



CAPE COD COMMISSION

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DATE: November 16, 2000

TO: Brian A. Currie
59 Town Hall Square
Falmouth, MA 02540

FROM: Cape Cod Commission

RE: Hardship Exemption
Cape Cod Commission Act, Section 23

APPLICANT: Town of Falmouth-Fire Rescue Department
399 Main Street
Falmouth, MA 02540

PROJECT #: TR20034/HDEX20034

PROJECT: Falmouth Fire/Rescue Communications Tower
399 Main Street
Falmouth, MA 02540

BOOK/PAGE:

DECISION OF THE CAPE COD COMMISSION

SUMMARY

The Cape Cod Commission (Commission) hereby approves the Hardship Exemption application of the Falmouth Fire/Rescue Communications Department with Conditions, for the construction of a 120-foot municipal communications tower, pursuant to Section

Falmouth Fire/Rescue Communications Tower, Project TR20034
Hardship Exemption
November 16, 2000

1



23 of the Cape Cod Commission Act (Act), c. 716 of the Acts of 1989. The decision is rendered pursuant to a vote of the Commission on November 16, 2000.

PROJECT DESCRIPTION

The Falmouth Fire Department, located at 399 Main Street, has submitted a site plan for the proposed construction of a 120-foot free-standing communications tower. This proposed tower will replace the existing 80-foot, free standing tower which is located on a concrete pad adjacent to the Fire Department Headquarters building. The existing Fire Department building is a historic structure, although it is not located within a Historic District. The proposed tower is a vital part of the Public Safety Emergency Communication Network, which would link the Fire and Police Departments throughout Cape Cod.

This project is part of a two-phase renovation program that the Fire Department is undertaking to both upgrade the municipal communication system throughout the town, and to enlarge and modernize the existing Fire Department building on Main Street. The proposed communications tower will be erected as part of the Phase One site improvements, followed in early 2001 by a Phase Two DRI application. The Phase Two project includes an addition to the existing Fire Department Headquarters building, the removal of an existing residential structure on the property, a reconfiguration and expansion of the parking area, and additional landscaping and fencing to the site.

The 120-foot lattice tower will be erected on a concrete pad which will be located on the southwest corner of the lot. A generator building and equipment building will also be located adjacent to the wireless tower. The existing ambulance garage will be removed to provide the necessary space for the communications tower, generator building and equipment building.

The Fire Department property is abutted by Main Street to the north, King Street to the east, and residential units to the south and west. The proposed communications tower would be located in the southwest corner of the property, adjacent to three residential units.

Due to the Phase One and Two improvements to the site, and the desire expressed by the community to keep the Fire Department at its current location on Main Street, the communications tower must be located in the southwest corner of the lot. The communications tower must be constructed adjacent to the Fire Department building due to the prohibitive cost of hardwiring the proposed tower to the Headquarters building.

This technical requirement makes it cost-prohibitive for the applicant to locate the tower on another piece of property and eliminates the need for the applicant to conduct an alternative site analysis for the tower.

The applicant is seeking a hardship exemption on the basis that the lot presents a hardship based upon the need to locate the communications tower adjacent to the Fire Department Building. The lot is small, and due to the need to provide adequate access and egress for fire fighting equipment, the tower can only be feasibly located in the southwest corner of the lot.

REVIEW CRITERIA

Under the Act, the Commission has two overall areas of review in a hardship exemption request. The first pertains to a finding of hardship. The Commission may grant a hardship exemption where it specifically finds that a literal enforcement of the provisions of the Act would involve substantial hardship, financial or otherwise, to the applicant. The second finding is that desirable relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of the Act. In addition, the Commission's policy on determining whether substantial hardship exists states that "the basis for a finding of hardship shall be in the land or in the nature of the development rather than in the circumstances of the applicant."

