

A photograph of a city skyline featuring several modern skyscrapers. The buildings are reflected in a body of water in the foreground. The sky is clear and blue. The image is framed with a white border that has a clipped corner on the top right.

City of Austin **Small Cell Infrastructure Design Reference Guide**

Telecommunications and
Regulatory Affairs (TARA)

January 2019



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Definitions

"Antenna" means communications equipment transmitting or receiving electromagnetic radio frequency signals used in providing Wireless Service.

"Applicable Code" means: (A) uniform building, fire, electrical, plumbing, or mechanical codes adopted by a recognized national code organization; and (B) COA amendments to those codes.

"Austin Energy" or "AE" means the COA electric utility department.

"Austin Transportation Department" or "ATD" means the COA transportation department.

"Cantenna" is a waveguide antenna, directional in nature, used to better detect or broaden a wireless network's range generally in the shape of a can.

"City of Austin" or "COA" means the City of Austin, Texas.

"Decorative Pole" means a streetlight Pole specially designed and placed for aesthetic purposes and on which no appurtenances or attachments, other than specially-designed informational or directional signage or temporary holiday or special event attachments, have been placed or are permitted according to Applicable Codes.

"Design District" means an area zoned or otherwise designated by COA and for which COA maintains and enforces unique design and aesthetic standards.

"Historic District" means an area zoned or otherwise designated as a historic district under COA, state or federal law.

"Law" means common law or a federal, state, or local law, statute, code, rule, regulation, order, or ordinance.

"COA-owned Utility Pole" means a Utility Pole owned or operated by a COA department and located in Public ROW.

"Mobility Corridor" means traffic arteries designated by COA as part of the Corridor Mobility Program (<https://data.austintexas.gov/stories/s/gukj-e8fh>).

"Municipal park" means an area zoned or otherwise designated by COA as a public park for recreational activity.

"Network Node" means equipment at a fixed location enabling wireless communications between user equipment and a communications network and includes:



- (i) equipment associated with wireless communications
- (ii) a radio transceiver, an antenna, a battery-only backup power supply, and comparable equipment, regardless of technological configuration; and
- (iii) coaxial or fiber-optic cable immediately adjacent to and directly associated with a particular collocation.

"Network Node" does not include: (i) an electric generator; (ii) a Pole; or (iii) a macro tower.

"Network Provider" means:

- (A) a Wireless Service Provider; or
- (B) a person who does not provide Wireless Service and is not an electric utility but builds or installs on behalf of a Wireless Service provider:
 - (i) network nodes; or
 - (ii) Node Support Poles or any other structure supporting or capable of supporting a network node.

"Node Support Pole" or "NSP" means a Pole installed by a Network Provider for the primary purpose of supporting a Network Node.

"Permit" means written authorization to use Public ROW or collocation on a Service Pole required from COA before a Network Provider may perform an action or initiate, continue, or complete a project over which COA has police power authority.

"Pole" means a Service Pole, COA-owned Utility Pole, NSP or Utility Pole.

"Private easement" means an easement or other real property right only for the benefit of the grantor and grantee and successors and assigns.

"Public Right-of-Way" or "Public ROW" means the area on, below, or above a public roadway, highway, street, public sidewalk, alley, waterway, or utility easement in which COA has an interest. The term does not include:

- (A) a private easement; or
- (B) the airwaves above a public right-of-way with regard to wireless telecommunications.

"Service Pole" means a Pole, other than a COA-owned Utility Pole, owned or operated by COA and located in Public ROW, including:

- (A) a Pole supporting traffic control functions;
- (B) a structure for signage;
- (C) a Pole supporting lighting, other than a Decorative Pole; and
- (D) a Pole or similar structure owned or operated by COA and supporting only network nodes.

"Special District" means a Design District or Historic District.



"Transport facility" means each transmission path physically within a public ROW, extending with a physical line from a Network Node directly to the network for providing backhaul for Network Nodes.

"Utility Pole" means a Pole providing: (A) electric distribution with a voltage rating of not more than 34.5 kilovolts; or (B) services of a telecommunications provider.

"Wireless Service" means any service, using licensed or unlicensed wireless spectrum, including Wi-Fi, whether at a fixed location or mobile, provided to the public using a Network Node.

"Wireless Service Provider" (or WSP) means a person providing Wireless Service to the public.



Chapter

1



I. INTRODUCTION AND REFERENCES

1. INTRODUCTION

This Small Cell Reference Guide provides a synopsis of requirements for all Network Node installations in COA Public ROW. This guide also provides references to official COA criteria documents. It does not apply to Network Nodes not installed in Public ROW but may inform those installations.

This document is not regulatory in nature but serves as a resource for applicants wishing to place small cell infrastructure in the Public ROW. As a resource, this document provides the applicant with a roadmap to the specific COA technical requirements and specifications governing installation.

2. INSTALLATION TYPES

The COA permits six different types of Network Node installations in public ROW. These are (as more fully described in subsequent sections):

- (1) Streetlight Poles;
- (2) COA-Owned Utility Poles;
- (3) Non-COA-Owned Utility Poles;
- (4) Transport Facilities;
- (5) Freestanding Poles; and
- (6) Traffic signal Poles.

Network Providers may apply to:

- (a) attach Network Nodes to existing COA facilities (e.g. streetlight Poles, traffic signal



poles, etc.);

(b) install new Poles (either replacing an existing Pole or adding a new Pole); and

(c) install a combination of pole and underground vault for equipment storage. COA evaluates all underground or vault-type installation proposals on a case-by-case basis.

Because Network Nodes impact the aesthetics of COA public property and citizens, COA has developed specifications/criteria to help Network Providers design and install Network Nodes. Each Network Node involves a wide range of considerations. Depending on the installation location and type of Pole, different COA departments may be involved. For each Network Node, COA considers the following:

- The availability of electric supply (provided through AE or the appropriate power service provider)
- Pole type and location
 - Type SC-1 Pole – Streetlight (administered by AE)
 - Type SC-2 Pole – Utility Poles (administered by AE)
 - Non-COA-Owned (administered by TARA)
 - Type SC-3 Pole - Freestanding Pole (administered by Planning/Zoning and Development Services Department)
 - Type SC-4 Pole - Traffic Signal (administered by ATD)
- Trenching requirements are influenced and administered by ATD, AE, Austin Water Utility, Public Works, and Parks and Recreation Department (PARC), when applicable
- Traffic impacts during and after construction (administered by ATD).

3. PRIMARY REFERENCE MATERIALS

Network Providers interested in installing small cell infrastructure in the COA must familiarize themselves with the COA requirements governing installation and associated technology.

The following web page will serve as a useful starting point: COA [Municode Library](#).

The following COA departments address the various considerations associated with Network Nodes:



Table 1-1: Manuals and documents applicable to small cell installations in the COA. Applicants should use this guide as a general reference and refer to the resources in this table (and elsewhere in this document) for more complete information.

Construction or Installation Consideration	Responsible department or Entity	Reference Document	Reference Section
Pole attachments for Streetlights	Austin Energy	Utility Criteria Manual	Section 6
Electric Service Criteria		AE Design Criteria Manual	
Pedestrian Environment	Planning and Zoning Dept.	Historic Preservation Resources Transportation Criteria Manual	
Design District Standards			
Utility Coordination	Austin Transportation Dept.	ROW Management	
Sidewalk permits			
Traffic Flow			
Pole Attachment for Traffic Signals			
Excavation Impacts	Public Works/Street & Bridge	Street Repair Guidelines	
	Austin Water Utility	Austin Water Utility	
Community Tree Preservation	Development Services Department	DSD	
Watershed Protection		Watershed Protection	
Right of Way Adjacent to Municipal Park	Parks and Recreation Department	Parks and Recreation Department	
Application Management	Telecommunications & Regulatory Affairs	TARA Wireless Communications	



4. ADDITIONAL REFERENCES

This publication is a guidance document subject to change. The COA [Code of Ordinances](#) and the following documents (incorporated herein by reference) remain the official sources for regulatory information:

City of Austin

- [Utility Criteria Manual](#)
- [Great Street Specifications](#)
- [Drainage Criteria Manual](#)
- [Traditional Neighborhood District Criteria Manual](#)
- [Standards Manual](#)
- [Standard Specifications Manual](#)
- [Environmental Criteria Manual](#)

Austin Energy

- [AE Design Criteria Manual](#)
- [Pole Attachments](#)

Planning & Zoning

- [Historic Preservation Resources](#)

Austin Transportation

- [ROW Resources for Contractors](#)
- Utility Coordination - [Transportation Criteria Manual](#)
- Utility Coordination – [Utilities Criteria Manual – Section 3](#)
- [ROW Management](#)
- Sidewalk permits - [ROW Management](#)
- Traffic Flow - [Arterial Management](#)
- Pole attachments for traffic signals - [Rules & Design Manual for Small Cell Network Facilities in the Right-of-Way](#)
- Location and status of pole attachment to traffic signals – [ATD Asset Map](#) (turn on Pole Attachments in layer list).

