

MODEL MUNICIPAL TELECOMMUNICATIONS ORDINANCE PLAN

Zoning • Right-of-Way • Permitting • Licensing

Wireline • Fixed Wireless • Mobile Wireless • Satellite

Policy Overlay

Federal - Yes

State - No

Municipal - No

Prepared for: [Municipality Name]
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Section 1: Preamble and Purpose

1.1 Introduction

This Model Municipal Telecommunications Ordinance Plan (hereinafter "the Plan") establishes a comprehensive regulatory framework governing the deployment, operation, maintenance, and removal of telecommunications infrastructure within the incorporated limits of [Municipality Name] (hereinafter "the Municipality"). The Plan is intended to serve as a model template that individual municipalities may adopt, adapt, and incorporate into local ordinance.

Telecommunications infrastructure plays an essential role in supporting economic development, public safety, emergency services, and the daily quality of life for residents, businesses, and visitors. As network technologies evolve rapidly—from legacy copper wireline systems to fiber optic broadband, fixed wireless access, 4G/5G small cells, and low-earth-orbit satellite systems—municipalities must maintain a regulatory posture that is simultaneously supportive of community interests and welcoming of investment.

1.2 Goals and Objectives

This Plan is guided by the following goals:

- Promote universal, affordable broadband access for all residents, businesses, schools, libraries, and municipal facilities.
- Encourage technological progress and service equity.
- Protect the public health, safety, and welfare in the deployment of telecommunications infrastructure.
- Preserve the aesthetic character of neighborhoods, historic districts, and scenic corridors.
- Ensure equitable and non-discriminatory access to the public right-of-way and municipal assets.
- Streamline permitting and approval processes consistent with applicable federal and state law.
- Generate fair and reasonable compensation for use of municipal assets and the public right-of-way.
- Coordinate infrastructure deployment to minimize disruption to residents, businesses and service value of existing assets.

1.3 Legal Authority and Preemption

This Plan is adopted pursuant to the Municipality's general police powers, home rule authority (where applicable), and in accordance with the following legal frameworks:

- Telecommunications Act of 1996 (47 U.S.C. § 151 et seq.)
- Middle Class Tax Relief and Job Creation Act of 2012 (Spectrum Act, 47 U.S.C. § 1455)
- FCC Declaratory Ruling and Order on Accelerating Wireless Broadband (FCC 18-133, 2018)
- FCC Third Report and Order on Wireline Infrastructure (FCC 18-111, 2018)
- State Telecommunications Act (cite applicable state law)
- State small cell/wireless infrastructure deployment statute (cite applicable state law)

Nothing in this Plan shall be construed to supersede applicable federal or state preemption. The Municipality acknowledges that certain fees, timelines, and conditions may be subject to federal and state limitations and shall be interpreted accordingly.

1.4 Applicability

This Plan applies to all persons, entities, and carriers seeking to deploy, maintain, operate, upgrade, or remove telecommunications infrastructure within the public right-of-way, on municipal property, or on private property within the Municipality, including but not limited to:

- Incumbent Local Exchange Carriers (ILECs) and Competitive Local Exchange Carriers (CLECs)
- Cable television operators and cable broadband providers
- Wireless carriers and wireless infrastructure providers (WIPs)
- Fixed wireless internet service providers (FWISPs)
- Satellite earth station operators
- Neutral-host network operators
- Municipal or cooperative broadband providers

Section 2: Definitions

For purposes of this Plan, the following definitions shall apply. A comprehensive Glossary of technical terms is provided in Section 10.

Term	Definition
Applicant	Any person, corporation, partnership, limited liability company, government entity, or other legal entity that applies for a permit, license, or franchise under this Plan.
Antenna	Any system of wires, poles, rods, reflecting discs, or similar devices used for the transmission or reception of electromagnetic waves for communications purposes.
Collocate / Collocation	The mounting or installation of wireless facilities on a pre-existing structure. Under federal law, includes modifications to existing wireless towers or base stations.
Eligible Facilities Request (EFR)	A request to modify an existing wireless tower or base station that does not substantially change the physical dimensions of such structure, as defined under 47 U.S.C. § 1455(a).
Franchise	A non-exclusive grant of authority issued by the Municipality permitting use of the public right-of-way for telecommunications infrastructure deployment over a defined term.
Infrastructure Provider / Wireless Infrastructure Provider (WIP)	An entity that owns or operates wireless infrastructure, including towers, poles, and associated equipment.
Permit	Written authorization issued by the Municipality for construction, installation, or modification of telecommunications infrastructure.
Public Right-of-Way (ROW)	The area on, below, or above a public roadway, highway, street, sidewalk, alley, or similar public property dedicated or used for public travel or utilities, including the full width between property lines.
Small Wireless Facility (SWF)	A wireless facility meeting the definition under applicable FCC rules: antenna volume $\leq$ 3 cubic feet; all other equipment $\leq$ 28 cubic feet; mounted on a structure $\leq$ 50 feet or no more than 10% taller than adjacent structures.
Telecommunications Carrier	Any provider of telecommunications services as defined by 47 U.S.C. § 153.

Term	Definition
Tower	Any structure built for the sole or primary purpose of supporting any FCC-licensed antenna and related equipment, including monopoles, lattice towers, guyed towers, and stealth structures.
Wireless Facilities	Equipment at a fixed location that enables wireless communications, including radio transceivers, antennas, coaxial cables, power systems, and associated equipment.

Section 3: Zoning Provisions

3.1 General Zoning Principles

The Municipality recognizes that telecommunications infrastructure deployment may occur across all zoning districts and land uses. Zoning regulations shall be applied in a manner consistent with federal and state preemptions, ensuring that the Municipality does not unreasonably discriminate among providers of functionally equivalent services, prohibit or effectively prohibit the provision of telecommunications services, or regulate on the basis of RF emissions that comply with FCC standards.

Key legal standard: The Municipality shall act on applications within applicable "shot clock" timelines established by FCC rules and shall not impose requirements that effectively prohibit service.

3.2 Zoning District Matrix

The following matrix governs the permissibility of telecommunications infrastructure in each zoning district. "P" denotes permitted by right; "C" denotes conditionally permitted subject to review; "S" denotes special use permit required; "N" denotes not permitted.

