between when the network is built and when it generates sufficient revenue to fully cover bond debt service and operating costs.

Alternatively, contributions by the FORA land use jurisdictions may be necessary to close the financing gap for a duct network.

Another significant challenge will be ongoing management of the network. To avoid problems of service providers interfering with each others lines, and to ensure the integrity of the network, it is essential that a single entity assume responsibility for coordinating access and overseeing maintenance. This responsibility cannot be handed off to the Public Works departments of the respective jurisdictions. One strategy would be to designate the entity responsible for cable franchise monitoring and enforcement (see discussion in the preceding section) as the manager of the duct network, or designate one of the FORA land use jurisdictions to take the lead role.

#### **Recommendation for Coordinated Action by Local Jurisdictions**

The previous section on enforcement of Comcast franchise agreements outlined potential strategies for coordination. As discussed previously, implementation of the other near-term action option for development of a duct network will also require coordinated action. Ideally, the FORA land use jurisdictions would develop a single mechanism with sufficient authority and resources to successfully implement both near-term action options. Our recommendation for the most effective and efficient near-term coordination mechanism to implement the near-term action options is the creation by the FORA land use jurisdictions of a Memorandum of Agreement (MOA).

The purpose of the MOA would be to coordinate negotiations with Comcast and oversee its build-out throughout former Fort Ord, as well as coordinate implementation of a telecommunications duct network throughout the former Fort Ord (this could include telecommunications duct networks that MOA members install outside former Fort Ord boundaries in conjunction with public works or other development projects).

For more than 20 years local governments in California and many other states have demonstrated that their negotiating strength in dealing with cable companies can be maximized by working collaboratively with neighboring jurisdictions. Contiguous jurisdictions served by the same cable operator are typically in the best position to benefit from a MOA or other agreement established to negotiate and administer cable franchise agreements. The scope of such agreements in other jurisdictions has been as simple as sharing staff and consultant resources to manage the renewal

of individual franchise agreements. Other jurisdictions, such as Gilroy, Hollister, and San Juan Batista, have coordinated action to renegotiate existing franchise agreements with different renewal dates to create new agreements with common terms and conditions and the same renewal date.

The structure of such a MOA can vary considerably, and the terms and conditions of the agreement need to reflect the specific issues that concern the land use jurisdictions. Many years of experience working with multi-jurisdictional bodies has shown that there is no single best approach but rather a variety of approaches. The critical factor is for negotiation of the MOA agreement to have high level participation (City Manager or direct assistant) and for a consensus to be formed on the scope of the MOA. The issues to be addressed in the MOA include its specific authority, assistance to be provided to and by MOA members, and allocation of costs and resources.

There can be a broad range in the cost for establishment of a MOA agreement. Implementation costs can be minimized if the implementation is undertaken by consultants already familiar with the area and the existing cable and governmental relationships. In such cases, depending on the extent of consultant assistance to local jurisdiction staff and counsel, and how much time the relevant City Managers and City Attorneys would dedicate to its negotiation, the range of estimated cost would be between \$0 and \$25,000.

For a MOA between the FORA land use jurisdictions, the ongoing staffing level could be as limited as one full-time professional staff person plus a part-time administrative assistant. This staff team could be augmented as necessary with staff from public works and real estate (right-of-way) to monitor system build-out. Consultants could assist with special tasks such as franchise renewal process, transfer ownership, engineering, and communications related legal expertise. An efficient method for implementation of the MOA would be for one of the FORA land use jurisdictions to be designated as the lead entity, subject to the terms of the MOA agreement. The total cost to be shared by MOA members will be a function of the work to be done and how it is approached; however, there is the potential for significant economies of scale and cost savings through coordinated action when compared with each jurisdiction handling franchise agreement renewal on its own.

The MOA would also provide a cost-effective method for negotiating and managing agreements for access to a potential former Fort Ord telecommunications duct network, including collection of fees.

Should the FORA land use jurisdictions wish to consider either of the longer-term action options described in the next section, a MOA would provide a ready vehicle for planning and implementation. At that point, the MOA members may also wish to consider formation of a Joint Powers Authority to take advantage of the debt issuance and enhanced authorities that may be needed to successfully implement these longer-term action options.

#### ***Coordination with Regional Initiatives***

AMBAG established the Central Coast Broadband Access Project to increase the availability of broadband and fiber optic service throughout the region<sup>7</sup>. The Project's Steering Committee is

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<sup>7</sup> Bay Area Economics worked with AMBAG to prepare the Project's report, *Using High-Speed Internet Technologies for Economic Development: Assessment of Needs and Opportunities* (March 2003), along

currently implementing its "Call to Action" report. This work potentially includes an upcoming test of whether the establishment of public/private partnerships, including a possible Joint Powers Authority, may increase the interest of third-party telecommunications providers in expanding service throughout the region. The East Garrison of former Fort Ord and North Salinas are seen as priority areas because of large-scale near-term new development. The Project is also pursuing other opportunities to increase access to broadband services, including wireless broadband demonstration projects.

