

# CITY OF OREGON DESIGN GUIDELINES FOR UTILITY FACILITIES IN THE RIGHT-OF-WAY

## **Part I General Overview**

### **Section 1. Initial Notes**

- A. The City of Oregon's Department of Public Service is the responsible agency for administering the receipt and processing of permits for utility facilities in the City's Right-of-Way.
- B. All references hereafter to the "Department" or to "DPS" refer to the Department of Public Service or their independent consultant.

### **Section 2. General Requirements**

- A. All Public Right-of-Way work shall be furnished and placed in compliance with the current editions of the following general standards for construction in the public right-of-way:
  - 1) State of Ohio Department of Transportation, (ODOT), Construction and Material Specifications, (CMS)
  - 2) City of Oregon Municipal Code (OMC) Chapter 712 - Right of Way
  - 3) City of Oregon Work In The Right-Of-Way Permit Requirements
  - 4) American Association of State Highway and Transportation Officials; (AASHTO), Standards and Guidelines
  - 5) National Fire Protection Association 70 National Electric Code; (NFPA-70 NEC)
  - 6) Americans with Disabilities Act and implementing regulations, including, without limitation, currently proposed Americans with Disabilities Act Accessibility Guidelines (ADAAG) promulgated by the United State Access Board.
  - 7) All applicable local, state, and federal codes and regulations.

- B. Copies of Items a. through g. listed above are available at:

City of Oregon  
Department of Public Service  
5330 Seaman Road  
Oregon, OH 43616  
Tel: (419) 698-7047

## **Part II New Facilities and Major Modifications**

### **Section 1. General Design and Construction Standards**

The Department of Public Service desires to promote cleanly organized and streamlined facilities using the smallest and least intrusive means available to provide utility services to the community. All utility facilities in the public right-of-way must comply with all applicable provisions in this section. In the event that any other law, regulation or code requires any more restrictive structural design and/or construction requirements, the most restrictive requirement will control.

- A. **Collocation.** The Department desires and encourages collocations between two separate utility service providers on the same support structure whenever feasible and safe.

- B. **Antennas.** The antenna(s) associated with the first installation for telecommunication services must be top-mounted and concealed within a radome that also conceals the cable connections, antenna mount and other hardware. The Department may approve a side-mounted antenna with the initial installation if, in the Department's discretion, the side-mounted antenna would be more appropriate given the built environment, neighborhood character, overall site appearance and would promote the purposes in these Guidelines. GPS antennas must be placed within the radome or directly above the radome not to exceed six inches.
- C. **Pole-Mounted Equipment Cages.** When pole-mounted equipment is either permitted or required, all equipment other than the antenna(s), electric meter and disconnect switch must be concealed within an equipment cage not to exceed 21 cubic feet in total volume. Equipment cages may not extend more than 10 inches beyond the pole centerline on either side. The equipment cage must be non-reflective and painted, wrapped or otherwise colored to match the existing pole. The City prefers and strongly encourages equipment cages to be mounted flush to the pole. All pole-mounted equipment must be installed as flush to the pole as possible. Any standoff mount for the equipment cage may not exceed 4 inches and the must include metal flaps (or "wings") to conceal the space between the cage and the pole.
- D. **Undergrounded Equipment Vaults.** The Department generally permits pole-mounted equipment in self-contained cages, but the Department may require placement of the equipment in an environmentally controlled underground vault.
- E. **Ground-Mounted Equipment.** The Department will not approve any new ground-mounted equipment unless the applicant (1) proposes the ground-mounted equipment in connection with a tapered metal pole and shows clear and convincing evidence that the equipment cannot be feasibly installed as a pole-mounted installation, in an environmentally controlled underground vault, or within an existing street feature for a valid technical reason. Increased costs alone shall be presumed to be insufficient. Ground-mounted equipment shall not be permitted in connection with a wood pole. In the event that the Department approves ground-mounted equipment, the applicant must conform to the following requirements:
  - a. **Self-Contained Cabinet or Shroud.** The equipment shroud or cabinet must contain all the equipment associated with the facility other than the antenna. All cables and conduits associated with the equipment must be concealed from view, routed directly through the tapered metal pole and undergrounded between the pole and the ground-mounted cabinet.
  - b. **Concealment.** The Department may require the applicant to incorporate concealment elements into the proposed design. Concealment may include, but shall not be limited to, public art displayed on the cabinet, strategic placement in less obtrusive locations and placement within existing or replacement street furniture.
  - c. **Ambient Noise Suppression.** The Department may require the applicant to incorporate ambient noise suppression measures and/or require the applicant to place the equipment in locations less likely to impact adjacent residences or businesses to ensure compliance with all applicable noise regulations
- F. **Utility Lines.** Service lines must be undergrounded whenever feasible to avoid additional overhead lines. For metal poles, undergrounded cables and wires must transition directly into the pole base without any external junction box.
- G. **Electric Meter.** Multiple operators on a shared pole shall share a single electric meter. Site operators shall use the smallest and least intrusive electric meter available. The Department strongly encourages site operators to use flat-rate electric service when it would eliminate the need for a meter. Whenever permitted by the electric service provider, the electric meter should be painted to match the pole.

