

FORM SP

SOUTH HADLEY PLANNING BOARD

APPLICATION FOR SPECIAL PERMIT

Date March 8, 2018

Pursuant to the provisions of Chapter 40A of the General Laws of the Commonwealth of Massachusetts and the South Hadley Zoning By-Laws, the undersigned herewith submits the accompanying application for a Special Permit as described below and detailed in the supporting documentation which is incorporated into and made part of this application.

NATURE OF REQUEST (Check and Describe as Appropriate):

- a. Alteration/expansion/change of a nonconforming use and/or structure
- b. Home occupation
- c. Professional business
- d. New/second hand car dealer
- e. Flag lot
- f. Two-family dwelling/Three-family dwelling
- g. Multifamily dwellings for more than three families
- h. Flexible development
- i. Wireless communications facility
- j. Major earth removal, extraction, and/or fill activity
- k. Other (Describe _____)

GENERAL DESCRIPTION OF REQUEST:

Special permit to construct a 150' monopole and equipment compound.

APPLICABLE SECTIONS OF THE ZONING BYLAW:

Section 255-20 (Dimensional Regulations); Section 255-35 (Water Supply Protection District); Section 255-40 (Wireless Communications Regulations); Section 255-129 (Standards for Special Permits); and Section 255-149 (Site Plan Review Criteria).

1. Applicant Industrial Tower and Wireless, LLC

Address 40 Lone Street

Marshfield, MA 02050

Telephone (781) 319-1000

Email Address: John.champ@induscom.com

2. Owner (if not applicant) Adam and Rebecca Quenneville

Address 121 Amherst Road, South Hadley, MA 01075

Email Address: _____

3. Site Plan Preparer Robert A. Foresi/ R.A. Foresi Associates

Title or License Professional Land Surveyor

Address 1111 Elm Street, # 23, West Springfield, MA 01089

Telephone (413) 737-0735

Email Address: _____

4. Deed of property recorded in the Hampshire County Registry of Deeds,
Book 8027 Page 26

5. Location and description of property (street and number if any) +/- 4 Acres, Hadley Street
See Hampshire Registry, Plan Book 205, Page 18.

Assessors Map # 56 Parcel # 119

6. The subject property is presently in zoning district(s): Agricultural and Water Supply Protection Overlay

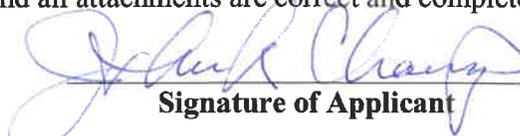
7. Is the subject property located within one or more of the Master Plan's Land Use Area
Districts? Yes If so, in which of the districts or areas? Route 47, Hadley Street to Town Common

8. Is the subject property located in a National Historic District or listed as a Priority
Heritage Landscape? No If so, which one? N/A

9. Does the subject property abut a designated Scenic Roadway? Yes

10. Is the subject property within the designated South Hadley Falls Economic Opportunity
Area? No

I, as applicant, certify that the application and all attachments are correct and complete.


Signature of Applicant

FOR PLANNING BOARD OFFICE USE:

11. Amount of Application Fee: _____

12. Fee Paid? Yes _____ No _____

FOR TOWN CLERK (indicate date and time received):

Submission received on (Date) _____
at (time) _____

Signature _____

FORM SPR

SOUTH HADLEY PLANNING BOARD

APPLICATION FOR SITE PLAN REVIEW

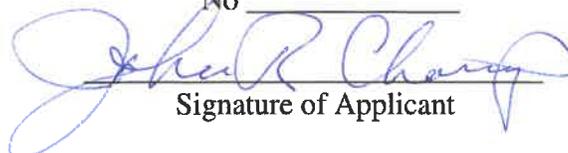
Date March 8, 2018

File one completed application form together with ten (10) copies of the site plan with the Planning Board. One (1) copy of Form SPR shall be concurrently filed with the Town Clerk.

To the Planning Board:

The undersigned herewith submits the accompanying Site Plan for review as required by Section 12 of the Zoning By-Laws.

1. Applicant Industrial Tower and Wireless, LLC
Address 40 Lone Street
Marshfield, MA 02050
Telephone (781) 319-1000
2. Owner (if not applicant) Adam and Rebecca Quenneville
Address 121 Amherst Road, South Hadley, MA 01075
3. Site Plan Preparer Robert A. Foresi/ R.A. Foresi Associates
Title or License Professional land Surveyor
Address 1111 Elm Street, #23, West Springfield, MA 01089
4. Deed of property recorded in the Hampshire County Registry of Deeds,
Book 8027 Page 26
5. Location and description of property (street and number if any) +/- 4 Acres, Hadley Street
See Hampshire Registry, Plan Book 205, Page 18.
Assessors Map # 56 Parcel # 119
6. Fee Paid: Yes No


Signature of Applicant

Town Clerk:

Date of Submission _____

Signature _____

**SOUTH HADLEY PLANNING BOARD
APPLICATION SUPPORT STATEMENTS AND DOCUMENTATION**

APPLICANT: Industrial Tower and Wireless, LLC
40 Lone Street
Marshfield, Massachusetts, 02050

Co-Applicant #1: T-Mobile Northeast, LLC

Co-Applicant #2: Sprint Spectrum L.P.

Site Address: 4+/- Acres, Hadley Street, South Hadley, MA.