PROCEDURAL HISTORY

The applicant submitted a hardship exemption application to the Commission on October 10, 2000. The application was deemed to be complete on October 11, 2000. A duly noticed public hearing was conducted by the Commission pursuant to Section 5 of the Act by an authorized subcommittee of the Commission on November 6, 2000 at the Falmouth Police Department. The public hearing was continued to November 16, 2000 and the record was left open for the submission of written materials until November 16, 2000.

The subcommittee held a public meeting after the close of the public hearing to deliberate on the project on November 6, 2000.

At the November 6, 2000 subcommittee meeting, the subcommittee voted unanimously to recommend to the full Commission that the hardship exemption request be approved with conditions. A final public hearing was held before the full Commission on

November 16, 2000. At this hearing, the Commission voted _____ to approve the hardship exemption.

Materials submitted for the record

<u>From the applicant:</u>	<u>Date received</u>
1. Hardship exemption application form	October 11, 2000
2. DRI application form	October 11, 2000
3. Certified abutters list	October 11, 2000
4. 8 1/2 x 11" section USGS quadrangle map of project area	October 11, 2000
5. Parcel map of Falmouth Fire Department	October 11, 2000
6. 24 x 36" copies of proposed site plan	October 11, 2000
7. 11 x 17" copy of proposed site plan	October 11, 2000
8. Letter stating reason for requesting hardship exemption	October 11, 2000
9. Letter from Fire Chief Brouder in support of project	October 11, 2000
10. Letter from Commercial Communications	October 30, 2000
11. Letter from Broadcast Signal Lab re: fall zones	November 6, 2000

<u>From Cape Cod Commission staff</u>	<u>Date</u>
2. Letter to applicant regarding complete application	October 17, 2000
3. Subcommittee notice	October 18, 2000
4. Letter to applicant regarding scheduling of hearing	October 18, 2000
5. Staff report	November 1, 2000

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 into the record by reference.

TESTIMONY

November 6, 2000 Public Hearing

Falmouth Fire Paul Chief Brodeur presented the proposed Fire/Rescue Communications Tower project to the subcommittee. He explained that the existing 80-foot tower would be demolished and simultaneously replaced by the new 120-foot lattice communications tower. A document was handed out detailing the existing and proposed twenty-year capital facilities plan of the Falmouth Fire Department, explaining that the proposed tower is integral in improving the department's ability to provide for the public's safety. He showed a site map of the proposed communications tower and its proximity to other

abutting buildings. He also presented a rendering of the Phase Two development proposal, including the Fire Department building addition, proposed communications tower and parking facilities. He also distributed an elevation drawing showing the Fire Department Headquarters building and the proposed tower. Fire Chief Brodeur stated that he had discussed the location of the proposed tower with all abutters and none has expressed a concern about the issue of the fall zone.

Greg Smith, Commission planner, presented the staff report. He discussed the Commission's review criteria for hardship exemptions and explained that to grant a hardship exemption the Commission must make two findings: 1) that literal enforcement of the provisions of the Act would create substantial hardship, financial or otherwise, to the applicant, and 2) that desirable relief may be granted without substantial detriment to the public good and without nullifying or derogating from the intent or purposes of the Act. Mr. Smith stated that upon review of the proposed communications tower, and considering the extenuating circumstances surrounding the inability to relocate the Fire Department Headquarters building and thus the communications tower, that a physical hardship does exist. Mr. Smith stated that staff recommended granting the hardship exemption because the applicant had adequately demonstrated that there is substantial hardship.

The subcommittee's initial questions concerned both whether a commercial carrier would be located on the tower, and the effects of the fall zone in a residential area. The Fire Chief replied that there is no intention to have private carriers at this time. Mr. Swenson, the applicant's engineer, stated that the communications towers are constructed in such a way that the principal issue of ice falling from them are minimal and does not pose a safety issue to residences adjacent to the tower.

The subcommittee also inquired as to whether the facility would only be used for public safety purposes, and if the town hoped to have the tower constructed before winter. The Fire Chief responded affirmatively to both questions.