- H. **Telephone/Fiber Optic Utilities.** Cabinets for telephone and/or fiber optic utilities may not extend more than 10 inches beyond the pole centerline on either side, and must be painted, wrapped or otherwise colored to match the pole. Microwave or other wireless backhaul is discouraged when it would involve a separate and unconcealed antenna.
- I. **Spools and Coils.** To reduce clutter and deter vandalism, excess fiber optic or coaxial cables shall not be spooled, coiled or otherwise stored on the pole whether in a cabinet or not.
- J. **Underground Conduit.** All underground conduit placed behind the curb face and underneath the sidewalk must be SCH 40 PVC encased in concrete. All underground conduit must be SCH 40 PVC encased in rigid metal material when placed: (1) underneath driveway aprons, (2) within tree wells or (3) in front of the curb face and beneath the street.
- K. **Above-Ground Conduit.** On wood poles, all above-ground wires, cables and connections shall be encased in the smallest section or smallest diameter conduit, u-guard, or shroud feasible, with a maximum dimension of 4" diameter, and be galvanized.
- L. **Ground Rods.** All ground rods shall be 1 inch in diameter and 10 feet in length made from copper-clad steel (high strength) as required in ASTM A325 and in compliance with ODOT CMS 725.
- M. **Lights.** Unless otherwise required for compliance with FAA or FCC regulations, the facility shall not include any permanently installed lights. Any lights associated with the electronic equipment shall be appropriately shielded from public view. The provisions in this subsection shall not be interpreted to prohibit installations on streetlights or the installation of luminaires on new poles when required by the Department.
- N. **Generally Applicable Health and Safety Regulations.** All facilities shall be designed, constructed, operated and maintained in compliance with all generally applicable health and safety regulations, including without limitation all applicable regulations for human exposure to radio frequency (RF) emissions.

## Section 2. General Location Criteria

- A. **Collocation Preference.** Whenever an applicant proposes to place a utility facility within 1000 feet from an existing utility facility, whether on a new pole or an existing potential support structure, the applicant must either collocate with the existing facility or demonstrate with clear and convincing evidence that a collocation is either not technically feasible or space on the existing facility is not potentially available.
- B. **General Limitation on New Poles.** The Department strongly discourages more than one (1) utility facility on a new pole per block and will not approve more than one per block on each side of the street unless the applicant qualifies for a limited exception pursuant to the following:
  - (a) *Limited Exemption for Personal Wireless Service Facilities.* Federal law prohibits a permit denial when it would effectively prohibit the provision of personal wireless services. Due to wide variation among wireless facilities and technical service objectives, and due to changed circumstances over time, a limited exemption for proposals in which strict compliance with this chapter would effectively prohibit personal wireless services serves the public interest. Circumstances in which an effective prohibition may occur are extremely difficult to discern, and specified findings to guide the analysis promotes clarity and the City's legitimate interest in well-planned wireless facilities deployment. Therefore, in the event that any applicant asserts that strict compliance with any provision in this chapter, as applied to a specific proposed wireless communications facility, would effectively prohibit the provision of personal wireless services, the director of the Director of Public Service may grant a limited, one-time exemption from strict compliance, subject to the following provisions:
    - 1. *Required Findings.* The director of the Department of Public Service shall not grant any exemption unless the applicant provides each of the following:

