

FLORIDA PUBLIC SERVICE COMMISSION
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MEMORANDUM

August 28, 1997

TO: DIRECTOR, DIVISION OF RECORDS AND REPORTING (BAYO)

FROM: DIVISION OF COMMUNICATIONS (TRUBELHORN) *MTJ*
DIVISION OF LEGAL SERVICES (PELLEGRINI) *CF MBS*

RE: DOCKET NO. 950814-TL - REVIEW OF ORDER APPROVING
EXPERIMENTAL TARIFF TO PROVIDE LOCAL EXCHANGE SERVICE TO
DOG ISLAND VIA CELLULAR LINK TECHNOLOGY BY ST. JOSEPH
TELEPHONE COMPANY

AGENDA: SEPTEMBER 9, 1997 - REGULAR AGENDA - PROPOSED AGENCY
ACTION - INTERESTED PERSONS MAY PARTICIPATE

CRITICAL DATES: NONE

SPECIAL INSTRUCTIONS: S:\PSC\CMU\WP\950814TL.RCM

CASE BACKGROUND

About eleven years ago, a group of property owners on Dog Island requested telephone service from St. Joseph Telephone and Telegraph Company (St. Joseph or company). Although Dog Island is in St. Joseph's service territory, the company did not initially provide service to the area or report the service requests as required by 25-4.0185(1), Florida Administrative Code. Providing service to the island presented, and still presents, many unusual conditions: for example, (1) the four-mile, underwater extension of cable facilities from the company's Carabelle office to the island; (2) environmental concerns from governmental agencies (since Dog Island is a "coastal barrier island") and from the property owners themselves wishing to conserve the natural beauty of their island; (3) the island's vulnerability to storms in the Gulf of Mexico; and (4) the limited access to the island (no bridge or highway to the mainland).

When staff became aware, in 1993, that fifty residents had requested phone service (the island had water and power services), staff requested that the company provide service to the island. On December 13, 1994, the company filed a Petition for Declaratory Statement concerning the provision of telephone service to Dog

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FPSC-RECORDS/REPORTING

DOCKET NO. 950814-TL
DATE: August 26, 1997

Island. In Order No. PSC-95-0375-FOF-TL, issued March 15, 1995, the Commission denied the Petition, concluding that the petition lacked specific information to issue a declaratory statement (Attachment A, pages 11-15). In June of 1995, St. Joseph filed a proposed tariff to provide local service by reselling cellular telephone service. The proposed tariff was approved as "experimental" by the Commission by Order No. PSC- 95-1178-FOF-TL, issued September 20, 1995 (Attachment B, pages 16-21).

Due to Hurricane Opal, the company was unable to install the cellular link equipment to the island's customers until November 1995. The service is provided through a billing arrangement between the company and 330° Communications in which St. Joseph pays a usage rate for each Dog Island subscriber number. In response to staff's March 1996 data request, the company provided traffic usage data, cellular air time costs, and equipment costs from March through June of 1996. In its September 26, 1996, recommendation, staff reviewed the cellular service and compared its costs and capabilities with traditional local exchange service provided via a fiber cable to the island, and determined that traditional service was the economical choice with a break-even period of two to three years. Staff also considered how telephone facilities might affect the island's natural environment. Since telephone facilities could be buried within existing roadways or could be attached to existing power poles, staff believed the impact to be small, but nevertheless controversial.

At the October 29, 1996, Agenda Conference, the Commission deferred action on the recommendation and directed the company and staff to further study how best to serve the island. In December of 1996, the company hired Engineering Associates (EA) of Atlanta, Georgia, to perform a comprehensive study.

In January of 1997, staff received a petition signed by 95 Dog Island residents attesting that their cellular service was poor and supporting the installation of fiber cable to the island. Given several subscriber complaints, staff tested five lines on Dog Island on February 25, 1997. These tests showed unsatisfactory noise levels and fluctuations on three of the lines.

EA completed its study on August 1, 1997. EA reported on ten alternatives to serve the island. Two proposed placing submarine cable to the island; two proposed using microwave facilities; and six proposed using wireless services. EA recommended an Advanced Fibre Communications (AFC) Spread Spectrum Radio system to the island, and copper distribution and Digital Loop Carrier (DLC) on the island.

DOCKET NO. 950814-TL
DATE: August 26, 1997

In its August 1, 1997, letter, the company proposed replacing the existing cellular service with AFC's Spread Spectrum Radio service to the island and copper distribution cables and DLC on the island. This recommendation addresses the company's proposal.

DISCUSSION OF ISSUES

ISSUE 1: Should the Commission approve the experimental tariff to provide cellular link local access telephone service to the customers on Dog Island as a permanent tariff?

RECOMMENDATION: No. The cellular link local access telephone service to customers on Dog Island is not cost effective, is not of adequate quality, and is not equal to the service provided other St. Joseph subscribers as Section 364.08(1), Florida Statutes, requires. Also, the company has proposed replacing the cellular service with radio and copper distribution service. Therefore, the tariff should not be made permanent, but should remain in effect until St. Joseph provides telephone service to the island as recommended in Issue 2.

STAFF ANALYSIS: There are currently 96 residential and 2 business subscribers on Dog Island. It is reasonable to expect that 125 access lines will be in service in five years. St. Joseph expects the number to gradually increase to a maximum of 180 subscribers. Two new luxury homes were added in 1996 to the 125 dwellings on the island. There is also an 8-unit hotel, yacht club, a landing strip for airplanes, and a volunteer fire department headquartered on the Island. The island is seven miles long and is subdivided into 410 parcels for private use- many of which are owned by the Dog Island Conservation District and will remain undeveloped. The rest of the island is dedicated as a wilderness preserve.

In its July 31, 1996, response to staff's data request (Attachment C, pages 22-26), the company provided (1) its total non-recurring costs to provide cellular service to Dog Island subscribers through June 1996, and (2) the total cellular usage (air time) costs and minutes of use from March through June 1996. Using that information, staff calculated the costs to provide cellular service. The cellular costs include a fixed component for equipment (estimated at \$562 per subscriber) and a variable component for air time (estimated at \$620 per subscriber per year). As discussed later in Issue 2, the Company's estimate to provide Spread Spectrum Radio service to the island and distribution cables

DOCKET NO. 950814-TL
DATE: August 26, 1997

on the island is \$264,451. This amount is the fixed component, and little or no variable costs are expected. Economic analysis of the above costs (assuming 100 subscribers) yields a break-even point of two to three years, meaning that (after three years) the radio alternative is the least cost choice among the current cellular service and the viable alternatives presented in Issue 2.

Staff has evaluated the signal quality and visited several sites on Dog Island. For cellular phones, the signal is generally strong, and the phone units are of high quality, but the service provided does not compare favorably with land-line telephone service. For example, the phones on Dog Island have a strong background hiss. Some customers have lost their connection during a conversation and have had to redial their party to continue the call. On February 25, 1997, responding to several Dog Island subscriber complaints, staff engineers tested five lines on Dog Island at the Fire Station and two residences (Attachment D, page 27). Staff found (1) unsatisfactory noise levels and fluctuations on three of the lines, (2) an interfering pulse every 11.5 seconds that eclipsed signal and voice communications, and (3) an unsatisfactory noise impulse count on one line. Standard telephone equipment (CPE) for use in other parts of the home is not compatible with the cellular phones. Fax services and Internet access, available over regular telephone lines within the rest of the Carrabelle exchange, are unreliable. In January of 1997, staff received a petition (Attachment E, pages 28-32) signed by 95 Dog Island residents attesting that their cellular service was poor and supporting the installation of fiber cable to the island. Cellular phones also lack the security and privacy of regular land line phones.

Section 364.08(1), Florida Statutes, states:

A telecommunications company may not
extend to any person the benefit of any
. . . . facility not regularly and uniformly
extended to all persons under like
circumstances for like or substantially
similar service.

Staff believes that Dog Island subscribers are in like circumstances with the rest of St. Joseph subscribers, pursuant to Section 364.08(1), Florida Statutes. Therefore, St. Joseph should provide Dog Island customers a service that is equal in quality to the service provided to all of its other customers. Since, as discussed above, St. Joseph's current cellular service to Dog Island subscribers provides unsatisfactory telephone service and unreliable Fax/Internet access service, it is unequal to the

DOCKET NO. 950814-TL
DATE: August 26, 1997

service provided other St. Joseph subscribers. Therefore, it is staff's opinion that the cellular service to Dog Island violates 364.08(1), Florida Statutes.

Staff recommends that, because the experimental tariff provides telephone service that is not cost effective, is not of adequate quality, is not equal to the service provided other St. Joseph subscribers pursuant to Section 364.08(1), Florida Statutes, and because the company has proposed to replace the cellular service with Spread Spectrum Radio service, it should not be made permanent. The tariff should remain in effect until St. Joe provides telephone service to the island as recommended in Issue 2.

ISSUE 2: Should the Commission approve the Company's proposal to construct Spread Spectrum Radio service to Dog Island and copper distribution facilities and DLC on the island to provide switched local exchange telephone service?

RECOMMENDATION: Yes. The Commission needs to ensure that St. Joseph Telephone & Telegraph Company provides telephone service to Dog Island subscribers per Section 364.15, Florida Statutes. As discussed in Issue 1, St. Joseph needs to provide its Dog Island subscribers service equal to the wireline service provided to its other Carrabelle subscribers. Staff believes that the Company's proposal to install Spread Spectrum Radio service with copper distribution and DLC on the island will provide such service, once it is fully operational and once it has passed staff's service evaluation tests. Staff recommends that the Commission order the company to report quarterly on its efforts to gain Dog Island Conservation District approval for the construction on Dog Island, and on the completion status of the items on its timetable for providing Spread Spectrum Radio service to Dog Island. The report should include the name of an official contact for the Dog Island Conservation District with respect to St. Joseph's application. Staff recommends that the company provide the proposed service within one year from the date of the Commission Order approving the company's proposal. Staff engineers should conduct a service evaluation 120 to 180 days after this radio/copper service is provided to St. Joseph subscribers, to confirm that satisfactory service is being provided.

DOCKET NO. 950814-TL
DATE: August 26, 1997

STAFF ANALYSIS: Section 364.15, Florida Statutes, states:

Whenever the Commission finds, on its own motion or upon complaint . . . that any additions or extensions should reasonably be made to any telecommunications facility . . . in order to secure adequate service or facilities for telephone service, the commission shall make and serve an order directing that such . . . additions, or extensions be made

Since the above statute requires adequate service and since the current cellular service to Dog Island is inadequate, the Commission should approve the company's proposal to construct Spread Spectrum Radio service. Also, Section 364.08 (1), Florida Statutes, provides that:

A telecommunications company may not . . . extend to any person . . . the benefit of any . . . facility not regularly and uniformly extended to all persons under like circumstances for like or substantially similar service.

Additionally, staff notes that under both state and federal concepts of universal service, St. Joseph is charged with providing telecommunications services to Dog Island residents within a reasonable time of a service request. Section 364.025(1) Florida Statutes, states:

For a period of 4 years after January 1, 1996, each local exchange telecommunications company shall be required to furnish basic local exchange telecommunications service within a reasonable time period to any person requesting such service within the company's service territory.

47 U.S.C. § 254(b)(3), Telecommunications Act of 1996, states:

Consumers in all regions of the Nation, including . . . those in rural, insular, and high cost areas, should have access to telecommunications and information services . . . that are reasonably

DOCKET NO. 950814-TL
DATE: August 26, 1997

compared to services provided in urban
areas

At the October 29, 1996, Agenda Conference, the Commission directed the company and staff engineers to further study how best to serve the island. In December 1996, the company hired Engineering Associates (EA) to perform a comprehensive study. EA completed its Final Report and Recommendation on August 1, 1997 (Attachment F, pages 33-50).

EA studied ten alternative methods of providing telephone service to the island:

Two methods considered installing submarine fiber cable to the island with copper or fiber distribution cables on the island. EA expressed reservations about the installation of submarine cable to the island. It noted significant environmental concerns about the crossing. It stated that a marine survey of submerged vegetation and obstacles would be required to determine the exact route. It also noted that armored cable should be buried at a depth of 10 ft due to the characteristics of the sea floor and the boat traffic within St. George Sound. While staff still supports its installation proposal made in the September 26, 1996, recommendation (Attachment G, pages 51-57), staff believes that the Company's radio proposal, discussed below, provides adequate telephone service while avoiding the environmental and permitting concerns of a submarine crossing of St. George Sound.

Two methods considered installing microwave facilities to the island with copper or fiber distribution cables on the island. These alternatives require the construction of an antenna tower on the island that would be subjected to high winds and erosion.

The remaining six methods considered wireless options from several vendors. EA's concerns about five of these six include FCC permit requirements for licensed cellular frequencies, a need to construct a base station at each residence and a wireline backhaul facility, limited capacity, and other concerns.