Public Works Department

- [Street Repair Guidelines](#)
- [Utility Criteria Manual Section 5](#)

Austin Water Utility

- [Section 2 - Utilities Criteria Manual](#)

Development Services Department

- [Development Assistance Center](#)

Watershed Protection



- [Watershed Protection Ordinances and Requirements](#)

Parks and Recreation Department

- [Parks and Recreation Department Interactive GIS map](#)

Telecommunications & Regulatory Affairs

- [TARA Wireless Communications](#)

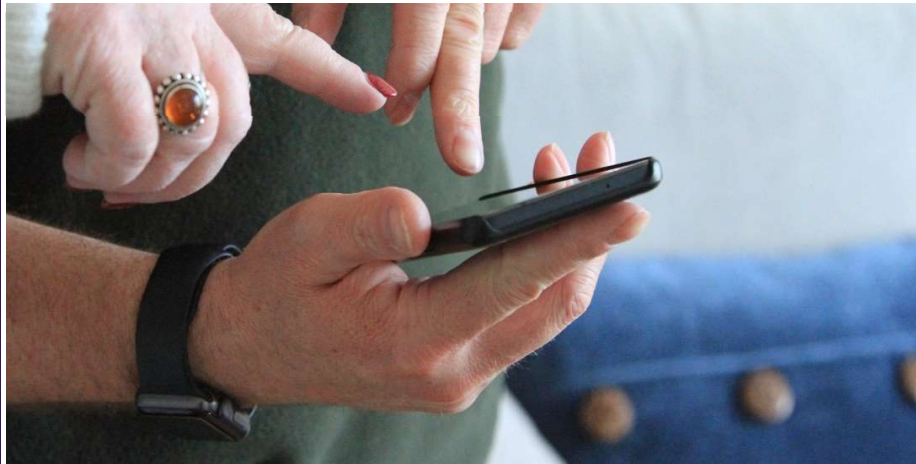
Appendix A

- Austin Utility Location & Coordination Committee (AULCC) General Guidelines



Chapter

2



II. CITY OF AUSTIN SMALL CELL APPROVAL PROCESS

COA has developed a small cell approval process to align with the needs of its citizens and Network Providers. Developing a process has been an iterative endeavor with changes made as the parties learned lessons. COA has developed an improved, streamlined, bi-furcated process it believes meets the objectives defined below.

1. OBJECTIVES

The COA *Imagine Austin* initiative envisions safe, well-maintained, stable and attractive neighborhoods and places with their character and history preserved. All residents should have a variety of outstanding public facilities and services. Among the *Imagine Austin* goals are:

- Development in connected and pedestrian-friendly patterns supporting transit and urban lifestyles and reducing sprawl, while protecting and enhancing neighborhoods;
- A safe, vibrant, day and night time urban lifestyle downtown for residents, workers and visitors;
- Development in a manner friendly to families with children, seniors and individuals with disabilities;
- Recognizing Austin's unique character and local businesses as a vital part of the city;
- Clear guidelines to support quality development and preservation that sustain and improve Austin's character and provide certainty for residents and the business community.

The COA protects its citizens while striving to make Austin the most livable city in the country. COA leaders believe implementing small cell technology supports those objectives.



2. RELEVANT DEPARTMENTS

Depending on a proposed small cell location and the issues associated with installation, some COA departments *will* have a role while other departments *may* have a role.

Departments required for every application

- Telecommunications and Regulatory Affairs (administers the application process)
- AE Electric Service Delivery (ESD) (provides electric service to COA customers and oversees pole attachments on AE-controlled infrastructure)
- ATD (pole attachments on ATD-controlled infrastructure; right-of-way management; arterial management; excavation)

COA organizations which *may* have a role in reviewing an application

- Austin Water Utility (water infrastructure)
- AE On-site Energy Resources (chilled water infrastructure)
- Watershed Protection Department (storm water infrastructure)
- Planning & Zoning Department (Urban Design & Historic Preservation)
- Public Works Department (designs, manages and inspects major capital improvement projects; promotes bicycle, pedestrian, safe routes and urban trail projects; maintains network of trails, roadways and bridges once built)
- Development Services Department (Development Assistance Center)
- Parks and Recreation Department (when right of way is adjacent to or in a municipal park)

3. PROCESS FLOW

COA has implemented a small cell permitting process available on the TARA web site.



4. RESOURCES AND FREQUENTLY ASKED QUESTIONS

The Resources in Section 4 above, will assist WSPs in navigating the small cell design/installation process. Additionally, you may contact [TARA personnel](#) for assistance.

FAQ 1: How can I obtain a permit for a small cell network node?

Answer: Begin by contacting COA's [Telecommunications and Regulatory Affairs](#) department (COASmallCell@austintexas.gov). They can assist you with the entire process.

FAQ 2: How will I know which COA departments will participate in the review process for a small cell application?

Answer: It depends on the location and other attributes of the proposed location. For a "regular" location (*i.e.* one which will receive power from the existing AE streetlight infrastructure and located at a pre-approved acceptable location), the process will be relatively easy. Only TARA, AE and ROW management should be involved. For an "irregular" location (*i.e.* one which cannot be served from existing AE streetlight infrastructure or not located at a pre-approved acceptable location), the number of COA departments will vary depending on the circumstances of the proposed installation (*e.g.* required excavation, tree trimming, *etc.*).

FAQ 3: How are small cell fees determined?

Answer: For the most part, the Texas legislature has set limits on fees municipalities can charge for small cell installations? (See Texas Local Government Code, Title 9 (Public Buildings and Grounds), Subtitle A (Municipal Public Buildings and Grounds), Chapter 284 (deployment of Network Nodes in Public Right-of-Way) Also, see Section III below.

FAQ 4: How many small cell locations can I apply for at one time?

Answer: At the time of publication of this document, the COA does not limit the number of applications.

FAQ 5: When will I know if my small cell permit is approved?

Answer: COA will approve the proposed *location* for a small cell within ten days of the WSP applying for a permit. Approval of the site plans, electric service, *etc.* will take longer and depend on the complexity of the proposed installation. COA hopes to have requests approved within thirty days for "regular" locations (described above in FAQ 2).

FAQ 6: Will there be a site visit required for WSP and COA together?

Answer: No site visit will be *required* to get the permit (*i.e.* Phase 1). Depending on the type of pole, location, *etc.*, a site visit *may* be needed to address electric service or other issues.



FAQ 7: Can a carrier use the COA-issued “Authorization to Use Public ROW” to obtain construction permits?

Answer: Yes and no. The Authorization to Use Public ROW will allow a carrier to obtain the necessary permits to begin installing equipment at the approved location. *However*, the carrier must still go through the design phase (Phase 2) to arrange for electric service and fiber backhaul and obtain permits associated with installing fiber and electric service.

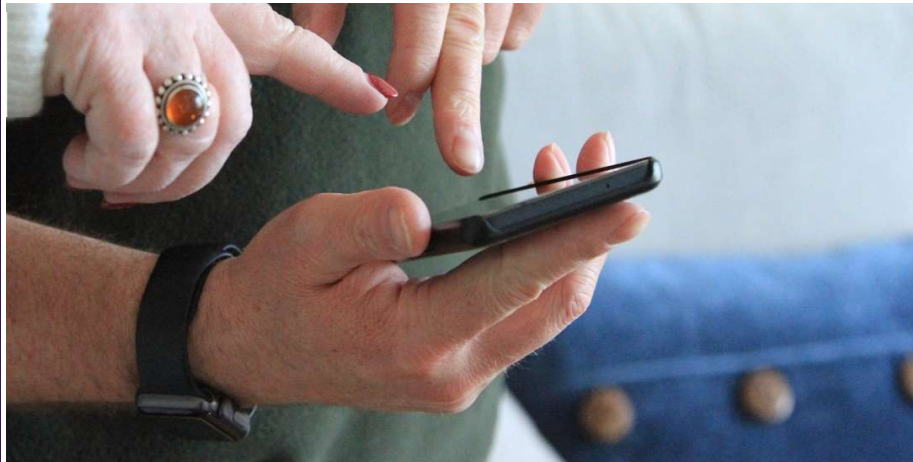
FAQ 8: Will carriers be responsible for the costs associated with connecting to the fiber network and obtaining electric service?

Answer: Yes.



Chapter

3



III. FEE SCHEDULE

The COA charges fees for small cells to recover part of the cost of administering the small cell program. COA must employ staff to review permits, perform inspections, administer contracts, *etc.*

1. SUMMARY OF FEES

To recover some of the costs associated with processing applications and administering small cell infrastructure, the COA has implemented certain non-discriminatory fees.

Pursuant to the COA Code, COA charges the following fees:



Table 3-1 Fee Schedule for Small Cells

Description	Application Fees	Added Unit Fees	Note – Unit of Measure
Pole Attachments			
Annual Usage and Occupancy Charge			Per Contract
Pole Attachment Filing Fee	\$25.00	\$25.00	Per Pole
Wireless Attachment			Per Contract
Small Cell Networks – Network Node Application Fee		\$500.00	First (5) Network Nodes on an Application
Additional Node		\$250.00	Each, up to (30) per application
Node Pole		\$1000.00	Each
Wireless attachments to streetlight poles (or other non-distribution service poles). Attachments to distribution poles will be billed at FCC calculated rate		\$20.00	Per Year
Transferring Licensees Attachments (External)			Direct Costs + 15%
Transferring Licensees Attachments (Internal)			Direct Costs + Overhead and G&A
Vehicle/Equipment Use (External)			Direct Costs + 15%
Small Cell Networks			
Network Node Application Fee		\$250	First (5) Network Nodes on an Application
\$250 for each additional network node, with up to (30) node per application			
Public Right-of-way use rate for each network node		\$250	Per node, per year
Rent: Pole Attachments and Right-of-Way use for antennas and related equipment	\$1500.00		Per pole attachment, per year
Rent: ROW Use for Fiber Optic cabling connecting antenna locations			
Bore or Micro-Trenched Conduit per Linear Foot per Year (pro-rated among joint installation participants)			
0" - 4" Conduit	\$0.63		
4" - 8" Conduit	\$1.25		
Pre-existing Conduit, Per Linear ft. per Year	\$0.32		
Trenched conduit per linear foot per year (pro-rated among joint installation participants)			
0" - 4" Conduit	\$1.25		
4" - 8" Conduit	\$2.50		
Service Pole Attachment Fee		\$20.00	Per Year
Site Location Application Fee	\$1250.00		Per Location
Transport Facility Fee		\$28.00	Per network node per month

2. ON-LINE FEE RESOURCES

- [City of Austin Budget Information](#) (pages 613 and 696)
- [AE Fee Schedule](#)
- [Historic Preservation Office](#)



Chapter

4



IV. GENERAL REQUIREMENTS FOR ALL INSTALLATIONS

1. INTRODUCTION

A number of COA departments oversee small cell installations. Relevant COA departments must review and approve all applications prior to installation. No installation work on small cells can proceed without the requisite approval.