The regional orientation of the Broadband Access Project may result in additional options that complement the near- and long-term action options recommended in this memorandum for former Fort Ord. FORA and its land use jurisdictions should participate in the Broadband Access Project's Steering Committee to support the development of additional regional options and demonstration projects, and to determine how to best benefit from the Project's ongoing work.

### **Implementation Actions for Longer-Term Options**

#### ***Third Party Service Provider Agreements***

There are a number of challenges to attracting third party service providers to former Fort Ord, including the reduced number of such providers after recent telecommunications industry consolidation, the high cost of constructing an additional network independent of the SBC and Comcast networks, and the limited market potential for a secondary market such as the Monterey Peninsula area when compared with larger metropolitan areas. Based on conversations with service providers who serve secondary markets, we expect that the FORA land use jurisdictions would need to provide a sizable capital contribution of a couple million dollars or more, as well as access to municipal tax-exempt financing, to attract a third-party service provider at this time, in addition to providing access to a duct network.

As former Fort Ord sites are developed it is likely that there will be one or more telecommunications service providers brought in by individual customers to serve them who may be able to provide service to other former Fort Ord locations. Of planned residential developments at former Fort Ord, at this time only the Army's Residential Communities Initiative is expected to enter into an agreement with a third party provider for voice, video, and data services. This service will be a subsidiary of Verizon pursuant to regulatory provisions for master planned communities under single ownership and cannot be extended into other adjacent areas. If Verizon uses this infrastructure to provide service through an entity not subject to these regulations, it could provide telecommunications services throughout former Fort Ord, including fiber optic service.

Some of the large businesses who locate at former Fort Ord are likely to use third party providers such as Level 3 or XO Communications. Since the high cost of extending fiber service is absorbed by the first customer, the cost of providing access to subsequent users on the same fiber run is greatly reduced. Over time there are likely to develop "pockets" of access to third party fiber service in certain areas.

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with the subsequent report, *A Call to Action: Increasing High-Speed Internet Access and Usage for Regional Economic Development* (June 2003).



The FORA land use jurisdictions should continue to monitor the extent of access to fiber service that results from implementation of the near-term action options, as well as any third-party service arranged by individual tenants. Should this result in a lack of adequate coverage to office, industrial, and mixed-use areas, the FORA land use jurisdictions should then consider issuing a solicitation for a contract with a third-party service provider.

#### *Implementation Challenges*

A significant challenge for a future third party service provider solution will be the need for it to contract with an entity that will not be affected by FORA's future dissolution. An "access non-profit" as described in the next section would be an example of one such potential entity.

Availability to a duct network would greatly reduce the cost of a third party service provider developing its network. A service provider would prefer exclusive access to a network, although a public entity would likely not be allowed to provide exclusive access. Exclusive access is important for a former Fort Ord-wide third party solution because the residential areas will provide a built-in subscriber base that reduces revenue risk for the provider. With SBC and Comcast in place, it is unlikely that there will be sufficient market share available to support more than one additional former Fort Ord-wide service provider. Should the duct network be transferred to a private entity (such as an "access" non-profit) it may be possible for the private entity to arrange exclusive access.

There is the potential that the need for potential capital contribution or other subsidy for a third-party service agreement may lessen in the future as a result of changes in telecommunications regulations, advances in technology, greater industry and capital market interest in secondary market locations, and demonstrated market acceptance of new space developed at former Fort Ord.

#### *Former Fort Ord "Access Non-Profit"*

The creation of a former Fort Ord "Access Non-Profit" to acquire wholesale capacity from the CENIC network at the connection point on the CSUMB campus for its use including resale, management of a duct system within former Fort Ord, arrangement of service agreements with third party service providers, and/or implementation of other programs presents the issues typical of development of new non-profit organizations. These include the scope of its purpose as set forth in articles of incorporation, composition of the Board of Directors, and financial obligations of the FORA land use jurisdictions, among other matters.

A new non-profit will require initial start-up funding, with the amount based on the scope of its responsibilities. While ongoing operations should be able to be financed from user fees, the non-profit may require access to credit enhancements for capital costs associated with development of a third party network. These credit enhancements would most likely need to be provided by the FORA land use jurisdictions.