Infrastructure Type	Residential	Commercial	Industrial	Agricultural	Conservation	Historic District
Aerial Wireline (on existing poles)	P	P	P	P	N	C
Underground Wireline	P	P	P	P	S	P
Small Wireless Facility (on existing structure)	P	P	P	P	S	C
Small Wireless Facility (new structure)	C	P	P	P	N	S
Macro Tower (Monopole)	C	P	P	C	S	S
Macro Tower (Lattice/Guyed)	N	C	P	C	N	N
Fixed Wireless Ground-Level Equipment	C	P	P	P	S	C
Satellite Earth Station (<1m dish)	P	P	P	P	C	C
Satellite Earth Station (>1m dish)	C	P	P	P	N	S
Distributed Antenna System (DAS)	C	P	P	P	N	C
Neutral-Host Shared Infrastructure	C	P	P	P	S	C

Legend: P = Permitted by right | C = Conditional use permit required | S = Special use permit required | N = Not permitted

3.3 Height and Setback Standards

3.3.1 Macro Tower Height

Maximum tower heights by district are as follows:

Zoning District	Maximum Height
Residential (R-1, R-2, R-3)	Not permitted without special use permit; maximum 65 feet if granted
General Commercial (C-1, C-2)	Maximum 120 feet above grade
Heavy Commercial / Mixed Use (C-3)	Maximum 150 feet above grade
Light Industrial (I-1)	Maximum 150 feet above grade
Heavy Industrial (I-2)	Maximum 199 feet above grade (above 200 ft requires FAA coordination)
Agricultural / Rural	Maximum 120 feet; 150 feet with conditional use permit
Overlay / Designated Broadcast Corridor	Per overlay district regulations; coordinate with FCC FM/AM protections

3.3.2 Small Wireless Facility Height

Small wireless facilities mounted on existing structures shall not extend more than ten (10) feet above the top of the supporting structure, subject to the 50-foot overall cap established by federal definition. New poles installed to support small wireless facilities in the ROW shall not exceed the greater of: (a) 50 feet above ground level, or (b) ten (10) percent above the tallest existing utility pole within 500 feet in the same ROW.

3.3.3 Setbacks

Tower setbacks shall be measured from the base of the tower to the nearest property line, building, or overhead utility line as follows:

- Macro tower base setback from property lines: 100% of tower height (fallzone setback), unless a licensed structural engineer certifies a lesser distance.
- Setback from residentially-zoned property: minimum 200 feet regardless of height.
- Setback from schools, parks, playgrounds, and day care facilities: minimum 300 feet.
- Setback from historic district boundaries: as determined by Historic Preservation Commission.
- Small wireless facilities: no additional setback beyond applicable ROW placement standards.

3.4 Aesthetic and Design Standards

3.4.1 Stealth and Camouflage

The Municipality strongly encourages stealth and camouflage design for telecommunications infrastructure in residential zones, historic districts, scenic corridors, and gateway corridors. The following stealth designs may be required by the approving authority as a condition of approval:

- Monopine, monopalm, or other simulated natural features
- Flagpole, bell tower, steeple, or clock tower designs
- Concealment within architectural elements of existing buildings
- Below-grade vaulted equipment enclosures
- Decorative streetscape poles designed to match district character

Note: Stealth design requirements shall not be so burdensome as to constitute an effective prohibition on service. The Municipality shall work collaboratively with applicants to identify feasible alternatives.

3.4.2 Equipment Enclosures and Screening

Ground-mounted equipment associated with any telecommunications facility shall be:

- Enclosed within a solid masonry, pre-cast concrete, or powder-coated metal enclosure compatible with surrounding architecture;
- Screened from public view by landscaping, berms, or architectural screening where feasible;
- Painted or wrapped in a color compatible with the host structure or surrounding environment; and
- Maintained in good aesthetic condition throughout the term of operation.

3.5 Historic Districts and Scenic Corridors

Applications for telecommunications infrastructure within a designated Historic District or Scenic Corridor shall be subject to review by the Municipality's Historic Preservation Commission or Design Review Board, as applicable. The reviewing body shall apply the Secretary of the Interior's Standards for the Treatment of Historic Properties and shall consider:

- Visual impact on the character-defining features of historic resources;
- Reversibility of proposed installation;
- Compatibility of materials, colors, and forms with the historic context; and
- Availability of technically feasible alternative sites outside the protected corridor.

The Historic Preservation Commission's review shall be completed within the applicable FCC shot clock period and shall not cause the overall processing time to exceed federal limits.

3.6 Environmental Review

All telecommunications facilities that qualify as Eligible Facilities Requests (EFRs) under federal law are categorically exempt from local environmental review. For all other facilities, the Municipality may require an environmental assessment addressing:

- Visual resources and scenic impacts
- Noise from generators, HVAC, and cooling equipment
- Stormwater and impervious surface impacts from equipment pads
- Tree removal and vegetation disturbance
- Consistency with adopted Natural Hazards Mitigation Plan

Section 4: Right-of-Way Management

4.1 Right-of-Way Access Generally

The public right-of-way is a public asset held in trust by the Municipality for the benefit of all residents. The Municipality shall manage the ROW to ensure public safety, traffic flow, infrastructure coordination, and aesthetic quality while providing fair and non-discriminatory access to telecommunications providers.

All use of the public ROW for telecommunications infrastructure requires either: (a) a valid ROW franchise agreement with the Municipality, or (b) a valid ROW use permit, as set forth herein. A provider holding a franchise or permit does not thereby obtain any real property interest in the ROW and shall not represent to third parties that it has any such interest.

4.2 ROW Franchise Agreement

4.2.1 Franchise Requirement

Any telecommunications provider seeking to install aerial or underground cable, conduit, fiber, or associated infrastructure spanning multiple blocks or throughout the Municipality shall first obtain a ROW Franchise Agreement. Franchise agreements shall be required for:

- Wireline broadband providers (fiber, copper, coaxial cable)
- Providers installing conduit systems intended for shared or future use
- Distributed antenna systems (DAS) networks involving multiple poles or attachment points
- Fixed wireless providers installing backhaul fiber or conduit

Small wireless facility providers whose installations are limited in scope (fewer than five locations) may use individual ROW use permits in lieu of a franchise agreement, at the Municipality's discretion.

4.2.2 Franchise Agreement Contents

A ROW Franchise Agreement shall include at minimum the following provisions:

1. Grant of non-exclusive right to use the ROW for the purposes described;
2. Term of the franchise (standard term: 10 years; renewable upon mutual agreement);
3. Franchise fee (see Section 4.5);
4. Description of the infrastructure to be installed, including routes, depths, and conduit sizing;
5. Performance and construction standards;
6. Insurance and surety bond requirements;
7. Indemnification and hold harmless provisions;
8. Provisions for relocation of infrastructure at the provider's expense upon Municipality's request;
9. ROW restoration and pavement cut standards;
10. Emergency response obligations;
11. Audit rights and record-keeping requirements;
12. Default and termination provisions;
13. Abandonment and removal obligations.

4.3 ROW Use Permit

4.3.1 Permit Requirement

In addition to any franchise agreement, each separate installation or construction project within the ROW requires an individual ROW Use Permit (also referred to as an Encroachment Permit or Street Opening Permit). ROW Use Permits are required for:

- Any excavation, boring, or trenching within the ROW
- Placement of ground-mounted equipment cabinets in the ROW
- Installation of new utility poles or replacement poles
- Attachment of small wireless facilities to existing structures in the ROW
- Aerial wire stringing between poles

4.3.2 ROW Permit Application Requirements

A complete ROW Use Permit application shall include:

- Completed application form with contact information for the applicant and responsible contractor;
- Site plan showing proposed installation, dimensions, and relationship to existing utilities;
- As-built survey of existing utilities (or 811 One-Call confirmation number);
- Traffic control plan where work will affect lanes, sidewalks, or bicycle facilities;
- Proposed construction schedule including duration of ROW disturbance;
- Pavement restoration plan meeting Municipal pavement cut standards;
- Proof of required insurance and surety bond;
- Applicable permit fee (see fee schedule).

