



CAPE COD COMMISSION

3225 MAIN STREET
P.O. BOX 226
BARNSTABLE, MA 02630
(508) 362-3828
FAX (508) 362-3136

E-mail: frontdesk@capecodcommission.org

DATE: December 15, 2005

APPLICANT: Industrial Communications and Electronics, Inc.
40 Lone Street
Marshfield, MA 02050

RE: Development of Regional Impact
Cape Cod Commission Act, Sections 12 and 13

PROJECT #: TR# 05019

PROJECT: Centerville-Osterville-Marstons Mills Fire District, Water Department and
Industrial Communications and Electronics, Inc. wireless facility

MAP/PARCEL: 119/009

BOOK/PAGE: Book 545, Page 191

DECISION OF THE CAPE COD COMMISSION

SUMMARY

The Cape Cod Commission (Commission) hereby approves with conditions the application of Industrial Communications and Electronics (ICE or Applicant) as a Development of Regional Impact (DRI) pursuant to Sections 12 and 13 of the Cape Cod Commission Act (Act), c.716 of the Acts of 1989, as amended, for the proposed 150-foot ICE wireless tower (Project) in Osterville, MA. The decision is rendered pursuant to a vote of the Commission on December 15, 2005.

PROJECT DESCRIPTION

ICE proposes to build a 150-foot monopole on a parcel of land to be leased from the Centerville-Osterville-Marstons Mills Fire District, Water Department located on 1138 Main Street in Osterville, MA. The Project is proposed as a monopole and will provide space for up to five co-locators, each of which would place a standard array of antennas mounted on the monopole. The accessory equipment compound is proposed to be contained within a fenced area of 6,400 square feet. The equipment compound will contain all necessary ground-based facilities and equipment for the antennas. This includes a proposal for up to five equipment cabinets placed at ground level, surrounded by a chain-linked fence. The monopole is proposed to be located approximately 200 feet from the property line adjacent to Main Street, and more than 500 feet from the southern property

Decision
ICE Wireless Facility- #TR05019
December 15, 2005

line. The monopole will be set back more than 500 feet from the nearest occupied residential or commercial property on a site that is within the RC (residential-commercial) zoning district. The remainder of the 18-acre site is wooded and is owned by the COMM Fire District, Water Department.

PROCEDURAL HISTORY

The Barnstable Town Manager referred the Project to the Commission on June 28, 2005. A duly noticed public hearing was conducted pursuant to Section 5 of the Act by an authorized subcommittee of the Commission on November 16, 2005 at the Barnstable Superior Courthouse. This hearing was immediately followed by a public meeting of the subcommittee to deliberate on the Project, reviewing it under the 2002 Regional Policy Plan (RPP). At this meeting, the subcommittee voted unanimously to recommend to the full Commission that the Project be approved as a DRI, subject to conditions. The final public hearing was held before the full Commission on December 15, 2005. At this hearing, the Commission voted unanimously to approve the Project as a DRI, subject to conditions.

MATERIALS SUBMITTED FOR THE RECORD

From the Applicant:

- Antenna specifications provided by Andrew Corporation dated May 3, 2004
- Balloon test photosimulations dated May 16, 2005
- Site lease agreement between COMM Water Department and ICE dated June 8, 2005
- Propagation maps provided by ICE dated January 2005 and June 13, 2005
- RF exposure evaluation dated August 19, 2005
- Letter from ICE to Commission on Indian Affairs dated August 30, 2005
- Environmental Sound Levels Evaluation dated September 1, 2005
- Letter from ICE to MA Division of Fisheries and Wildlife dated September 7, 2005
- Letter from ICE to MA Historical Commission dated September 16, 2005
- Letter from Sabatia, Inc. regarding environmental assessment of proposed site dated September 22, 2005
- Existing FCC registered towers within five miles of Osterville dated September 23, 2005
- Letter of commitment from TMobile dated September 29, 2005
- Letter of commitment from Cingular Wireless dated October 4, 2005
- Letter from ICE Propagation Manager regarding infeasibility to co-located dated October 5, 2005
- Development of Regional Impact application dated October 17, 2005
- Site plans prepared by Industrial Communications Engineering Division dated October 18, 2005
- Color board of proposed wireless facility dated October 18, 2005
- Technical Bulletin compliance overview dated October 18, 2005
- Letter of commitment from Verizon RF Engineer (undated)