Tax Assessor's Lot ID: Map 56, Lot 119

I. About the Applicant

Industrial Tower and Wireless, LLC (“ITW”) is a Delaware Limited Liability Company located at 40 Lone Street in Marshfield, Massachusetts. ITW is one of a series of interrelated entities that provide a broad array of telecommunications related services across New England, Florida and the Mid-West.¹ ITW is Industrial’s site acquisition, development and tower site leasing business, and owns and operates approximately 125 tower facilities in New England plus additional sites in Florida, Colorado and Nebraska. ITW also provides radio frequency (“RF”) propagation and site leasing management services to a sister company that operates a vast PCS and Cellular network on over 600 plus tower sites in the mid-west.

Industrial’s tower network provides the critical infrastructure necessary to support its own 900Mhz trunked digital commercial mobile radio services network as well as wireless services for federal, state and local public safety communications systems (including E911), third party cellular and PCS network coverage, wireless broadband and internet services, microwave backhaul and radio and TV broadcast. Industrial is a provider of “personal wireless services” under the Federal Telecommunications Act of 1996, and is a Public Service Corporation as defined by the Massachusetts Department of Telecommunications and Energy.

II. Applicant’s Interest in the Property

On October 30, 2017, ITW entered into a Purchase and Sale Agreement with Adam and Rebecca Quenneville for the purchase of the proposed project site consisting of approximately 4 acres of land on Hadley Street in South Hadley, Massachusetts (the “Property”). See Tab 1 (Purchase & Sale Agreement (redacted)). The Property is shown as Map 56, Lot 119 on the South Hadley Assessors Maps and is also shown as Lot B-7 on a plan of land entitled “Plan of Land South Hadley, MA Division of Land of Adam and Rebecca Quenneville”, dated April 12,

¹ Industrial Tower and Wireless, LLC, Industrial Communications, LLC, Industrial Communications & Electronics, Inc. and Industrial Wireless Technologies, Inc. (collectively “Industrial”).

2005, drawn by R.A. Foresi Associates and recorded with the Hampshire County Registry of Deeds, Plan Book 205, Page 18. ITW, acting as a tower site developer, seeks to permit and construct a 150' monopole style telecommunications tower at the Property to provide a replacement location for Sprint and T-Mobile, as further explained and discussed below.

III. Special Permit Application and Rules and Regulations Filing Requirements

1. Project Narrative Statement.

The Co-Applicants, T-Mobile and Sprint, seek to relocate their existing personal wireless communication services antennas and equipment from the existing smokestack at the Mount Tom Power Station in Holyoke, MA to a new 150' monopole telecommunications tower (the "Tower") and equipment compound (hereinafter the Tower and the equipment compound shall be referred to collectively as the "Facility") at the Property. This relocation is necessary because the power station was closed in December, 2014, and the smokestack will be removed in June/July 2018, resulting in the need for a replacement site to fill the gap in wireless service caused by the decommissioning of the smokestack.

Original Site Location – Site Plan No. 1 / Site 1.

According to the South Hadley Zoning Bylaw (the "Bylaw") the Property is located in the Agricultural Zoning District and in the Water Supply Protection District in South Hadley. As shown on the project site plans, Site Plan No. 1 filed with ITW's application, the Facility will be located within a 6,400-square foot (80' x 80') compound area, set back at the far westerly end of the Property. See Tab 2 (Industrial Communications, South Hadley, MA, Site Plan No 1). The compound will be topped with 6" of gravel and surrounded by an 8' high chain link perimeter security fence. The Tower is designed to accommodate five (5) carriers on the Tower and their equipment in the compound below.

The Tower is located 937 feet off of Hadley Street in a clearing at the rear of the lot, but surrounded by a dense tree cover. Access to the Facility will be over an existing 18' wide gravel drive that will be extended by a 12' wide gravel drive through the cleared area to the Facility. Industrial will use as much of the previously disturbed access drive as possible to limit additional clearing of native vegetation, and will limit clearing of the Project Site to only what is necessary for construction of the site. The existing, mature and well-established vegetation surrounding the Facility will be used for added screening of the compound.

The Tower itself will be set back 937 feet from the entrance on Hadley Street to the Property. There are five (5) residences to the north, east and south of the Facility, with the closest at 442 feet and the farthest at 698 feet away from the Tower. See Tab 18A (Map showing the distance to the nearest homes of the Site 1). The Facility is located at the rear of the Property in order to create the furthest distance from all residential uses. The outer edge of the base of the

Tower is 77.5 feet off of the rear lot line. The closest side line from the outer edge of the base of Tower is 90.3 feet from the northerly lot line. The extensive existing tree cover and vegetation, distance from the road and the numerous curves in the access drive, will to the maximum extent possible visually shield the Facility from view from Hadley Street and will shield the base of the Tower from the view of abutting homes.

The advantage of Site Plan No. 1 is that it sets the Facility as far back as possible from adjoining residences located on parcels to the north, east and south. The site also sets the Facility as far back as possible from Hadley Street at a location that abuts municipal conservation land. However, the location of the Facility per Site Plan No. 1 appears to require a variance from the Zoning Board of Appeals for relief from the one foot of setback for each foot of height per Bylaw Section 255-40 (G)(3)(a)(2). This is because the waiver provisions of Section 255-40 (G)(3)(b) do not provide for waivers of setbacks from property in residential use in the Agricultural Zoning District.

Alternative Site Location – Site Plan No. 2 / Site 2.

The Facility, as shown on Site Plan No. 2, relocates the Facility into the middle of the Property. The Facility has all of the same design characteristics of the first location such as the style of tower, size of compound, fencing, utilities, access and the like, except that the tower height is reduced by two (2) feet in order to meet the setback criteria of the Bylaw. See Tab 2 (Site Plan No. 2). While this relocation, with a 148-foot tower, has the advantage of meeting the setback criteria of the Bylaw, it has the disadvantage of setting the Facility significantly closer to five single family homes located on Hadley Street and depicted in **Tab 18B**.