The cost estimates of these alternatives are summarized in Attachment F, page 43. Costs range from \$878,684 for the submarine cable with Fiber distribution option to \$229,471 for the Optaphone wireless option. The Octaphone wireless option is not a viable option due to its limited capacity, and frequency clearing and licensing obstacles.

In its August 1, 1997, letter (Attachment H, pages 58-59), the company, concurring with EA's recommendation, proposes to install

DOCKET NO. 950814-TL
DATE: August 26, 1997

AFC's Spread Spectrum Radio service to the main (eastern) portion of the island and to the western portion of the island (Attachment F, page 47), at an estimated cost of \$264,451. This proposal should alleviate the environmental and permitting concerns associated with crossing the Gulf and crossing the two washover areas on the west side of the island. The company also proposes to install copper distribution cables and AFC Digital Loop Carrier (DLC) on the island. The distribution cables would be buried on the larger, eastern side of the island where most of the subscribers are located, and aerial drops would be placed on existing power poles on the western side of the island to serve less than ten subscribers. Staff believes that this distribution plan mitigates many environmental concerns, since it does not call for buried cable across the washover areas, and since the DLC equipment allows for smaller distribution cables. Given the proposed distribution cabling cost estimate of \$149,311 (Attachment F, page 41- \$111,311 + \$38,000), staff recognizes that EA and the company have reduced the company's initial \$250,000 (Attachment G, page 56) estimate for distribution cables on the island by more than \$100,000.

The proposed AFC Spread Spectrum Radio system will look like wireline service to Dog Island subscribers. It is a wireless system that operates in license-free ISM (Industrial-Scientific-Medical) spectral frequency bands, 2.4 and 5.7 Gigahertz (Ghz), as allocated by the FCC. FCC certification is required; FCC licensing and permission to use certain frequencies, however, are not. Spread spectrum means that the signals are spread over a range of frequencies during transmission and reception. Spread Spectrum Radio was first developed by the military to deter jamming and eavesdropping by spreading the radio signal across a wide bandwidth. Staff believes, therefore, that using Spread Spectrum Radio will provide security and privacy equal to regular land-line phones.

AFC's proposed system for serving Dog Island will send Spread Spectrum Radio over a four-mile, line-of-sight link, at 5.7 Ghz from a local exchange terminal (LET) at Carrabelle's tower to a remote subscriber terminal (RST) near an existing power pole on the east side of the island. Radio signals of 2.4 Ghz will then travel, in series, to two RSTs across the washover zones to the west side of the island. The RSTs will be collocated with the DLC equipment in standard DLC cabinets. The copper distribution will run from each RST to each subscriber. The proposed radio system is digital, and should support all central office features. The Spread Spectrum Radio system will provide two E1 signals (30 channels each) that will generate 240 telephone lines (125 64Kbs channels) beyond the RSTs and DLC equipment. St. Joseph has

DOCKET NO. 950814-TL
DATE: August 26, 1997

several AFC DLC systems in use in the Carrabelle exchange. The Dog Island DLCs can provide the same voice, fax, data, and ISDN services that can be provided by the Carrabelle DLC systems. This means that the Dog Island service should equal the service provided to other Carrabelle subscribers, satisfying staff and Dog Island subscriber concerns about the current inequality in service. Staff believes, therefore, that the proposed radio system and copper distribution/DLC facilities will provide adequate telephone service as required by Sections 364.15 and 364.08(1), Florida Statutes.

An FCC supervisor advised staff that spread spectrum technology is being used satisfactorily across the United States, and that the FCC is approving certifications in about 45 days from receipt of an application. AFC is apparently a new entrant in the field, having installed its first spread spectrum radio system at Sanctorum, Mexico, for TelMex of Mexico, in March of this year. It serves 240 telephones over a 15 kilometer, line-of-sight distance. Laboratory testing of the AFC system is nearing completion. When completed, two technical reports will be generated for FCC submission that will be included in AFC's certification application to the FCC. AFC anticipates that the Spread Spectrum Radio system will perform satisfactorily to Dog Island due to the robustness of its signal and due to the short line-of-sight distance involved (four miles from Carrabelle exchange to Dog Island). AFC also expects that these factors and its on-site adjustments of the power output and receiver levels will allow the system to overcome concerns about the adverse effects of Gulf storms, fog, and rain.

St. Joseph's August 19, 1997, letter presents a timetable for providing AFC's Spread Spectrum Radio service to Dog Island; it extends 250 days from approval by the Dog Island Conservation District to service provisioning (Attachment I, pages 60-61). St. Joseph attests that it has begun seeking approval from the Dog Island Conservation District for the required construction. This approval could be difficult to obtain due to the strong environmental concerns of the District and some residents. Staff offers to assist St. Joseph in attaining Conservation District approval, and requests the company notify us when we might help to resolve problems or delays. Staff believes that the overall proposal of radio service to the island and over the washover zones, buried distribution cable and DLC on the eastern portion of the island, and aerial distribution west of the washover zones is a reasonable compromise that deals effectively with environmental concerns for the sea bed and the island itself. Staff recommends that the company provide the proposed service within one year from the date of the Commission Order approving the company's proposal. As previously noted, Section 364.025(1), Florida Statutes, requires

DOCKET NO. 950814-TL
DATE: August 26, 1997

the local exchange company to furnish service within a reasonable time period. Staff believes that the company has asked Dog Island residents to wait more than "a reasonable time" for adequate telephone service.

In conclusion, staff recommends that the Commission approve St. Joseph's proposal to construct Spread Spectrum Radio service to and along Dog Island and to construct copper distribution cables and DLC on the island. Staff believes that, once this combined radio and copper system is fully operational, it should provide to Dog Island subscribers service that is both adequate and equal to that provided other St. Joseph subscribers. Since the current cellular service is not satisfactory, staff recommends that the Commission order St. Joseph to report quarterly on its efforts to gain Dog Island Conservation District approval for the construction on Dog Island, and on the completion status of the items on its timetable for providing radio service to Dog Island. The report should include the name of an official contact for the Dog Island Conservation District with respect to St. Joseph's application. Staff engineers should conduct a service evaluation 120 to 180 days after this radio/copper service is provided to St. Joseph subscribers, to confirm that satisfactory service is being provided. The proposed radio/copper system should be serving Dog Island subscribers within one year from the date of the Commission Order approving the Company's proposal.

ISSUE 3: Should this docket be closed?

RECOMMENDATION: No. This docket should not be closed until St. Joseph provides telephone service to Dog Island residents that is adequate and equal to the service provided other Carrabelle subscribers.

STAFF ANALYSIS: The current cellular service to Dog Island is not adequate as required by 364.15, Florida Statute; nor is it equal to the service that St. Joseph provides other Carrabelle subscribers, as required by 364.08(1), Florida Statutes. The proposed Spread Spectrum Radio service is expected to provide adequate service to Dog Island residents. This docket should not be closed until such service is provided and confirmed through service evaluation tests.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition for Declaratory) DOCKET NO. 941293-TL
Statement Concerning Potential) ORDER NO. PSC-95-0375-FOF-TL
Service to Dog Island by St.) ISSUED: March 15, 1995
Joseph Telephone & Telegraph)
Company)
_____)

The following Commissioners participated in the disposition of this matter:

SUSAN F. CLARK, Chairman
J. TERRY DEASON
JOE GARCIA
DIANE K. KIESLING
JULIA L. JOHNSON

ORDER DENYING PETITION FOR DECLARATORY STATEMENT

BACKGROUND

BY THE COMMISSION:

On December 13, 1994, St. Joseph Telephone & Telegraph Company (St. Joseph) filed a Petition for Declaratory Statement (Petition) concerning the prospective provision of telephone service to Dog Island. Dog Island is described in the petition as an unbridged barrier island in Franklin County, Florida, within St. Joseph's certificated service territory.

The petition notes that some residents of the island are opposed to conventional telephone service because of adverse environmental impacts, but at least one resident is opposed to cellular service. In the petition, St. Joseph describes conventional telephone service to Dog Island to encompass:

switched telephone service provided by wire (either buried or overhead) and/or submerged cable or microwave or some combination thereof.

Petition, p. 2.

St. Joseph believes that more residents would support wireless (e.g. cellular) service than conventional wireline service. St. Joseph also notes that cellular service is currently available to island residents, but not through St. Joseph or at rates comparable

to local exchange service provided in the rest of St. Joseph's service territory.

St. Joseph asks us to answer five questions concerning facts described as unique to St. Joseph concerning the provision of telephone service to Dog Island.

DISCUSSION

St. Joseph first asks whether §364.03(3), Florida Statutes, requires St. Joseph to provide conventional wireline telephone service to Dog Island, if one or more residents of Dog Island make a formal request for such conventional service. We conclude the petition lacks sufficient information for us to issue a declaratory statement as to this issue.

§364.03(3), Florida Statutes, provides:

Every telecommunications company shall, upon reasonable notice, furnish to all persons who may apply therefor and be reasonably entitled thereto suitable and proper telecommunications facilities and connections for telecommunications services... [e.s.]

The implication of the petition is that wireless, e.g., cellular, service may be both perceived to be by residents and in fact more suitable than conventional wireline service for the peculiar circumstances of Dog Island. However, without any facts establishing a comparison of either costs or other factors as between wireless and the various listed conventional service modalities, there is an insufficient basis on which to characterize either wireline or wireless service as more "suitable and proper" for Dog Island than the other.

St. Joseph next inquires whether §364.08(1), Florida Statutes, requires St. Joseph to extend wireless facilities, e.g., cellular, to one or more persons on Dog Island when such facilities are not regularly made available and uniformly extended to all persons in St. Joseph's territory. Also, St. Joseph inquires whether §364.08(2), Florida Statutes, allows St. Joseph to provide wireless, e.g., cellular, service to residents of Dog Island at less than the cost of such service to St. Joseph. We conclude that we lack sufficient information to issue a declaratory statement as to these issues.

As to part one of the question, §364.08(1) states, in pertinent part,

A telecommunications company may not...extend to any person...the benefit of any...facility not regularly or uniformly extended to all persons under like circumstances for like or substantially similar service.

Though further facts might well establish that the difficulties of providing conventional wireline service on Dog Island are such that no other customers of St. Joseph are in "like circumstances", the absence of any actual cost comparison leaves such a conclusion unsupported at this point.

As to part two of the question, §364.08(2) prevents any telecommunications company from giving

any free or reduced [rate] service between points within this state.

In other words, St. Joseph may not deviate from scheduled rates. However, that still begs the question of whether St. Joseph's prospective Dog Island customers are in "like circumstances" with the rest of St. Joseph's subscribers. Absent any cost or other comparisons for wireless and wireline service, that question cannot be answered, or scheduled rates determined. See Issue 3, infra.

St. Joseph next inquires whether §364.09, Florida Statutes, and 364.14(1)(a), Florida Statutes, allow St. Joseph to impose a surcharge on Dog Island subscribers for service, even though the calling scope for such subscribers would be identical to Carrabelle subscribers who are not charged a surcharge. Finally, St. Joseph asks how the Commission would calculate an appropriate surcharge pursuant to §364.14(1), Florida Statutes, in the event that a surcharge is found lawful and deemed to be appropriate. We conclude that we lack sufficient facts to issue a declaratory statement as to these issues.

Again, the cited statutes, §364.09 and 364.14(1)(a), Florida Statutes, prohibit charging greater or lesser compensation for telecommunications services rendered as between persons

under the same or substantially the same circumstances and conditions.

§364.09. The circumstances of St. Joseph's Dog Island customers and others might not be the same or substantially the same when a comparison of costs, construction difficulties and other impacts of wireless as compared to wireline service are considered. However,

that information has to be supplied so as to provide a basis for that conclusion, if that conclusion is, in fact, correct.

Similarly, those comparative factors would be relevant to whether any difference in charges would be unjust, unreasonable, unjustly discriminatory, unduly preferential or violative of Chapter 364.

St. Joseph next inquires whether the provision of wireless, e.g., cellular, service to Dog Island by St. Joseph would constitute an unreasonable or undue preference or advantage to any person or locality contrary to the requirements of §364.10, Florida Statutes. We conclude that we lack sufficient facts to issue a declaratory statement as to this issue.

Again, the answer would depend on a comparison between the costs, construction difficulties and other impacts of wireless as compared to wireline service in the particular circumstances of Dog Island. Those have not been supplied in any detail by St. Joseph.

Finally, St. Joseph asks whether the Commission could decide under Chapter 364, Florida Statutes, that the most reasonable method of providing telephone service to Dog Island is to provide a wireless, e.g., cellular, telephone service. We conclude that we lack sufficient facts to issue a declaratory statement as to this issue.