From Federal, State or Local officials:

- Letter to ICE from Executive Office of Health and Human Services dated March 15, 2002
- Letter from COMM Water Department regarding property lease to ICE dated April 29, 2005
- DRI Referral form from Barnstable Town Manager dated June 28, 2005
- Certified abutters list from Town of Barnstable dated July 21, 2005
- Letter to ICE from Commission on Indian Affairs dated September 16, 2005

From the Public:

- E-mail from Nathan Nickerson III of Eastham, MA

The application and notices of public hearings relative thereto, the Commission staff's notes, exhibits and correspondence, the transcript and minutes of meetings and hearings and all written submissions received in the course of our proceedings are incorporated in the record by reference.

TESTIMONY

Note: see minutes in project file for complete public hearing and subcommittee meeting proceedings.

At the November 16, 2005 public hearing the Applicant provided an overview of the proposed Project. Staff provided an overview of issues associated with community character and hazardous waste management issues. David Maxson of Broadcast Signal Labs, Inc. presented the technical review of the proposed wireless facility.

JURISDICTION

The proposed Project qualifies as a Development of Regional Impact under Chapter A, Section 3(i) (1) of the Commission's Enabling Regulations Governing Review of Developments of Regional Impact, Barnstable County Ordinance 90-12 as amended which provides that "construction of any wireless communication tower exceeding thirty-five (35) feet in height from the natural grade of the site on which it is located" is a Development of Regional Impact.

FINDINGS

The Commission has considered the application of ICE for the proposed monopole at the COMM Fire District, Water Department in Osterville, MA, and based on consideration of such application and upon the information presented at the public hearings and submitted for the record, makes the following findings pursuant to Sections 12 and 13 of the Act:

General

1. The proposed Project is a cellular/wireless communications monopole, 150 feet in height, designed to hold up to five antenna arrays to be mounted on the monopole for Cingular, TMobile and Verizon, as well as up to two additional wireless co-locators.
2. The proposed Project would provide improved cellular phone service in Osterville to Cingular, TMobile and Verizon customers.
3. As the first substantive public hearing was held on November 16, 2005, this project was reviewed pursuant to the 2002 RPP.
4. The project must be consistent with local zoning, and the Applicant will be required to obtain all zoning approvals. The Applicant will be required to obtain a Bulk Variance to permit a structure that exceeds the 30-foot maximum height limit in the Residential Zoning District from the Town of Barnstable.
5. The proposed Project will be constructed in accordance with the site plans submitted by Industrial Communications Engineering Division received on October 18, 2005. The

monopole and equipment compound will be located approximately 200 feet from Main Street in a residential (RC) zoning district. The monopole and equipment cabinets will lie within a fence-enclosed area totaling approximately 6,400 square feet.