Mr. Frank Shephard asked if the tower would be used for communications between Otis and Mashpee, and if the generator building is to supply power to both the tower and storage building. Fire Chief Brouder responded affirmatively to both questions. Mr. Shephard also inquired if the Fire Chief had spoken with abutters about the proposed communication tower. The Fire Chief responded that he had discussed the proposed tower thoroughly with all abutters.

Mr. Shephard asked Mr. Brian Currie (Falmouth Town Planner) to explain why the Town had applied for a Hardship Exemption. Brian stated that he felt that the town would be facing a financial hardship if the project had to undergo a complete DRI review, principally because the budget for construction had been previously set and any additional delays as a result of the review process would place a serious financial hardship on the town.

Mr. Smith presented the staff report, outlining the reasoning for the hardship exemption. The staff report did not support the financial hardship expressed by the town, instead stating that there is a unique feature of the land and existing structure that created the hardship. Specifically, the inability of the Fire Department to relocate the Headquarters building and adjoining communications tower to a larger, more remote site necessitated the need to site the tower on the corner of the lot, adjacent to nearby residential units.

Based on the hardship, the proposed communications tower must be located on the Main Street lot. Although the applicant cannot meet the requirements of the fall zone as outlined in the Cape Cod Commission's Technical Bulletin #97-001 (*Guidelines for DRI review of Wireless Communication Towers*), a waiver of the requirements is allowable under the Hardship Exemption, providing that a demonstrated hardship has been shown to exist by the applicant.

Mr. Smith also explained that an approval of the Hardship Exemption should be conditioned based upon landscaping and fencing for the proposed tower, generator building and equipment building. Mr. Shephard asked if the Commission could condition a Hardship Exemption. Dorr Fox, Chief Regulatory Officer, replied that the Commission could condition a Hardship Exemption.

Mr. Shephard also asked if the lattice construction was the strongest design for the proposed tower, and if it were possible to locate it in another area. Gay Wells asked if the Town had considered a monopole instead of a lattice tower. Mr. Swenson replied that a monopole was looked at, but it is much more expensive than a lattice pole. The foundation for a monopole is more engineering intensive and he believes it results in a more unsightly structure. Mr. Swenson stated the proposed tower could not be constructed elsewhere on the site due to access and egress issues associated with fire equipment. Mr. Swenson also stated the Headquarters building roof was not a sufficient location for the proposed tower due to weight and possible leaking issues.

Mr. Barry Norris of the Town Building Committee stated that there can never be a commercial operation on the tower because there is no space for an antenna to be placed.

JURISDICTION

The proposed Falmouth Fire/Rescue Communications Tower qualifies as a Development of Regional Impact (DRI) under under Section 3(i) of the Enabling Regulations governing Developments of Regional Impact which requires review for “the construction of any wireless communications tower exceeding thirty-five (35) feet in height from the natural grade of the site on which it is located but not including the reconstruction or replacement of an existing wireless communication tower on the same site, provided that the reconstruction or replacement does not exceed the height of the existing wireless communications tower by more than twenty (20) feet. Said twenty feet shall be measured from the height of the existing wireless communications tower in existence on June 30, 1997.”

FINDINGS

The Commission has considered the Town of Falmouth’s Hardship Exemption for the proposed Falmouth Fire/Rescue Communications Tower, and based on consideration of such application and upon the information presented in the public hearing and submitted for the record, makes the following findings pursuant to Section 23 of the Act:

General

1. The proposed 120-foot Fire/Rescue Communications tower is to be a replacement tower for the existing 80-foot municipal communications tower located adjacent to the Fire Department Headquarters building. The proposed communications tower will be located on the same site as the existing communications tower, although it will be located on a different part of the property. Due to both the size of the lot and the Phase Two improvements to the Headquarters Building and parking lot, the proposed communications tower must be located in the rear corner of the lot.
2. The proposed municipal communications tower must be located close to the Fire Department Headquarters Building due to the high costs of hardwiring the tower to the Headquarters building.
3. The proposed municipal communications tower is a vital part of the Public Safety Emergency Communications Network, which would link the Fire and Police Departments throughout Cape Cod.