Going back to §364.03(3), the statute only requires that "suitable and proper" telecommunications service be supplied, not a specific service modality. Therefore, we could decide, if we had a factual basis on which to do so, that cellular was suitable and proper service for Dog Island and that conventional wireline service was either less so or not so at all. However, though we could make that determination upon a proper factual showing -- if indeed that conclusion followed from those facts -- we cannot do so in the absence of those facts. In effect, the statutes do not prohibit all discrimination in charges, but only discrimination that is undue or unjust. A factual basis is required to differentiate undue or unjust discrimination from differences which may be justified by the unique circumstances of Dog Island.

In view of the above, it is

ORDERED by the Florida Public Service Commission that the Petition For Declaratory Statement of St. Joseph Telephone & Telegraph Company is denied. It is further

ORDERED that this docket is closed.

ORDER NO. PSC-95-0375-POF-TL
DOCKET NO. 941293-TL
PAGE 5

ATTACHMENT A
DOCKET NO. 950814-TL
August 28, 1997

BY ORDER of the Florida Public Service Commission this 15th
day of March, 1995.

/s/ Blanca S. Bayó

BLANCA S. BAYÓ, Director
Division of Records and Reporting

This is a facsimile copy. A signed
copy of the order may be obtained by
calling 1-904-488-8371.

(S E A L)

NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.59(4), Florida Statutes, to notify parties of any administrative hearing or judicial review of Commission orders that is available under Sections 120.57 or 120.68, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing or judicial review will be granted or result in the relief sought.

Any party adversely affected by the Commission's final action in this matter may request: 1) reconsideration of the decision by filing a motion for reconsideration with the Director, Division of Records and Reporting within fifteen (15) days of the issuance of this order in the form prescribed by Rule 25-22.060, Florida Administrative Code; or 2) judicial review by the Florida Supreme Court in the case of an electric, gas or telephone utility or the First District Court of Appeal in the case of a water or wastewater utility by filing a notice of appeal with the Director, Division of Records and Reporting and filing a copy of the notice of appeal and the filing fee with the appropriate court. This filing must be completed within thirty (30) days after the issuance of this order, pursuant to Rule 9.110, Florida Rules of Civil Procedure. The notice of appeal must be in the form specified in Rule 9.900 (a), Florida Rules of Appellate Procedure.

OR941293.MRD

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Request for approval of) DOCKET NO. 950814-TL
tariff filing proposing cellular) ORDER NO. PSC-95-1178-FOF-TL
service for Dog Island by St.) ISSUED: September 20, 1995
Joseph Telephone and Telegraph)
Company. (T-95-404 filed)
6/26/95))

The following Commissioners participated in the disposition of this matter:

SUSAN F. CLARK, Chairman
J. TERRY DEASON
JOE GARCIA
JULIA L. JOHNSON
DIANE K. KIESLING

ORDER APPROVING EXPERIMENTAL TARIFF

BY THE COMMISSION:

More than fifty residents of Dog Island have requested that St. Joseph Telephone & Telegraph Company ("St. Joseph" or "the Company") provide telephone service. The residents of Dog Island are in the Carrabelle exchange which is in the service territory of St. Joseph. Providing service to Dog Island requires no exchange boundary change or extension. However, the task of providing telephone service to Dog Island residents presents the Company with unusual conditions.

Dog Island is located approximately four miles from the mainland of Florida. Access to Dog Island is limited. There is no bridge or highway connecting Dog Island to the mainland. Ferry service to and from Dog Island is limited. A small airstrip is located on the island. The Company's service personnel would be dependent on the limited ferry service to reach the island.

There are approximately 125 residences on the island and, of these, the Company estimates approximately 50 residences will initially subscribe to telephone service. The overwhelming majority of people with residences at Dog Island consider the residences their second or vacation homes.

Due to its location off the coast of Florida, Dog Island is vulnerable to storms in the Gulf of Mexico. Residents of Dog

ORDER NO. PSC-95-1178-POF-TL
DOCKET NO. 950814-TL
PAGE 2

Island enjoy the natural beauty of the island. While many of these residents desire telephone service, some are concerned that it could harm the environment and the scenic beauty of the island. However, power poles are already located on the island as well as water facilities.

On June 26, 1995, the Company filed a one-year experimental tariff, effective September 1, 1995, to provide local exchange service via cellular technology for Dog Island at monthly rates equal to those being currently paid by subscribers in the Carrabelle exchange. There would be no usage charges for the cellular service offered by the Company. St. Joseph would implement an experimental premise visit charge to Dog Island residents of \$43.00 from December 1, 1995 through September 1, 1996. The Company also plans a non-tariffed offering of programmed cellular units at only \$40.00 per unit to Dog Island residents; considerably less than the Company's cost.

The cellular instrument the Company will use to provide service will be a standard unit equipped with an AC/DC converter. Roaming restrictions will be programmed into the units to allow customers to have the same local calling scope as current subscribers of the Carrabelle exchange. The units could be purchased through the telephone company at a cost of \$40.00, or elsewhere at market prices; if purchased elsewhere, the Company would have to program the roaming restrictions. The Company is offering the cellular units at below their cost to price them at a rate closer to what customers would normally pay for customer premise equipment units.

Dog Island customers will be provided a Carrabelle (697) telephone number and Carrabelle's calling scope:

Alligator Point	\$.25 extended calling plan
Apalachicola	\$.25 extended calling plan
Eastpoint	\$.25 extended calling plan
St. George Island	\$.25 extended calling plan
Tallahassee	Toll free EAS
Sopchoppy	Toll free EAS
Crawfordville	Toll free EAS

Dog Island customers will be billed appropriate toll charges by the Company in the same manner as other local exchange customers.

It is the Company's belief that serving Dog Island through cellular technology is the most acceptable method of providing service because of the higher capital cost for alternative means of

ORDER NO. PSC-95-1178-POF-TL
DOCKET NO. 950814-TL
PAGE 3

providing service (submarine cable, radio or microwave). The Company estimates its capital cost to provide cellular service to Dog Island will be less than \$20,000. The Company believes the sunk investment for each of the other alternatives (submarine cable, radio and microwave) would exceed \$250,000.

The Company proposes to recover some of the costs of initiating service by applying a premise visit charge of \$43.00 for service requested on or after December 1, 1995. Dog Island residents requesting service before December 1, 1995 would be assessed the \$4.25 premise visit charge currently paid by St. Joseph customers requesting service.

The \$43.00 charge, effective December 1, 1995, would cover the \$18.00 cost of the ferry trip to the island, plus an additional hour of travel time for the installer at the loaded labor rate of \$25.00 an hour. This premise visit charge would be an experimental, transitional rate. If approved, the \$43.00 premise visit charge would not be assessed to Dog Island residents the first 3 months the tariff was in effect because the Company could, if it had a backlog of service connection orders, process several of them at a time thus spreading the transportation costs of sending a telephone serviceman to and from the island over several service connections.

The Company seeks approval of the \$43.00 premise visit charge for Dog Island customers as an experimental, transitional rate, pursuant to the provisions of Section 364.057, Florida Statutes. The \$43.00 rate would last from December 1, 1995 until September 1, 1996. St. Joseph indicated that after this charge has been in effect, the Company may review whether or not the service connection charges adequately cover its cost of service. The Company may request to adjust its premise visit charge for service connections to Dog Island if it believes such an adjustment is needed to achieve a closer relationship between the costs and charges for Dog Island residents.

Most Florida local exchange companies are allowed to charge service connections rates which approximate their costs. The Commission has previously allowed the Company to impose a service connection charge surcharge within an exchange to recoup unique expenses. When there was a toll for all vehicles entering St. George Island, the Commission allowed the Company to charge a \$4.00 surcharge for service connections for new installations and a \$2.00 surcharge per move or change order for residences on St. George Island. The surcharges remained in effect until the toll charges to cross the St. George Island bridge were eliminated. For these

ORDER NO. PSC-95-1178-POP-TL
DOCKET NO. 950814-TL
PAGE 4

reasons, the experimental service connection surcharge for Dog Island is approved.

The Company believes that sometimes bad weather, rough seas, sporadic ferry schedules and the presence of most island property owners only on weekends and holidays, will prevent St. Joseph from meeting the time requirements for installations and repair. Failures and the reason for such failures will be noted on the quarterly service reports to the Commission. The Company requests that such reports list the customers of Dog Island separately because of the difficulty of serving such subscribers. We recognize the unique characteristics of Dog Island. It is acceptable to show the Dog Island reports separately, rather than with other Carrabelle quarterly service reports filed with the Commission.

Some residents of Dog Island have been seeking telephone service from the Company for more than two years. We are concerned that service be provided to the residents of Dog Island in an expeditious manner. However, we are also concerned with the high cost of providing this service, and the potential impact on the general body of ratepayers. Therefore, we approve the tariff with the modification that the Commission will review this experiment within six months after cellular service is implemented. Based on customer satisfaction and the actual costs of providing the service, the Company may be required to conduct a feasibility study, including cost data, for providing service to Dog Island.

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that St. Joseph Telephone & Telegraph Company's tariff filing to provide local exchange service via cellular technology for Dog Island is approved, effective September 1, 1995. It is further

ORDERED that the Commission will review this experiment within six months after cellular service is implemented. It is further

ORDERED that if a protest is filed in accordance with the requirements set forth below, the tariff shall remain in effect with any increase in revenues held subject to refund pending resolution of the protest. It is further

ORDER NO. PSC-95-1178-POF-TL
DOCKET NO. 950814-TL
PAGE 5

ORDERED that if no protest is filed in accordance with the requirements set forth below, this docket shall be closed.

By ORDER of the Florida Public Service Commission, this 20th day of September, 1995.

BLANCA S. BAYÓ, Director
Division of Records and Reporting

by: /s/ Kay Flynn
Chief, Bureau of Records

This is a facsimile copy. A signed copy of the order may be obtained by calling 1-904-413-6770.

(S E A L)

RVE

Commissioner Johnson dissents.

NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.59(4), Florida Statutes, to notify parties of any administrative hearing or judicial review of Commission orders that is available under Sections 120.57 or 120.68, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing or judicial review will be granted or result in the relief sought.

The Commission's decision on this tariff is interim in nature and will become final, unless a person whose substantial interests are affected by the action proposed files a petition for a formal proceeding, as provided by Rule 25-22.036(4), Florida Administrative Code, in the form provided by Rule 25-22.036(7)(a)(d) and (e), Florida Administrative Code. This

ORDER NO. PSC-95-1178-POF-TL
DOCKET NO. 950814-TL
PAGE 6

petition must be received by the Director, Division of Records and Reporting, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on October 11, 1995.

In the absence of such a petition, this order shall become final on the day subsequent to the above date.

Any objection or protest filed in this docket before the issuance date of this Order is considered abandoned unless it satisfies the foregoing conditions and is renewed within the specified protest period.

If this Order becomes final on the date described above, any party adversely affected may request judicial review by the Florida Supreme Court in the case of an electric, gas or telephone utility or by the First District Court of Appeal in the case of a water or wastewater utility by filing a notice of appeal with the Director, Division of Records and Reporting and filing a copy of the notice of appeal and the filing fee with the appropriate court. This filing must be completed within thirty (30) days of the date this Order becomes final, pursuant to Rule 9.110, Florida Rules of Appellate Procedure. The notice of appeal must be in the form specified in Rule 9.900(a), Florida Rules of Appellate Procedure.



ST. JOSEPH

Telecommunications

ST. JOSEPH TELEPHONE & TELEGRAPH COMPANY

P.O. Box 220 • 502 Fifth Street • Port St. Joe, Florida 32456
•Established 1924•

July 31, 1996

Mr. Jim Strong
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Dear Mr. Strong:

I am enclosing St. Joseph Telecommunications' response to Staff's data request concerning telephone service for Dog Island.

If any additional information is needed, I can be reached at (904) 229-7222.

Sincerely,

Lynda N. Bordelon
External Affairs Manager

LNB:jpc

Enclosures

cc: Mr. Bill Thomas
Director - Products & Services

**DATA REQUEST
 TELEPHONE SERVICE FOR DOG ISLAND
 ST. JOSEPH TELECOMMUNICATIONS
 JULY 31, 1996**

1. Provide a roster schedule showing the number of Dog Island access lines installed, by date, through November, 1995.

RESPONSE: See Attachment.

2. What were the total nonrecurring costs to provide telephone service via cellular technology to Dog Island's subscribers through November 1995?

RESPONSE: The total nonrecurring cost for provision of service through November 1995 is 826,577.00. Total through June 1996 is 654,524.00.

3. Provide the total cellular usage cost to the Company for each billing cycle through December 10, 1995. For each billing cycle specify the beginning and end dates.

RESPONSE: Cellular usage was billed beginning March 1996 as follows:

<u>Month</u>	<u>Usage - Minutes of Use</u>	<u>Cost To Company</u>
March	18,380	\$2,757.00
April	30,920	4,638.00
May	37,981	5,697.00
June	38,693	5,804.00

The billing cycle is the 20th through the 19th of each month.