4.4 ROW Construction Standards

4.4.1 Underground Installation

Underground telecommunications conduit and cable shall comply with the following minimum standards:

Standard	Requirement
Minimum burial depth (conduit)	24 inches below finished grade in paved areas; 18 inches in unpaved areas
Minimum burial depth (direct-buried cable)	24 inches in all areas
Conduit sizing	Minimum 1.25 inch ID for fiber; recommend minimum 2-inch ID for future expansion
Spare capacity	Minimum 33% spare conduit capacity to be maintained or offered for shared use
Marking tape	Detectable marking tape required 12 inches above all buried conduit
Bore clearance from water/sewer	Minimum 12-inch horizontal clearance; minimum 18-inch vertical clearance
Splice vault placement	Outside the traffic lane; minimum 18 inches from curb face
Pavement restoration	Full lane-width overlay for cuts greater than 36 inches; per Municipal pavement cut policy for smaller cuts
Pavement cut moratorium	No cuts permitted in newly paved roads for 5 years unless otherwise approved

4.4.2 Aerial Installation

Aerial telecommunications attachments on utility poles shall comply with the National Electrical Safety Code (NESC) and the following Municipal standards:

- Minimum vertical clearance over roadways: 18 feet (15.5 feet for residential streets)
- Minimum vertical clearance over sidewalks and bikeways: 10 feet
- Minimum vertical clearance over alleys: 16 feet
- Cable must be properly tensioned and sagged per NESC; no excessive sag or unsafe overhang
- Abandoned aerial facilities must be removed within 90 days of decommissioning
- Permit holder is responsible for trimming conflicting vegetation

4.4.3 Pole Attachment Standards

Attachments to municipal-owned poles shall be governed by the Municipality's Pole Attachment Agreement, which shall incorporate FCC formula rates where applicable. For poles owned by investor-owned utilities, the provider shall comply with applicable state pole attachment regulations and shall provide the Municipality with copies of executed pole attachment licenses.

4.5 Right-of-Way Fees and Compensation

The Municipality is authorized to charge fees that recover the actual, direct, and reasonable costs associated with managing the ROW. Fees shall be set by resolution and updated as needed. The current fee schedule is as follows:

Fee Type	Basis	Amount / Rate
Annual ROW Occupancy Fee (linear infrastructure)	Per route-foot of installed infrastructure	\$0.50 – \$2.00 / route-foot / year (set by resolution)
Small Wireless Facility ROW Fee	Per attachment per year	Not to exceed \$270/year or actual cost, per FCC rules
New Pole Installation Fee (SWF)	Per new pole per year in ROW	Not to exceed \$270/year or actual cost, per FCC rules
Street Opening / ROW Use Permit	Per project	\$250 – \$2,500 based on scope
Franchise Fee (Wireline)	Percentage of Gross Revenues from services provided in the Municipality	Up to 5% of gross revenues (per Telecom Act cap for cable; negotiate for others)
Make-Ready Inspection Fee	Per pole inspection	Actual cost of inspection
Pavement Cut Surcharge	Per square yard of pavement disturbed	Set by resolution; reflects pavement degradation cost

Note: All fees shall be consistent with applicable FCC orders limiting ROW fees for small wireless facilities and shall not exceed the Municipality's actual and direct costs for wireline ROW management. Fee schedules shall be publicly posted.

4.6 Dig Once / Coordinated Infrastructure Policy

The Municipality adopts a Dig Once policy to maximize efficient use of ROW disturbance. Key provisions include:

- The Municipality's Public Works Department shall maintain a GIS database of all known underground utilities and shall share this information with applicants to facilitate colocation of conduit.
- All road construction, resurfacing, and major utility projects shall include a Dig Once review to determine whether telecommunications conduit should be installed concurrently.
- The Municipality may install Municipality-owned conduit during any qualifying ROW construction project and offer this conduit for lease to telecommunications providers.
- Providers are encouraged to offer excess conduit capacity for shared use by other providers in exchange for reduced ROW fees.
- The Municipality shall maintain an online ROW notification system to alert providers of upcoming construction projects.

4.7 Relocation Obligations

Any telecommunications provider using the public ROW shall relocate its facilities at its own expense when necessary for public improvements, including road widening, bridge replacement, utility upgrades, transit construction, or other public works, provided that:

- The Municipality provides reasonable advance notice (minimum 90 days for non-emergency relocations);
- The Municipality designates an alternative location within the ROW for relocation where feasible;
- The relocation is not due to the provider's own error or violation; and
- The Municipality reimburses costs for any second relocation within five years of the first for the same facility segment.

Section 5: Permitting Procedures

5.1 Permit Types and Applicability

The Municipality shall issue the following permit types for telecommunications infrastructure:

Permit Type	Applicable Situations	Target Processing Time
Building Permit	Structural modifications, equipment mounting on buildings, towers, equipment enclosures	10 days (EFR) / 60 days (SWF) / 150 days (new tower or major facility)
ROW Use / Encroachment Permit	Any work within the public right-of-way	10 business days (SWF) / 30 days (wireline)
Conditional Use Permit (CUP)	Towers in residential zones, non-preferred locations	60–90 days per local code
Special Use Permit (SUP)	Historic district installations, towers with significant impact	90–120 days per local code
Franchise Agreement	Systemwide ROW use for wireline or DAS networks	60 days for complete applications
Satellite Earth Station Permit	Dish antennas > 1 meter requiring structural review	30 days
Collocate-Only Permit (EFR)	Eligible Facilities Requests under federal law	60 days from complete application

5.2 Shot Clock Requirements

The Municipality shall act on telecommunications permit applications within the following timeframes established by federal law and FCC rules. Failure to act within these timeframes may result in the application being deemed approved by operation of law, as provided under applicable FCC rules:

Application Type	Shot Clock Period
Eligible Facilities Request (collocation, no substantial change)	60 days from complete application
Small Wireless Facility (collocation on existing structure)	60 days from complete application
Small Wireless Facility (new structure in ROW)	90 days from complete application
New Wireless Tower (not subject to NEPA/Section 106)	150 days from complete application
New Wireless Tower (subject to NEPA/Section 106 review)	150 days (may be tolled for environmental review per FCC rules)
Wireline Infrastructure (ROW permit)	30 days from complete application (state law may govern)

The shot clock is tolled when the Municipality issues a notice of incompleteness within the first 30 days (for 60-day shot clocks) or first 10 business days (for other shot clocks), or upon mutual written agreement of the parties.

5.3 Application Completeness

5.3.1 Completeness Review

Within 10 business days of receiving an application (or 30 days for building permits), the Municipality shall determine whether the application is complete. An application is complete when it contains all materials required by the applicable checklist published by the Municipality. The Municipality shall provide written notice of any deficiencies and specify the additional materials needed.