2. APPLICATION PROCESS

All applicants must use the COA small cell application process. This process is outlined elsewhere in this document and available for more detailed review on-line [here](#).

3. AESTHETIC STANDARDS AND REQUIREMENTS

The COA considers aesthetics an important part of any small cell installation. To streamline the small cell application process, applicants should perform a visual inspection to understand and determine the existing aesthetic and character near the proposed installation. This inspection should take place prior to applying for a permit. While the COA encourages an on-site inspection, inspection of on-line street images is acceptable.

When applying to install new poles or equipment, applicants must pay careful attention to the existing character and aesthetics of the area around the proposed installation. New Poles must match the existing aesthetics, particularly when installing in a Special District or neighborhood with unique streetlight assemblies. In those circumstances, applicants must use the same pole aesthetics in the same area to maintain a cohesive appearance.



4. SELECTING A CONCEALMENT APPROACH

While each installation can have unique aesthetic requirements, a common theme is the COA desire for Network Providers to conceal Network Node equipment as much as technologically feasible and meet the COA technology and design aesthetic requirements. Network Providers must house all Network Node equipment internal to the Pole, conceal it behind an exterior shroud, or place it underground. COA will consider applications where the equipment is not fully concealed, or where the equipment is mounted exterior to the pole. These solutions are not preferred and may be subject to additional review. Network Providers are encouraged to conduct a thorough review of pole and equipment providers' concealment products prior to completing their permit applications. Network Providers with design concepts featuring external mounting of equipment should anticipate the need for additional review. The COA will review and approve those applications on a case-by-case basis.

5. LIGHTING – A SPECIAL CONSIDERATION

The different types of possible installations appear elsewhere in this document. Some of the installations may include lighting in addition to housing small cell equipment. Along with aesthetics, poles and installations with attached lighting have additional criteria the Network Provider must consider.

Lighting contributes benefits to a particular installation. Chief among the benefits are public safety, aesthetics and quality of life for residents living and working near the lighting. Accordingly, the COA has specific requirements for lighting installations in the [Utility Criteria Manual](#).

Applicants are strongly encouraged to thoroughly review the [Utility Criteria Manual](#) prior to submitting applications that include lighting. In addition to the performance requirements of lighting installations for public safety purposes, this document provides additional useful information for applicants and reviewers alike. The [Utility Criteria Manual](#) provides guidance on luminaire design aesthetics, lighting level criteria, typical streetlight spacing, streetlight specifications, and electrical and streetlight details.

6. TYPICAL NETWORK NODE CONSTRUCTION

Pole components include:

- Foundation
- Equipment cabinet
- Upper Pole
- Mast arm
- Cantenna or antenna enclosure
- Pole extension (where applicable)
- All hardware and electrical equipment necessary for a complete assembly.



Network Providers shall design Network Node components per the following criteria:

- Decorative transition between the equipment cabinet and upper Pole shall be installed over the equipment cabinet upper bolts or decorative base cover installed to match the equipment cabinet size;
- All hardware connections hidden from view;
- Each Pole component must be architecturally compatible to create a cohesive aesthetic.

7. DOCUMENTATION

The COA requires all design/build documentation to be complete. The following are typical documentation requirements for all small cells.

- Provide to COA all documentation required by the [Utility Criteria Manual](#) and AULCC General Guidelines.
- Submit three copies of a list of all materials and equipment incorporated in the work. The list, at a minimum, must include:
 - Small cell standards
 - Pull Box
 - Fuse holders
 - Conductors
 - Conduit
 - Wireless Lighting Control and Monitoring System
 - Small cell foundations
 - Equipment pads
 - All other items required for a complete installation

Network Providers must provide accurate as-built drawings of the project, indicating location and setback of conduit, lighting control center, utility service point, and pole locations along the roadway measured from a reliable location.

8. MATERIALS AND EQUIPMENT

Do not use materials or equipment not approved by COA. COA's approval shall not relieve Network Providers of responsibility for the proper functioning of the completed installation.

COA will return for correction and re-submission incomplete lists or those with unacceptable materials.

9. EQUIPMENT INSTALLATION

Network Providers must collect, gather and assemble into one book the installation details, instructions and schematics of actual equipment.



10. SITE PLANS

Submit all plans meeting the following criteria:

- 1:10 scale; include a note re: horizontal and vertical scale.
- Show separation between utility conduit and customer conduit.
- Identify any street or sidewalk crossings.
- When submitting revised plans, specifically describe how you revised the plan to address each previous comment.
- Survey indicating boundaries and easements (if the right of way is located in or adjacent to a municipal park)
- Use COA-approved signature blocks on site plans.

11. TRAFFIC CONTROL PLANS

Traffic control plans must comply with Section 8.5.0 of the [Transportation Criteria Manual](#).

12. TRENCHING AND EXCAVATION

- All trenching activities within the Right of Way shall comply with the Utilities Criteria Manual.
- If trenching near cast-iron pipe, follow the requirements in Section 2.9.2B.18. of the COA Utilities Criteria Manual.
- Consult the AWU Pipeline Engineering group (currently on the 3d floor of the Waller Creek building) regarding the amount of pipe to replace when trenching under an asbestos cement pipe or a cast iron pipe with lead caulk joints.
- Boring above or below cast-iron pipe must comply with Section 2.9.2B.17 of the [Utilities Criteria Manual](#).
- Excavate a minimum of 24" below the base depth of each water line junction box, backfill and compact with pea rock to permit water drainage.
- Damage to street pavements, curb and gutter, concrete and paver sidewalks, driveways, and any other surface features shall be repaired in accordance with the requirements of the [Utilities Criteria Manual](#) Section 5, the [Standards Manual](#), the [Standard Specifications Manual](#) and the [Street Repair Guidelines](#).

13. ELECTRICAL AND CONDUIT

The COA, at its sole discretion, will determine the best approach for providing electric service to Network Nodes.



The preferred approach for providing electric services is for AE to provide service to small cells using existing AE streetlight infrastructure. AE will use its streetlight pull boxes and conduit system to pull new electric service from the nearest/most appropriate AE Network source through existing streetlight infrastructure (in the rare case AE has no infrastructure in place, the WSP must install necessary conduit and pull boxes to access the electric source location). AE will install a fusing device at the Network source for the service installation using appropriately-sized fuses and line side conductor. The COA reserves the right, at its sole discretion, to approve the electric service plan.

If the preferred approach for providing electric service is not feasible, the COA will work with Network Providers to arrange an alternative.

Unless indicated otherwise, Network Providers shall follow the electrical and conduit requirements in the COA [Utilities Criteria Manual](#).

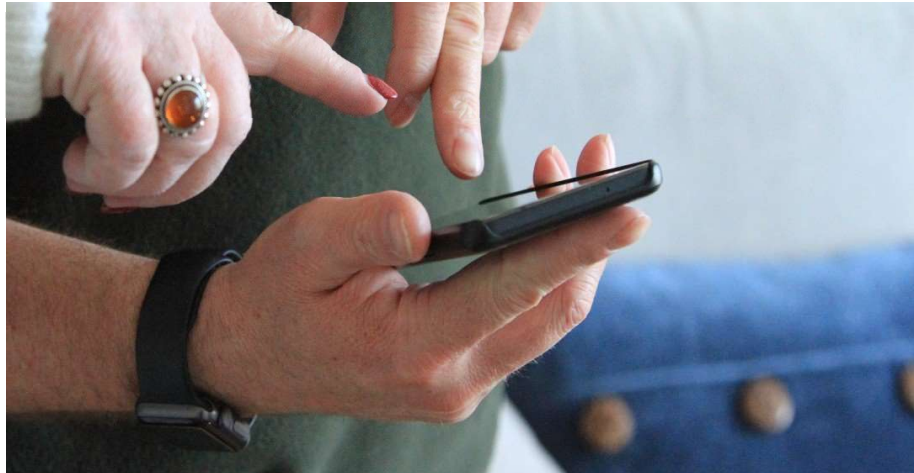
14. LAWS, RULES, AND REGULATIONS

Network Provider shall be fully informed of and comply with all Laws and orders/decrees of bodies or tribunals with jurisdiction or authority affecting: (a) those engaged or employed on the work or (b) the conduct of the work. Network Provider shall protect and indemnify COA, its employees and representatives against any claim or liability arising from or based on the violation of any Law, order or decree, whether by Network Provider, subcontractors, suppliers of materials or services or their employees.



Chapter

5



V. TYPE SC1 & SC2 POLES - COMBINATION SMALL CELL/STREETLIGHT

1. INTRODUCTION

The following general requirements apply to a streetlight Pole replacement. More detailed requirements appear in individual department documents presented in Section 4 above. Network Providers should submit plans and requests as informed by this document, but as required by the individual departments.

Network Providers should locate type SC-1 Poles only: (1) where an existing streetlight Pole can be removed and replaced or (2) at a new location requiring a streetlight. AE typically owns existing streetlights; type SC-1 Poles replacing existing streetlights shall meet AE standards.

2. GENERAL GUIDANCE

Network Providers shall use the same NSP aesthetic in the same area to maintain a cohesive appearance.