It should be noted that the scope of such a non-profit need not be limited to former Fort Ord, and that its purpose could be expanded to increase access to fiber and broadband services throughout the Monterey Peninsula and Salinas area.

#### *Implementation Challenges*

Decisions on the establishment of an access non-profit, particularly the types and amounts of financial contributions, will require developing a consensus among the FORA land use

jurisdictions on the need for the non-profit, its scope, and the formula for financial contributions. This represents a significant departure from the historical reluctance of the FORA land use jurisdictions to create entities that can act independent of individual jurisdictions.

A related challenge is obtaining access to the needed funding. Some portion of the funding may be available from grant sources (such as EDA funding), and other funding may be possible through tax-exempt bond sources available to non-profits. However, the nature of a telecommunications non-profit and its lack of operating history will likely require some type of credit enhancement. FORA's members, along with most local jurisdictions in the State, are currently under severe fiscal pressure, which may limit the near-term potential to assume such an obligation. Further research would be required to address the legal and fiscal questions related to providing such assistance.

### **Factors Requiring Ongoing Evaluation**

The research and analysis conducted for this and previous memoranda is based upon current economic factors, including the status of the telecommunications industry and available capital, as well as technological factors and the current pre-development status of most of former Fort Ord. Regulatory factors have a huge impact on the availability of telecommunications services, particularly the ability of third parties to access existing networks. All of these factors are fluid and change on a continuing basis. The FORA land use jurisdictions should continue to monitor changes in the economic, technological, and regulatory environment for telecommunications services to understand how these may affect the services available to future tenants at former Fort Ord. Such monitoring could include ongoing surveys of existing and prospective tenants regarding telecommunications needs, as well as mapping of currently available and newly provided services for use by developers and third-party service providers.

### ***Technology Development***

The ongoing rapid evolution of telecommunications technology is likely to result in new types of service and lower cost networks in the near- and long-term. Many of the technologies that are currently in an early stage of development or not ready for wide-scale deployment, will move into commercial usage. Key examples include:

- The continuing evolution of wireless technologies that hold the promise of high-speed service through a limited number of transmitters, greatly reducing the cost of network development;
- New means of transmitting broadband Internet access, such as the use of electrical utility lines, and technologies to increase the speed of connections over existing lines; and
- New technologies for installing fiber optic lines to individual businesses and homes that result in much lower installation cost than current practices.

### ***Regulatory Considerations***

Since passage of the Telecommunications Act of 1996, the local incumbent telephone companies, long distance providers, and cable television providers have been involved in ongoing battles in the federal courts and regulatory bodies regarding limits on the services they may offer and their obligation to open their networks to other parties. SBC has explicitly stated that the current regulatory regime has caused it to pull back on investments to extend its network and implement

more advanced technologies. Advances in technology, particularly the use of Internet Protocol for voice services (commonly referred to as VoIP), have made cable companies direct competitors to existing telephone companies.

Many observers consider the existing regulatory structure, particularly its different restrictions for various types of service providers, in an environment where all telecommunications will soon be digital and able to be provided by any telecommunications provider, to be a limiting factor in expanding the availability of broadband and advanced fiber services. Others are concerned about changes in regulations that may reduce the number of potential service providers.