Per Site Plan No. 2, the Tower itself will be set back 610 feet from Hadley Street. There are five (5) residences to the north, east and south of the Facility, with the closest at 235 feet and the farthest at 522 feet away from the Tower. See Tab 18B (Map showing the distance to the nearest homes of Site 2). The Facility is located in the middle of the Property in order to conform to the zoning setback criteria of the Bylaw. The outer edge of the base of the Tower is 407.2 feet off of the rear lot line, 149.5 feet from the northerly lot line, 148.8 feet to the southerly lot line, and 148.6 feet from the lot to the southeast of the Property. The middle of the Property is wooded with existing tree cover and vegetation and will to the greatest extent possible visually shield the Facility from view from Hadley Street.

The view of nearby residences of Site 1 will be well screened by tree cover and vegetation. There will be extremely limited view impacts from Site 1. The base of Site 2 will also be well screened by existing vegetation and tree cover, though nearby residences may see the upper sections of the Tower. In addition to the tree cover and significant set back from Hadley Street, visibility of the Tower from the neighboring area will be mitigated by the use of a monopole style tower that maintains a narrow profile to the eye, and that will be manufactured in a silver/gray galvanized steel that blends in with the visual surroundings. No lighting is required per the FAA Approval dated 1/12/18. See Tab 3 (FAA Aeronautical Study). A review of the

Massachusetts Historic Commission inventory on the MASS GIS Oliver system determined that there are no properties listed on the National or State Register of Historic Places near the Property. The Property is not located in a Priority Heritage Landscape.

The Facility requires electrical and fiber optic services, which will be installed underground along the access drive from Hadley Street to the Facility. There are no water, sewer, septic or gas services used at the site. T-Mobile plans to deploy an emergency generator located on a concrete pad, fueled by a 120-gallon propane tank. Sprint uses battery power for emergency operations. No hazardous waste is stored, produced or emitted at the Facility. As noted earlier, the compound will be surrounded by an 8' high chain link fence with a 10' wide security gate on the easterly side of the compound, at the end of the access drive. The gate will be locked to prevent unauthorized access to the site. An additional gate will be installed at the easterly end of the access drive, approximately 150 feet off of Hadley Street. This will prevent unauthorized vehicular access up to the Facility.

Each carrier will deploy antennas and remote radio heads on the Tower with accessory equipment cabinets located on concrete pads at ground level, within the 80' x 80' fenced equipment compound. The cumulative radio frequency radiation emissions from this site, based upon the proposed antenna and equipment configurations, are well below the maximum levels authorized by the Federal Communications Commission for maximum permissible exposure (MPE). See **Tab 4** (RF Safety Report). All cabling from the antenna to the ground mounted equipment will be routed inside of the monopole. Once construction is complete, the Facility will be an essentially passive site with a limited need for access. The proposed Facility will be unmanned. Trips to and from the Facility will be limited to a few times per month for wireless technicians to maintain equipment and for property maintenance.

Further information regarding the proposed Facility is provided in the sections below.

2. Photographs of the Existing Site Conditions.

Photographs of the proposed Facility at Site 1, showing the surrounding conditions in all four directions, the existing access drive and an aerial view via Google Earth are attached hereto in **Tab 5**.

- See **Exhibit A** (Google Earth Photo)
- See **Exhibit B** (Tower Location North View)
- See **Exhibit C** (Tower Location East View)
- See **Exhibit D** (Tower Location South View)
- See **Exhibit E** (Tower Location West View)
- See **Exhibit F** (Access Drive Photos)

3. Master Plan Consistency Statement.

The proposed Facility is located in the Route 47, Hadley Line to Town Common Land Use Area Vision Statement area. As stated in the Master Plan, that area consists primarily of single-family residences and farmland with patches of commercial development. Route 47 is noted as having been designated a Scenic Byway by the Federal Government through South Hadley and Hadley, MA. The overall goal of the district is to have this corridor remain in keeping with its current pattern by retaining its rural and scenic identity.

As proposed, the Facility is consistent with the Master Plan. The Site 1 Tower is set back 937 feet off of Route 47. The Site 2 Tower is set back 610 feet off of Route 47. The area surrounding the Facility is wooded. The Property rises steadily 36 feet in ground elevation from Route 47 up the top of a rise approximately 400 feet off of Hadley Street, before leveling off and turning out of view from the Street. The Tower at Site 1 is another 500 plus feet further back from the top of the rise. The Tower will be largely shielded from view along Route 47, though there are locations where the Tower will be visible from Route 47. The Facility and fencing will not be visible from Route 47. The rural and scenic character of the area is therefore largely maintained. Other than the 6400-square foot compound and the existing access drive, the remainder of this four-acre site will remain undeveloped. Existing vegetation will be maintained. Therefore, neighborhood aesthetics will be maintained and environmental conservation will be fostered through the preservation of open space.

4. Special Permit Standards Consistency Statement.

Pursuant to the Use Regulation Schedule, Attachment 1, to the Bylaw, Wireless Communications Towers are allowed by special permit in the Agricultural Zoning District and by special permit in the Water Supply Protection Overlay District.²

- A. Water Supply Protection Overlay District. Section 255-35 of the Bylaw, regarding uses in the Water Supply Protection Overlay District, have a special standard of review for Special Permit uses in this overlay district. See Section 255-35 (H). The proposed Tower is consistent with the Special Permit standard of Section 255-35 (H) for the following reasons:
- a. The Wireless Communications Facility is a permitted use in the Water Supply Protection Overlay District per Section 255-35(D)(9). See Section 255-35 (H)(1).
 - b. The Site Plan contains features and information consistent with the requirements of Section 255-35 (H)(2) providing for drainage recharge and prevention of loss of recharge as well as provisions to control soil erosion and sedimentation. See **Tab 6** (Stormwater Management Letter).