The [AE Design Criteria Manual](#) provides requirements for luminaire design aesthetics, lighting level criteria, typical streetlight spacing, streetlight specifications, and electrical and streetlight details. The Network Provider shall provide to COA all documentation required by the AE Design Criteria Manual.

All Network Node equipment shall be housed internal to the Pole or hidden behind an exterior shroud. Network Providers shall not mount equipment to the exterior of a Pole unless approved by COA on a case-by-case basis prior to installation.

Network Providers should pay special attention to installations proposed in Special Districts or neighborhoods with unique streetlight assemblies or installations. Network Providers can perform



this inquiry during the initial review of the installation. Network Providers should contact COA Urban Design (512-974-2975) for more information, if needed. New Network Nodes shall match the existing streetlight aesthetics when installed in a Special District or neighborhoods with unique streetlight assemblies.

3. BASIS OF DESIGN

Pole design must match the aesthetics of existing streetlights installed adjacent to the Pole. Prior to applying, the Network Provider shall perform a visual inspection to determine existing aesthetics.

While specific installations can vary based on local requirements and the products chosen for installation, the pole components generally include:

- the foundation
- equipment cabinet
- upper pole
- luminaire
- mast arm
- luminaire control node (if applicable)
- cantenna or antenna enclosure
- all hardware and electrical equipment necessary for a complete assembly.

Network Providers shall size Network Node components to meet COA design criteria. For type SC-1 and SC-2 Poles, the following criteria apply:

- a decorative transition between the equipment cabinet and upper Pole installed over the equipment cabinet upper bolts or decorative base cover to match the equipment cabinet size
- the upper pole shall be scaled to 0.5 to 0.75 the size of the equipment cabinet, with a 10-inch minimum outer diameter
- all hardware connections shall be hidden from view
- no horizontal flat spaces greater than 1.5 inches shall exist on the equipment cabinet
- each Pole component shall be architecturally compatible to create a cohesive aesthetic.

An example of an *unacceptable* Network Node installation and acceptable installation appear in Figures 5-1.



Figure 5-1: Unacceptable SC-1 Installation



Antenna shroud does not include smooth transition between upper Pole and antenna shroud attachment



Conduit, mounting bracket and other hardware must be hidden from view



4. PLACEMENT REQUIREMENTS

The following general placement requirements introduce the different considerations influencing placement. More detailed requirements appear in the individual department requirements presented in Table 1-1

WSP should locate Type SC-1 Poles only: (1) where an existing Pole can be removed and replaced or (2) at a new location where a streetlight is necessary. Type SC-1 Poles can be owned by AE (preferred and as approved by AE).

- When submitting a Pole design and configuration, follow COA criteria. When submitting a Pole design for a privately-owned Type SC-1 Pole, locate the Pole as follows:
 - Not impeding, obstructing, or hindering pedestrian or vehicular travel;
 - In alignment with existing trees, utility poles, or streetlights;
 - Within the street amenity zone whenever possible [The amenity zone is the area between the curb and sidewalk];
 - Equidistant between trees when possible, with a minimum of 15 feet separation;
 - With clearance from existing utilities as required by COA design criteria;
 - Outside the 20-foot equipment clear zone (for base cabinets less than 18" in diameter) or 30-foot clear sight triangle (for base cabinets equal to or greater than 18" in diameter) at intersection corners (See Figure 3-7); and
 - 10' away from the triangle extension of an alley way flare.
- Any new Type SC-1 Pole general location and spacing shall be as determined per the AE [Design Criteria Manual](#) and [Transportation Criteria Manual](#).



Chapter

6



VI. TYPE SC-3 FREE-STANDING POLE INSTALLATIONS

1. INTRODUCTION

The following general requirements introduce the different considerations influencing the installation of a new type SC-3 pole. More detailed requirements appear in individual COA criteria in Section 4, above. WSPs must submit plans and requests as informed by this document, but as required by the individual COA design criteria.

A type SC-3 installation involves the WSP installing a new, purpose-built, stand-alone cellular node pole, typically in a new pole installation with no planned purpose other than serving as a small-cell node.

2. GENERAL GUIDANCE

This section applies to only single-carrier, single-technology installations in COA Public ROW. Dual-carrier, dual-technology installations or locations not in COA Public ROW may vary from these guidelines with COA approval.

WSPs shall place all equipment internal to the equipment cabinet or hidden behind the Cantenna. No equipment shall be strapped to the outside of the Pole unless approved by the COA. If COA approves a dual-carrier Pole, all equipment shall be located internal to the Pole or Cantenna.



3. DESIGN GUIDANCE

SC-3 Pole design shall match the aesthetics of installed infrastructure within the sight-line of the proposed installation. In particular, Network Providers should pay attention to other vertical infrastructure in the immediate vicinity, such as existing streetlights. Prior to applying, the Network Provider shall perform a visual inspection to determine existing aesthetics.

The Network Node components must be “visually pleasing.” To be considered “visually pleasing,” include the following in the design proposal:

- Effective architectural transitions between different sections of the pole with different dimensions;
- Cover all attachments;
- Install a decorative transition over the equipment cabinet upper bolts or decorative base cover to match the equipment cabinet size;
- Maintain the scale between components (a common ratio between adjacent sections such as a base cabinet and a upper pole of 0.5 to 0.75 times the size of the equipment cabinet can render a pole “visually pleasing”);
- Ensure the scale of upper pole components is consistent with other elements and large enough to allow for internal routing of cables and equipment (generally, a 10” minimum outer diameter is required to meet this requirement);
- Hide all hardware connections from view (generally by installing shrouds); and
- Avoid the pole becoming an “attractive nuisance” for trash by ensuring no horizontal flat spaces greater than 1.5” on any component within reach of ground level.

An example of an *unacceptable* type SC-3 installation and acceptable installation appear in Figure 6-1. The installation on the left has several features that render it unacceptable to CoA.

- The transition from the cantenna to the pole is unshrouded, with all equipment physical and electrical connections exposed. Additionally, this presents a sharp visual contrast as the pole changes from the larger cantenna to the narrower lower tube. In the figure on the right (preferred), the area between the cantenna and pole has a separate shroud that both provides a smooth transition between the pole components and covers all the physical and electrical connections.
- In the figure on the left, antenna components and related wiring and equipment mounts are fully exposed, though painted matching colors. In the figure on the right (preferred), the antennas, wires, and associated bracketry are hidden from view by the pole structure, or by various concealment shrouds.
- In the pole installation on the left, power and/or communication wires and connections are mounted exterior to the pole. In the installation on the right (preferred), these are mounted inside the pole.



Figure 6-1: Unacceptable SC-3 Installation (L) and acceptable SC-3 installation (R)





4. PLACEMENT REQUIREMENTS

The following general placement requirements introduce the different considerations influencing placement. More detailed requirements appear in the COA criteria presented in the Additional References section, above.

All type SC-3 Poles shall be privately-owned and permitted by COA via the *Freestanding Small Cell Infrastructure ROW Permit Requirements* and meet the following criteria:

- Not impeding, obstructing or hindering pedestrian or vehicular travel;
- Not located along the frontage of a building deemed “historic” on any level;
- Not to significantly create a new obstruction to property sight lines;
- At the intersection of property lines or along secondary property street facing;
- Within the street amenity zone whenever possible;
- In alignment with existing trees, Utility Poles and streetlights. *See* Figures 6-5, 6-6, and 6-7;
- Equi-distant between trees when possible, with a minimum 15’ separation;
- With required clearance from existing utilities;
- Inside the allowable installation zone illustrated in Figures 6-3 (for a typical intersection) and Figure 6-4 (for a Great Streets Intersection).
- 10’ from the triangle extension of an alley way flare;
- No closer than 18” from the curb face;
- Not located within 100’ of the apron of a fire station or other adjacent emergency service facility; and
- No closer than 250’ – radially - from another privately-owned type SC-3 Pole.
- Not encroach into a municipal park beyond the right of way line