6. The proposed Project is needed to provide signal propagation in this area of Osterville for Cingular, TMobile and Verizon's wireless communications networks. The proposed monopole will also provide space for up to two additional wireless carriers that may also need to improve their network coverage in this region. Cingular, TMobile and Verizon have stated that there exist significant gaps in their network coverage, which creates the need for a new facility in Osterville. The Regional Policy Plan (MPS 4.4.2.1) requires telecommunications facilities to locate on existing structures, or to co-locate with other carriers wherever feasible to reduce visual impacts. The Applicant has provided a letter of commitment from Cingular, TMobile and Verizon.
7. A 180-foot wireless facility constructed by ICE two years ago is located approximately 1.4 miles away on Bourgeois Lane in Osterville. The proposed 150-foot monopole would provide the necessary coverage for Cingular, TMobile and Verizon and up to two additional co-locators within the identified area where a coverage gap currently exists and should be of sufficient height to negate the need for additional wireless facilities within the existing coverage gap area in Osterville.
8. Elevation drawings submitted by Industrial Communications Engineering Division received on October 18, 2005 show the location of five externally-mounted antenna arrays for the co-locating wireless carriers on the monopole at 10-foot intervals. Verizon will have an antenna at 150 feet. The remaining carriers will have antenna at 140 feet, 130 feet, and two additional antenna arrays would be located at 10 and 110 feet.
9. ICE signed a Site Lease Agreement (Agreement) with the COMM Fire District, Water Department for the use of 6,400 square feet of property for the construction and operation of a wireless communications facility. The lease covers a period of 10 (ten) years, which would begin thirty days following the issuance of a building permit for the monopole.
10. David Maxson of Broadcast Signal Lab, the Commission's consultant on wireless facilities projects, prepared a summary review of the proposed Project. He received copies of all materials from the Applicant and attended the public hearings and subcommittee meeting. His report analyzed ICE's proposal and supporting material, and indicated that the proposed 150-foot monopole would meet the Commission's goals of wireless facilities co-locating multiple carriers to minimize the number of wireless towers, as well as providing needed wireless coverage.
11. According to the Site Acquisition Specialist, the proposed Project site was identified as a potential location for a wireless facility after ICE completed an alternatives analysis of possible tower sites on existing structures and of available land in the town.
12. Section IV.C of the Technical Bulletin states the applicant shall submit documentation of the legal right to install and use the proposed facility mount at the time of the application for DRI approval. The applicant (Lessee) has submitted a Site Lease Agreement from the COMM

Water Department, Fire District (Lessor) dated June 8, 2005 that “hereby leases to Lessee, and Lessee hereby leases from Lessor, ground space measuring 80 by 80 feet in size.”

13. Section V.B of the Technical Bulletin states that, in general, the height of a wireless service facility should not be more than 10 feet above the average building height or tree canopy if there are no buildings within 300 feet of the site. The height of the proposed monopole at the COMM Fire District, Water Department is higher than the surrounding canopy by approximately 100 feet. ICE has proposed a monopole of 150 feet because this height is the minimum necessary to provide sufficient coverage for its cellular network while providing adequate height for co-locators.
14. The Technical Bulletin states that a fall zone should be equal to the height of the proposed monopole (150 feet), but the Bulletin allows for a reduction of that zone by half of the proposed height (75 feet) if a better design would result. To the north, south, east and west of the proposed site are numerous residential neighborhoods, none of which are within 500 feet of the proposed monopole. However, a newly constructed Water Department storage building is located 120 feet from the base of the monopole, within the fall zone. However, as the storage building will not be occupied, the fall zone requirement was waived by the subcommittee. As designed, the proposed Project meets the guidelines of the Technical Bulletin. Also, as proposed, the 150-foot monopole would minimize visual impacts through the construction of a wireless facility of sufficient height to allow for the co-locating of up to five (5) wireless carriers, which may negate the need to construct additional wireless facilities in this area of town.
15. Section VI-A of the Technical Bulletin states that wireless facilities should not be located in areas open to view from public roads, recreational areas or residential development. Views of the proposed monopole and associated equipment compound would be minimal from Main Street, due primarily to a 200-foot vegetative buffer along Main Street that will serve to screen the base of the monopole and the equipment compound.
16. Photos of the Project’s visibility in Osterville were prepared by ICE based on a balloon test conducted on May 16, 2005 when a balloon at the site was raised to 150 feet. The photos indicate that the monopole would be visible from two locations. Based on the photos of the balloon test, staff has determined that the proposed 150-foot monopole will primarily be visible to an area located within a 2,000-foot radius of the structure (less than 1/2 mile). The two areas from which the monopole will most likely be visible are Main Street and one neighborhood north of the site (Admiral’s Lane). For other locations, the public will have limited or obstructed views of the monopole between vegetation and buildings. The Commission finds that a combination of a limited public viewshed and a pale gray color is sufficient to limit the long-range visual impact of the project on the surrounding communities.
17. The facility will be located with a Significant Natural Resource Area on a portion of the site that has been previously disturbed. As no vegetation will be removed and no hazardous materials will be stored on the site, the project will not adversely affect any environmentally sensitive areas.