4. There is an overriding desire on behalf of the community to keep the Fire Department Headquarters building at its current location on Main Street.
5. A series of constraints preclude locating the proposed municipal communications tower elsewhere on the site. These constraints include the requirement to keep the Headquarters building on the Main Street property, the technical requirement and high costs of hardwiring the proposed communications tower to the Headquarters building, and the Phase Two Fire Department redevelopment plans which preclude the communications tower from being located elsewhere on the site.
6. The proposed municipal communications tower will only be used for municipal use, and not for future commercial carriers.
7. A literal enforcement of the provisions of the Act would involve substantial hardship to the applicant.
8. Desirable relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of the Act.

Dimensional Requirements

9. The Technical Guidelines state that ground-mounted wireless service facilities should be no higher than ten feet above the average height of buildings within 300 feet of the proposed facility, or, if no buildings are located within 300 feet of the facility, all ground-mounted facilities should be surrounded by dense tree growth to screen views of the facility in all directions. The proposed 120-foot tower will replace the existing 80-foot communications tower. According to the applicant's consultant, the tower must be 120 feet in order to provide the necessary town-wide communications coverage sought by the Fire Department. Based on the hardship, the proposed communications tower must be located on the Main Street lot. Although the applicant cannot meet the requirements of the height restriction as outlined in the Cape Cod Commission's Technical Bulletin #97-001 (*Guidelines for DRI review of Wireless Communication Towers*), a waiver of the requirements is allowable under the Hardship Exemption, providing that a demonstrated hardship has been shown to exist by the applicant.

Setbacks

10. Based on Technical Bulletin #97-001, the minimum distance from the base of any ground-mounted communications tower to any property line, habitable dwelling, road, business, institutional use, or other public recreational area should be the height of the facility/mount, including antennas or other appurtenances. This setback is considered the "fall zone". Based on the community's desire to keep the Fire Department at its current location, the necessity of locating the tower adjacent to **the** Fire Department building, and access and egress issues, the proposed communications tower must be located in the southwest corner of the Main Street lot. Although the applicant cannot meet the requirements of the fall zone as outlined in the Cape Cod Commission's Technical Bulletin #97-001, a waiver of the requirements is allowable under the Hardship Exemption.

Design Standards

11. Wireless service facilities should be hidden from public view wherever possible by incorporating them into an existing or proposed structure, through the careful selection of construction materials and/or color. Also, such facilities should be surrounded by buffers of dense tree growth and understory plantings in all directions to create an effective year-round visual buffer. The applicant has stated that the town will work with Commission staff on the Phase Two DRI application's landscape plan to design suitable fencing and landscaping around the proposed tower.

Equipment Shelters

12. Equipment shelters for wireless service facilities should be surrounded by a security barrier, as well as camouflaged behind an effective year-round landscape buffer. The landscaped buffer and fencing shall be consistent with Technical Bulletin #97-001 ("Technical Bulletin"). Fire Chief Brouder stated that the generator and equipment building will have a brick façade to match the façade on the Headquarters building, and will also be surrounded by a security fence. Both the landscaping and fencing around the equipment building will be submitted for approval by the Commission on the Phase Two DRI landscaping plan.

Noise Standards/Radiofrequency (RFR) Standards

13. Ground-mounted wireless service facilities should not generate noise from equipment and/or wind in excess of 50 db at the property line. The applicant agreed to having an acoustical engineer take ambient noise readings before and after construction of the communication tower to ensure that the noise levels will not be above 50 db.

Hazardous Materials Standards

14. The Falmouth Fire/Rescue Department is not located in either an existing Wellhead Protection District or a Potential Public Water Supply Area according to maps produced for the 1996 Regional Policy Plan. The emergency generator will supply both the wireless facility and the entire Fire/Rescue installation. The generator will be a replacement of a gas-fired unit currently on site. The Chief indicated that the new generator will likely be a dual-fired unit, capable of running either on gas or diesel fuel.