Figure 6-3: Freestanding Small Cell spacing radius

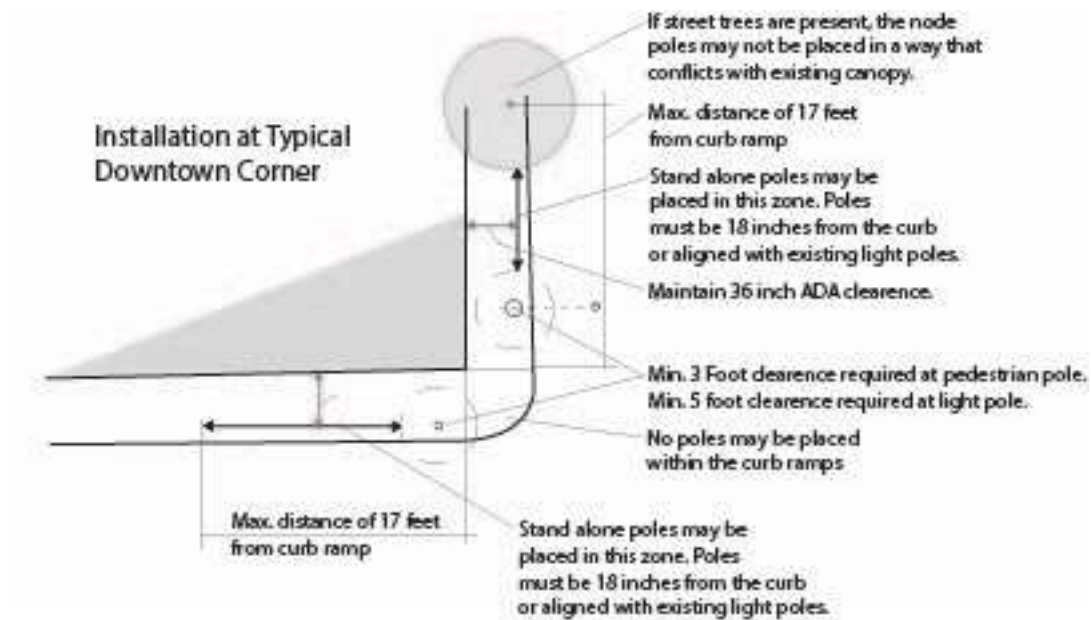


Figure 6-4: Freestanding Small Cell spacing radius

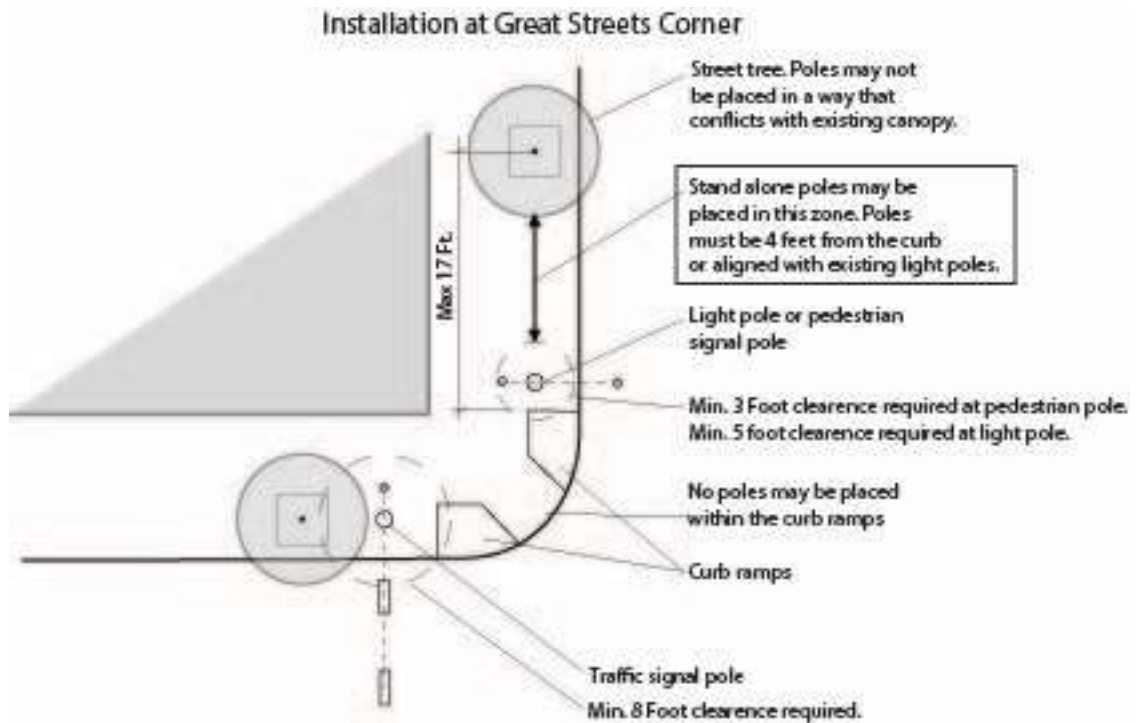


Figure 6-5: Freestanding Network Node in Amenity Zone



Figure 6-6: Freestanding Network Node location between property and trees

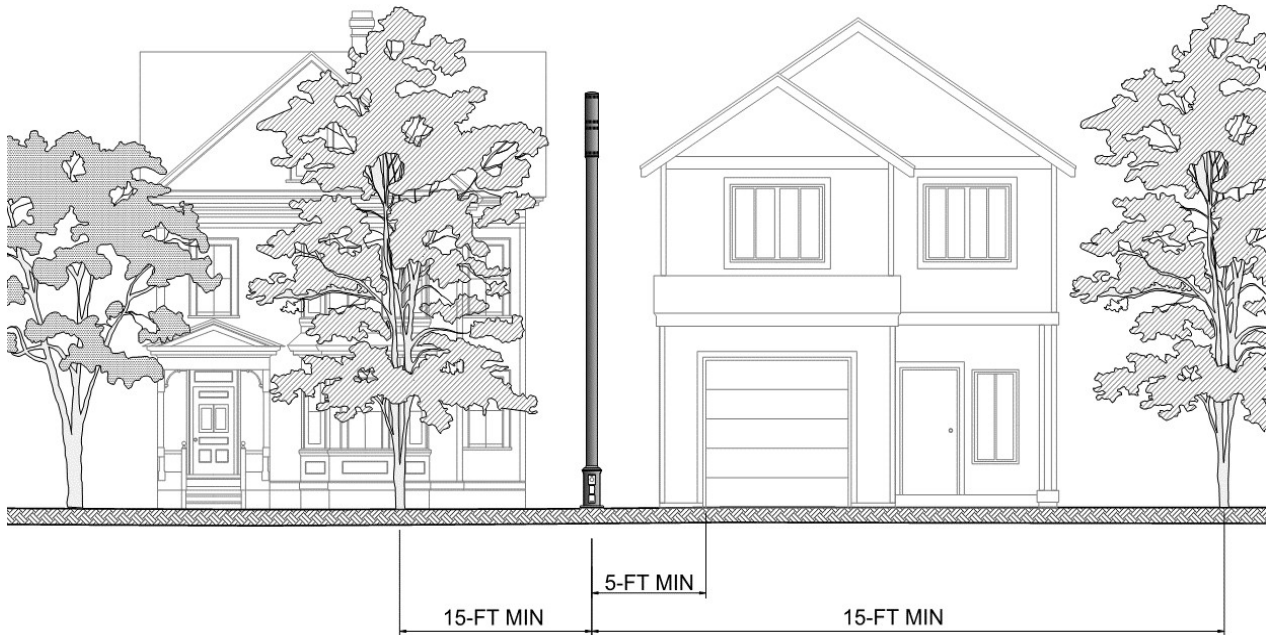


Figure 6-7: Freestanding Small Cell between property lines

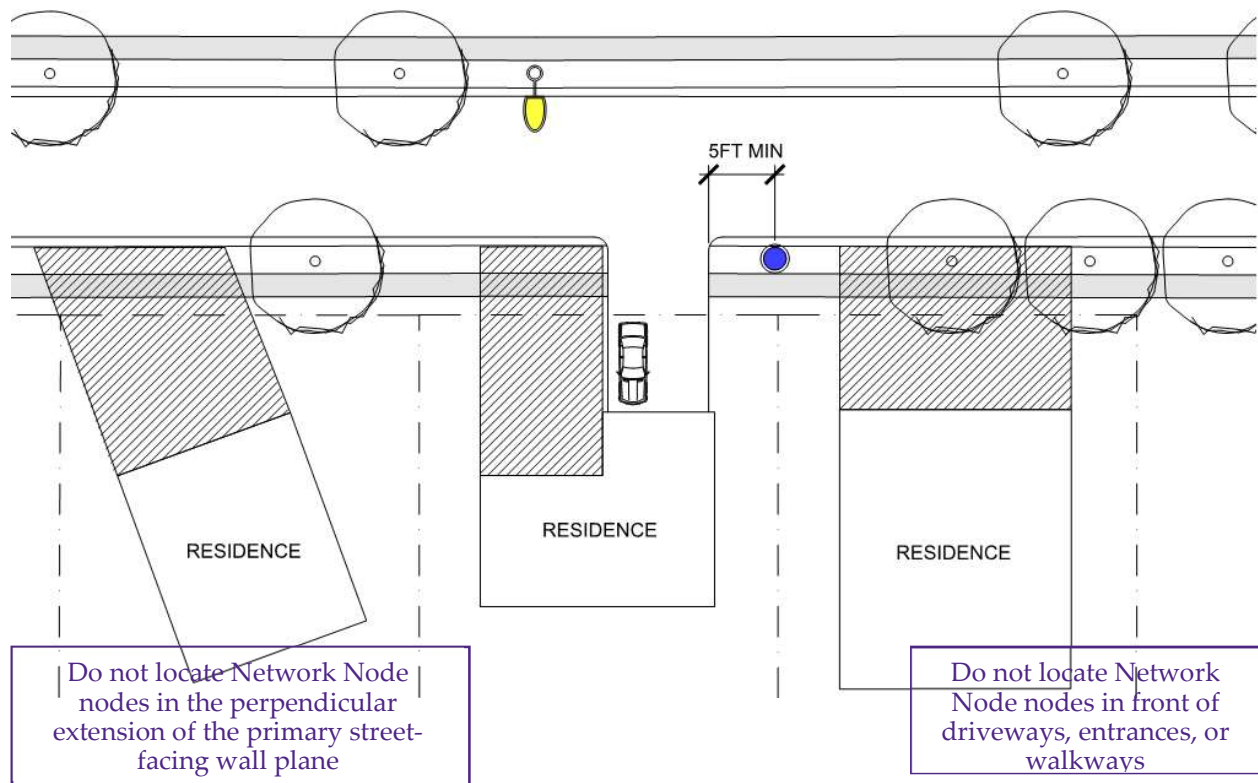




Figure 6-8: Small Cell in Commercial Area



When located adjacent to a commercial establishment, take care to locate Network Nodes so they do not negatively impact the business. Small cell nodes shall not be located in front of storefront windows, primary walkways, primary entrances or exits, or in a way impeding a delivery to the building. Small cells should be located between properties as much as possible as shown in Figure 3-10. .



Chapter

7



VII. TYPE SC-4 COMBINATION SMALL CELL AND TRAFFIC SIGNAL

1. PURPOSE

The following general requirements introduce the considerations influencing the installation of a combination traffic signal and small cell pole. More detailed requirements appear in the individual COA criteria documents in the Additional References section, above. Network Providers must submit plans and requests as informed by this document, but as required by the individual criteria documents.