18. Technical Bulletin 97-001 states that to the extent that it extends above the height of the vegetation immediately surrounding it, the monopole should be painted a light gray or light blue hue to blend with the sky and clouds. The monopole will be constructed of steel and painted gray.
19. The site is located more than 200 feet from Main Street. This natural vegetative buffer will provide screening to limit views of the proposed ICE equipment compound from Main Street to the west.
20. A larger buffer of existing natural woodland vegetation provides approximately more than 500 feet of screening between the proposed site and all of the adjacent land uses to the north, south and east. Because there are no visibility issues associated with the construction of the equipment compound, the applicant is proposing to only construct a ten-foot high chain linked fence around the compound.
21. The applicant states that due to the land clearing operations that were previously conducted during the construction of the adjacent storage building, no trees will need to be removed for construction of the facility.
22. When considering the visual impacts (including design, location, color, height and public views), the alternatives analysis, coverage and co-location capacity of the proposed project versus the alternative of using multiple shorter facilities (which would have less visual impact and less coverage), the Commission finds that these factors are sufficient to limit adverse community character impacts, and that the benefit of providing better coverage offsets the greater visual impact caused by height. The Commission further finds that the proposed facility is in keeping with the RPP goals of minimizing visual impacts and encouraging multiple carriers on wireless communication towers.
23. According to information provided by the applicant, no lighting is required by the Federal Aviation Administration (FAA) because at 150 feet, the proposed monopole does not require FAA notification.
24. According to Section VI-B of the Technical Bulletin, noise impacts from wireless facilities should not exceed 50 decibels (dB) at the property line. Cavanaugh Tocci Associates conducted a noise assessment on August 17, 2005 and called for a generator noise specification of no more than 65 dBA at 50 feet from the generator.
25. Section VI-C of the Technical Bulletin requires authorization to certify that the Radiofrequency Radiation (RFR) from the proposed telecommunications equipment is compliant with federal and state safety standards. The applicant's radiation safety specialist has stated that the proposed facility would comply with all regulatory guidelines for RF exposure.
26. Section IX of the Technical Bulletin requires monitoring and maintenance of a cellular tower after it has been constructed. Measurements of noise levels must be taken 90 days after operation begins, and at annual intervals thereafter. At the present time, the Department of Public Health does not require the monitoring of wireless facilities.