² Though the Use Regulation Schedule notes that Wireless Communications Towers are allowed by special permit in the Water Supply Protection Overlay District, Section 255-35(D)(9) provides that Wireless Communications Towers are *permitted uses* in this overlay district, when approved pursuant to the dimensional criteria of Section 255-20 and the provisions of Wireless Communications regulations of Section 255-40.

- c. There are no hazardous or potentially hazardous materials to be used or stored on site.
- d. The proposed Facility meets the standards for the grant of a special permit under Article IX of the Bylaw and meets the following specific standards of the Water Supply Protection Overlay District:
 - i. The project in no way will adversely affect the existing or potential quality or quantity of water available in the District because the Facility does not use water, sewer, gas, or other utilities except fiber optic cable and electricity. It does not generate waste or effluent of any kind. See Section 255-35 (H)(3)(b)(1).
 - ii. There will be no substantial disturbance of soils, topography, drainage, vegetation or any other water related natural characteristics of the Property because the access drive to the location of the Facility has already been constructed. A short 12-foot wide access drive extension will be constructed to access Site 1 together with a 6400-square foot compound area. The remainder of the site will remain in its current natural state. See Section 255-35 (H)(3)(b)(2). For Site 2 no access drive extension is needed.

B. Wireless Communications Regulations. Section 255-40 of the Bylaw, regarding siting of wireless communications facilities, has a special standard of review for Special Permit uses. See Section 255-40 (K)(2). The proposed Tower is consistent with the Special Permit standard of Section 255-40 (K)(2) for the following reasons:

- a. Special Permit Requirements. The Plan and Materials filing requirements of Article IX of the Bylaw regarding the Special Permits have been submitted.
- b. Site Plan Requirements. The Plan and Materials filing requirements of Article XII of the Bylaw regarding the Site Plan Review have been submitted.
- c. Authority to Develop Property. ITW has the authority to develop, erect and operate the proposed Facility as the future owner of the Property to be acquired pursuant to a Purchase & Sale Agreement by which they will purchase the property following permitting. See Tab 1.
- d. Conformity. The Plans and documentation are in conformity with the provisions of the wireless communications regulations, as evidenced by the plans and supporting materials.
- e. Need. The need for the Facility is established by:
 - i. The Statement of Need of T-Mobile. See Tab 7.

- ii. The RF Propagation Study of T-Mobile showing a significant gap in wireless coverage following the decommissioning of the smokestack at Mount Tom Power Station in Holyoke, MA. See Tab 8.
- iii. The Statement of Need of Sprint. See Tab 9.
- iv. The RF Propagation Study of Sprint showing a significant gap in wireless coverage following the decommissioning of the smokestack at Mount Tom Power Station in Holyoke, MA. See Tab 10.
- v. List of Existing Telecommunications Sites in South Hadley and within 1 Mile of South Hadley. See Tab 11.
- vi. Map of Existing Tower Sites. See Tab 12.

All existing wireless communications towers in and around South Hadley, MA do not fill the gap in coverage to be created by the loss of the power station smokestack as evidenced by the RF Propagation Studies and the Statements of Need. The proposed height of 150 feet is the minimum height necessary to fill the gap in coverage caused by the loss of the power station smokestack as evidenced by the RF Propagation Studies and the Statements of Need.

The RF Studies of both Sprint and T-Mobile show that, with the removal of the smokestack at the Mt. Tom power station, there is a significant gap in wireless coverage extending approximately two miles north to south along Interstate Route 91 and the Connecticut River and approximately one mile wide. This area involves most of the westerly side of South Hadley, including large sections of Route 47.

- f. Removal Cost. The estimated removal cost of the Facility has been certified by Jonathan M. Longchamp, P.E., of Daigle Engineers, Inc. of Methuen, MA at \$14,750.00. See Tab 13.
- g. Scheduled Inspections and Maintenance. The site is inspected bi-monthly by ITW tower crews. Maintenance is performed as needed, based upon those inspections by ITW tower crews and maintenance personnel.
- h. Photographic Rendition of Proposed Facility (Color). A photographic rendition of the proposed Facility is attached hereto. See Tab 14, Exhibits A-D (Photo Renditions).
- i. View Lines. View lines of the proposed Tower for Site 1 from the North, East, South and West at a distance of 1 to 3 miles are attached hereto. See Tab 15.
- j. Balloon Test. A balloon test will be conducted prior to the first public hearing on this application, in accordance with the requirements of the Bylaw.

5. Statement of Impacts to Historic Places or Priority Heritage Landscape.

The proposed Facility will have no historical and cultural impacts relative to properties listed on the National or State Register of Historic Places or as a Priority Heritage Landscape. There are no properties located within 300 feet of the Property listed on the National or State Register of Historic Places or as a Priority Heritage Landscape. See Section 255-40(E)(3). Nor are there any such properties within a mile of the Property. See **Tab 16** (Massachusetts Historic Commission Inventory Map). The Site 1 Tower is set 937 feet off of Route 47 and is well screened from view in all directions. The Site 2 Tower is set 610 feet off of Route 47 and is well screened from public view in all directions.

6. Background on the Historical Nature of the Buildings Existing on the Property.

There are no existing buildings or structures on the Property.