This section applies to replacing an existing traffic signal Pole with a type SC-4 Pole or a new traffic signal installation location. WSPs should locate type SC-4 Poles only: (1) where an existing traffic signal Pole can be removed and replaced, or (2) at a new location where a traffic signal Pole is necessary. Existing traffic signal Poles are typically owned by ATD. Type SC-4 Poles replacing existing traffic signal Poles shall meet COA design criteria.

2. GENERAL GUIDANCE

Combination traffic signals and small cell installations have the same aesthetic requirements of other installations. Additionally, they must maintain their primary function of safe and effective traffic control and management. In installations that include a luminaire, the lighting design shall follow the luminaire specifications and design requirements set forth in the Utilities Criteria Manual.

ATD shall provide guidance on all issues related to the operation and function of traffic signals and traffic controls including but not limited to typical traffic signal placement, signal specifications, street signs or other signage (where applicable). The Network Provider shall provide all documentation required by ATD during the permitting process.

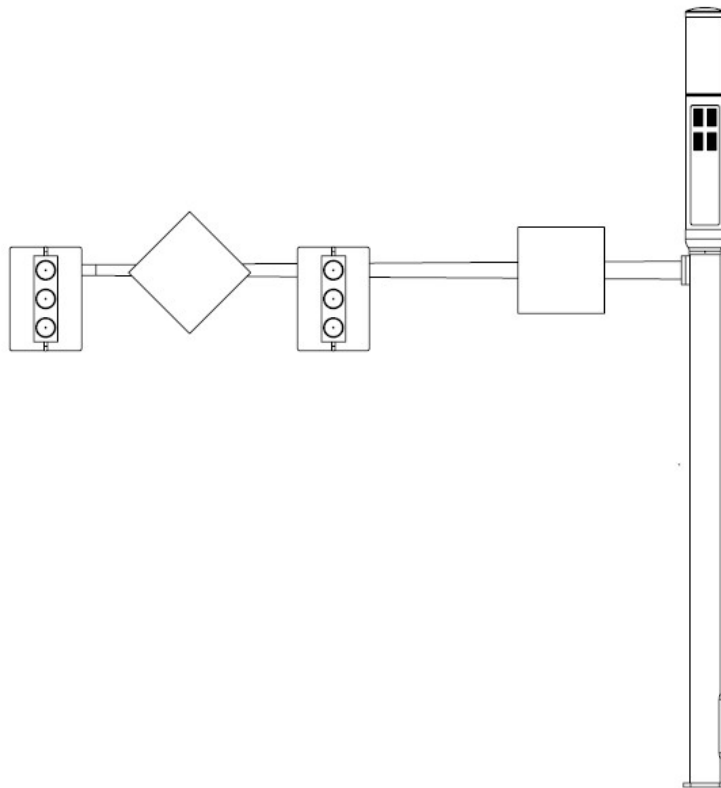


All Network Node equipment shall reside above the signal arm, internal to the Pole or hidden behind an exterior shroud. Network Providers shall mount no equipment to the exterior of the Pole unless covered by a shroud.

3. BASIS OF DESIGN

The type SC-4 Pole shall comply with the COA combination pole design. An example of the SC-4 pole is in Figure 7.1.

Figure 7-1: SC-4; Traffic Signal Small Cell Combination Pole



4. PLACEMENT REQUIREMENTS

A replacement SC-4 traffic signal pole will be placed in the same location as the pole it replaces except as approved by the COA. More detailed requirements are presented in the COA requirements presented in Table 1-1



APPENDIX 1 – Detailed Interdepartmental Information

This Appendix provides additional detail regarding the specific requirements of individual departments and points of contact in each department



A.U.L.C.C. MINIMUM REQUIREMENTS FOR 90% SUBMITTAL

1. Use General Permit Program format. For more information, contact:
 - O. B. McKown OB.Mckown@AustinTexas.gov 512-974-6330
 - Zackary Martin Zackary.Martin@AustinTexas.gov 512-974-6356
2. All plan sheets must have name and PE number of the engineer responsible for design and the engineering consultants TBPE firm registration number on every sheet/page of plan set per TBPE rule §137.77
3. Utility plan and profile drawn to scale. We suggest one inch equals 40 feet (1:40) in plan and one inch equals six feet (1:6) in profile.
4. All symbology, line types, abbreviations explained on a legend sheet between the index sheet and first layout sheet.
5. North arrow on each sheet aligned to point at top edge or left edge of sheets.
6. Property information shall include property lines, property address, owner name(s).
7. Right-of-way line shall be described in heavy line weight and labelled ROW
8. Easements shall be labelled as to type, use (PUE, Electric, Wastewater, etc.) and width with distinct line type and easement document number.
9. Roadway features shall include sidewalk, edge of pavement (label *EOP*), curb-gutter (label *BOC* or *FOC*), street name and street class.
10. Bore pit location and dimensions shall be described if using directional bore method.
11. Distinct line type shall be used in **plan** and **profile** for different construction methods.
12. All existing and proposed utilities shall be described and labelled with size, material type, and usage (i.e., W, WW, elec, SD).
13. All infrastructure that is abandoned and no longer serving the original utility purpose shall be labeled as abandoned (i.e., AB, ABND).
14. Existing feature locations are verified by field survey (tie-down using survey monuments and or benchmarks).
15. 24-inch and greater dimension(s) shall be described with double line to render actual internal dimension(s) of line/main.
16. Show existing ground in profile view.
17. Capital Metro Rail, TXDOT or other ROWs must be labeled and show with bold distinct line type.
18. Indicate stationing along proposed alignment in **plan** and **profile**.
19. Label all proposed utilities to be constructed by others as “*by others*.”
20. Buried fiber minimum cover 36-inch for directional drill method, 30-inch for trench method.



21. Carrier conduit required for all cable routes in City ROW – no direct-bury cable.
22. Bore pit or trench depth greater than 60-inches requires shoring detail.
23. Add all City of Austin Standard Details appropriate for the project (trench details, sidewalk repair, curb-gutter repair details, pavement repair, etc.).
24. Please select appropriate City details applicable to your project from City Standard Specifications Manual here: municode.com/library/tx/austin/codes/standards_manual
25. Include on Cover Sheet:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF AUSTIN MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

Include in General Notes:

APPROPRIATE EASEMENT OR ACCESS AGREEMENT MUST BE SECURED FOR PROJECT AREA OUTSIDE RIGHT OF WAY BEFORE WORK BEGINS. MUST OBTAIN PERMISSION FROM AFFECTED PROPERTY OWNERS FOR ANY CONSTRUCTION-RELATED ACTIVITY THAT MAY ENCROACH ON ADJACENT PROPERTY.

26. Include on All Plan and Profile Sheets:

- All existing utilities crossing bore path must be physically located (potholed) for horizontal and vertical location prior to boring/construction.
- Location information gathered by potholing must be added to profile sheets.
- Must maintain minimum vertical and horizontal clearance from all existing and proposed utilities based on minimum requirement by utility provider.
- Contact One Call utility to locate service as required by state law.

Suggested Planimetric Labeling

G.....Gas Line

T.....Telecom

SW.....Sidewalk

W.....Water Line

BOC.....Back of Curb

ROW.....Right-of-Way

OH.....Overhead Utility

WW.....Wastewater Line

SD.....Storm Drain Line

EOP.....Edge of Pavement

RW.....Reclaimed Water Line

AEU.....Austin Energy Underground

AEC.....Austin Energy Chilled Water

The consultant/designer is responsible for performing quality control to ensure 90% submittal



conforms to utility owner requirements and COA criteria.

This guide is intended as an aide to facilitate Utility Coordination review and not to be construed as guaranteeing a successful submittal.

AULCC CONTACT POINTS

Utility Coordination

Reza Sedghy	Reza.Sedghy@AustinTexas.gov	512-974-7912
Isaiah Lewallen	Isaiah.Lewallen@AustinTexas.gov	512-974-1479
Jaclyn Lozano	Jaclyn.Lozano@AustinTexas.gov	512-974-2412

Small Cell Contact

April Sellers Oldag	April.Sellers@AustinTexas.gov	512-974-3430
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Corridor Program Office Contact

Gregory Pepper	Greg.Pepper@AustinTexas.gov	512-974-7282
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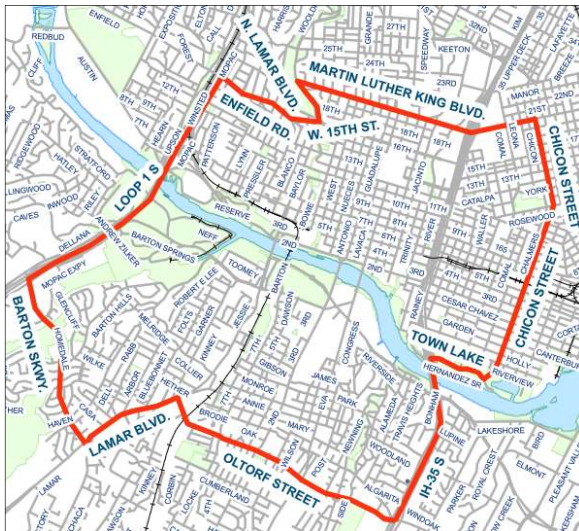
AULCC Review Required by applicants for Permits (site plan, general permits, excavations, etc.) that will:

- Use \geq 25-ft in the Downtown Austin Project Coordination Zone (**DAPCZ**)
or
- Use 300-ft or greater in all full purpose COA jurisdictions.

All projects less than 300-ft or 25-ft in DAPCZ are reviewed as a small project notification.



DAPCZ Boundaries



Great Streets Boundaries





AUSTIN WATER UTILITY – INFRASTRUCTURE MANAGEMENT GENERAL GUIDELINES

1. Conform to City of Austin Utilities Criteria Manual Section 3
2. All plan sheets must have name and PE number for engineer responsible for design and the engineering consultants TBPE firm registration number on every sheet/page of plan set per TBPE rule §137.77
3. Please register at the following address to obtain access to AWU record information
 - 3.1. AustinTexas.gov/water/GIS_EXTERN/GIS_AccessRequest_Form.cfm
4. Include on each plan sheet
 - 4.1. Austin Water as-built Project Number,
 - 4.2. Water Intersection Number,
 - 4.3. Wastewater Profile Number,
 - 4.4. Main size, material type, and usage (W/WW/Reclaimed), i.e., 6" CI WL
 - 4.5. If main is abandoned be sure to label line as AB, ABND, etc., i.e., AB/ABND 6" CI WL, 8" PVC WWL ABND/AB
5. Show AWU infrastructure that is 24-in and larger as double-lined to reflect internal diameter.
6. Describe AWU infrastructure and appurtenances per as-built records.
7. If actual location differs from record location provide method by which your information was obtained and submit proof, i.e., pictures, surveyed information (tie-down using XYZ coordinates).
8. Profile required by City Code 14-11-173
9. When dimensioning/measuring separations, be sure to dimension/measure between proposed infrastructure and improvements from outside diameter to outside diameter or outside edge to outside edge
10. Bore Pits must be 5' horizontal separation from AWU infrastructure and appurtenances (outside diameter/edge to outside diameter/edge). Bore Pits cannot be above AWU infrastructure, especially behind fire hydrants
 - 10.1. If possible do not disturb AWU infrastructure trenches. The 5' will ensure integrity of trenches and will account for larger mains.
 - 10.2. AWU will consider less than 5' on a case-by-case basis depending on constraints shown on plans, size & depth of mains and alternatives considered to try to meet 5'/2'.
11. Do not disturb AWU trenches; 60-inches horizontal separation ensures trench integrity and accounts for larger mains.
12. AWU will consider clearances less than 24-inch vertical/60-inch horizontal dependent on a case-by-case basis upon:
 - 12.1. constraints described



- 12.2. size, depth, material of affected main
- 12.3. alternatives considered to meet statutory minimum clearances
13. City staff may require video surveying for directional drilling method of construction per [Utilities Criteria Manual](#) §5.7.2.
14. Consider above items in relationship to proposed works and ensure *all* proposed utilities are described on your plan and profile sheets.
15. Print to scale.

Austin Water Utility Contact Point

Eric Sermenio Eric.Sermenio@AustinTexas.gov 512-972 0497

As-Built Drawings

Please register at the following address to obtain access to AWU record information:

AustinTexas.gov/water/GIS_EXTERN/GIS_AccessRequest_Form.cfm



AUSTIN TRANSPORTATION DEPARTMENT SIGNAL OPERATIONS GENERAL GUIDELINES

1. Describe traffic signaling infrastructure on plan and profile
 - 1.1. Location
 - 1.2. Pole number
 - 1.3. Anchor location
 - 1.4. Guy direction
 - 1.5. Duct bank dimensions
 - 1.6. Conduit size and count
 - 1.7. All appurtenances including vaults, hand holes, cabinets, etc.
2. As-built drawings provided on request to Chris Dixon

SIGNAL OPERATIONS CONTACT POINT

Chris Dixon	Chris.Dixon@AustinTexas.gov	512-974-4052
Seyed Ghazinezhadian	Seyed.Ghazinezhadian@AustinTexas.gov	512-974-4065
Ben Henson	Ben.Henson@AustinTexas.gov	512-974-4899



WATERSHED PROTECTION DEPARTMENT WATERSHED ENGINEERING GENERAL GUIDELINES

1. 24 -inches minimum vertical separation from outer edge of storm drain, manhole, inlet or appurtenance.
 - a. Preferred 36-inch vertical separation below outer edge of storm drain pipe to protect pipe bedding material.
2. 60 -inches minimum horizontal separation from outer edge of storm drain, manhole, inlet or appurtenance
3. REQUIRED NOTE: above clearances (minimum 2-ft vertical and 5-ft horizontal) shall be stated in a general note
4. Profile required at all proposed crossings of storm drain line
5. Label all storm drain pipes with diameter and material
6. Label all storm drain pipes *SD*

WATERSHED ENGINEERING CONTACT POINT

Reyes Camacho	Reyes.Camacho@AustinTexas.gov	512-974-3506
Natalie Ortiz	Natalie.Ortiz@AustinTexas.gov	512-974-1455

ENGINEERING

Rebeka McKay	Rebeka.Mckay@AustinTexas.gov	512-974-3353
Sergio Mendoza	Sergio.Mendoza@AustinTexas.gov	512-974-3346

AS-BUILT DRAWINGS

Patrick Dowley	Patrick.Dowley@AustinTexas.gov	512-974-7290
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AUSTIN ENERGY GENERAL GUIDELINES

1. Austin Energy (AE) GIS maps are for reference only and represent only approximate relative location of property boundaries. Field survey AE facilities for exact locations.
2. Describe all existing electric infrastructure:
 - 2.1. pole number
 - 2.2. guys
 - 2.3. anchors
 - 2.4. overhead electric
 - 2.5. underground electric
 - 2.6. pull boxes drawn to scale, labelled with outer diameter and material
 - 2.7. manholes drawn to scale and dimensioned
3. Minimum separation from AE facilities is 24-inches measured from outer dimension to outer dimension
4. If proposed facility is within 60-inches of AE facility locate, pothole and survey for exact horizontal and vertical location. Potholing not required for hand-dug works.
5. Excavation within 100-feet of moonlight tower or moonlight tower guy anchor requires description of measures to protect these structures and approval of these measures by AE.
6. REQUIRED NOTE: If trenching within 60-inches (outer dimension) of AE pole or guy anchor, include the following note at each location:

CONTACT AUSTIN ENERGY FOR POLE SUPPORT (CHARGES APPLY).

7. AE CONTACT POINTS

Network & Downtown

Rudy Vela	Rudy.Vela@AustinEnergy.com	512 505 7650
Gary Simmank	Gary.Simmank@AustinEnergy.com	512 505 7120

Southeast & Southwest

John Biehn	John.Biehn@AustinEnergy.com	512 505 7647
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Southeast & Southwest AULCC Representative

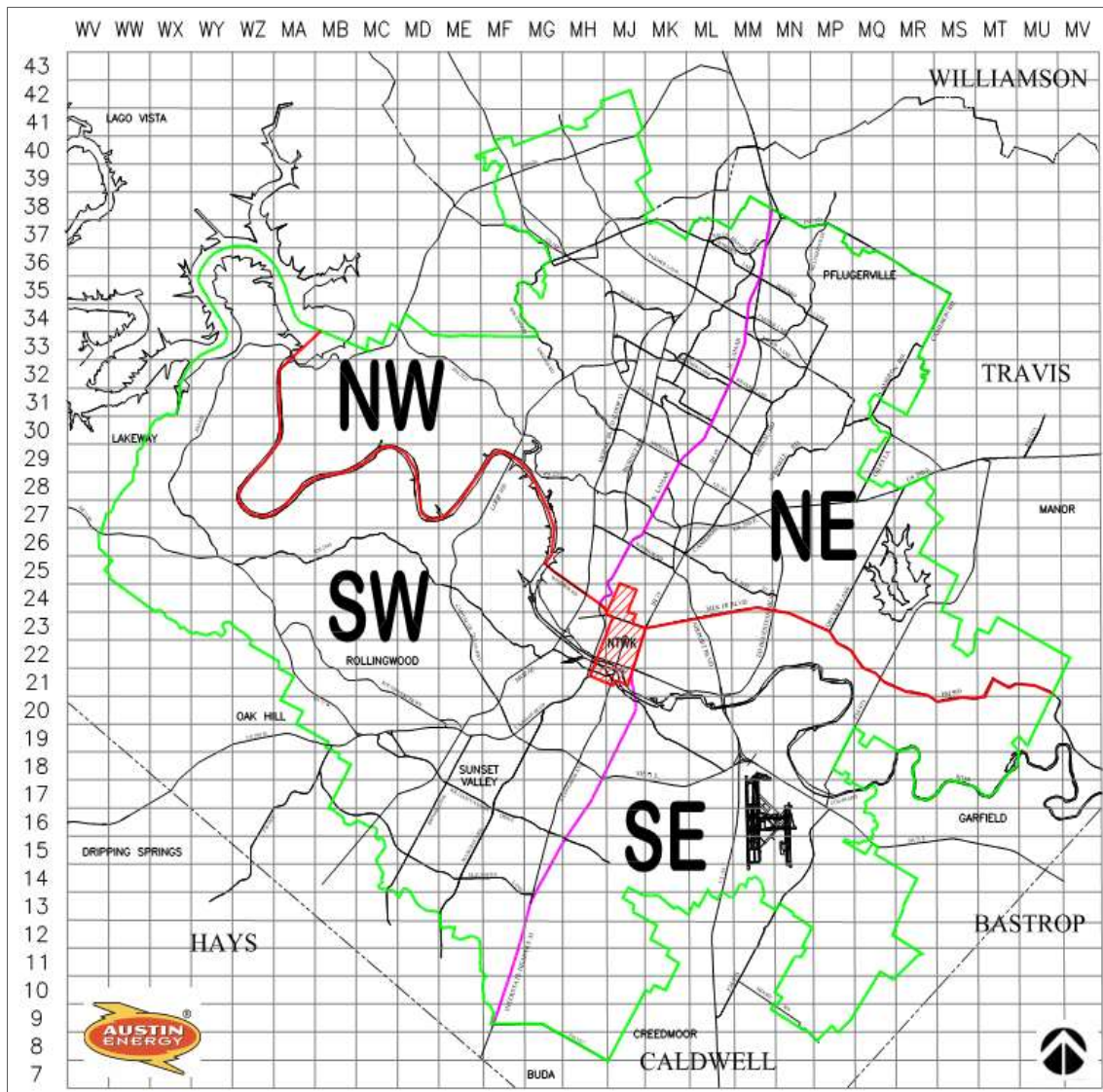
Megan Willis	Megan.Willis@AustinEnergy.com	512 505 7503
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Northwest & Northeast