27. The site is located within a Potential Public Water Supply Area. As such, MPS 4.3.1.3 to this Project, which restricts the use and generation of hazardous wastes and hazardous materials.
28. Site plans submitted by the applicant show space within the equipment compound capable of accommodating a total of five carriers. These Plans show use of both equipment cabinets and shelters. The equipment cabinets will be painted a non-reflective gray finish and will not extend above the height of the proposed fence. Based on the companies contacted by ICE, both batteries and an on-site generator will be used to provide for backup power by all co-locators.
- ~~29.~~ Technical Bulletin 97-001- *Guidelines for Development of Regional Impact Review of Wireless Communication Towers*- specifies that the Commission may require full containment of any hazardous materials used on site, including provision of an enclosed containment area without floor drains or sumps. The proposed equipment configuration includes equipment cabinets and equipment shelters.
- ~~30.~~ ICE submitted plans for a backup power supply for its installation that is to be comprised of four (4) sealed batteries to be stored in a sealed cabinet located within the equipment compound.
31. MPS 4.3.1.1 requires projects to minimize their hazardous material use and/or waste generation through source reduction, reuse, material substitution, employee education, and recycling. Carriers contacted by ICE to locate on the monopole include Cingular, T-Mobile and Verizon. Based on prior DRI reviews or wireless projects, some carriers use equipment cabinets and some use shelters. Equipment cabinets have different environmental requirements than machinery housed in shelters, therefore the site may generate additional hazardous waste in the future, primarily from interior lighting and air conditioning units. ICE will require incandescent (non-mercury) interior lighting, as well as digital (non-mercury) thermostats for equipment shelters.
- ~~32.~~ MPS 4.3.1.2 requires projects to be in compliance with Massachusetts Hazardous Waste Regulations, 310 CMR 30.00. The proposed facility will generate waste sealed lead-acid batteries from ICE's equipment cabinets. It may also generate oil and other fluids in the future from air conditioning units. It also included an on-site transformer that uses hazardous materials to function.
33. Section VI(A)(5)(a) of the *Guidelines for Development of Regional Impact Review of Wireless Communication Towers* states that lighting of equipment shelters and any other facilities on the ground should be designed consistent with the Commission's Technical Bulletin 95-001. The applicant has confirmed that there will be no exterior lighting of the facility.
34. The Project is located in a Significant Natural Resources Area (SNRA) as mapped by the 2002 RPP, due to the presence of potential public water supply area. However, it is not located in estimated rare species habitat as mapped by the Natural Heritage and Endangered Species Program. Also, there are no wetlands on or within 100 feet of the site.

35. A natural resources inventory was not required for the Project as the project is being situated on land previously cleared for the construction of an adjacent storage building.
36. As stated in MPS 2.5.1.3., the Project is required to provide open space in an amount equal to twice the total disturbed area of the project site, which equals 6,400 square feet. However, as the COMM Water Department, Fire District is a co-applicant and a municipality, the Commission finds that the requirement may be waived in this instance.
37. There are no water resources or transportation impacts anticipated from the proposed Project's construction and operation.

CONCLUSION

Based on the findings above, the Commission hereby concludes:

1. The Project complies with the applicable Minimum Performance Standards of the 2002 Regional Policy Plan and meets the guidelines of Technical Bulletin 97-001.
2. Provided that the Applicant obtains a variance, the Project is consistent with the Town's development regulations. Granting DRI approval is in no way intended to support or oppose the grant of such waiver at the local level.
3. The proposed Project complies with the Barnstable Local Comprehensive Plan, which has been certified by the Cape Cod Commission.
4. The probable benefits of the proposed Project outweigh the probable detriments resulting from the development. This is supported by the facts that the Project as proposed would provide improved cellular phone service in Osterville to customers (finding #6), and the placement of this monopole would have a high probability of providing space for a majority of active wireless carriers in Osterville (finding #7). These benefits outweigh the detriment of the visual impact resulting from the construction of the monopole at the COMM Water Department, Fire District at 1138 Main Street in Osterville, MA.

The Commission hereby approves with conditions the application of Centerville-Osterville-Marstons Mills Fire District, Water Department and Industrial Communications and Electronics, Inc. for the ICE Osterville cell tower as a Development of Regional Impact, provided the following conditions are met:

CONDITIONS

General:

1. This DRI decision is valid for 7 years. Local development permits may be issued pursuant hereto for a period of 7 years from the date of the written decision. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this decision.
2. The Applicant shall obtain all necessary Federal, state and local permits for the proposed Project.