7. Project Schedule.

The Property has an existing access drive into the property. The location of the Facility is already substantially cleared. Thus, minimal additional site work is necessary. Once the small section of 12' wide access drive is constructed, utilities will be run up the access drive from Route 47 to the Facility location. The foundation for the Tower will be installed, the Tower will be erected, the equipment pads installed, the security fencing will be erected, the site will be powered up, antennas and equipment installed and the Facility will be operational approximately four (4) months after the issuance of a building permit:

A. Access Driveway, Site Work and Installation of Utilities	Weeks 1-2
B. Foundation for Tower and Equipment Pads	Week 2-6
C. Tower Installation	Week 7
D. Security Fencing and gates	Week 6-8
E. Utility hook-up	Week 6-8
F. Installation of Equipment, Generator, Antennas	Week 6-8
G. Finish Site Work, Grading and Signage	Week 8-10

Because the power station smokestack will be decommissioned in June/July, 2018, ITW seeks to have the Facility operational by July 15, 2018.

8. Statement of the Impacts on the Town's Scenic Roadways.

The proposed Facility is not expected to have an adverse impact on scenic roadways within the Town of South Hadley. While Route 47 has been designated a scenic highway, the Tower is set back 937 feet from the road for Site 1 and 610 feet for Site 2, is elevated well above the road, and will be screened by existing tree cover on the Property and blocked from view by the topography itself.

9. Statement of the Impacts on the Town’s Agricultural Lands and Uses.

The proposed Facility is not expected to have any impact on agricultural lands or uses in the town of South Hadley. The Property is not used for agricultural purposes. Therefore, the use of the Property as proposed will not reduce the existence of agricultural lands or uses.

10. Commercial/Office/Industrial Development Applications.

A. Management Plan. The Facility will be operated twenty-four (24) hours per day, seven (7) days a week. The Facility is unmanned. No employees will be on site except for a few times per month for wireless technicians to maintain equipment and for property maintenance. Parking is provided outside the fenced facility area, though the entry gate will allow vehicles to pull into the fenced compound, as needed. The Facility produces no trash or waste. This is a low maintenance facility. Landscaping around the Facility is not necessary, because the tower compound will not be visible from any location. General maintenance of the Facility will occur on an as needed basis based upon regular inspections. Snow plowing is also on an as need basis. There are no sources of noise or light emission from the Facility, except the emergency generator.

B. Plans for signage. Plans for Signage for the proposed Facility are incorporated into the Site Plans, including size and location of signs. Signage schemes are also separately detailed as attached. No signs will be illuminated. See Tab 17.

See **Exhibit A** (Tower Sign)

See **Exhibit B** (Gate Sign)

See **Exhibit C** (Caution Sign)

See **Exhibit D** (Notice Sign)

C. Properties within 300 feet of the Property. All properties located within 300 feet of the Property are shown on Sheet 2 of the Site Plan entitled “300’ Locus Plan”. See Tab 2 (Site Plan No. 1, Sheet 2 300’ Locus Plan). The general features of these parcels are as follows:

- Map 53, Lot 1, is a large abutting parcel of woodland located to the west of the Property containing 72.6 acres. It is owned by the Town of South Hadley as conservation land.
- Map 56 Lot 95, is a 4.2 acre wooded parcel that abuts the Property to the north. This parcel is used as a single-family house lot.
- Map 56 Lot 43, is a large mixed-use lot with industrial and residential uses located to the north beyond Lot 95, containing 20.66 acres.
- Map 56 Lots 105, 106, 40, 56, 108, and 129 are all located to the east of the Property on the opposite side of Hadley Road. These parcels contain single-family dwellings.
- Map 56 Lot 96 is an abutting parcel to the east of the Property. This parcel is used as a single-family house lot. It consists of 1.9 acres.

- Map 56 Lot 113 is a 1-acre parcel to the east of the Property. It is used as a single-family house lot.
- 56 Lot 102 is a large abutting parcel to the south of the Property containing 6.7 acres. This parcel is used as a single-family house lot.
- Map 56 Lot 126 is a lot southerly of the Property used as a single-family house lot with 1.7 acres.

The single-family dwellings closest to Site 1, range between 442 and 698 feet from the proposed Tower. See Tab 18A (Map showing the distance to the nearest homes of Tower Site 1) The single-family residential dwellings closest to Site 2 are between 235 and 522 feet from the proposed Tower. See Tab 18B (Map showing the distance to the nearest homes of Tower Site 2).

- D. Architectural Styles. All structures within 300 feet of the Property are single family dwellings.
- E. Pedestrian and Non-motorized access. No pedestrian or non-motorized access is provided for or encouraged for this site.
- F. Public Transit. Public transit is not necessary for this site.
- G. Vehicular Access. Access to and from the site will be made via the existing gravel drive from Hadley Street.

IV. Compliance with Wireless Communications Regulations - § 255-40

The proposed Facility complies with the purpose and intent of the Bylaw. Broadly stated, the purposes of the wireless communications regulations are to provide for the development of adequate and necessary wireless communications facilities, to ensure that such facilities will be in harmony with the character of the surrounding community; protect the community's scenic, historic, and environmental resources; avoid negative impacts on the general safety, welfare and quality of life of the community, encourage co-location of wireless communications facilities, and provide for the development of freestanding wireless communications to provide adequate coverage throughout the community, while limiting the number of such towers to the minimum amount needed for such services. These goals are accomplished primarily through location and design criteria, with which ITW has complied as fully as possible.

1. Location Criteria § 255-40 (F).

- A. Existing Towers and Alternate Tower Structures. Although the Bylaw provides that, to the extent feasible, antennas are to be located on existing towers and existing alternate tower structures, compliance with this bylaw criterion is not possible because there are no existing towers or alternate tower structures within the coverage gap area that could support the wireless antenna systems. The RF coverage maps for T-Mobile and Sprint show the existing coverage including the coverage provided by

the smokestack at the Mt. Tom Power Station. With that smokestack removed, the coverage gap for each carrier is clear. See Tabs 8 and 10. The Existing Tower Map and Existing Tower list identify all surrounding towers. There are no existing structures that could act as a replacement site for the T-Mobile and Sprint carriers on the smokestack. Thus, a new tower site is necessary because the existing towers do not fill the gap created by the loss of the smokestack. There are no tall structures in South Hadley or across the river in Holyoke that can provide coverage via either a new tower or an existing structure. ITW conducted an alternative site feasibility study for other possible sites, but no other sites were available and/or viable to fill the coverage gap. See Tab 19 (Alternative Site Analysis).