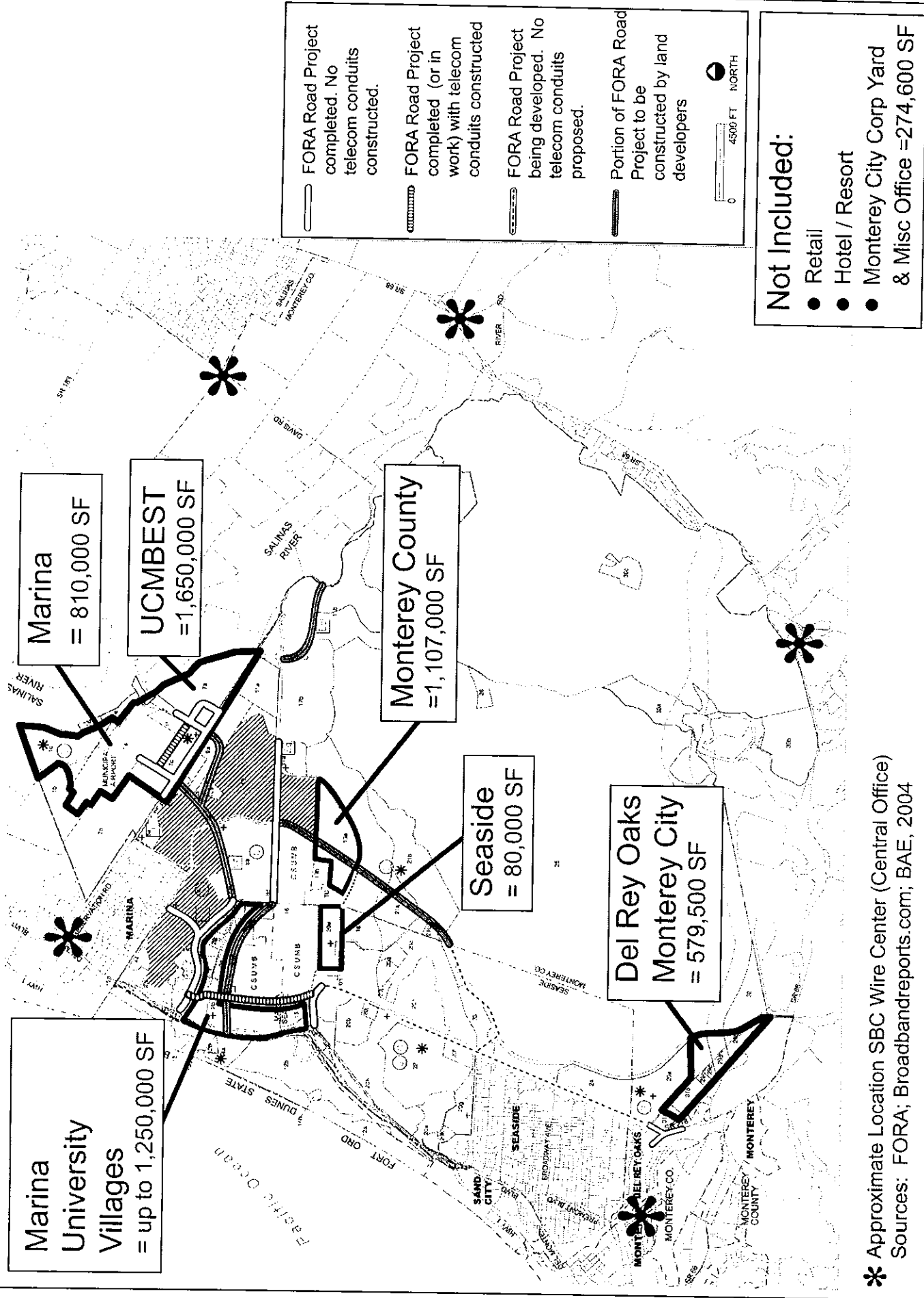
### **Action Plan**

As described in the preceding sections, the consultant team recommends that the FORA land use jurisdictions take the following actions:

- 1) Approve the recommended near-term action options of: (1) enforcement of Comcast franchise agreements; and (2) creation of a former Fort Ord-wide telecommunications duct network;
- 2) Agree to establish a Memorandum of Agreement (MOA) to obtain resources needed for implementation of the near-term options and allocate costs. One jurisdiction should be designated as the lead jurisdiction for implementation of MOA activities;
- 3) Determine appropriate options to encourage jurisdictions to contribute at their discretion towards the initial cost of up to an estimated \$25,000 for negotiation and implementation of the MOA, as well as the ongoing staffing, consultant, and other operating costs;
- 4) Develop a joint strategy on Comcast franchise renewal through the MOA framework, with the objective of a single coordinated franchise renewal negotiation involving all of the FORA land use jurisdictions;
- 5) Establish common duct network construction requirements through the MOA framework for developer constructed road improvements, including FORA CIP projects and developer off- and on-site road improvements;
- 6) Formulate a funding strategy that can generate in the range of an estimated \$550,000 to \$1.1 million in additional non-FORA funds to construct telecommunications duct improvements in selected future FORA CIP road improvement projects; and
- 7) Monitor the fiber optic and telecommunications requirements of prospective tenants for new commercial development in former Fort Ord, track the installation of new fiber optic service by tenants, and make this information available to prospective tenants, telecommunications service providers, developers, and other interested parties.

Successful monitoring of the implementation of the selected action options, availability of service in former Fort Ord, and larger trends in the telecommunications industry are important elements in successful implementation of the Base Reuse Plan and require high level involvement by City Managers or direct assistants. This monitoring activity will determine whether the initial set of action options are successful in providing the desired fiber optic service or if additional action options should be considered for implementation. FORA's Administrative Committee should consider this matter on a regular basis, as often as quarterly, and forward information and recommendations as necessary to the FORA Board.

Figure 1: Potential Former Fort Ord Office / Mixed-Use / Industrial Development



\* Approximate Location SBC Wire Center (Central Office)  
Sources: FORA; Broadbandreports.com; BAE, 2004