5.3.2 Standard Application Checklist — Small Wireless Facility

A complete SWF application shall include:

- Completed Municipal application form with applicant contact information
- Site plan (1"=20' minimum scale) showing: pole location, setbacks, ROW boundaries, proposed equipment dimensions
- Elevation drawings showing all antenna and equipment dimensions, mounting heights, and clearances
- Structural analysis or load study for host structure (licensed structural engineer stamp required)
- RF emissions compliance letter demonstrating compliance with FCC OET Bulletin 65 limits
- Manufacturer's specifications for antennas and associated equipment
- Coverage map showing service objective and gap being addressed (if coverage is the justification)
- Photo simulations from at least three vantage points within 300 feet
- Completed NEPA checklist / categorical exclusion documentation
- FCC registration number (if applicable)
- Proof of insurance meeting Municipal requirements
- Application fee per adopted fee schedule

5.3.3 Standard Application Checklist — New Tower

A complete new tower application shall include all items listed for SWFs plus:

- Alternatives analysis demonstrating why collocation on existing structures is not technically feasible or available
- Certified survey of the proposed site
- FAA Form 7460-1 filing confirmation or determination that filing is not required
- Environmental assessment (EA) addressing all relevant NEPA categories
- Section 106 (NHPA) finding or initiation of consultation
- Tower lighting plan consistent with FAA requirements
- Decommissioning bond or financial security
- Co-location certification letter confirming structure will accommodate two or more carriers

5.4 Review Standards

5.4.1 Eligible Facilities Requests (EFR)

For any Eligible Facilities Request under 47 U.S.C. § 1455(a), the Municipality's sole review is whether the request qualifies as an EFR (i.e., does not substantially change the physical dimensions of the existing tower or base station). Substantive review of RF emissions, visual impact, or land use compatibility is not permitted for qualifying EFRs. The Municipality shall apply the FCC's definition of "substantial change":

- Height increase: more than 10% or 20 feet (whichever is greater) for towers outside ROW; more than 10% or 10 feet for towers inside ROW
- Width increase: more than 20 feet beyond tower boundary, or more than the width of the tower at the level of the modification
- Excavation or deployment outside existing lease area
- Defeat or circumvention of existing concealment elements
- Violation of prior conditions of approval

5.4.2 Small Wireless Facility Review

For small wireless facility applications, the Municipality shall evaluate:

- Compliance with applicable FCC regulations and RF emission standards
- Structural integrity of host structure
- Consistency with design standards (Section 3.4)
- Compliance with ROW placement standards (Section 4.4)
- Consistency with any applicable master license agreement (MLA) terms

The Municipality shall not deny a SWF application based on: (a) RF health concerns, provided emissions comply with FCC standards; (b) aesthetic grounds alone without a showing of substantial impact; or (c) the availability of alternative sites outside the ROW.

5.4.3 New Tower Review

New tower applications shall be subject to full zoning and design review including alternatives analysis, visual impact assessment, and consistency with the goals of this Plan. Denials shall be in writing, supported by substantial evidence in a written record, and not effectively prohibit the provision of wireless services.

5.5 Batch Processing

Any applicant submitting 10 or more substantially similar small wireless facility applications within a 30-day period shall be eligible for batch processing. Batch applications shall be processed under a single shot clock applicable to the most complex application in the batch. The Municipality may, at its discretion, apply standardized permit conditions to all applications in a batch. Applications in a batch that involve materially different site conditions may be severed from the batch and processed individually.

5.6 Master License Agreement (MLA)

The Municipality may enter into a Master License Agreement (MLA) with one or more telecommunications providers to establish standardized terms, conditions, and fees for recurring or multiple-site deployments. An MLA shall include:

- Standard engineering and design specifications for ROW deployments
- Pre-approved structural specifications for standard pole types
- Streamlined site-specific permit review (site-level review against pre-approved standards)
- Standardized fee schedule over the MLA term
- Dispute resolution procedures
- Annual reporting requirements

5.7 Permit Conditions

The Municipality may attach reasonable conditions to any telecommunications permit consistent with applicable law. Permissible conditions include:

- Compliance with construction and safety codes
- Requirements for as-built surveys and GIS submittals
- Periodic safety inspections of towers and structures
- Maintenance obligations and response time requirements for non-conforming conditions
- Removal and remediation upon decommissioning
- Co-location requirements for macro towers
- Lighting and aviation obstruction marking

Conditions shall not include: unlimited duration insurance requirements beyond what is necessary; conditions based on RF emission concerns where FCC emissions limits are met; requirements to relocate to less technically suitable sites; or any condition that constitutes an effective prohibition on service.

Section 6: Licensing and Franchising

6.1 Telecommunications Licensing Generally

The Municipality may require a telecommunications license or franchise for any provider using the public ROW on an ongoing basis or seeking to provide telecommunications services within the Municipality. Licensing requirements are distinct from permit requirements and address the ongoing business relationship between the provider and the Municipality.

6.2 Cable Franchise

Any provider of cable television service, as defined by the Cable Communications Policy Act (47 U.S.C. § 521 et seq.), shall obtain a cable franchise from the Municipality prior to offering cable service. The cable franchise shall comply with Title VI of the Communications Act and applicable state cable franchise laws. Key provisions shall include:

- Non-exclusivity: Cable franchises shall be non-exclusive. The Municipality shall not grant any exclusive cable franchise or unreasonably refuse to award competitive franchises.
- Term: Standard cable franchise term of 10 to 15 years, subject to renewal.
- Franchise fee: Up to 5% of gross revenues derived from the provision of cable services in the franchise area.
- Public, Educational, and Governmental (PEG) Channels: The Municipality may require allocation of up to three PEG channels with adequate support for equipment and access.
- Institutional Network (I-Net): The Municipality may require provision of a dark fiber or capacity set-aside for municipal facilities.
- Build-out requirements: The franchise shall specify minimum service territory, density thresholds, and timeline for build-out to underserved areas.
- Consumer protection standards: Service interruption credits, customer service standards, and dispute resolution procedures.

6.3 Wireline Broadband / Telecommunications License

Providers offering wireline broadband (fiber, DSL, fixed copper) or traditional telephone service using the ROW but not subject to cable franchise requirements shall obtain a Telecommunications ROW License. The license shall address:

- Term (typically 5 to 15 years; renewable)
- Annual ROW occupancy fee based on linear feet of infrastructure or gross revenues
- Insurance and indemnification requirements
- Network maps and GIS data submission obligations
- Service territory and non-discrimination obligations
- Annual reporting of subscriber counts by census tract (without individual customer disclosure)

6.4 Wireless Carrier Licensing

Wireless carriers providing mobile or fixed wireless services within the Municipality are licensed by the FCC and do not require a separate Municipal telecommunications license. However, wireless carriers using the ROW for infrastructure shall comply with ROW franchise or permit requirements as set forth in Section 4 and permitting requirements as set forth in Section 5.

The Municipality may enter into a Master License Agreement (MLA) with wireless carriers or infrastructure providers covering all ROW deployments under a unified contractual framework. An MLA does not substitute for site-specific permits but streamlines the approval process for recurring deployments.

6.5 Fixed Wireless Provider License

Providers offering fixed wireless internet access (FWIA) services using ground-mounted or structure-mounted equipment in the ROW shall obtain either a Telecommunications ROW License (for systemwide deployments) or individual ROW Use Permits (for limited deployments). Fixed wireless providers shall:

- Disclose service areas, technologies, and frequency bands in use
- Comply with FCC Part 15 or licensed spectrum regulations as applicable
- Provide evidence of spectrum authorization or license-exempt operation as applicable
- Maintain RF emissions within FCC limits and provide updated compliance calculations upon equipment modification

6.6 Satellite Service Licensing

Satellite service providers (including VSAT, LEO broadband, and DBS) are federally licensed by the FCC and are not subject to Municipal licensing for the provision of service. However, the installation of satellite earth station antennas and supporting infrastructure on structures within the Municipality shall comply with:

- Section 3 (Zoning Provisions) of this Plan
- FCC Over-the-Air Reception Devices (OTARD) Rule (47 C.F.R. § 1.4000), which limits local restrictions on small dishes (≤ 1 meter or ≤ 1 meter in the U.S. for DBS) used for reception by the occupant
- FCC regulations governing earth stations greater than 1 meter, which are subject to local zoning with certain limitations
- National Environmental Policy Act (NEPA) and Section 106 (NHPA) review for large earth stations

The Municipality shall not require local operating licenses for satellite service providers and shall not regulate the signal content or technology choices of satellite operators. The Municipality may regulate the physical installation of ground equipment, subject to the OTARD rule and applicable federal preemptions.

6.7 Municipal Broadband / Public Utility Provider

The Municipality may operate, or cause to be operated through a public utility district or cooperative, a municipal broadband network. Municipal broadband operations shall be subject to all provisions of this Plan applicable to providers, except that the Municipality shall not charge itself franchise fees. A municipal broadband operator shall:

- Obtain all required permits and approvals on the same timeline as private providers
- Maintain separate accounts for broadband operations to ensure cost transparency
- Operate on a non-discriminatory, open-access basis where feasible
- Publish annual financial and operational reports
- Comply with applicable state laws governing municipal broadband operations

6.8 License Transfer and Assignment

No franchise, license, or ROW use agreement may be assigned, transferred, or delegated to a third party without prior written approval of the Municipality. The Municipality shall act on a transfer request within 120 days of a complete application. Approval shall not be unreasonably withheld. The Municipality may condition approval on assumption of all obligations under the original franchise and evidence of the transferee's financial and technical capability.

Section 7: Wireline Infrastructure

7.1 Scope

This section governs the deployment, operation, and maintenance of wireline telecommunications infrastructure including copper telephone networks, coaxial cable systems, and fiber optic networks (both aerial and underground).

7.2 Fiber Optic Network Deployment

The Municipality supports and encourages the deployment of fiber optic broadband infrastructure to all premises within the Municipality. To facilitate broadband investment, the Municipality shall:

- Offer streamlined permitting for fiber-to-the-premises (FTTP) deployments in unserved census block groups
- Expedite review of underground permits associated with federal or state broadband grant awards
- Reduce ROW permit fees by 50% for fiber builds in census blocks with no existing broadband infrastructure offering speeds of 10/10 Gbps or greater
- Provide Dig Once coordination for all fiber deployments as described in Section 4.6
- Make Municipal-owned conduit available at cost for broadband providers upon application

7.3 Copper and Coaxial Legacy Infrastructure

Incumbent telephone companies and cable operators maintaining legacy copper or coaxial infrastructure in the ROW shall:

- Maintain all aerial and underground plant in safe and serviceable condition
- Remove abandoned copper, coaxial, or other decommissioned wireline infrastructure within 12 months of network retirement
- Notify the Municipality's ROW Manager prior to any major network upgrade or retirement affecting large portions of the network
- Comply with all NESC, NEC, and Municipal standards for plant maintenance

7.4 Open Access and Conduit Sharing

The Municipality encourages open-access, shared-infrastructure models to reduce redundant ROW disturbance. Where a provider installs conduit with Municipal assistance (reduced fees, Dig Once participation, Municipal conduit access), the Municipality may require:

- Offer of at least one empty conduit for IRU or lease to competing providers at commercially reasonable rates
- Non-discriminatory access pricing for any conduit sharing arrangement
- Filing of conduit location data with the Municipal GIS database

Section 8: Wireless Infrastructure

8.1 Small Wireless Facilities (SWF)

8.1.1 Purpose and Applicability

Small wireless facilities (SWF), including small cells and distributed antenna systems (DAS) nodes, are increasingly essential to delivering 4G LTE Advanced and 5G New Radio (NR) services. The Municipality seeks to facilitate the deployment of SWFs consistent with federal law, while protecting community aesthetics and managing the ROW efficiently.

8.1.2 Preferred Attachment Hierarchy

In the ROW, SWF applicants shall demonstrate consideration of the following attachment hierarchy before proposing a new pole installation:

14. Existing municipal light standard or traffic signal structure
15. Existing investor-owned utility pole
16. Existing wireless infrastructure provider structure
17. Existing commercial building or structure
18. New pole installation (where the above are not technically feasible or available)

The applicant shall provide written justification if departing from the preferred hierarchy.

8.1.3 Equipment Specifications

SWFs in the ROW shall comply with the following dimensional standards:

Parameter	Standard
Antenna volume	Not to exceed 3 cubic feet per FCC definition
Associated ground/pole-mounted equipment	Not to exceed 28 cubic feet per FCC definition (aggregate)
Maximum height (on existing pole)	Top of mount not to exceed 10 feet above top of existing pole; overall structure not to exceed 50 feet
Maximum height (new ROW pole)	Not to exceed the greater of 50 feet or 10% above tallest adjacent utility pole within 500 feet
Conduit and cable routing	All conduit and cable shall be flush-mounted, internally routed, or concealed within a shroud; no exposed cable exceeding 6 inches unless within conduit
Equipment shrouding	Antenna shall be concealed within a shroud, radome, or decorative enclosure where technically feasible
Pole color/finish	Shall match existing pole color or as directed by ROW Manager
Warning labels	RF warning labels required per FCC rules; size and placement to minimize visual intrusion

8.2 Macro Wireless Towers

8.2.1 Co-location Requirements

Any applicant seeking approval for a new macro wireless tower shall demonstrate that no existing structure within the primary search ring can accommodate the proposed antenna array. New towers shall be designed and built to accommodate a minimum of three (3) independent co-location tenants. The Municipality may impose a co-location condition on any tower approval and may require the applicant to enter into a co-location agreement with the Municipality or a neutral third-party tower manager.

8.2.2 Lighting Requirements

Towers shall be lighted in accordance with FAA Advisory Circular 70/7460-1 requirements where applicable. For towers at or below the FAA notification threshold (currently 200 feet AGL) that are not otherwise required to be lighted by the FAA, the Municipality may require the use of the minimum lighting required for safety. Red steady-burn lights are preferred over flashing lights in residential vicinities where FAA permits.

8.2.3 Decommissioning

Any tower, SWF, or wireless facility that has been unused and non-operational for a continuous period of 12 consecutive months shall be considered abandoned. The permit holder shall remove all abandoned facilities within 90 days of written notice from the Municipality. To secure removal obligations, applicants for new macro towers shall provide a decommissioning financial assurance (bond, letter of credit, or escrow) in an amount equal to the estimated cost of tower removal, as determined by a qualified engineer.

8.3 Fixed Wireless Access (FWA) Infrastructure

Fixed wireless access deployments, including point-to-point backhaul and point-to-multipoint access systems, shall comply with the following:

- Equipment mounted on existing structures: subject to applicable zoning and building permit requirements
- Equipment in the ROW: subject to ROW Use Permit and applicable SWF standards (if meeting SWF definition) or ROW Use Permit (if not meeting SWF definition but installed in ROW)
- Ground-mounted equipment outside the ROW: subject to standard zoning review for accessory structures
- Unlicensed spectrum operation: compliance with FCC Part 15 required; provider assumes all interference risk
- Licensed spectrum operation: copy of FCC license or frequency coordination documentation required with application.

8.4 Satellite Infrastructure

8.4.1 Consumer Satellite Dishes (OTARD)

Consumer satellite receive-only dishes of 1 meter or less in diameter (or 1 meter or less for DBS in the 48 contiguous states) are protected by the FCC's Over-the-Air Reception Devices (OTARD) Rule (47 C.F.R. § 1.4000). The Municipality shall not prohibit or unreasonably restrict the installation of OTARD-protected antennas. Local restrictions on OTARD antennas are permitted only where they: (a) protect safety or historic preservation interests; (b) do not unreasonably delay, prevent, or increase the cost of installation; and (c) do not preclude reception of an acceptable quality signal.

The Municipality may apply the following standards to OTARD-protected antennas:

- Antennas shall not be mounted on Common Areas of multi-family properties (which remain subject to HOA or property owner authority) unless the FCC rule applies to the exclusive use area of the occupant
- Antennas creating a verifiable public safety hazard may be required to be repositioned where a signal of acceptable quality can still be received

8.4.2 Commercial and Industrial Satellite Earth Stations (> 1 meter)

Satellite earth stations (SES) larger than 1 meter in diameter, VSAT hubs, teleport facilities, and other commercial satellite ground infrastructure are subject to full zoning review under Section 3 of this Plan. Applications shall include:

- FCC earth station license or application number (for licensed bands) or frequency coordination documentation (for shared spectrum)
- Technical specifications including dish diameter, mounting height, azimuth, elevation, frequency bands, and transmit power
- Interference analysis for licensed installations
- FAA notification status for structures exceeding notification thresholds
- Screening and landscaping plan for ground-mounted reflectors visible from public ways

8.4.3 Low Earth Orbit (LEO) Satellite Integration

The Municipality acknowledges the emergence of LEO broadband satellite systems (e.g., broadband constellations operating in Ku, Ka, and V-band) as a significant provider of broadband to rural and underserved areas. User terminal equipment for LEO systems shall:

- Be treated as consumer satellite equipment for OTARD purposes when used for residential service (terminal $\leq$ 1 meter)
- Be subject to standard small commercial installation permitting where terminals exceed 1 meter or are used for commercial/enterprise purposes
- Not require frequency use permits from the Municipality (FCC licensing governs)

The Municipality encourages LEO satellite providers to engage in community outreach to households in unserved areas and to participate in Municipal broadband mapping efforts.

Section 9: Enforcement, Compliance, and Appeals

9.1 Inspections

The Municipality reserves the right to inspect any telecommunications infrastructure in the public ROW or on Municipal property at any time upon reasonable notice (minimum 24 hours for non-emergency inspections). In cases of imminent public safety hazard, the Municipality may conduct emergency inspections without prior notice. Inspections may include structural assessment, equipment inventory, RF emissions measurement, and verification of permit compliance.

9.2 Violations and Enforcement

The following shall constitute violations of this Plan:

- Failure to obtain required permits, licenses, or franchises prior to construction or installation
- Construction or installation not in conformance with approved plans or permit conditions
- Failure to restore ROW to pre-construction condition within required timeframes
- Failure to maintain infrastructure in safe condition
- Operation of equipment that causes harmful interference to licensed communications services
- Abandonment of infrastructure without notification and removal
- Submission of false or misleading information in an application

Upon finding a violation, the Municipality shall issue a Notice of Violation with a reasonable cure period. If the violation is not cured within the cure period, the Municipality may:

19. Assess civil penalties up to \$1,000 per day per violation for ongoing violations (after cure period expires)
20. Suspend or revoke the applicable permit, license, or franchise
21. Perform emergency remediation work at the permit holder's expense
22. Seek injunctive relief in a court of competent jurisdiction

9.3 Insurance Requirements

All permit holders and franchise holders shall maintain the following insurance coverages throughout the term of the permit or franchise:

Coverage Type	Minimum Limits
Commercial General Liability	\$2,000,000 per occurrence; \$5,000,000 aggregate
Automobile Liability	\$1,000,000 per occurrence
Workers' Compensation	Statutory limits per applicable state law
Umbrella / Excess Liability	\$5,000,000 per occurrence; \$10,000,000 aggregate
Property Insurance (on equipment)	Replacement cost value of installed equipment
Professional Liability / E&O (if applicable)	\$1,000,000 per claim

The Municipality shall be named as an additional insured on CGL and umbrella policies. Certificates of insurance and endorsements shall be provided to the Municipality's Risk Manager prior to issuance of any permit.

9.4 Performance Bond / Financial Assurance

Prior to commencing ROW construction, permit holders shall provide a performance and restoration bond in an amount equal to 100% of the estimated cost of ROW restoration. Bonds shall be issued by a surety licensed in the state. In lieu of a bond, the Municipality may accept a letter of credit from a federally insured financial institution or a cash deposit.

9.5 Appeals

Any applicant whose permit application has been denied, or who objects to conditions imposed on an approval, may appeal to the Municipal Board of Zoning Appeals (or equivalent body) within 30 days of the written decision. Appeals shall be de novo reviews of the factual record. The Board shall issue its written decision within 60 days of the appeal hearing. Further appeals shall be governed by applicable state administrative law.

For Eligible Facilities Requests, the applicant may also seek relief in federal or state court under 47 U.S.C. § 1455(c). The Municipality acknowledges its obligation to act within the applicable shot clock and to provide a written denial with supporting evidence in the record.

Section 10: Glossary of Telecommunications Terms

The following terms are defined for reference in this Plan and in all associated permits, licenses, and agreements.

4G LTE (Long-Term Evolution)

The fourth generation of mobile network technology, providing high-speed wireless broadband communications. LTE-Advanced and LTE-Advanced Pro are enhanced versions offering higher throughput. Most current mobile voice and data services are delivered over 4G LTE infrastructure.

5G NR (New Radio)

The fifth generation global wireless standard developed by 3GPP. 5G NR operates in sub-6 GHz (FR1) and millimeter wave (FR2, 24–100 GHz) spectrum bands, offering significantly higher data rates, lower latency, and greater device density than 4G LTE. Requires denser small cell deployments, especially at millimeter wave frequencies.

Antenna (Telecommunications)

Any device used to transmit or receive electromagnetic signals. Includes panel antennas, omnidirectional whip antennas, dish antennas (parabolic reflectors), and phased array antennas. Antenna gain, beamwidth, and polarization are key performance characteristics.

Base Station

The fixed end of a cellular or wireless link, including the radio transceivers, antennas, and associated equipment installed at a fixed location to communicate with mobile or fixed user equipment. Also referred to as a Node B (3G), eNodeB (4G), or gNodeB (5G).

Broadband

High-speed internet access with sufficient bandwidth to support simultaneous transmission of voice, video, and data. The FCC currently defines broadband as a service delivering at least 25 Mbps download and 3 Mbps upload, though the statutory benchmark is moving toward 100/20 Mbps and higher.

Carrier of Last Resort (COLR)

A telecommunications carrier obligated under state law or regulatory order to provide basic telecommunications service to any customer who requests it within a defined service territory, regardless of the cost of doing so.

CLEC (Competitive Local Exchange Carrier)

A company that competes with the incumbent telephone company to provide local telephone and broadband services, typically by leasing network elements from the incumbent (UNE-P) or building its own network infrastructure.

Co-location / Collocation

The practice of installing the facilities of multiple telecommunications providers on a single structure, tower, or facility. Encouraged by federal law as a means of reducing the number of new towers required. The FCC's EFR rule broadly protects the right to collocate on existing structures.

Conduit

A pipe or tube, typically made of PVC, HDPE, or steel, installed underground to contain and protect telecommunications cables and fiber. Conduit enables future cable replacement or augmentation without additional excavation.

DAS (Distributed Antenna System)

A network of spatially separated antenna nodes connected to a common source to provide wireless coverage or capacity over a geographic area. DAS can be deployed outdoors (macro DAS along streets) or indoors (in-building DAS in large venues).

Dark Fiber

Installed fiber optic cable that has not yet been activated or that is unused. Dark fiber can be leased to service providers who supply their own optical networking equipment to 'light' it. A common asset in municipal open-access networks.

DBS (Direct Broadcast Satellite)

A form of satellite television service in which the satellite broadcasts directly to small consumer receive antennas (dishes), typically 18–36 inches in diameter, operating in the Ku-band (12–18 GHz) or Ka-band (26.5–40 GHz).

Eligible Facilities Request (EFR)

A federal statutory term under 47 U.S.C. § 1455(a) for a request to modify an existing wireless tower or base station by collocating new transmission equipment or replacing existing transmission equipment, provided the modification does not substantially change the physical dimensions of the structure. Local governments must approve EFRs within 60 days.

EIRP (Effective Isotropic Radiated Power)

A measure of the power transmitted from an antenna in the direction of maximum gain, expressed in watts or dBW/dBm. Used in RF emissions compliance calculations. FCC Maximum Permissible Exposure (MPE) limits are expressed in terms of power density at a distance.

Fiber Optic Cable

A data transmission medium using pulses of light transmitted through glass or plastic strands. Single-mode fiber (SMF) is used for long-haul and backbone applications; multi-mode fiber (MMF) is used for shorter runs. Fiber provides virtually unlimited bandwidth capacity and is the preferred medium for wireline broadband backbone and distribution.

Fixed Wireless Access (FWA)

The use of wireless technology to provide broadband internet access to fixed locations, typically residential or business premises. FWA uses licensed or unlicensed spectrum and directional or sector antennas, and may operate in microwave bands (2.5 GHz, 3.5 GHz, 5 GHz, 6 GHz, 11 GHz, etc.) or millimeter wave bands.

Franchise

A non-exclusive grant of authority by a local government permitting a company to use the public right-of-way for telecommunications infrastructure. Franchise agreements define the terms, fees, and conditions of ROW use.

FCC (Federal Communications Commission)

The independent U.S. federal regulatory agency responsible for regulating interstate and international communications by radio, television, wire, satellite, and cable. The FCC licenses wireless spectrum, establishes RF safety standards, and has preemptive authority over aspects of telecommunications regulation.

FTTH / FTTP (Fiber to the Home / Premises)

A broadband network architecture in which optical fiber is extended directly to the end user's premises, providing the highest capacity and most future-proof wireline connection. Architectures include PON (passive optical network) and point-to-point active Ethernet.

GEO Satellite (Geostationary Earth Orbit)

A satellite operating at approximately 35,786 km above the equator, appearing stationary relative to Earth's surface. GEO satellites cover large geographic areas but have higher latency (~600 ms round-trip) due to signal propagation distance. Used for broadcast, broadband, and weather services.

ILEC (Incumbent Local Exchange Carrier)

The traditional wireline telephone company that was the primary provider of local telephone service in a given area prior to market liberalization. ILECs are typically subject to additional regulatory obligations, including carrier of last resort status and network interconnection requirements.

IRU (Indefeasible Right of Use)

A long-term contractual right to use a specified portion of a fiber or conduit asset, typically for a period of 15 to 25 years. An IRU is not a property ownership interest but functions as a long-term lease, providing the holder with the practical equivalent of ownership for network planning purposes.

LEO Satellite (Low Earth Orbit)

A satellite operating at altitudes of 160–2,000 km above Earth's surface. LEO constellations (such as broadband internet constellations) use large numbers of satellites to provide continuous coverage. LEO offers significantly lower latency (20–40 ms) than GEO satellites, making it competitive with terrestrial broadband for most applications.

Macro Cell / Macro Tower

A large cellular base station providing coverage over a wide area (typically 1–30 km radius depending on frequency and terrain), typically mounted on a standalone tower or elevated structure at heights of 50–200 feet. Macro cells form the backbone of cellular networks.

MEO Satellite (Medium Earth Orbit)

A satellite operating at altitudes of 2,000–35,786 km. MEO constellations are used for navigation (GPS, GLONASS, Galileo) and broadband applications. MEO latency is typically 80–150 ms, between GEO and LEO.

Millimeter Wave (mmWave)

Radio frequency spectrum in the range of 24–100 GHz, characterized by very high bandwidth potential but limited propagation range (typically 100–300 meters line-of-sight) and susceptibility to rain fade and foliage attenuation. Used in 5G NR FR2 deployments requiring dense small cell networks.

MIMO (Multiple Input, Multiple Output)

An antenna technology using multiple antennas at both transmitter and receiver to improve communications performance. Massive MIMO, used in 5G base stations, employs large antenna arrays (32T32R, 64T64R, or more) to support beamforming and spatial multiplexing.

Monopole

A single steel tube tower used to support wireless antennas. Monopoles are widely used for cellular macro sites due to their relatively small footprint and lower visual impact compared to lattice towers. Heights typically range from 60 to 150 feet.

NESC (National Electrical Safety Code)

Published by IEEE, the NESC establishes minimum requirements for the safe installation, operation, and maintenance of electric supply and communication lines and associated equipment, including utility poles, aerial cables, and underground cables.

NEPA (National Environmental Policy Act)

Federal law (42 U.S.C. § 4321 et seq.) requiring federal agencies to assess the environmental effects of their actions. The FCC has adopted categorical exclusions from NEPA review for many telecommunications facilities; those not categorically excluded must submit an Environmental Assessment (EA).

NHPA / Section 106 (National Historic Preservation Act)

Federal law (54 U.S.C. § 300101 et seq.) requiring federal agencies to consider the effect of their undertakings on historic properties. The FCC has a Programmatic Agreement governing Section 106 review of telecommunications facilities, including tower deployments.

OET Bulletin 65

FCC Office of Engineering and Technology Bulletin 65 provides guidance on evaluating compliance with FCC RF exposure limits (Maximum Permissible Exposure standards). Telecommunications applicants use OET-65 calculations to demonstrate that proposed installations will not exceed human exposure limits.

OTARD Rule

The FCC's Over-the-Air Reception Devices Rule (47 C.F.R. § 1.4000) prohibits restrictions that impair the installation, maintenance, or use of antennas used to receive fixed wireless signals, including: (1) TV broadcast; (2) MMDS (wireless cable); and (3) DBS satellite signals. Protects dishes ≤ 1 meter in residential exclusive use areas.

PON (Passive Optical Network)

A fiber optic network architecture using passive optical splitters to enable a single optical fiber to serve multiple endpoints. PON systems share fiber from the central office to a neighborhood distribution point, then split to individual premises. Common PON standards include GPON, XGS-PON, and NG-PON2.

Right-of-Way (ROW)

The strip of land, owned or controlled by a governmental entity, over which public streets, highways, utility corridors, and related infrastructure are built. The ROW typically extends beyond the paved road surface to include sidewalks, landscaping strips, and utility easements.

RF (Radio Frequency) Emissions

Electromagnetic energy emitted by wireless transmitters and antennas. The FCC sets Maximum Permissible Exposure (MPE) limits to protect the public from potentially harmful RF energy. Local governments may not regulate RF emissions from FCC-compliant equipment.

Shot Clock

The time period within which a local government must act on a telecommunications permit application, established by FCC rules and federal law. Missing a shot clock deadline may result in the application being deemed granted. Applicable shot clocks range from 60 to 150 days depending on application type.

Small Cell

A low-powered radio access point with a range of 10 meters to 2 kilometers, used to supplement macro cell networks for capacity and coverage. Small cells may be femtocells (home use), picocells (enterprise), or metrocells/street-level cells (outdoor urban deployment).

Small Wireless Facility (SWF)

As defined by the FCC, a wireless facility where: (1) each antenna is no more than 3 cubic feet in volume; and (2) all other wireless equipment associated with the facility is no more than 28 cubic feet in volume. SWFs receive streamlined permitting treatment under federal law.

Spectrum

The range of electromagnetic radio frequencies used for telecommunications. Spectrum is managed by the FCC through licensing, auctions, and spectrum sharing rules. Key wireless broadband spectrum includes 600 MHz, 700 MHz, 850 MHz, AWS (1700/2100 MHz), PCS (1900 MHz), CBRS (3.5 GHz), C-band (3.7–3.98 GHz), and millimeter wave (24–100 GHz).

Stealth Facility

A telecommunications facility designed to blend into its surroundings or disguise its telecommunications function, such as a monopole designed as a tree (monopine), flagpole, light standard, bell tower, or other contextually appropriate form.

Tower

Any structure built for the sole or primary purpose of supporting FCC-licensed antennas, including monopoles, lattice towers, guyed towers, and stealth towers. The FCC's definition of "tower" is relevant to EFR determinations and shot clock applicability.

VSAT (Very Small Aperture Terminal)

A two-way satellite ground station with a dish antenna typically 0.75 to 3.8 meters in diameter, used to transmit and receive data via satellite. VSAT systems are used for enterprise connectivity, maritime/aviation broadband, remote site communications, and backhaul.

Wireline

Telecommunications infrastructure using physical cable (copper, coaxial, or fiber optic) to transmit signals, as opposed to wireless (radio frequency) transmission. Wireline networks include traditional telephone networks (PSTN), cable television networks, and fiber broadband networks.

WIP (Wireless Infrastructure Provider)

A company that builds, owns, and leases wireless infrastructure—such as towers, small cell poles, DAS networks, and equipment shelters—to wireless carriers and other users. WIPs include tower companies and neutral-host operators.

Section 11: Exhibits and Appendices

The following exhibits and appendices are incorporated into and made part of this Plan. Municipalities adopting this Model Plan shall complete and attach each exhibit prior to adoption.

Exhibit	Description
Exhibit A	Adopted Fee Schedule — Permits, Licenses, ROW Fees, and Franchise Fees
Exhibit B	Standard Permit Application Forms (SWF, New Tower, Wireline, Satellite)
Exhibit C	ROW Construction Standards and Pavement Restoration Specifications
Exhibit D	Municipal Zoning Map with Telecommunications Overlay
Exhibit E	Standard Franchise Agreement Template — Cable / Wireline Broadband
Exhibit F	Standard Master License Agreement Template — Small Wireless Facilities
Exhibit G	Municipal Pole Attachment Agreement Template
Exhibit H	Decommissioning Bond / Financial Assurance Form
Exhibit I	Pre-Application Meeting Request Form and Process
Exhibit J	GIS Data Submittal Requirements and Metadata Standards
Exhibit K	Environmental Review Checklist (NEPA Categorical Exclusion Eligibility)
Exhibit L	Section 106 (NHPA) Historic Preservation Consultation Process
Exhibit M	Approved Vendor and Equipment List (optional; municipality-specific)
Exhibit N	Municipal Broadband Strategic Plan (if applicable)
Exhibit O	Digital Equity and Inclusion Plan (optional but recommended)

Section 12: Plan Adoption, Amendment, and Review

12.1 Adoption

This Plan shall take effect upon adoption by the Municipal Council [or equivalent governing body] by ordinance or resolution. The adopting municipality shall codify applicable permit and fee provisions in its Municipal Code and shall make this Plan and all exhibits publicly available on the Municipal website.

12.2 Annual Review

The Municipality shall conduct an annual review of this Plan to assess: (a) changes in applicable federal and state law; (b) changes in telecommunications technology and deployment practices; (c) new FCC orders or rule-makings; and (d) feedback from providers and the public. The annual review shall be conducted by the Director of Community Development [or equivalent] and any recommended amendments shall be presented to the governing body for action.

12.3 Conflict Resolution

In the event of a conflict between any provision of this Plan and applicable federal or state law, the federal or state law shall govern. The Municipality shall promptly update this Plan to reflect any preemptive changes in law.

END OF MODEL MUNICIPAL TELECOMMUNICATIONS PLAN

This document is a model template. Municipalities should review with qualified legal counsel prior to adoption.