- B. Spacing. There are no wireless communications towers within one mile of the proposed Facility. See Tabs 11 and 12.
- C. Historic and Residential Properties. The Property is not located closer than 300 feet to any properties (1) listed on either the State or National Register of Historic Places or (2) developed as part of a residential subdivision for which a definitive plan was approved by the South Hadley Planning Board. See Tab 18 (Abutting Properties Map). See also Tab 16 (Historic Properties List and Map).
- D. Elevation. The proposed Facility will be set at an elevation of 268 feet at Site 1. The height of 150 feet will bring the total elevation to 418 feet above mean sea level. See Tab 2 (Site Plan 1). ITW requests a waiver of 18 feet for this site as it exceeds an elevation of 400 feet above mean sea level. The waiver is technically necessary to allow a tower height of 150 feet. That height is required to fill the gap in wireless coverage due to the dismantling of the Mount Tom Power Station smokestack. The proposed waiver does not exceed a total height of 450 feet.

For Site 2, the proposed Facility will be set at an elevation of 264 feet with a tower height of 148 feet. The height of 148 feet will bring the total elevation to 412 feet above mean sea level. See Tab 2 (Site Plan 2). ITW requests a waiver of 12 feet for this site as it exceeds an elevation of 400 feet above mean sea level. The waiver is technically necessary to allow a tower height of 148 feet. That height is required to fill the gap in wireless coverage due to the dismantling of the Mount Tom Power Station smokestack. The proposed waiver does not exceed a total height of 450 feet.

- E. Holyoke Range Area. The Facility is not located within the Holyoke Range Area as defined in the Bylaw. See Tab 20, Exhibits A-C (Holyoke Range Maps).

2. Design and Siting Requirements, General.

The proposed Facility meets the general design and siting criteria of the Bylaw.

- A. Co-location. The Facility is designed and will be developed for use by up to five (5) telecommunications carriers/users. See Tab 2 (Site Plans).

- B. Equipment shelter.
- a. The carriers at the site will be using pre-manufactured equipment cabinets, rather than equipment shelters. Such cabinets do not exceed 400 square feet in area per carrier and do not exceed 14 feet in height.
 - b. The cabinets will be located on concrete pads within the Facility. See Tab 2 (Site Plans).
- C. Security. The Facility will be protected by an 8' high chain link fence accessed through a 10-foot-wide locked gate. See Tab 2 (Site Plans). In addition, a 14-foot-wide locked swing gate will be located on the access drive, 150 feet in from Hadley Street, to prevent unauthorized access up the access drive. See Tab 2 (Site Plans).
- D. Parking. A minimum of one parking space is provided at the Facility, along with a vehicle turnaround area. This parking area will be used solely in connection with the maintenance of the wireless communications facility. No permanent storage of vehicles or other equipment will occur on site.
- E. Signage. The Facility will have the signage required by the Bylaw as follows:
- a. Identification Sign. An identification sign identifying the wireless communications facility and detailing the owner, operator, and an emergency telephone number where the owner or its emergency representative can be reached on a twenty-four-hour basis will be located on the security fencing at the tower compound. See Tab 2 (Site Plan Sign Sheet).
 - b. No Trespassing Sign. A no trespassing sign will be affixed to the security swing gate and on the security fencing at the Facility. See Tab 2 (Site Plan Sign Sheet).
 - c. FCC Registration Sign. It is not necessary for this site to be registered with the FCC.
 - d. Notice and Caution Signs. A Notice sign will be attached to the security gate and a Caution sign at the tower compound fence. See Tab 2 (Site Plan Sign Sheet).

Screening. ITW seeks a waiver from the landscape buffer requirements of the Bylaw for Site 1. The Tower is set 937/610 feet back from Hadley Street and is far enough from existing structures and dwellings that it is well shielded by existing topography and tree cover. The compound area will not be visible from adjoining properties or roadways. Adding shrubs and trees around the Facility will not provide additional screening effect. The Planning Board is authorized to grant exceptions to the screening specifications of the Bylaw where topography and site conditions warrant. Such is the case in this application.

As to Site 2, ITW desired input from the Planning Board regarding the need for landscape buffer plantings and screening and whether a waiver is appropriate.

- F. Radiofrequency Effect. The RF Safety Study conducted by Donald L. Haes, Jr., dated December 29, 2017, establishes that the summation of the proposed T-Mobile and Sprint PCS PWS RF power levels will be within the established RF exposure guidelines. See Tab 4 (RF Safety Study).

3. Design and Siting Requirements for Wireless Communications Towers.

Wireless communications facilities involving erection of new wireless communications towers must be designed, developed, and operated in accordance with the requirements of Section 255-40 (G). This application meets those criteria.

- A. General. As noted above, the requirements detailed in Section 255-40 (F), “Design And Siting Requirements, General”, are met regarding co-location, equipment shelters, security, parking, signs, screening (by waiver) and radio frequency effect.
- B. Height. All wireless communications towers shall be constructed to the minimum height necessary to accommodate the anticipated usage. Here, the proposed tower is intended as a multi-carrier site starting with a minimum of two telecommunications carriers, with a capacity for up to five carriers. ITW seeks a tower height of 150 feet for Site 1, which is the maximum height allowed for a two-carrier site. No exception for additional height is sought. Based upon the RF Studies and Statement of Need of each carrier, 150 feet is the minimum height needed to fill the coverage gap on Route 91 and in South Hadley caused by the decommissioning of the smokestack.
- C. Setbacks. The setback for telecommunications facilities is measured from the nearest property line to the outer edge of the base of the tower. That distance is approximately 77.5 feet for Site 1 at the rear of the lot. Because the Property is located in the Agricultural Zoning District, the setbacks for the proposed Facility is one foot for each foot of height of the structure. See Section 255-40 (G)(3)(a)(2). Here, the Tower is proposed at 150 feet in height. However, the Bylaw allows for a waiver to reduce the set back to a distance of up to 0.5 feet for each foot of height in the Agricultural zone where the use is non-residential. Where the use is residential, no waiver appears to be available and the tower must meet the one (1) foot of setback for each foot of height.

Here, ITW seeks a waiver of 0.5 feet for each foot of height for the rear setback that borders Town-owned conservation land in the Agricultural zone which abuts the Connecticut River. That land is not in residential use. This waiver will enable the Facility to be pushed back to the far rear of the Property at a setback of +/- 77 feet. However, because the properties abutting the Property to the north and south are in residential use, no waiver is allowed. Nevertheless, the Site 1 setbacks do not meet the one (1) to one (1) setback for these residential uses. To fully permit Site 1, a variance from Section 255-40 (G)(3)(a)(2) is required from the Zoning Board of

Appeals. With that relief, the Tower will be located as far from all residences to the maximum extent possible.

- D. Pre-engineered Fault. All wireless communications towers shall be pre-engineered to "fold at a predetermined height" in the event of catastrophic failure to ensure that the wireless communications tower shall remain on the parcel on which the tower was permitted. The proposed Tower has been pre-engineered to fold at a height of 75 feet. See Tab 21 (Tower Manufacturer Letter of Valmont Industries, Inc. dated January 2, 2018 by Nathan Ross, PE and Christopher Blaumer, P.E).
- E. Style of Towers. ITW proposed a monopole style tower. Therefore, no additional findings are required regarding the style of tower.
- F. View. The proposed Facility is located and designed to limit, to the fullest extent possible, views from adjacent properties, residential neighbors, adjacent roadways, and other areas of Town. This is accomplished by locating the Tower 937/610 feet back from Hadley Street and by taking advantage of existing vegetation and tree cover to shield the tower from view.

In addition, the Tower will be constructed of galvanized steel with a silver/grey coating that will minimize the visual impact of the tower on adjacent properties. See Tab 22 (Color Board) and **Tab 14, Exhibits A-D** (Photo Renditions).

- G. Preservation of Vegetation. Existing on-site vegetation shall be preserved to the maximum extent practicable. See Tab 2 (Site Plan, showing limit of work).
- H. Lighting. The Tower will not be artificially lighted.

4. Design and Siting Requirements for Wireless Communications Antennas.

- A. Height. The wireless communications antennas proposed for the Facility are designed so as not to exceed the height of the Tower and in no event will they extend more than ten (10) feet above the height of the Tower. See Tab 2 (Site Plan).
- B. Extension. Wireless communications antennas shall not extend more than technically necessary for the operation of the wireless communications services, but in no case shall they extend more than thirteen (13) feet beyond the side or outer perimeter of the Tower. See Tab 2 (Site Plan).
- C. Integral Part of Structure. All building-mounted components of the facilities shall be designed and located, to the extent practicable, so as to appear as an integral part of the architecture of the existing alternate tower structure.

5. Bond Required.

ITW will provide a bond in the amount of \$14,750.00, which has been determined to be sufficient to reasonably restore the site to the condition which existed prior to installation of the wireless communications tower and/or wireless communications antennas (including related equipment and fixtures), as certified by Jonathan M. Longchamp, P.E of Daigle Engineers, Inc. of Methuen, MA. See Tab 12.

V. Section 255-129. Standards for Special Permits

1. The proposed Facility complies with the land use and overlay district requirements of the Bylaw. Wireless communications facilities are allowed uses by special permit in the Agricultural zoning district. When authorized by special permit, wireless facilities are a permitted use in the Water Supply Protection District. Because the proposed project meets the criteria of the Bylaw, it is consistent with the purpose and intent of this Bylaw and of the land use district in which it is located.
2. The proposed Facility is suitable to the surrounding neighborhood and the "Land Use Area" in which it is located as discussed previously herein. See Master Plan Consistency Statement.
3. The proposed Facility is compatible with existing uses and uses allowed by right in the neighborhood, Land Use Area, and zoning district, because the majority of the site will remain wooded, and is well screened and set back from existing streets and residences.
4. The proposed Facility is compatible with the existing character of the neighborhood and Land Use Area, and/or zoning district. The majority of the site will remain wooded, and is well screened and set back from existing streets and residences. There is no increased density due to the proposed Facility. There is no increase in impervious surfaces. The Facility is a low traffic, low intensity and passive use. It uses no municipal services. The Facility produces no smoke, noise, effluent nuisance, traffic, odors or light emissions.
5. The proposed Facility is suitable for the property on which it is proposed. An access drive and cleared areas already exist on site. There are no historic structures or historic districts nearby. The site is well set back off of the street. The existing vegetation buffers and screens the proposed Tower from neighboring properties and public roads.
6. The proposed Facility provides safe access for fire, police, and other emergency vehicles.
7. The proposed Facility does not use or require water or waste disposal systems.
8. The proposed Facility only produces a few vehicle trips per month and so does not cause significant traffic congestion, impair pedestrian or bicycle safety, or overload existing roads, sidewalks and trails.

9. The proposed Facility does not result in excessive air, water, noise, or light pollution, or create any other public or private nuisance.
10. The proposed Facility does not degrade the scenic, rural, or historic character of the Town with structures or other lot features which are deemed visually objectionable in light of the goals articulated in South Hadley's Master Plan.
11. The proposed Facility is consistent with the South Hadley Master Plan.
12. The proposed Facility complies with applicable criteria for site plans under § 255-148.

VI. Site Plan Review

1. Section 255-148. Review criteria.

- A. The Site Plan meets the objectives of the Site Plan Review criteria of the Bylaw. As discussed above, the proposed Facility complies with the requirements of the Bylaw, the applicable regulations and the South Hadley Master Plan.
- B. The proposed Facility will utilize the existing access drive, cleared areas, existing terrain, and surrounding landscape to minimize disruptions to natural processes, existing land forms, and significant vistas.
- C. The proposed Facility, to the extent feasible, avoids wetlands, wetland buffers, rivers, river resource areas, vernal pools, sensitive habitats, steep slopes, floodplains and hilltops; minimizes obstruction of scenic views from publicly accessible locations; minimizes tree, vegetation and soil removal and grade changes; provides screening with a scale and character that is appropriate to the surrounding area; and screens objectionable features from neighboring properties and roadways.
- D. The Facility is integrated into the surrounding landscape, and provides buffering from objectionable visual elements both within the Property and between the Property and the surrounding area. This occurs through the retention of existing vegetation and the natural topography to maintain a strong natural visual buffer to surrounding properties.
- E. The Facility design provides for convenient and safe vehicular movement within the site and to adjoining public ways.
- F. The Facility design provides for adequate measures to prevent pollution of surface or ground water, to minimize erosion and sedimentation, and to prevent changes in ground water levels, increased run-off and potential for flooding.

- G. The Facility design minimizes adverse impacts on the Town's services and infrastructure.
- H. The Facility design minimizes intrusion of light into adjacent properties, and shall minimize excessive night-sky lighting, while ensuring adequate light for safe use of the property.
- I. The Facility design places electric and fiber optic utilities underground.
- J. What limited drainage occurs on site is recharged to ground water to the extent practical. The peak rate of surface water flowing off-site does not increase above predevelopment conditions and does not adversely affect drainage on adjacent properties or public roads or increase turbidity of water flowing off-site.

VII. Request for Waivers

ITW seeks the following waivers, as allowed under the Bylaw.

1. Waiver of Design and Siting Criteria § 255-40 (F)(6)(a) (Landscape Buffer) per § 255-40 (F)(6)(b)(1).

ITW seeks a waiver from the landscape buffer requirements of the Bylaw for the Tower at Site 1. The topography and site conditions already in existence at the proposed Facility adequately screen any views of any equipment shelters and fencing from adjoining properties. The proposed Tower is set 937 feet back from Hadley Street and is far enough from existing structures and dwellings that it is well shielded by existing topography and tree cover. See Tab 5 (Photos of existing site conditions).

2. Waiver of Location Criteria § 255-40 (E)(4) (Site 1 Elevation) per § 255-40 (E)(7)(c).

The proposed elevation at the top of the Tower at Site 1 is 418 feet above mean sea level. See Tab 2 (Site Plan, Site 1). This is 18 feet above the height criterion of 400 feet per §255-40 (E)(4). An increase in elevation above mean sea level is permitted pursuant to §255-40 (E)(7)(c) due to, *inter alia*, technical necessity provided the maximum elevation does not exceed 450 feet above mean sea level. Here, an increase in elevation to 418 feet is necessary so that T-Mobile can locate its antennas at 150 above ground level so as to allow it to provide adequate coverage to the coverage gap caused by the removal of power plant smokestack.

For Site 2, the proposed elevation at the top of the Tower at Site 2 is 412 feet above mean sea level. See Tab 2 (Site Plan, Site 2). This is 12 feet above the height criterion of 400 per §255-40 (E)(4). An increase in elevation above mean sea level is permitted pursuant to §255-40 (E)(7)(c) due to, *inter alia*, technical necessity provided the maximum elevation does not exceed 450 feet above mean sea level. Here, an increase in elevation to 412 feet is necessary to allow T-Mobile

and Sprint to fill the gap in coverage. Thus, ITW requests a waiver of 12 feet for this site as it exceeds an elevation of 400 feet above mean sea level.

3. Waiver of Design and Siting Criteria § 255-40 (G)(3)(a)(2) (Rear Setback) per § 255-40 (G)(3)(b)(3).

ITW seeks a waiver of the setback measurement of one foot for one foot of height for the rear setback of the Site 1 Facility. ITW requests a waiver up to 0.5 feet for each foot of height in order to push the Facility to the far rear of the Property at a setback of 77.5 feet. This will locate the Tower as far from all residences to the maximum extent possible. The rear lot line abuts Town owned conservation land that's on the Connecticut River and is not in residential use. Setting the Tower at the rear of the lot will have no impact on the land abutting the rear lot line. For Site 1, a variance will be requested from the setback criteria of § 255-40 (G)(3)(a)(2) as to the adjoining parcels in residential use with lot lines less than 150 feet from the Tower.

CONCLUSION

Based upon the foregoing materials and analysis, the Planning Board should grant the Special Permit necessary for the construction of the Facility as proposed at Site 1, together with the requested waivers and approve the Site Plan. In the alternative, request is made that the Planning Board approve the Special Permit and Site Plan for Site 2 with the Landscape Buffer waiver.

INDUSTRIAL TOWER & WIRELESS, LLC
By its attorney,

Date: March 5, 2018

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