- i. Evidence that the proposed wireless facility qualifies as a “personal wireless services facility” as defined in 47 U.S.C. § 332(c)(7)(C)(ii);
    - ii. A clearly defined and reasonable technical service objective and a clearly defined potential site search area; and
    - iii. A meaningful comparative analysis that includes the factual reasons why (1) any alternative location(s) or design(s) suggested by the City or otherwise identified in the administrative record are not technically feasible and (2) the proposed location and design deviation is the least noncompliant location and design necessary to reasonably achieve the applicant’s technical service objective.
  - 2. *Scope of Exemption.* The Director of Public Service shall limit the exemption to the extent to which the applicant demonstrates such exemption is necessary to reasonably achieve its reasonable technical service objectives. The Department of Public Service may adopt conditions of approval specific to a permit issued as a limited exemption pursuant to this section, as reasonably necessary to promote the purposes in this chapter and protect the public health, safety, and welfare.
- C. **Alignment with Other Poles.** The centerline of any new pole must be aligned with the centerlines of existing poles in the right-of-way. After the Department approves a proposed new pole location, but before the permittee commences construction, the permittee must verify the correct pole alignment in the field.
- D. **Setbacks for Visibility and Access.** Any new pole and/or equipment and other improvements associated with a new pole or an existing pole must be setback from intersections, alleyways and driveways and placed in locations where it will not obstruct motorists’ sightlines or pedestrian access. In general, the Department will presume that no obstruction will occur when a new pole and/or equipment is setback at least (i) 50 feet from any intersection; (ii) six (6) feet from any driveway cut or alleyway entrance or exit; and (iii) six (6) feet from any permanent object or existing lawfully-permitted encroachment in the public right-of-way, including without limitation bicycle racks, traffic signs and signals, street trees, open tree wells, benches or other street furniture, streetlights, door swings, gate swings or sidewalk café enclosures. The Department may, in its discretion, require an additional setback for a specific pole when it determines that the presumptively acceptable setback would nevertheless obstruct motorists’ sightlines or pedestrian access.
- E. **Obstructions.** Any new pole and/or equipment and other improvements associated with a new pole or an existing pole must not obstruct any: (i) worker access to any above-ground or underground infrastructure for traffic control, streetlight or public transportation, including without limitation any curb control sign, parking meter, vehicular traffic sign or signal, pedestrian traffic sign or signal, barricade reflectors; (ii) access to any public transportation vehicles, shelters, street furniture or other improvements at any public transportation stop (including, without limitation, bus stops, streetcar stops, and bike share stations); (iii) worker access to above-ground or underground infrastructure owned or operated by any public or private utility agency; (iv) fire hydrant access; (v) access to any doors, gates, sidewalk doors, passage doors, stoops or other ingress and egress points to any building appurtenant to the right-of-way; or (vi) access to any fire escape.
- F. **Historic or Architecturally Significant Structures.** Any new pole and/or equipment and other improvements associated with a new pole or an existing pole may not be placed directly in front of any historic or architecturally significant structures in prominent or highly visible locations.

### Section 3. New and Replacement Poles

- A. **General Restrictions on New Wood Poles.** In all locations, the Department requires a metal pole rather than a wood pole. Wood poles will only be allowed on a case by case basis taking into consideration the build and/or natural environmental character of the proposed site

location. The Department shall not approve any new wood poles in the following districts:

- a. Commercial Zoning and Overlay Districts;
  - b. Residential Zoning Districts;
  - c. Historic Overlay Districts (including area adjacent to historic landmarks);
  - d. Underground Utility Districts (including areas where all utilities are primarily underground even if not established as formal district); and
  - e. Park and Recreation Districts primarily designed as more urban and active.
- B. **Overall Height.** Any pole greater than 50 feet above ground level (including antennas or other aerial equipment) shall be subject to review and approval by the Department. The Department shall consider other poles in vicinity, the built environment, the neighborhood character, the overall site appearance and the purposes in these Guidelines. The zoning district height limit shall not be determinative.
- C. **Pole Diameter.** Any wood pole with a diameter greater than 12 to 14 inches or any tapered metal pole with a diameter at base greater than 10 to 12 inches shall be subject to review and approval by the Department. The Department shall consider other poles in vicinity, the built environment, the neighborhood character, the overall site appearance and the purposes in these Guidelines.
- D. **Wood Pole Footings and Foundations.** All new wood poles must be direct buried to a depth determined, stamped, sealed and signed by a professional engineer licensed and registered by the State of Ohio, and subject to the Department's review and approval.
- E. **Tapered Metal Pole Footings and Foundations.** All new tapered metal poles must be supported with a cast-in-place reinforced concrete pier designed, stamped, sealed and signed by a professional engineer licensed and registered by the State of Ohio, and subject to the Department's review and approval. Footings and anchor bolts must be constructed from steel (high strength) per ASTM A36, threaded (J-type / L-type), hot-dip galvanized per ODOT CMS Item No. 711.02 and in a length and diameter determined, stamped, sealed and signed by a professional engineer licensed and registered by the State of Ohio, and subject to the Department's review and approval. All anchor bolts must be concealed from public view with an appropriate pole boot or cover subject to the Department's prior approval.
- F. **Tapered Metal Pole Material.** All tapered metal poles must be constructed from hot-dip galvanized steel or other corrosion-resistant material approved by the Department and finished in accordance with these Guidelines to avoid rust stains on adjacent sidewalks, buildings or other improvements.
- G. **Metal Pole Finish.** Metal poles must be hot dipped galvanized, unless environmental considerations dictate the requirement for painted poles. Paint color to be determined by DPS. The applicant may select a paint or powder coat system in compliance with ASTM standards.
- H. **Banners.** The Department may require the applicant to install functional banners when technically feasible and the Department determines that such additions will enhance the overall appearance and usefulness of the proposed facility.
- I. **Standard Pole Configuration.** The standard pole configuration for a wireless telecommunication facility shall be in accordance Detail TP-1 (City of Toledo Standard), unless approved otherwise by the Director of Public Service.

#### **Section 4. Installations on Existing Poles and Other Potential Support Structures**

- A. **General.** The Department encourages applicants to consider existing poles and other potential support structures prior to any new pole to reduce congestion in the public right-of-way. The Department will consider all generally applicable design, construction and location standards when reviewing applications for new facilities installed on existing poles or other potential support structures in the public right-of-way.

- B. **Privately-Owned Structures.** For a privately-owned structure in the public right-of-way onto which an applicant proposes to attach a wireless communications facility, if the owner of the structure requires a restrictive standards than those contained in these Guidelines, the more restrictive standards shall control. If any portion of a privately-owned structure is on private property, the applicant must first obtain all applicable zoning and building permits prior to submittal of an application to the Department.
- C. **City-Owned Structures.** The City, in its proprietary capacity, retains sole and absolute discretion over whether and on what terms it may allow wireless facilities on its poles and other facilities in the public right-of-way notwithstanding conflicting design provisions set forth in these Guidelines. Applicants may not submit any applications in connection with City-owned poles or other facilities without a valid and fully executed agreement to use the specific pole or other facility. The City shall not authorize any attachments to City-owned infrastructure that negatively impacts the structural integrity of the support structure.
  - a. **City-Owned Traffic Control Signal Poles.** The City prohibits wireless facilities (and all other non-traffic control facilities) on City-owned traffic control signal poles.

## **Section 5. Additional Design and Construction Standards for Major Modifications**

In addition to all applicable General Design and Construction Standards, the Department requires all major modifications to eligible facilities to comply with the following requirements:

- A. **Coordination with Original Facility Design.** The applicant must design the proposed installation in a manner that mimics the design and any concealment elements of the existing facility. To the extent feasible, new facilities should utilize capacity in existing equipment cages or cabinets and existing conduits or risers. The Department may, in its discretion, authorize the applicant to replace an existing equipment enclosure with a larger one when the Department determines that a larger enclosure is more visually appropriate than a second enclosure on the same support structure.
- B. **Antennas.** Any additional antenna(s) installed to the support structure must be side-mounted and parallel to the roadway. The Department prohibits side-mounted antennas that overhang the roadway, but may permit side-mounted antennas that overhang the sidewalk provided that the antenna complies with all applicable setbacks requirements in these Guidelines and the TMC.
- C. **Structural Integrity.** Any additional equipment must not negatively impact the structural integrity of the support structure and must comply with all applicable local, state and federal codes and regulations.

## **Part III Approvals and Denials**

### **Section 1. Required Findings for Approvals.**

- A. **Review.** The Department may approve or conditionally approve a permit application subject to review only when it finds that:
  - a. The proposed utility facility, its support structure, equipment and all associated improvements, have been designed and sited in a manner that is sympathetic to the particular architectural character of the buildings and compatible with the streetscape in the vicinity of the proposed project site;
  - b. Design elements of the proposed utility facility, its support structure, equipment and all associated improvements, have been sensitively selected to reflect the detailing and materials associated with the buildings and streetscape in the vicinity of the proposed project site;
  - c. The proposed utility facility, its support structure, equipment and all associated improvements, have been designed and sited in a manner that does not

adversely impact right-of-way circulation, accessibility, or obstruct existing or planned-future uses of the right-of-way; and

- d. The proposed utility facility complies with all applicable design, construction and location provisions in the Guidelines.

## **Section 2. Minor Technical Exceptions.**

- A. **Purpose.** The Department recognizes that in some circumstances strict compliance with these Guidelines may result in undesirable aesthetic outcomes, and that minor deviations should be granted when the need for such deviation arises from circumstances outside the applicant's control.
- B. **Required Findings.** The Department may, in its sole discretion, grant a minor technical exception from strict compliance with the design and location guidelines when the Department finds that:
  - a. The applicant has requested an exception in writing;
  - b. The need for the exception arises from an external factor outside the applicant's control that impact public health, safety or welfare, including without limitation soil compaction, existing congestion or clutter within the right-of-way or other location-specific phenomenon;
  - c. The proposed deviation from the applicable requirement is less than 10% larger than the generally applicable standard; and
  - d. The granting of a minor technical exception would not create any obvious hazard or unreasonable obstruction in the public right-of- way.

**GENERAL NOTES:**

**NEW TAPERED METAL POLE INSTALLATION:**

ALL METAL POLES SHALL BE MAINTAINED IN A VERTICAL AND PLUMB CONDITION.  
 ALL METAL POLES SHALL BE ANCHORED ON A REINFORCED CONCRETE FOOTING (MAX. 2' DIA. @ SURFACE) AND SHALL BE DESIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF OHIO.  
 ALL METAL POLES SHALL HAVE A MAXIMUM HEIGHT OF 40' ABOVE GRADE.  
 ALL METAL POLES SHALL HAVE A MAXIMUM DIAMETER OF 10" TO 12" AT THE BASE.  
 POLE FINISH: STANDARD TO BE HOT-DIPPED GALVANIZED STEEL UNLESS OTHERWISE NOTED.

**POLE ATTACHMENT:**

ALL EQUIPMENT CABINETS AND/OR SHROUDS SHALL BE ATTACHED TO POLES BY ANCHORS OR STRAPPED TIGHTLY TO THE POLE.  
 ALL HARDWARE USED TO ATTACH EQUIPMENT TO THE POLE SHALL BE HOT-DIPPED GALVANIZED STEEL.

**WIRING AND CABLE MANAGEMENT:**

SERVICE LINES SHALL BE UNDERGROUND WHENEVER POSSIBLE TO AVOID ADDITIONAL OVERHEAD LINES.  
 ALL ABOVE GROUND AND BELOW GROUND WIRING AND CABLING, ALONG WITH THEIR CONNECTIONS SHALL BE LOCATED WITHIN THE POLE AND CONCEALED FROM VIEW. NO SURFACE MOUNTED CONDUIT WILL BE ALLOWED.

**DESIGN OF EQUIPMENT:**

ANTENNA, POLE ATTACHMENTS SHROUD, OPEN-CAGE SERVICE EQUIPMENT SHROUD, AND METER ENCLOSURE MAY VARY PER MANUFACTURER BUT MUST BE WITHIN THE LIMITS OF THE MAXIMUM DIMENSIONS NOTED ON THIS DRAWING.

**FINISHES:**

ALL POLE MOUNTED EQUIPMENT SHALL BE PAINTED TO MATCH POLE AND SHALL BE IN COMPLIANCE WITH THESE GUIDELINES.

**EQUIPMENT NOISE:**

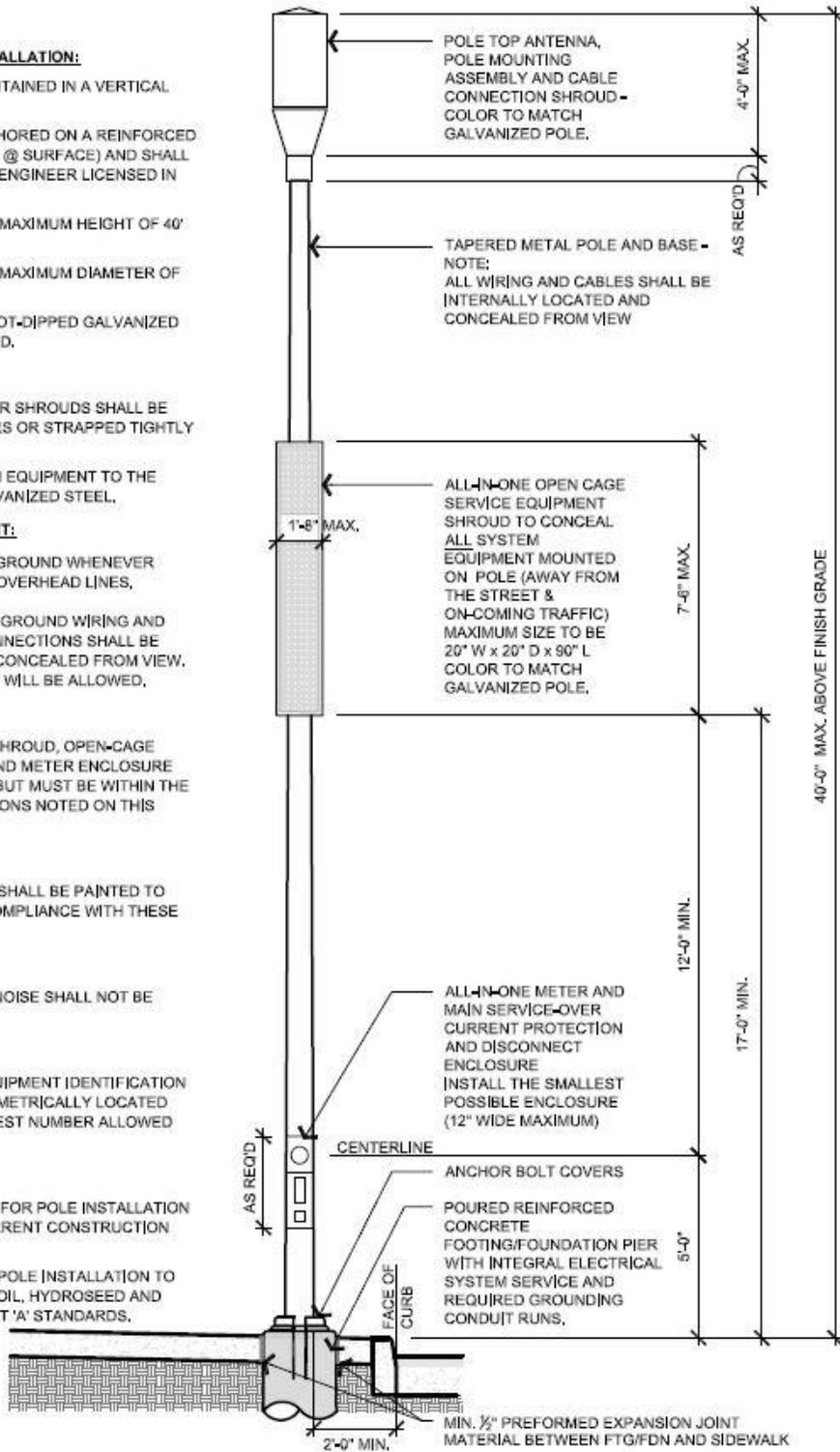
EQUIPMENT WHICH GENERATES NOISE SHALL NOT BE INSTALLED.

**EQUIPMENT SIGNING:**

ALL WARNING STICKERS AND EQUIPMENT IDENTIFICATION AND COMPLIANCE SHALL BE SYMMETRICALLY LOCATED AND BE THE FEWEST AND SMALLEST NUMBER ALLOWED BY LAW.

**RESTORATION:**

ALL WALK REMOVAL NECESSARY FOR POLE INSTALLATION TO BE REPLACED PER CITY'S CURRENT CONSTRUCTION STANDARDS.  
 ALL LAWN AREAS DISTURBED BY POLE INSTALLATION TO BE RESTORED WITH MIN. 4" TOPSOIL, HYDROSEED AND MULCH PER CITY'S CURRENT PART 'A' STANDARDS.



CITY OF TOLEDO; STANDARD CONFIGURATION - POLE MOUNTED SYSTEM ON NEW TAPERED METAL POLE

TP-1  
 DATED: 10-04-2016