3. No development work, as the term “development” is defined in the Act, shall be undertaken until all appeal periods have elapsed, or if such an appeal has been filed, until all judicial proceedings have been completed.
4. Prior to the issuance of a Building Permit for any phase of construction, the Applicant shall obtain a preliminary Certificate of Compliance from the Commission that states that all conditions in this decision pertaining to the issuance of a Building Permit have been met. Prior to the monopole becoming operable for the cellular networks, the Applicant shall obtain a final Certificate of Compliance from the Commission. Such Certificates of Compliance shall not be issued unless all conditions have been complied with. Notification of the need for a final Certificate of Compliance shall be given to the Commission at least 30 days in advance of the Project’s start of operations, to allow time for staff to inspect the site and ascertain that all conditions have been met.
5. Prior to the issuance of a preliminary Certificate of Compliance, the Applicant shall submit final plans as approved by local boards for review by Commission staff to determine their consistency with Section 12 of the Cape Cod Commission Enabling Regulations.
6. The proposed Project shall be constructed as a 150-foot monopole with platform-style antenna mount for Cingular, TMobile and Verizon and up to two (2) additional wireless carriers, with accessory equipment shelters, as shown on the site plans prepared by Industrial Communications Engineering Division dated October 18, 2005. The monopole will be painted gray.
7. Prior to the issuance of a preliminary Certificate of Compliance, the applicants shall provide the Cape Cod Commission with at least two bona fide, non-contingent, signed co-location contracts from two wireless carriers for a minimum of five years and renewable thereafter.
8. No trees shall be removed for the construction of either the wireless monopole or the equipment compound.
9. The Applicant shall perform all repairs necessary to keep its equipment located on or about the leased premises in good condition, reasonable wear and tear and damage from the elements excepted. Said lease premise and all towers and related equipment shall be kept in a neat appearance. Maintenance of the facility shall include, but not be limited to, structural integrity of the mount, implementing and maintaining a security barrier, painting and fencing. The Applicant shall not build upon or disturb any areas other than those that are identified under the lease agreement dated June 8, 2005 with the COMM Water Department, Fire District.
10. If ICE intends to abandon the Project, it shall notify the Commission and the COMM Water Department, Fire District of this intention and the proposed date of abandonment, by certified U.S. Mail. Such notice shall be given no less than 30 days prior to the abandonment. Within 120 days of the termination or expiration of the Site Lease Agreement between ICE and the COMM Water Department, Fire District, Lessee will remove all equipment and other materials from the site. ICE will then, to the extent reasonable, restore the portion of the site to its condition at the commencement of the Site Lease Agreement.

11. All wireless carriers on the proposed monopole shall be limited to the use of either battery packs or a single on-site generator to be fueled with natural gas or compressed gas to provide emergency or backup power to the facility and associated equipment. In the event that an on-site generator is used, it shall be sized to accommodate all carriers that wish to utilize it for emergency power.
12. The equipment pads and/or equipment shelters shall be constructed without floor drains or sumps.
13. The facility shall use incandescent (non-mercury) interior lighting, as well as digital (non-mercury) thermostats.
14. There shall be no exterior lighting of the equipment shelter or the site.
15. Prior to issuance of a final Certificate of Compliance, Commission staff shall conduct a site inspection to verify compliance with the limitation on on-site fuel use and that equipment shelters have been constructed without floor drains. If, based on the site inspection, the site is found not to be in compliance with these requirements, the Applicant shall modify the Project to conform to these requirements as outlined in this decision. Such modification shall take place prior to issuance of a final Certificate of Compliance.

The Cape Cod Commission hereby approves with conditions the application of Industrial Communications and Engineering, Inc. as a Development of Regional Impact pursuant to Sections 12 and 13 of the Act, c. 716 of the Acts of 1989, as amended for the proposed Centerville-Osterville-Marstons Mills Fire District, Water Department and Industrial Communications and Electronics, Inc. wireless facility in Osterville, Massachusetts.

 Alan Platt, Chair
 Commonwealth of Massachusetts

 Date

Barnstable, ss.

On this _____ day of _____, 2005, before me personally appeared _____, to be known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

 Notary Public
 My Commission expires: