



Minor Telecommunication Rooftop Applications - Technical Feasibility Justification Template

Background:

Seattle Municipal Code 23.57.016, Visual impacts and design standards, item C. requires that minor telecommunication facilities in a separate screened enclosure *shall be located near the center of the roof*, if technically feasible.

When an applicant proposes to place a facility away from the center of the rooftop (including more than 20 feet away from existing minor telecommunication facility on the rooftop), a Technical Feasibility Justification report should be submitted with the application. This report should provide clear evidence to the City that the requested location for the new antenna placement is *as close to center as technically possible* to allow antennas to propagate signals without rooftop interference. The City will retain this report in the permit files as the official documentation for approval of placements out in accord with SMC 23.57.016 (C).

Use the following template to write the Technical Feasibility Justification report to provide the City with enough information to confirm that placement closer to the center of the building is not technically feasible. Note: The report should be formatted as a technical report document.

Technical Feasibility Justification Template

Request Summary:

Provide an overview of the where and why for the specific proposed rooftop deployment.

Supporting Detail:

1. Provide site-specific justification for the equipment placement at the exact rooftop position for the specific building permit application.
 - Include signal propagation diagrams and calculations showing the technical feasibility of deployment at all of the following.
 - At the edge of the roof
 - In a code-compliant location near the center of the roof
 - At a midpoint between these two locations
 - Include technical issues that are avoided by the proposed placement location.
 - Technical issues should focus on *signal propagation* impacts.
 - Secondary factors can also be included for context (e.g., structural limitations, existing rooftop conditions, safety regulations that limit placement, etc.).
 - Include a photo(s) showing existing rooftop conditions, if rooftop conditions prevent placement at any of the above referenced locations.
 - Include information to show a significant reduction in coverage when antennas are placed at the center of the roof. As demonstration of technical infeasibility:
 - Include a table quantifying signal coverage improvement between the analyzed antenna locations.

- When signal coverage reduction is 10% or less, additional technical information must be provided to further support the feasibility argument (e.g., density of customers, critical service corridors (e.g., arterials), etc.)
 - Include non-technical factors in the report (e.g., landlord/building owner preference) for additional consideration. SDCI will weigh these factors accordingly.
2. Describe the antenna design requirements and technical constraints that require placement away from the center of rooftop.
 3. Address the technical impacts of different roof design conditions (e.g., parapet, non-parapet).
 4. Include a technical diagram(s) demonstrating the antenna height or angle requirements for full signal propagation, with a summary explaining the diagram.

Report Attestation:

1. Include a statement of qualifications for the RF engineer signing the report.
2. Signature of RF engineer completing the report.