4. How does the service quality provided by the Company to Dog Island residents compare to the service provided by Cellular One. Explain the nature of any complaints from your customers.

RESPONSE: Cellular One is not a provider of cellular service in our area. We are, therefore, unable to provide a comparison.

Initially, we received customer inquiries regarding the availability of data transmission using the cellular connection. We were able to change out those phones to a data compatible instrument at no additional cost to the end user of St. Joseph.

DATA REQUEST
TELEPHONE SERVICE FOR DOG ISLAND
JULY 31, 1996
PAGE TWO

Since that time, a few minor problems have been resolved. We have received some complaints regarding low level transmission and recently we have met with the cellular provider to resolve this problem. A realignment of the antenna is being worked on in an effort to strengthen the signal.

ATTACHMENT

BOG ISLAND INSTALLATION SCHEDULE

<u>MONTH</u>	<u>DAY</u>	<u>NO. INSTALLED</u>
October 1995	27	12
	30	4
	31	3
November 1995	2	1
	6	1
	7	3
	8	2
	17	3
	21	16
	22	4
	24	8
	27	6
28	5	
December 1995	1	3
	5	<u>1</u>
		74

Currently there are 98 customers in service, including one company test number.

TO Mr. Jim Strong, Florida Public
Service Commission
FROM Lynda E. Bordison, External Affairs Mgr.
SUBJECT Distribution of Usage
COMPANY St. Joseph Telecommunications

DATE July 31, 1996

DISTRIBUTION OF USAGE ON
JULY 1, 1996 BILLING FOR
308 ISLAND CUSTOMERS

0 - 100	45	1001 - 1100	1
101 - 200	17	1101 - 1200	2
201 - 300	9	1201 - 1300	0
301 - 400	3	1301 - 1400	0
401 - 500	2	1401 - 1500	0
501 - 600	3	1501 - 1600	0
601 - 700	4	1601 - 1700	0
701 - 800	4	1701 - 1800	1
801 - 900	3	1801 - 1900	0
901 - 1000	1	1901 - 2000	1

The 49th customer on the distribution list used 113 minutes of air time.

Sincerely,



Lynda E. Bordison
External Affairs Manager
ST. JOSEPH TELECOMMUNICATIONS

LMB:jpc

cc: Mr. Bill Thomas
Director - Products & Services

C. O. & IXC TRANSMISSION

COMPANY ST. Joe CENTRAL OFFICE CARRA ELIE

EVALUATOR EH / RS.

C. O. Milliwatt # 697-2913 C. O. Quiet Line # 697-2912
 IXC Milliwatt # _____ IXC Quiet Line # _____
 Dial Tone Level (dbm) _____ Frequency of Milliwatt (Hz) _____

Is the C. O. equipped with at least 3 milliwatt test lines? YES NO

C. O.	Dog Island To C.O. Name	Line Number	Telephone Number	Loss (dBm)	Noise C-Message (dBmCO)	Noise Impulse Counts
11:00 AM	697-4778 FRA STAL			+5	FLUCTUATING 26-28	24 53 dBm 0 59 dBm
EAS or IXC	4702 "VAN BACKERMAN"	INSTRUMENT		-1	19-20	1 53
	4798 " "	INSTRUMENT		+2.0	32.5-33	1 53
	4701 "BECKMAN INSTRUMENT"			+1.5	-23.5	1 53
11:07 PM F6A	4778 File Home			+1	FLUCTUATING 26-29	2 53
						1 59

Definitions:

Noise, C-Message - Measurements are expressed in dB above reference noise (dBmC) where 0dBmCO = -90dBm at 1004 Hz
 Impulse Noise - Measured in counts per minute with the impulse counter dBmCO setting adjusted for the facility being measured
 Loss, Inverted Connection - The transmission loss measured in dBm on a trunk at 1004 Hz

C. O. transmission test limits (FPSC proposed or as given in the BOC Notes on the LEC Network - 1994)

- a) Dial Tone (-5 to -22 dBm)
- b) C. O. Loss (Analog office <= -1.5 dBm - digital office <= 0 to -7 dBm set via translations)
- c) Milliwatt Frequency (994 to 1014 Hz)
- d) C. O. Noise, C-Message (Analog office <= 22 dBmCO - digital office <= 25 dBmCO)
- e) C. O. Noise, Impulse (<= 5 counts at * dBmCO in 5 minutes)
 - * Digital or electronic office set the impulse counter to 47 dBmCO.
 - * Crossbar office set the impulse counter to 54 dBmCO - step by step etc set the impulse counter at 59 dBmCO

IXC transmission test limits as proposed by the FPSC:

- a) Loss (maximum is -8 dBm, minimum is 0 dBm)
- b) Noise, C-Message (<= ** if measuring an analog trunk and <= 26 if measuring a digital trunk)
- c) Noise, Impulse (<= 5 counts in 5 minutes at *** dBmCO)

Analog Trunk Length in Miles	0-50	51-100	101-200	201-400	401-1000
Noise Limit Values in dBmCO	29	31	33	36	38

*** Set the impulse counter to 54 dBmCO if it is a voice frequency trunk and 63 dBmCO if it is a digital trunk.

TO: THE PUBLIC SERVICE COMMISSION

FROM: DOG ISLAND RESIDENTS

95
 SIGNATURES
 2-25-97
 [Signature]

DUE TO THE POOR SERVICE PROVIDED BY CELLULAR TELEPHONE SERVICE TO DOG ISLAND, I SUPPORT THE INSTALLATION OF FIBEROPTIC CABLE TO DOG ISLAND. I UNDERSTAND THAT THE IMPACT TO THE ENVIRONMENT WOULD BE MINIMAL AND THAT THIS TYPE OF SERVICE WOULD ALLOW TRANSMISSION OF THE INFORMATION FROM THE DEFIBRILATOR TO THE EMT UNIT ON SHORE.

NAME	ADDRESS	DATE
<u>Nina Hill</u>	<u>Box 5214 H-C 63 32322</u>	<u>697-4782</u>
<u>David Hill</u>	<u>1163 Dog Island, P.O. 9746 Carroll, GA 32322</u>	<u>697-4782</u>
<u>Maurine Hill</u>	<u>Box 5022 D.I. CARROLL FL.</u>	
<u>Thomas Hill</u>	<u>697-4757</u>	<u>1-2-97</u>
<u>Michael Hill</u>	<u>770-253-2426</u>	
<u>Jeff Rabin</u>	<u>Alb. Ga 697-4774</u>	
<u>Leah Rabin</u>	<u>Alb. Ga 697-4774</u>	
<u>Jessie Rabin</u>	<u>Alb. Ga 697-4774</u>	
<u>John Smith</u>	<u>1107 Riverside Dr Tallahassee</u>	
<u>Barbara Smith</u>	<u>1107 Riverside Dr Tallahassee</u>	
<u>John Smith</u>	<u>324 W. 8th Ave Tallahassee, FL 32303</u>	
<u>John Smith</u>	<u>D.I. Box 5021</u>	<u>1-4-97</u>
<u>Mrs. Riley</u>	<u>Drawer N 697-3770</u>	
<u>John Smith</u>	<u>2500 [unclear] 697-</u>	
<u>John Smith</u>	<u>816 [unclear] Tallahassee 32302</u>	
<u>John Smith</u>	<u>3200 [unclear] Tallahassee 32303</u>	
<u>Cliff Lewis</u>	<u>3117 [unclear] Tallahassee 32303</u>	
<u>John P. Madonia</u>	<u>1123 Alachua Av. Tall Fla 32308 1/5/97</u>	
<u>John P. Madonia</u>	<u>1123 Alachua Av. Tall Fla 32308 1/5/97</u>	
<u>John Farnsworth</u>	<u>THL</u>	
<u>CLEF FARNSWORTH</u>	<u>THL</u>	
<u>TOM ASBURY</u>	<u>THL 697-4792</u>	
<u>James G. Hill</u>	<u>#10, unit 3 Dog Island Fla.</u>	

TO: THE PUBLIC SERVICE COMMISSION

FROM: DOG ISLAND RESIDENTS

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<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>
Louis Beckman	P.O. Box 5006 Dog Island 32922	12/24/96
Steve Beckman	4023 Army St., San Francisco 94131 (415)	12/20/96
Lori Small Beckman	4022 Army St. San Francisco 94131 (415)	12/20/96
Murphy	P.O. Box 5006 Dog Island	12/20/96
Becker Boatman	Box 5000 Dog Island FL 32922	12-30-96
Mary Beth Boatman	6974701	
FIRE CHIEF	DOG ISLAND 6974778	
Jim Stanton	P.O. Box 5034 Dog Island 32922	
John Granger	P.O. Box 5034 Dog Island 32922	
Dick Granger	P.O. Box 5034 Dog Island 32922	
Shirley Granger	P.O. Box 5034 Dog Island 32922	
Harold Bell	P.O. Box 5047 Dog Island	
Ed Robinson	Box 5047 Dog Island 32922	
Ed Weigel	118 Parshley Live Oak, FL 32060	
Judy Weigel	" " " "	
Walter Weigel	2035 NW 36 Ave Gainesville FL 32605	
Jean Weigel	2035 NW 36 Ave Gainesville 32605	
Heather Weigel	Kalecrest + Dr Danbury CT 06811	
Chris Howell	8 Oakwood Ave 407 N. Waverly, CT 06850	
Scott White	409 Talafu St Tallahassee FL 32304	

TO: THE PUBLIC SERVICE COMMISSION

FROM: DOG ISLAND RESIDENTS

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NAME	ADDRESS	DATE
Peter Barth		
1500 W. ...	715 E. ... Tall.	
H. ...		
Hugh K. ...	PO Box 5036 Carabelle, FL 32322	
...	PO Box 5036 Carabelle, FL 32322-1400	
Daniel ...	PO Box 389 ...	
...	" 5010 "	
...	" 5010 "	
...	PO Box 765 ...	
...	1100 ... Dog Island ... FL 32322	
Bill ...	4213 Cornell Crossing Kennesaw, GA 30144	
F. ...	865 ... Tucker GA 30034	
AC ...	868 ... Tucker GA 30034	
...	175 ... GA 30034	
...	175 ... GA 30034	
Mike ...	Box 5024 Dog Island	
Doris ...	Box 5024 Dog Island	
Ernie ...	1238 Canella Dr Tallahassee 32301	
Janet ...	Box 5024 Dog Island Fla 32322	
Nick ...	10053 CollinsHole Rd 668-3894 32312	
Valerie ...	" " " "	
Richard M. ...	1506 Kassel Dr Tall. 697-4755	
46 Marilyn ...	1506 Kassel Dr Tall. 697-4755	

TO: THE PUBLIC SERVICE COMMISSION

FROM: DOG ISLAND RESIDENTS

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NAME	ADDRESS	DATE
<i>Chris O. Perry</i>	697-4703	7/9/97
<i>Ineke Harrison</i>	697-4714	7-9-97
<i>Judith Harrison</i>	697-4714	1-9-97
<i>Marilyn Walker</i>	P.O. Box 696 Eadsport FL	1-10-97
<i>Richard L. Vane</i>	697-4764	1-11-97
<i>Vicki Vane</i>	697-4764	1-11-97
<i>Ron Vane</i>	697-4764	1-11-97
<i>Angie Soderstrom</i>	904 - 692410	
<i>Benji Botenreiter</i>	904	
<i>Ted Attdz</i>	404 - 857-1829	
<i>Tom Francis</i>	220 - 300-9424	
<i>Quinn Tracy</i>	404 - 589-6650	
<i>Raymond Williams Franklin County Commissioner</i>	Box 648 Casseltone FL	
<i>Barbara Waddorf</i>	904 - 697-4705	
<i>K. K. Childress</i>	404	
<i>Delores B. Waddorf</i>	904 - 893-1444	
<i>ROBBY BOTENREITER</i>	597-817-	
87 <i>BECKER, Robert J.</i>	ATLANTA GA	
<i>Pat Clark</i>	697-4718	1/27/97
<i>Louise Clark</i>	697-4718	1/27/97
<i>John Quirk</i>	697-4729	
<i>Tom Smith</i>	697-4709	
<i>Edward A. Walsh</i>	697-4734	

TO: THE PUBLIC SERVICE COMMISSION

FROM: DOG ISLAND RESIDENTS

DUE TO THE POOR SERVICE PROVIDED BY CELLULAR TELEPHONE SERVICE TO DOG ISLAND, I SUPPORT THE INSTALLATION OF FIBEROPTIC CABLE TO DOG ISLAND. I UNDERSTAND THAT THE IMPACT TO THE ENVIRONMENT WOULD BE MINIMAL AND THAT THIS TYPE OF SERVICE WOULD ALLOW TRANSMISSION OF THE INFORMATION FROM THE DEFIBRILATOR TO THE EMT UNIT ON SHORE.