The wireless *Guidelines* allow the Commission to require provisions for “full containment of any hazardous materials used on site, including an enclosed containment area with a sealed floor, designed to contain 110% of the total volume of hazardous materials used, handled or stored on site and a prohibition on floor drains.”

Co-location

15. The applicant has stated that the proposed tower will not be designed for future commercial wireless carriers in order to reserve any excess capacity for safety and municipal facilities in the future.

Other

16. No affordable housing, open space, natural resource or transportation impacts are anticipated to result from the proposed demolition of the existing 80-foot communications tower and construction of the proposed 120-foot lattice communications tower and ancillary buildings. Desirable relief may therefore be granted without nullifying or substantially derogating from the intent or purpose of the Act.

The Commission hereby approves with conditions the Hardship Exemption application of the Falmouth Fire Department for the proposed municipal communications tower, provided the following conditions are met:

CONDITIONS

1. Prior to the initial operation of the communications tower, the applicant shall obtain a Certificate of Compliance from the Cape Cod Commission. Compliance with these conditions is required prior to the issuance of the Certificate of Compliance.
2. The proposed landscaping and fencing plan (to be submitted as part of the Phase Two DRI application) must meet the standards outlined in the Technical Bulletin and be reviewed and approved by the Commission.

3. The project shall be designed to provide full containment of any hazardous materials used on site, including an enclosed containment area with a sealed floor, designed to contain 110% of the total volume of hazardous materials used, handled or stored on site. These requirements shall apply to both the wireless equipment sheds and to the on-site emergency generator which is to supply entire facility. Also, the slab or sub-base of the equipment shelter(s) and emergency generator building shall not include floor drains. Prior to issuance of a Certificate of Compliance, the applicant shall provide the Commission with final "as built" plans showing compliance with these requirements.
4. Lighting of equipment shelters and any other facilities on the ground shall be designed in accordance with Technical Bulletin #95-001, Development of Regional Impact Guidelines for Exterior Lighting. Also, all signs shall comply with FCC regulations and applicable requirements of the town's signs regulations.
5. All equipment proposed for the proposed communications tower should be authorized per the FCC Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (FCC Guidelines). Pre-construction and post-construction ambient readings are to be conducted by a noise expert, with both reports submitted to the Cape Cod Commission in accordance with Technical Bulletin #97-001. Also, ambient readings will be required for any future municipal antennas that might be added to the proposed tower, with reports submitted to the Cape Cod Commission.
6. After the proposed communications tower is operational, the applicant will submit, within 90 days of the beginning of operations, and at annual intervals from the date of issuance of the Certificate of Compliance, existing measurements of RFR from the wireless service facility. Such measurements should be signed and certified by a RF engineer, stating that RFR measurements are accurate and whether they meet FCC Guidelines as specified in the Radiofrequency Standards (sub-section VI C) of these Guidelines.
7. After the proposed communications tower is operational, the applicant shall submit, within 90 days for the issuance of the Certificate of Compliance, and at annual intervals for the first three years from the date of issuance of the Certificate of Compliance, existing measurements of noise from the wireless service facility. Such measurements should be signed by an acoustical engineer, stating that noise measurements are accurate and whether they meet the Noise Standards (sub-section VI B) of these Guidelines.

8. The applicant shall maintain the wireless service facility in good condition. Such maintenance includes, but is not limited to, painting, structural integrity of the mount and security barrier, and maintenance of the buffer areas and landscaping.
9. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, may be deemed cause to revoke or modify this decision.
10. This hardship exemption only applies to use of the tower as a public fire safety use, and not to commercial wireless communication facilities.

CONCLUSION

Based on the findings above, The Cape Cod Commission hereby approves the Hardship Exemption application of the Town of Falmouth for the construction with conditions of a 120-foot lattice Fire/Rescue communications tower.



Frank Shephard, Chair

Nov 16, 2000
Date

Commonwealth of Massachusetts

Barnstable, ss

Subscribed and sworn to before me this 16th day of November, 2000.



Katharine L. Peters, Notary Public