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>
Charlie A. Newman II	1648 Old Country Rd 6700004, Oct. 20 1991	2-17-97
Clara K. Newman	" "	" "
Jan B. Dalton	P.O. Box 15074, Tully, 32317	2/17/97

FINAL REPORT AND RECOMMENDATION

***ALTERNATIVES FOR THE PROVISION OF
TELEPHONE SERVICE***

DOG ISLAND, FLORIDA

PREPARED BY

Engineering Associates, Inc
2825 Cumberland Parkway, Suite 100
Atlanta, Georgia 30339

8/1/97

GENERAL INFORMATION

Dog Island, Florida is a barrier island approximately 4.5 miles off the coast of Carrabelle, Florida. The land area of the island is approximately 1842 acres, or approximately 2.88 square miles. The eastern most point of the island is at approximately N 29° 49' 66", W 84° 34' 37", and the western most point is at approximately N 29° 46' 97", W 84° 40' 48". There are approximately 120 houses on the island with a potential of 150 to 160 houses. Florida Power Corporation serves the island with electricity via approximately 22,000 feet of submarine cable to the island, and aerial distribution facilities on the island.

CURRENT TELEPHONE SITUATION

Local telephone access for the residents of Dog Island is currently provided by the reselling of cellular telephone service. This service is provided through a billing arrangement between the St. Joseph Telephone and Telegraph Company (St. Joe) and 360° Communications in which St. Joe pays 360° Communications a usage rate for each Dog Island subscriber number, and bills the Dog Island subscriber a flat residential rate.

ENVIRONMENTAL ISSUES

Dog Island, Florida, is classified as a "coastal barrier island", an "undeveloped coastal island", and, because the strait of water between Carrabelle, Florida and Dog Island is classified as "sovereign submerged lands", it is subject to the provisions of Chapter 253 F.S. and the rules as set forth in Chapter 18-21, F.A.C., Sovereignty Submerged Lands Management.

18-21.004, (h), 3. F.A.C.

(h) "No application to use sovereignty, submerged land adjacent to or surrounding an unbridged, undeveloped coastal island or undeveloped coastal island segment may be approved by the Board of Trustees unless it meets the following criteria:

3. With respect to applications to use sovereignty, submerged lands for the provision of public utility services, such services were in place as of December 18, 1990, and the requested use of sovereignty, submerged land will not result in an upgrade in capacity or will not service additional customers on an unbridged, undeveloped coastal island or undeveloped coastal island segment. Applications may be approved under this provision only to allow the maintenance or repair of existing utility lines, or as necessary to maintain public safety as ordered by the Public Service Commission; or"

ALTERNATIVES

This Report and Recommendation takes into account, the more traditional as well as the most advanced methods of providing access to the island, i.e., the means of crossing the St. George Sound with telephone service, and of providing telephone service on the island.

ALTERNATIVE METHODS OF ACCESS FROM THE CARRABELLE EXCHANGE TO DOG ISLAND

Submarine Facilities

General Discussion:

As noted in the above discussion of Environmental Issues, Chapter 18-21, F.A.C., prohibits the installation of additional facilities for utilities beyond what existed on December 18, 1990 on sovereignty submerged land. However, given the statutes can be changed with legislative action, or permission can be granted if certain criteria are met, we will provide discussion on the provision of submerged facilities.

The installation of a submarine cable is far more complicated than a typical underground installation. The environmental issues relating to the placement of submarine cable can be quite extensive as well as costly.

Prior to submission of regulatory permits, a survey must be accomplished by a professional to determine if a route corridor exists, and if the existence of submerged vegetation or other obstacles may require a deviation in the route corridor.

Permits as well as submerged land leases are required to be filed with federal, state, and local agencies including Department of Environmental Regulation, Division of Water Management, Army Corps of Engineers, Dog Island Conservation District, and Coastal Barrier Resources System.

Our initial appraisal indicates that a probable route could exist, however, a submarine cable route corridor cannot be defined prior to a marine survey. An inventory of submerged vegetation and obstacles will dictate the final route location. In fact, we were advised of a submerged location which included approximately 2000-3000 feet of rock, obviously creating a deviation in the probable route.

All distances indicated in the staff recommendation can only be estimates. The required marine survey including a GPS and ground true coordinate summary is the only accurate method of providing the distance across water.

The costs indicated in the staff recommendation do not appear to realistically reflect typical submarine cable project costs. Not only does it seem to underestimate current submarine cable prices, it is not inclusive of all associated administrative and regulatory costs.

Due to the characteristics of the sea floor between Carrabelle and Dog Island, and the boat traffic within the St. George Sound, armored submarine cable buried to a depth of 10 feet should be used. Although obstacles in the sound such as granite ballasts, rocks, etc., may prevent burying at a full 10 feet, every attempt should be made to bury as deep as possible. Where the sea floor would shift away from the cable, placing the cable at additional depth would provide added protection. Because of the boat traffic within the sound, it would be more prudent to use armored cable. In those instances where the cable might be less than 10 feet beneath the sea floor because of the previously mentioned obstacles, the

armored would provide better protection against being damaged by boat anchors etc. The cost of maintenance also contributes to the use of armored cable.

Estimated Cost:

10 Foot Depth with Armored Submarine Cable (Section 8)	\$422,300
Cost to Connect to C.O.	\$10,000 (estimate)
DLC (includes cabinet, pad)	\$ 50,000
Engineering Costs	15% x L&M
Marine Survey:	\$ 11,350
	+ 100% Contingency = \$22,700
Cost of environmental studies not determined	
Total	\$563,345

Maintenance Issues:

Maintenance of the submarine facility would require bringing the equipment and personnel necessary to raise the cable, repair the cable, and jet the cable back into the bottom of the sound following the repair.

Cost estimate per occurrence: \$31,700

Microwave

General Discussion:

An alternative to providing service to the island via submarine cable, is microwave. Microwave would be less obtrusive to the environment, and less expensive. A tower which would allow the mounting of an antenna at 85 feet and a weather-proof shelter to house the radio equipment is required. Towers can be designed and built that would be environmentally compatible with existing features of the island

System Equipment:	Carrabelle Site	\$40,475
	Dog Island Site	\$40,475
DLC (includes cabinet, pad)		\$50,000
Spare Equipment		\$14,226
Installation, Site Survey, Turn-Up		\$15,690
Tower on Dog Island		\$100,000
Weather Proof Shelter		<u>\$10,000</u>
Total		\$270,866

Maintenance Issues:

The main concerns with any standing structure on the island, like an antenna tower, will be strong winds and erosion. It will be necessary to engineer the tower to withstand strong winds, and to locate the tower so that normal erosion of the island would not affect it. With these considerations, there will be little maintenance and no reason to have heavy equipment such as bucket trucks, etc. on the island

Other

Other wireless alternatives for access from the Carrabelle Exchange have been considered in connection with the provision of service on the island, and are discussed in the Wireless Alternatives section of this report.

WIRELINER DISTRIBUTION ALTERNATIVES

General Discussion:

Although electrical utilities exist on the island, and it would be possible to attach telephone facilities to some of the power poles, there are cases where telephone facilities would require additional poles, and in some cases taller poles, to be installed due to the length of certain spans (the distance between poles), and due to electrical utilities being attached too low on existing poles to be feasible to attach telephone facilities 40 inches below the electrical facilities. Additionally, maintenance due to strong winds and storms is a factor in the total cost of providing telephone service via aerial facilities.

Erosion of the island will be a factor whether aerial or buried facilities are used. In an erosion study by Glen Champion, dated April 17, 1996, titled "Historic Shoreline Movement Rates, Dog Island, Northwest, Florida", he states that "...the two ends of the island are accreting while the rest of the Gulf shore is eroding. The area containing the two narrow washover zones is eroding most rapidly." The two narrow washover zones are of most concern. To serve the residences on the far west end of the island will require crossing the two washover zones either with buried facilities or on the existing power poles which currently cross the washover zones. The study states that during Hurricane Opal, "The two washover zones were covered by more than one meter of overwash sand. All vegetation on the seaward half of these zones was covered by sand. A small bridge on the west side of the eastern washover zone that was nearly buried in sand exemplifies the amount of sediment transported onto the beach by the storm. According to L. Huntsman, before the storm the bridge had been several feet above the marsh finger channel it crossed." The point being, that during storms the washover zones may be breached by tidal surges and any facilities crossing the zones will likely be washed away cutting both telephone and electrical power. A map compiled by S. Demirpolat and W.F. Tanner showing shoreline changes from 1856 to 1979 is attached (figure 1)

Figure 2 and Figure 3 following are the costs for a copper distribution system and fiber to the serving area (FSA) distribution. This particular fiber rich FSA concept requires a node approximately every 2000 feet of fiber, and copper distribution from the node to the house. Figure 2 is the unit cost and Figure 3 is the cumulative cost based on the approximate number of feet of facilities required to serve the island. The unit prices are based on bids received by Engineering Associates for the same types of facilities on various projects over a period of time. These unit prices represent costs to construct on normally accessible construction sites. Dog Island is only accessible by boat or barge for heavy equipment. The costs for transport of equipment must be added to normal costs. To provide service via wireline distribution, precise specifications would be developed and RFPs issued to obtain exact cost and timeframes. The following tables assume a maximum of 150 houses with two lines per house

WIRELESS DISTRIBUTION ALTERNATIVES

General Discussion:

Wireless technology uses a multi-cell, digital, wide-area radio access system to provide subscriber access to the local exchange for voice, fax, data, and ISDN services. In a wireless architecture, radio links would be used to distribute telephone service to the residents of the island either directly via a Wireless Local Loop configuration, or via nodes strategically placed on the island with copper distribution to the residences.

Nortel

The Nortel wireless system is a cellular system working in the 800 Mhz range which will require a permit from the FCC to operate. The requirements for this system would be at least one, maybe two towers, with backhaul facilities to the local exchange. Each subscriber would have access to the system via a cellular type phone.

System Cost: (Section 6)	\$500,000 (approximate)
Switching:	\$150,000
One, possibly two towers would be required. Cost:	\$100,000 each
Total Estimated Cost:	\$750,000 to \$850,000

Ericsson

Base stations (approximately 200) would be mounted on power poles at a height of 15 to 20 feet. The antenna is a box approximately 12"x14". Requires cabling (copper - twisted pair) back to the radio exchange equipment from each base station.

System Cost: (Section 7)	\$439,000
Buried backhaul cabling: Labor -	\$127,685
Aerial backhaul cabling: Labor -	\$ 65,000
Switching:	\$150,000
Total Estimated Cost:	\$781,685

Pole Rental	\$ 4,590 Year Estimate
-------------	------------------------

The Ericsson system would require cabling back to the radio exchange from each base station. This does not solve the problem of either having to 1) bury the facilities and confront the environmental problems. or 2) attach to existing power poles and be faced with frequent and costly maintenance problems as poles have to be replaced.

Astronet (Mitsubishi)

The Astronet wireless system is a cellular system working in the 800 Mhz range. It utilizes channels leased from the local incumbent cellular carrier. The cost of this channel lease arrangement is negotiated on a case by case basis. Depending on the signal strength of the incumbent cellular carrier, an antenna may be required on the island. Following is a verbal estimate of system cost from Astronet.

System Cost:	\$300,000
Tower Cost (if required)	\$100,000
Total Estimated Cost	\$400,000

Optaphone

Optaphone is a wireless technology that can be deployed for up to 192 subscribers and uses narrowband FM for wireless transmission from a central base station to remote field stations. Copper is used to make short haul connections from the remote field stations to individual customer premises minimizing the wireline facilities required. Field stations can be mounted on existing structures such as power poles, or tops of houses. The system can be engineered, depending on distances between residences, and the individual requirements of each resident, to serve several residences with a single eight line field station, or serve individual residences with two line field stations. A separate microwave hop from Carrabelle to the island would not be required. Optaphone can be transmitted from the Carrabelle Central Office to the island over its own radio.

In order to obtain a accurate system cost, it would be necessary to determine the exact requirements of each resident. Following is an estimate to provide service on Dog Island using Optaphone technology. This cost is dependent on the system configuration, e.g., number of lines per resident, number of central base stations required, number of eight line and two line field stations required, etc. For the purpose of this report, we have used the pricing quoted by Optaphone for a 196 line configuration. A limiting factor of the Optaphone system is the number of channels that can be occupied simultaneously, thus limiting the number of simultaneous conversations.

Optaphone operates in licensed frequency bands that are currently heavily occupied. In order to obtain the number of frequencies required to implement a system that would adequately serve Dog Island, frequencies currently in use would have to be cleared and re-licensed by the FCC, and new licenses obtained for the currently unoccupied frequencies. *There are two primary reasons this is not a viable option. 1) It is highly unlikely incumbent users would be willing to move to another frequency to accommodate the use of an Optaphone system on Dog Island, and 2) the FCC currently has a freeze on issuing new licenses in the required frequency bands until a decision is made on auctioning spectrum*

System Cost: (Section 10)	\$191,471
Copper Drop (includes network interface)	<u>\$ 38,000</u>
Total	\$229,471

Additional costs would be incurred for legal fees to file applications for licenses, or to pay for spectrum if auctions are implemented by the FCC.

Advanced Fibre Communications UMC System 1000A

The AFC UMC 1000A is a wireless system that operates in the unlicensed frequency bands of 2.4 Ghz and 5.7 Ghz and utilizes spread spectrum technology. The 1000A is made up of two basic components, the local exchange terminal (LET) and the remote subscriber terminal (RST). The LET would be located at the Carrabelle Exchange, with RSTs strategically located on Dog Island. Transport from the LET to the RSTs would be via the AFC 1000A radio system. Distribution on the island from the RSTs to the residences would be copper distribution. Several RSTs would be placed on the island to minimize the amount of copper that would be required to serve the residences. More importantly, RSTs could be placed in the areas between the wash-over zones to serve the residences in those areas, and minimize both the environmental impact as well as the maintenance issues of crossing the wash-over zones with physical facilities.

There are several advantages to the UMC System 1000A. First, it utilizes unlicensed frequency bands which eliminates the need to obtain licenses or, in the least, permission for the use of frequency, as in the case of the Nortel and Astronet systems. It eliminates the need for frequency clearing as with the Optaphone system. There is no need for separate transport, i.e., microwave or submarine cable, from the Carrabelle Exchange to the island. Unlike the Ericsson system which requires copper distribution from each base station back to the radio exchange, each AFC RST is a stand alone unit served by radio with copper distribution to the residences only, thus minimizing the use of copper on the island. The RSTs can be placed so as to minimize the impact on the environment, i.e., near the residences between the wash-over zones.

System Cost:

System consisting of 1 LET and 3 RSTs (Section 3)	\$110,990
6 one-meter antennas (Section 4)	\$ 3,150
poles and brackets	\$ 1,000 (estimate)
Cabling	
Copper distribution (figure 4)	\$111,311
Copper Drop (includes network interface)	<u>\$ 38,000</u>
Total	\$264,451

Personal Communications Service

The term Personal Communications Service (PCS) is used to describe an array of portable products and services, delivered over the latest in wireless communications technology. PCS is capable of providing consumers with a reliable and affordable method of accessing the telephony networks with handsets that are light-weight and feature expandable beyond traditional analog wireless or wireline services. Unlike the licensing format employed in cellular, 306 Metropolitan Statistical Area licenses adjacent to 428 Rural Statistical Area licenses), the FCC mandated that PCS coverage would cover 492 Basic Trading Areas (BTA) which encompass 51 Major Trading Areas (MTA).

The Jacksonville MTA includes the Tallahassee BTA which encompasses the following counties:

Calhoun	Liberty
Franklin	Madison
Gadsden	Taylor
Jackson	Wakulla
Jefferson	Grady (Ga)
Leon	Thomas (Ga)

Dog Island is in Franklin County.

There are six companies licensed to provide Personal Communications Service in the Tallahassee BTA.

Those companies are:

A Block	Powertel Jacksonville Licenses, Inc.	E Block	BellSouth PCS
B Block	Primeco Personal Communications, L.P.	F Block	Mercury PCS
C Block	Southeast Wireless Communications, L.P.		
D Block	SprintCom		

Although this alternative appears to be a practical method for providing telephone service, the PCS licensees do not currently have a schedule for serving the Dog Island area.

COST SUMMARY

Wireline Distribution

Submarine Cable (page 4)	\$563,145
Copper Distribution - Plowed (fig 3, section 1) Includes terminals and equipment transport to island	<u>\$187,290</u>
Total	\$750,635
Submarine Cable (page 4)	\$563,145
Fiber to the Serving Area (FSA) (fig 3, section 1) Includes electronics and equipment transport to island	<u>\$315,539</u>
Total	\$878,684
Microwave (page 4)	\$270,866
Copper Distribution - Plowed (fig 3, section 1) Includes terminals and equipment transport to island	<u>\$187,290</u>
Total	\$458,156
Microwave (page 4)	\$270,866
Fiber to the Serving Area (FSA) (fig 3, section 1) Includes electronics and equipment transport to island	<u>\$315,539</u>
Total	\$586,405

Wireless/Wireline Distribution

Nortel (page 7)	\$750,000 to \$850,000
Ericsson (page 7)	\$781,685
Astronet (page 8)	\$400,000
Optaphone (page 8)	\$229,471
Advanced Fibre Communications (page 9)	\$264,451

DISCUSSION/RECOMMENDATION

The copper distribution alternative will be most obtrusive to the environment and will be the most subject to high maintenance costs due to the erosion of the island and the storms as previously discussed.

The Fiber to the Serving Area alternative requires not only the installation of fiber to designated node areas, but also the distribution of copper to the houses. As with the copper distribution system, this solution will very obtrusive to the environment and also be subject to erosion, storms and high maintenance.

The Wireless solutions from Nortel, and Astronet are for local service to be provided utilizing cellular frequencies, for which a permit must be obtained from the FCC. Prior to April 16, 1997 we had been in discussions with Mr. Steve Markendorff, Deputy of the FCC Wireless Bureau, Mr. Markendorff had stated that the FCC was under an injunction to not issue any further cellular permits in the Gulf which prohibits St. Joe from utilizing the Nortel, and Astronet systems. However, on April 16, the FCC released a Notice of Proposed Rule Making in which they are requesting comments on dividing the Gulf of Mexico for cellular purposes into two licensing areas.

The Ericsson Wireless system utilizes unlicensed frequency spectrum, but requires the placement of a base station for each subscriber residence. Each base station requires a wireline backhaul facility back to the centrally located base station controller. This wireline backhaul requirement defeats the purpose of a wireless local loop solution.

The Optaphone wireless telephone system provides the availability of multiple lines to each residence, minimizes the use of wireline facilities, can be transmitted from the Carrabelle Central Office to the island without a separate microwave hop, and is fully functional because it supports the features available from the central office, as well as data speeds up to 14.4 kbps, however, *it is not a viable option because of the limited capacity and the frequency clearing and licensing obstacles*

The AFC UMC System 1000A is the most feasible of the options investigated in this study. The system uses unlicensed frequency, it minimizes the impact on the environment because it minimizes the amount of copper distribution required, it utilizes spread spectrum which provides more than enough capacity, it can be transmitted from the Carrabelle Exchange to the island over its own radio, it's fully functional because it is a digital system and can support all central office features.

Personal Communications Service is a practical method of serving Dog Island. In discussions with three of the PCS vendors that have licenses to serve the Dog Island area, BellSouth PCS, Mercury PCS, and PCS PrimeCo, all three have agreed to continue discussion with St. Joseph Telephone to provide service specifically for the residents of Dog Island. However, no firm decisions have been made by any of the PCS providers on timetables for serving the island.

PRIMARY RECOMMENDATION:

It is our recommendation that St. Joseph Telephone Company select the Advanced Fibre Communications UMC System 1000A alternative. It is a cost effective method, will be the least obtrusive to the environment, and will provide a service equal to landline service with all of the features and benefits.

Although it will be necessary to obtain permits for the placement of the RSTs and plow the copper distribution, given the flexibility, availability, and efficiency of the AFC system, we feel it is the most appropriate choice.

ALTERNATE RECOMMENDATION:

If, for unforeseen reasons, the island cannot be served using the AFC UMC System 1000A technology, telecommunications access to the island can be provided via 6 Ghz microwave. This can be accomplished by utilizing the existing tower at Carrabelle and placing a tower on Dog Island. The necessary permits will have to be applied for and arrangements made to place a tower and the required termination equipment on the island. We recommend this alternative over placing submarine cable due to the upfront expense of placing the cable, and the ongoing maintenance costs. It is our opinion that submarine cable should be considered only where microwave is not technically feasible. Additionally, microwave is a proven, reliable means of transporting telecommunications.

A remote switch from the Carrabelle Exchange would be placed on the island. A shelter for the switch will have to be provided, and can either be a new structure built specifically for the remote, or if arrangements can be made with the island residents, the remote could be housed in the firehouse. We recommend the island be served via copper distribution. We have chosen this alternative over fiber because Fiber to the Home or Fiber to the Serving Area has not been proven to be an economical solution in any local service situation. Copper is a proven, reliable technology that can be equipped to provide the telecommunications required by the island residents.

We must express our concerns and reservations, however, about providing telephone service on the island via any type of wireline distribution facility, other than the short-haul drops used with AFC UMC 1000A and the Optaphone systems. With the erosion of the island, the two washover zones that must be crossed to serve residents on the west side of the island, and the potential for damage to the facilities, causing outage to the residents and frequent maintenance, we feel that, as we stated in our primary recommendation, wireless solutions should be vigorously pursued.

Signed: 

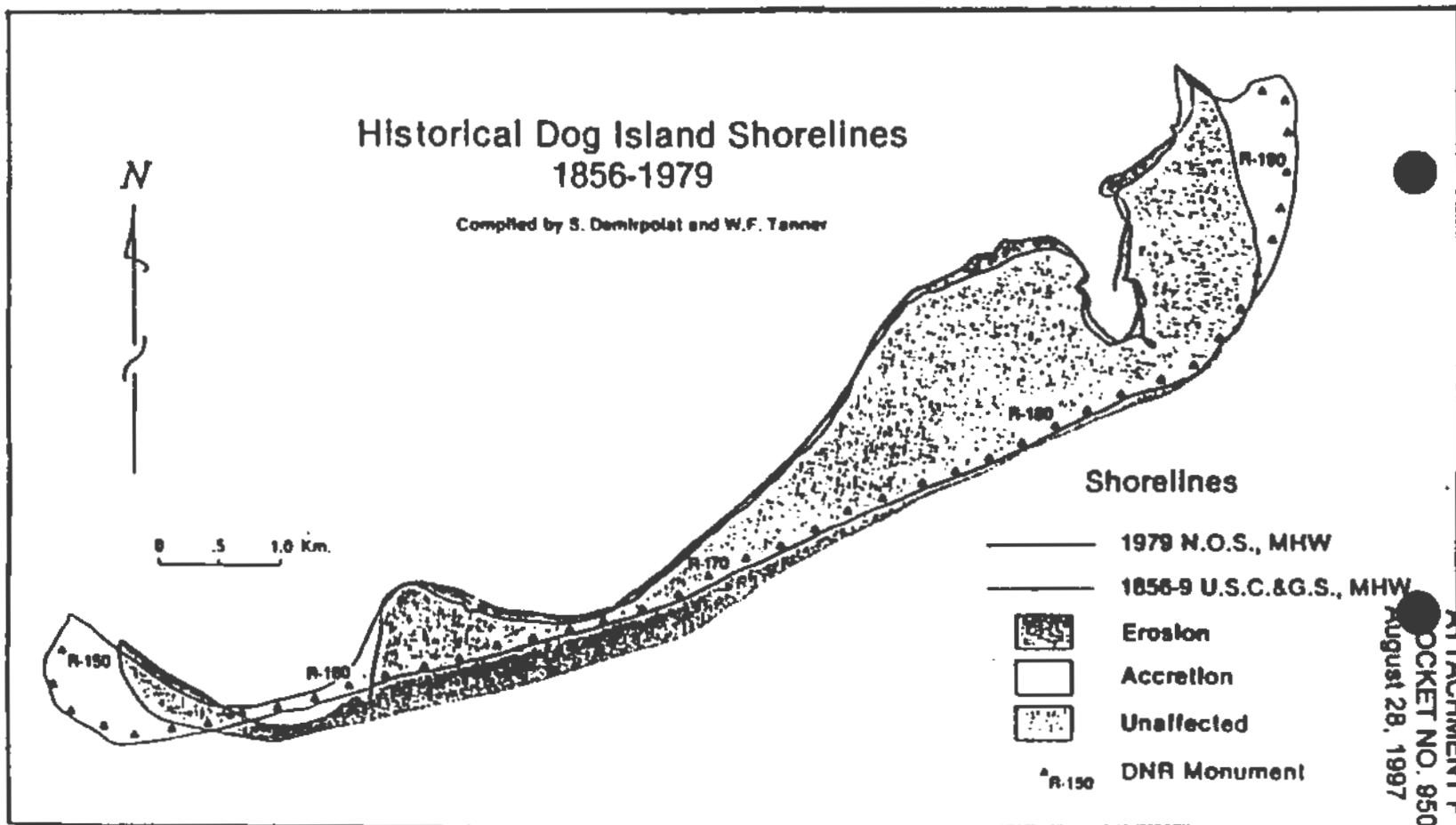
Thomas C. Harter, P.E. - President

Engineering Associates, Inc.

Signed: 

Ted McDonald - Manager - Wireless Business Development

Engineering Associates, Inc.



Dog Island shoreline changes since 1856. Map copied from Livingston 1989.

Figure 1

**COPPER/FIBER DISTRIBUTION
UNIT COSTS**

COPPER CABLE LABOR AND MATERIAL - UNIT PRICE							
UNIT	Per	Aerial Labor	Aerial Material	Plowed Labor	Plowed Material	Trenched Labor	Trenched Material
300 Pair-24 Gauge	1000 ft	\$ 750.00	\$ 3,000.00	\$ 1,400.00	\$ 3,600.00	\$ 3,000.00	\$ 3,600.00
200 Pair-24 Gauge	1000 ft	\$ 650.00	\$ 2,750.00	\$ 1,150.00	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00
150 Pair-24 Gauge	1000 ft	\$ 650.00	\$ 2,200.00	\$ 1,150.00	\$ 1,950.00	\$ 2,500.00	\$ 1,950.00
100 Pair-24 Gauge	1000 ft	\$ 650.00	\$ 1,650.00	\$ 1,150.00	\$ 1,400.00	\$ 2,500.00	\$ 1,400.00
50 Pair-24 Gauge	1000 ft	\$ 650.00	\$ 1,050.00	\$ 1,150.00	\$ 800.00	\$ 2,500.00	\$ 800.00
25 Pair-24 Gauge	1000 ft	\$ 650.00	\$ 750.00	\$ 1,150.00	\$ 500.00	\$ 2,500.00	\$ 500.00
FIBER LABOR AND MATERIAL - UNIT PRICE							
12 FIBER	1000 ft	\$ 650.00	\$ 960.00	\$ 880.00	\$ 720.00	\$ 2,500.00	\$ 720.00

Figure 2

**COPPER/FIBER DISTRIBUTION
CUMULATIVE COSTS**

COPPER CABLE DISTRIBUTION - CUMULATIVE PRICE										
UNIT	x 1000 Ft	Aerial Labor	Aerial Material	Total Aerial	Plowed Labor	Plowed Material	Total Plowed	Trenched Labor	Trenched Material	Total Trenched
300 Pair-24 Gauge	5.34	\$ 4,005.00	\$ 16,020.00	\$ 20,025.00	\$ 7,476.00	\$ 19,224.00	\$ 26,700.00	\$ 16,020.00	\$ 19,224.00	\$ 35,244.00
200 Pair-24 Gauge	4.56	\$ 2,964.00	\$ 12,540.00	\$ 15,504.00	\$ 5,244.00	\$ 11,400.00	\$ 16,644.00	\$ 11,400.00	\$ 11,400.00	\$ 22,800.00
150 Pair-24 Gauge	6.55	\$ 4,257.50	\$ 14,410.00	\$ 18,667.50	\$ 7,532.50	\$ 12,772.50	\$ 20,305.00	\$ 16,375.00	\$ 12,772.50	\$ 29,147.50
100 Pair-24 Gauge	7.41	\$ 4,816.50	\$ 12,226.50	\$ 17,043.00	\$ 8,521.50	\$ 10,374.00	\$ 18,895.50	\$ 18,525.00	\$ 10,374.00	\$ 28,899.00
50 Pair-24 Gauge	7.83	\$ 5,089.50	\$ 8,221.50	\$ 13,311.00	\$ 9,004.50	\$ 6,264.00	\$ 15,268.50	\$ 19,575.00	\$ 6,264.00	\$ 25,839.00
25 Pair-24 Gauge	7.26	\$ 4,719.00	\$ 5,445.00	\$ 10,164.00	\$ 8,349.00	\$ 3,630.00	\$ 11,979.00	\$ 18,150.00	\$ 3,630.00	\$ 21,780.00
Subtotal	38.95	\$25,851.50	\$ 68,863.00	\$ 94,714.50	\$ 46,127.50	\$ 63,664.50	\$ 109,792.00	\$ 100,045.00	\$ 63,664.50	\$ 163,709.50
Miscellaneous Units				\$ 53,040.12			\$ 46,112.64			\$ 46,112.64
Subtotal				\$ 147,754.62			\$ 155,904.64			\$ 209,822.14
Engineering Costs				\$ 22,163.19			\$ 23,385.70			\$ 31,473.32
Equipment Transport							\$ 8,000.00			\$ 8,000.00
TOTAL				\$ 169,917.81			\$ 187,290.34			\$ 249,295.46
FIBER TO THE SERVING AREA (FSA) - CUMULATIVE PRICE										
	x 1000 Ft									
12 Fiber	38.95	\$25,317.50	\$ 37,392.00	\$ 62,709.50	\$ 34,276.00	\$ 28,044.00	\$ 62,320.00	\$ 97,375.00	\$ 28,044.00	\$ 125,419.00
Miscellaneous Units				\$ 35,117.32			\$ 26,337.99			\$ 26,337.99
Copper Distribution	38.95	\$25,317.50	\$ 29,212.50	\$ 54,530.00	\$ 44,792.50	\$ 19,475.00	\$ 64,267.50	\$ 97,375.00	\$ 19,475.00	\$ 116,850.00
Fiber Electronics										
19 Nodes				\$ 66,500.00			\$ 66,500.00			\$ 66,500.00
3 Transmitters				\$ 48,000.00			\$ 48,000.00			\$ 48,000.00
Subtotal				\$ 266,856.82			\$ 267,425.49			\$ 383,106.99
Engineering Costs				\$ 40,028.52			\$ 40,113.82			\$ 57,466.05
Equipment Transport							\$ 8,000.00			\$ 8,000.00
TOTAL				\$ 306,885.34			\$ 315,539.31			\$ 448,573.04
Copper Drop										
Number Drops	120									
Cost/1000 feet	\$ 825									
Feet/drop	300									
Total	\$ 29,700									

Figure 3

ATTACHMENT F
 SOCKET NO. 950814-TL
 August 28, 1997

**COPPER DISTRIBUTION
CUMULATIVE COSTS
AFC UMC 1000A**

COPPER CABLE DISTRIBUTION - CUMULATIVE PRICE										
UNIT	x 1000 Ft	Aerial Labor	Aerial Material	Total Aerial	Plowed Labor	Plowed Material	Total Plowed	Trenched Labor	Trenched Material	Total Trenched
300 Pair-24 Gauge	0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
200 Pair-24 Gauge	0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
150 Pair-24 Gauge	1.6	\$ 1,040.00	\$ 3,520.00	\$ 4,560.00	\$ 1,840.00	\$ 3,120.00	\$ 4,960.00	\$ 4,000.00	\$ 3,120.00	\$ 7,120.00
100 Pair-24 Gauge	6.8	\$ 4,420.00	\$ 11,220.00	\$ 15,640.00	\$ 7,820.00	\$ 9,520.00	\$ 17,340.00	\$ 17,000.00	\$ 9,520.00	\$ 26,520.00
50 Pair-24 Gauge	10.6	\$ 6,890.00	\$ 11,130.00	\$ 18,020.00	\$ 12,190.00	\$ 8,480.00	\$ 20,670.00	\$ 26,500.00	\$ 8,480.00	\$ 34,980.00
25 Pair-24 Gauge	12.3	\$ 7,995.00	\$ 9,225.00	\$ 17,220.00	\$ 14,145.00	\$ 6,150.00	\$ 20,295.00	\$ 30,750.00	\$ 6,150.00	\$ 36,900.00
Subtotal	31.3	\$ 20,345.00	\$ 35,095.00	\$ 55,440.00	\$ 35,995.00	\$ 27,270.00	\$ 63,265.00	\$ 78,250.00	\$ 27,270.00	\$ 105,520.00
Miscellaneous Units				\$ 31,046.40			\$ 26,571.30			\$ 26,571.30
Subtotal				\$ 86,486.40			\$ 89,836.30			\$ 132,091.30
Engineering Costs				\$ 12,972.96			\$ 13,475.45			\$ 19,813.70
Equipment Transport							\$ 8,000.00			\$ 8,000.00
TOTAL				\$ 99,459.36			\$ 111,311.75			\$ 159,905.00

Figure 4

FLORIDA PUBLIC SERVICE COMMISSION
Capital Circle Office Center • 2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

M E M O R A N D U M

September 26, 1996

TO: DIRECTOR, DIVISION OF RECORDS AND REPORTING (RAYO)

FROM: DIVISION OF COMMUNICATIONS (SCHELL, STROUD) *MS*
DIVISION OF LEGAL SERVICES (VELLISERINI) *MCB*

RE: DOCKET NO. 950814-TL - REVIEW OF ORDER APPROVING
EXPERIMENTAL TARIFF TO PROVIDE LOCAL EXCHANGE SERVICE TO
DOG ISLAND VIA CELLULAR LINK TECHNOLOGY BY ST. JOSEPH
TELEPHONE COMPANY

AGENDA: OCTOBER 9, 1996 - REGULAR AGENDA - PROPOSED AGENCY ACTION
INTERESTED PERSONS MAY PARTICIPATE

CRITICAL DATES: NONE

SPECIAL INSTRUCTIONS: S:\PSC\CHU\WF\950814TL.RCM

CASE BACKGROUND

About ten years ago a group of property owners on Dog Island requested that St. Joseph Telephone and Telegraph Company (St. Joe or Company) provide telephone service. It would have required extending cable facilities three miles (all in the Carrabelle exchange) over to the Island. The Company did not provide service to the area; nor did the Company identify the pocket of demand as required by Rule 25-4.0185(1), Florida Administrative Code. When staff became aware three years ago that at least fifty residents had requested phone service (the island has had water and power for many years) staff requested that the Company provide service. St. Joe then filed a proposed tariff to provide local service via cellular equipment. The proposed tariff was approved as "experimental" by the Commission by Order No. PSC- 95-1178-POF-TL, issued September 20, 1995, with further instructions to review this docket after six months.

Since the planned installation dates were delayed by Hurricane Opal, the Company was unable to install the cellular link equipment to the Island's customers until November and December of 1995. In March, 1996 Staff sent the Company a data request for usage and billing costs. The Company was unable to provide the data because

DOCUMENT NUMBER-DATE

0316 SEP 26 8
FPSC-RECORDS/REPORTING

DOCKET NO. 950814-TL
DATE: September 16, 1996

360° Communications (the cellular link provider for St. Joe) had failed to bill the Company for the cellular span link through the March billing period. The Company has provided staff the requested data from March through June, showing traffic usage and cellular air time costs, along with the relevant equipment costs (Attachment G, pages 23-27). Staff has reviewed the current cellular service and compared its cost and capabilities with traditional local exchange service (Attachment H, pages 28-29). We have also considered the concerns about how telephone service facilities will affect the Island's natural environment. Since telephone facilities could be buried within existing roadways or be attached to existing power poles, staff believes the impact will be minimal. Therefore, we believe the following recommendations are appropriate.

DISCUSSION OF ISSUES

ISSUE 1: Should the experimental tariff to provide cellular link local access telephone service to the customers on Dog Island become a permanent tariff?

RECOMMENDATION: No. The experimental tariff providing cellular link local access telephone service to customers on Dog Island is not cost effective, is not of sufficient quality, and is not a "suitable and proper" method for providing telephone service pursuant to the requirements of Section 364.03, Florida Statutes. Therefore, the tariff should not be made permanent.

STAFF ANALYSIS: There currently are 97 subscribers on Dog Island. Staff expects the number to gradually increase. Two new luxury homes were recently added to the 125 dwellings on the island. There is also an 8 unit hotel, yacht club, a landing strip for airplanes, and a volunteer fire department headquartered on the Island. The island is seven miles long and is subdivided into 410 parcels for private use (about 350 acres, see Attachment A, page 8). The rest of the island is dedicated as a wilderness preserve. There is potential for at least 410 subscribers, some with more than single phone line requirements. With the confluence of technologies offering video dial tone, inter-active TV, internet, alarm circuits and regular plain old telephone service (POTS), a real potential exists for an expanded customer base with enhanced services. To provide these services, a fiber-based cable network will be required. An example of the type of equipment for cost-effective fiber distribution is shown on Attachment B, pages 9-11.

DOCKET NO. 950814-TL
DATE: September 16, 1996

Attachment H, pages 28-29, shows that cellular service will cost three to four times more in ten years than land line fiber optics, with none of the advantages of fiber.

Staff has evaluated the signal quality and visited numerous sites on Dog Island. For cellular phones, the signal is generally strong, and the phone units that the Company has provided are high quality, but they do not compare favorably with land line POTS. For example, the phones on Dog Island always have a strong hiss in the background. Some customers have lost their connection during a conversation and have had to redial their party to continue the call. As shown in Attachment G, page 25, the Company points out, "We have received some complaints regarding low level transmission, and recently we have met with the cellular provider to resolve this problem." Standard telephone equipment (CPE) for use in other parts of the home is not compatible with the cellular phones. Fax services and internet access is unreliable, if not impossible. All of these services are available over regular telephone lines within the rest of the Carrabelle exchange. Cellular phones also lack the security and privacy of regular land line phones.

Regarding the transmission of data/fax services, the Company in its original proposal stated, "Should customers require data/fax capabilities over 14.4 kb/s, there are cellular units available to convert the standard connection to meet this requirement. Equipment could be purchased at cost from St. Joseph, or from other vendors at market prices." Staff believes it is inappropriate to charge for services that are freely available to the Company's other customers in the Carrabelle exchange or anywhere else in the Company's service area.

It is Staff's opinion that customers on Dog Island are in like circumstances pursuant to Section 364.081(1), Florida Statutes, with the rest of St. Joe customers, and that the provision of land line facilities is the suitable and proper method to provide telephone service in accordance with Section 364.03, Florida Statutes. St. Joe should provide Dog Island customers a service that is equal in quality to the service provided to all of its other customers. In Attachment E, pages 14-18, Docket 941293-TL, Order No. PSC-95-0375-POP-TL, Order Denying Petition For Declaratory Statement, the Commission stated that St. Joe had not shown any comparison of costs, or other impacts, to show why the customers on Dog Island should not be considered in "like circumstances" with the rest of its exchange customers. The customers on Dog Island are entitled to treatment that is equal in effort and in investment per access line to that provided all of its other customers. The Company still has not complied with the Commission's request as stated in Attachment E to provide a full

DOCKET NO. 950814-TL
DATE: September 16, 1996

comparative cost between Cellular and land line methods of providing local exchange telephone service. Therefore, in the absence of a Company design and cost study for extending land line facilities to Dog Island, staff offers its design recommendation below in Issue 2. Staff recommends that, because the experimental tariff is not cost effective, does not provide service of sufficient quality, and is not suitable and proper pursuant to Section 364.03, Florida Statutes, it should not be made permanent.

ISSUE 2: Should the Commission require St. Joseph Telephone and Telegraph Company to install and construct wire line service to Dog Island for switched local exchange telephone service that is compatible with industry standards and is equal to what is already provided other customers in the Carrabelle exchange?

RECOMMENDATION: Yes, the Commission should order St. Joseph Telephone & Telegraph Company to provide the same standard of service to Dog Island customers that is being provided to the rest of the Carrabelle exchange by means of replacing the existing cellular link facilities with a land line. In addition, staff recommends the Commission order the Company to provide to staff, for review, a comparative study showing engineering designs and costs to place fiber cables with other methodologies, and to have the land line network fully functional by December 31, 1997.

STAFF ANALYSIS: On September 20, 1995, the Commission approved an experimental tariff allowing St. Joe to provide local exchange telephone service to the residences of Dog Island using cellular link technology. In lieu of the more conventional method of provisioning for telephone services, the Company chose to employ wireless cellular phones wired for local calling. In staff's analysis the cellular service, as now provided, does not meet the standards of reliability, or privacy; nor does it permit the same use of standard phone instruments and functions that are provided elsewhere in St. Joe's service territory.

In a letter dated April 7, 1995, to Commission Staff, (Attachment F, pages 19-22) the Company listed 4 options for providing telephone service on Dog Island: submarine cable, microwave trunking with digital line carrier (DLC), basic exchange telephone radio services (BETRS), and cellular telephone service. The Company discarded the first option, submarine cable, stating that, "St. Joe did not seriously consider the utilization of submarine cable, because of the potential maintenance problems and

DOCKET NO. 950814-TL
DATE: September 16, 1996

St Joseph's inability to make repairs." Staff believes a fiber as opposed to a submarine cable is more appropriate and should have been considered by the Company. There are a number of contract companies specializing in marine cable installation and maintenance. The second option, microwave trunking, was estimated to cost over \$261,000; and if distribution cost (using the Company's figures) to cable the Island is included, the total cost would be around \$511,000. The third option is to use BETRS. For 97 customers it would cost \$572,000; that would not be an economical solution. Moreover, according to the Company, the FCC will not approve the number of channels necessary for an acceptable level of service in the long run. The fourth option is establishing a cellular link from St. Joe's local exchange DMS10 switch through the cooperation of 360° Communications.

Local exchange companies are required to reasonably extend cable facilities under Rule 25-4.067, Florida Administrative Code. If unusual construction costs are required, the LEC can petition the Commission for surcharges, or can employ other methods to recover the initial capital costs. Staff believes the Company, by placing cable over to and onto Dog Island, would not exceed the average cost per access line of \$2,400.00, the Company-wide average for each of its current subscribers, excluding Dog Island (Attachment D, page 13). Though the Company has not provided a cost estimate to place a land line to the Island, they have estimated the costs of cabling the Island to exceed \$250,000. Their design included the placement of a mile of 600 pair cable, 3/4 of a mile of 400 pair cable, and other costly cables for a total of 39,000 feet for the purpose of providing two lines per lot, totalling 833 lines. Staff believes the Company's projections are too high and that maximum line use will not exceed 600 access lines for a period of twenty years or more. A more practical and forward looking approach would employ fiber optic technology as described below. Cost comparison charts are presented by staff in Attachment H, pages 28-29.

With respect to the cellular service, the amount the Company has already invested is shown in Attachment G, pages 24-27. The total nonrecurring costs to provision the cellular service through June 1996 is \$54,524 (2 1/2 times their original estimate). The Company is charged 15 cents a minute for air time used; March through June data are shown in Attachment G, page 24. Each month shows increasing amounts of air time and charges. The total charges for the months of March through June total \$18,896. For a full year these would exceed \$60,000. If charges continued for another three to four years at that level, the amount invested would be justified for a total fiber super communications highway. At the present rate the Company is losing a minimum of \$60,000 a

DOCKET NO. 950814-TL
DATE: September 16, 1996

year in revenue; this will only increase with time when more customers sign on and usage per customer creeps upward. Hence the provisioning of service with traditional FOTS is economically more attractive than cellular link technology.

Staff believes transmission requirements to Dog Island via fiber optics will probably never exceed 6 fibers - including all the telephone and television, interactive video, and future broadband services St. Joe could offer their customers. However, for the sake of redundancy, a 12 strand fiber cable costs about \$1.00 a sheath foot or about 8 cents per fiber foot. It can be inserted 4 feet below the bottom of the bay at about \$5.00 per foot, or for around \$100,000 (See Attachment C, page 12), or a total of about \$120,000 for materials and labor. Combined construction costs of a fiber span to the island with distribution fiber to nodes for individual groups of customers throughout the island, should not exceed \$2,000 per access line - \$400 less than the company's average to serve its existing wire line subscriber base. With 97 telephones currently in use (2 of them are business lines), it is reasonable to expect in 5 years that 125 access lines will be in service.

The Company's estimated cost of \$250,000 to cable Dog Island averages about \$6.40 foot. Staff believes the in-place cost for fiber distribution would not exceed \$1.90 per foot, or a total of \$130,000 including the electronics. Staff believes that to cable the island for today's needs, and allowing for very slow growth over the next five years, the line requirement would not exceed 125 access lines. Staff further forecasts 200 lines in ten years; 250 lines needed in 15 years; and in twenty years a maximum of 600 access lines. The conservative industry approach is to size the cable for the next 2-5 years. Considering this, copper cables larger than 50 and 100 pairs should not be considered at this time; whereas if fiber were chosen, the smallest available cable, 6 strands or less, could be used exclusively. Staff also believes the Company should underwrite engineering studies using fiber optic technology on Dog Island, or Fiber Coax hybrids, as an economical alternative to copper cables in considering how best to serve the demand for service on Dog Island.

In summary, Staff believes that a fiber span could be placed across the shallow bay from the shoreline in Carrabelle, where a fiber cable exists, over to Dog Island at a minimum depth of four feet below the bay floor for about \$120,000. With this facility Dog Island could be given high quality telephone and television capability service. The costs would be from three to four times less expensive after ten years than continuing cellular service. Therefore, staff recommends the Commission order St. Joe

DOCKET NO. 950814-TL
DATE: September 16, 1996

to replace the cellular link telephone service with a fiber optic land line from the mainland to Dog Island, and to place distribution lines made of fiber, fiber coax hybrid, or twisted pair copper design with the purpose of providing high quality POTS. This will also make possible the provisioning for future broadband highcap services, video dial tone, and remote distance learning and medical services. In addition, staff recommends the commission order the Company to provide to staff, for review, a comparative study showing engineering designs and costs to place fiber cables with other methodologies. Finally, staff recommends that the Company be required to provide the high quality local exchange switched telephone service via fiber by December 31, 1997.

ISSUE 3: Should this docket be closed?

RECOMMENDATION: Yes. This docket should be closed if no person, whose interests are substantially affected by the proposed action, files a protest within the 21 day protest period and upon completion and verification by Staff that the fiber fed land line telephone service is provided to the customers on Dog Island no later than December 31, 1997.

STAFF ANALYSIS: Unless a person whose substantial interests are effected by the Commission's decision files a protest within 21 days of the issuance of the order, this docket should be closed after the expiration of the protest period and upon completion and verification by Staff that the fiber fed land line telephone service is provided to the customers on Dog Island no later than December 31, 1997.



ST. JOSEPH TELEPHONE & TELEGRAPH COMPANY
P.O. Box 220 • 502 Fifth Street • Port St. Joe, Florida 32456
• Established 1924 •

August 1, 1997

Mr. Alan Taylor
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850



Dear Mr. Taylor:

Engineering Associates has completed the engineering study to determine the best alternative to provide service to the customers on Dog Island. The alternative chosen is a system manufactured by Advanced Fibre Communications utilizing spread spectrum radio and digital loop carrier. The spread spectrum radio will be used to transport E1's to serve the digital loop carrier. The service to the customers on Dog Island will be the same as the service provided to all the rest of our customers.

The spread spectrum radio will be used to cross the sound between Carrabelle and Dog Island utilizing our existing tower at Carrabelle and a pole on Dog Island to mount antennas. Spread spectrum radio will also be used to cross the two washover zones of the Island. Buried copper distribution will be used on the eastern portion of the Island which contains most of the customers. Aerial copper distribution will be used to serve the few customers located in two areas across the washover zones.

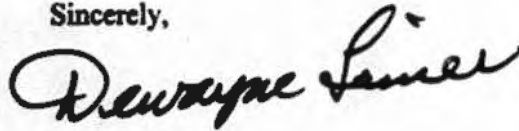
This method of serving the Island will avoid disturbing the sea bed or the washover zones thus it is more compatible with the environmental concerns. It will provide service compatible with that furnished all other customers.

We must obtain approval of our construction plans by the Dog Island Conservation District prior to beginning any further actions. If their approval can be obtained, the company plans to proceed with this alternative.

Advanced Fibre Communications estimated they can deliver the radio and digital loop carrier in approximately 90 days. The copper construction will have to be staked, bid packages prepared and bidders will have to have time to prepare bids. After bids are received, and a successful bidder is chosen, they will have to have time to obtain material before beginning construction. Construction could begin in approximately 120 days and be completed in 180 days assuming we do not have abnormal weather conditions which could delay construction. As construction is completed and drops placed the customers can be transferred to the new system

If you have any questions, please contact me at 850-229-7326.

Sincerely,

A handwritten signature in cursive script that reads "Dewayne Lanier".

Dewayne Lanier
Director-Network Engineering

DL/byk

cc: Mr. John Vaughan
Mr. Bill Thomas

ST. JOSEPH

RECEIVED

AUG 19 6 54 AM '97

ST. JOSEPH TELEPHONE & TELEGRAPH COMPANY

P.O. Box 220 • 502 Fifth Street • Port St. Joe, Florida 32456

• Established 1924 •

ADMINISTRATIVE
MAIL ROOM

August 19, 1997



Mr. Phil Trubelhorn
Engineer III Communications
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0866

Dear Mr. Trubelhorn:

The anticipated timetable for us to provide service to Dog Island utilizing the AFC spread spectrum radio and digital loop carrier is as shown below. As we do not know how long approval of our construction plan by the Dog Island Conservation will take, we have started the timetable at the time of their approval.

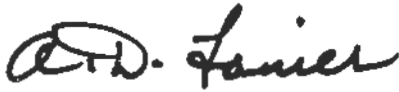
- 0 Days- Approval of construction plan by Dog Island Conservation District
- 30 Days- Sign agreement with AFC for equipment and services they are to provide.
Begin engineering field work for equipment placement.
- 60 Days- Complete engineering for equipment. Begin engineering for cable.
- 90 Days- Send bids for cable placement.
- 120 Days- Equipment delivery and begin installation. Receive bids for cable construction.
- 150 Days- Begin cable constructions.
- 210 Days- Complete cable construction.
- 250 Days- Complete transfer of customer to system.

This timetable is prepared assuming we do not have abnormal weather conditions which could delay engineering or construction. This timetable also assumes no additional permits have to be

prepared and approved.

I trust this provides the information requested, if you have any questions please contact me.

Sincerely,



A. Dewayne Lanier
Director-Network Engineering