Daniel McReynolds	Daniel.McReynolds@AustinEnergy.com	512 505 7868
Brian Van Dyke	Brian.VanDyke@AustinEnergy.com	512 505 7247
Mora Asadi	Mora.Asadi@AustinEnergy.com	512 505 7010



Austin Energy Design Area Map





AUSTIN ENERGY ONSITE ENERGY RESOURCES (CHILLED WATER) GENERAL GUIDELINES

1. Minimum separation from AE chill water pipes and fiber conduit:
 - 1.1. 24-inches below
 - 1.2. 24-inches right and left
 - 1.3. 36-inches above
2. AE chill water facilities shall be described on all sheets in plan and profile
3. Contractor shall pothole to locate all AE chill water piping and fiber conduit at each proposed crossing and at 300 foot intervals along drill path if proposed construction method is directional drill and running line is parallel to AE chill water facility.
4. Contractor shall contact AE Chill Water Piping Inspector 24 hours before exposing or crossing Austin energy chill water facilities: **Richard Hengst - 512 667 4551**
5. **REQUIRED NOTE** stating #3 and #4 above shall be placed on all sheets
6. Discharge of AE chill water system product
 - 6.1. AE chill water product contains chemicals and must be analyzed prior to discharge from the system.
 - 6.2. There shall be no penetrations of AE chill water piping. Chill water system product shall only be discharged to sanitary wastewater system and only with 24-hour advance notification to AWU.
 - 6.3. If penetration occurs telephone Richard Hengst immediately on 512-667-4551.
 - 6.4. Contractor shall repair damage to AE chill water system according to AE chill water specification at own cost.
7. See City of Austin [Utilities Criteria Manual](#) 2.5.0, 2.9.0, 2.9.B.17, 2.9.5B, C, section 3.4 (entire), 3.7.1, 5.7.2, 5.6.2

AUSTIN ENERGY CHILLED WATER CONTACT POINT

Mueller Energy Center

Barrett Story	Barrett.Story@AustinEnergy.com	512 505 3840
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Domain

Whitney Moyer	Whitney.Moyer@AustinEnergy.com	512 505 7148
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Central Business District

Tim McGowan	Tim.Mcgowan@AustinEnergy.com	512 505 3527
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Richard Hengst	Richard.Hengst@AustinEnergy.com	512 505 3838
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PUBLIC WORKS DEPARTMENT STREET AND BRIDGE OPERATIONS GENERAL GUIDELINES

1. Plan shall describe
 - 1.1. Curb-gutter or edge of pavement
 - 1.2. Lane lines
 - 1.3. Sidewalks
 - 1.4. Pedestrian ramps
 - 1.5. Non-standard materials (e.g. pavers, etc.)
 - 1.6. Proposed method of construction (differentiate on plan by linetype)
 - 1.7. Pavement removal and restoration area (cross-hatch on plan)
 - 1.8. Trench line within restoration area
2. Minimum plan requirements
 - 2.1. Describe limits of utility work and pavement or concrete structure damage clearly
 - 2.2. Appropriate trench repair details (at least 1100S-2, 1100S-3, 1100S-5, 1100S-7) to address all pavement types likely to be encountered.
 - 2.3. Appropriate details for repair of sidewalk, curb-gutter, driveway approach, etc.
 - 2.4. Applicable repair notes
 - 2.5. Include table listing all affected streets and include the following:
 - 2.5.1. street name
 - 2.5.2. street classification
 - 2.5.3. protection status
3. Pavement repair recommendation
 - 3.1. Include Standard Details 1100S-2, 1100S-3, 1100S-5
 - 3.2. If using Standard Details 1100-S-8A, 1100S-8B, 1100S-6B, 1100S-6D substitute CLSM where Class J PC concrete is shown.
 - 3.3. CLSM recommended for backfill
4. Pavement Restoration Plan (enhanced restoration strategy)
 - 4.1. Required for:
 - 4.1.1. all pavement cuts in Downtown Austin Project Coordination Zone
 - 4.1.2. all pavement cuts in Protected Streets
 - 4.1.3. all pavement cuts exceeding 300 linear feet
 - 4.2. See Standard Detail 1100S-7. In addition to trench repair, contractor must remove and replace existing asphaltic concrete surface full width of lane (travel, parking, bicycle) for length of repair project.



- 4.3. Replacement asphaltic concrete (Item 340S) surface layer shall be of type and thickness appropriate for street functional classification.
 - 4.3.1. Residential: replace minimum two (2) inches HMAC Type D
 - 4.3.2. Collector or Arterial: replace minimum three (3) inches HMAC Type C
- 4.4. Concrete street pavement restoration limits determined by joint locations
5. Sidewalks, pedestrian ramps, curb-gutter, driveway approaches
 - 5.1. Avoid placing vaults, hand holes, bore pits, etc. in sidewalks, pedestrian ramps, curb-gutter or driveway approach
 - 5.2. repair plan required for damaged concrete structures
 - 5.3. replacement of the structures must meet ADA specification
6. Include Street Repair Notes to the plans from S&B's Street Repair Guidelines – see link at AustinTexas.gov/StreetAndBridge

STREET REPAIR NOTES

TRENCH REPAIR: USE THE APPROPRIATE 1100S SERIES DETAILS FOR TRENCH REPAIRS:

- 1100S-2 (FLEXIBLE BASE AND AN ASPHALT SURFACE)
- 1100S-3 (CONCRETE OR ASPHALT OVERLAID CONCRETE), AND
- 1100S-5 (FULL DEPTH ASPHALT STREETS).

CLSM SHALL BE SUBSTITUTED FOR BACKFILL AND FLEXIBLE BASE REPLACEMENT PER THE DETAIL NOTES.

SURFACE RESTORATION: SURFACE PAVEMENT RESTORATION IS REQUIRED WHEN CUTS:

- 1) ARE OVER 300 LINEAR FEET IN LENGTH,
- 2) OCCUR WITH THE DAPCZ AREA, OR
- 3) OCCUR WITHIN PROTECTED STREET SEGMENTS.

USE DETAIL 1100S-7 FOR DETERMINING AREAS REQUIRING SURFACE REMOVAL AND REPLACEMENT. THE REPLACEMENT ASPHALTIC CONCRETE SURFACE LAYER THICKNESS SHALL BE A MINIMUM 2 INCHES HMAC TYPE D FOR LOCAL OR RESIDENTIAL STREETS AND A MINIMUM 3 INCHES HMAC TYPE C FOR COLLECTOR OR ARTERIAL STREETS (SEE ITEM 340S, SECTION 340S.4).

CONCRETE AND COMPOSITE PAVEMENTS: IN CONCRETE STREETS, ACTUAL RESTORATION LIMITS ARE DETERMINED BY JOINT LOCATIONS. FOR COMPOSITE PAVEMENTS CONSTRUCTED OF CONCRETE WITH A HMAC OVERLAY, USE 1100S-3 FOR TRENCH REPAIR (USING CLASS 360S CONCRETE) AND 1100S-7 FOR DETERMINATION OF ASPHALT SURFACE RESTORATION AREAS.



STREET & BRIDGE CONTACT POINT

Daren Duncan	Daren.Duncan@AustinTexas.gov	512-974-8774
David Boswell	David.Boswell@AustinTexas.gov	512-974-7071



PLANNING AND ZONING DEPARTMENT URBAN DESIGN GENERAL GUIDELINES

1. Plan shall describe:
 - Equipment proposed for installation
 - Outer dimensions of proposed equipment
 - Installation height above grade
 - If applicable pole type, material and dimension for proposed equipment attachment
 - Existing traffic signal
 - Existing Austin Energy
 - Decorative
 - New pole
 - Faux treatments proposed
 - historic landmarks, parks, schools, residential-zoned property, trees
 - existing utilities and surface features
 - type of proposed facility
 - proposed construction method
 - rendering of proposed location after installation of equipment
2. Location
 - If area is zoned or otherwise designated a historic district or landmark provide proof of approval by Historic Preservation Office
 - Indicate name of Design District or Underground Utility District if any
3. Include photograph of proposed facility location
4. If new pole provide justification for new pole through analysis of nearby poles deemed unsuitable.

URBAN DESIGN CONTACT POINT

Anne Milne	Anne.Milne@AustinTexas.gov	512-974-2868
Benjamin Campbell	Benjamin.campbell@austintexas.gov	512-974-7691



PARKS AND RECREATION DEPARTMENT GENERAL GUIDELINES

1. Plan shall describe:

- Equipment proposed for installation
- Outer dimensions of proposed equipment
- Installation height above grade
- Pole type and material
 - Existing traffic signal
 - Existing Austin Energy light pole
 - New pole
- Curb-gutter or edge of pavement and sidewalks
- Existing utilities and surface features
- Location of underground equipment facility
- Pavement removal and restoration area
- Appropriate details for repair of sidewalk, curb-gutter, etc.
- Proposed method of construction
- Rendering of proposed location after installation of equipment

2. Location

If the proposed location is in the right of way adjacent to a municipal park, submit a land survey conducted by a licensed surveyor to denote the distance from the park, all easements and boundaries.

3. Include photographs of the proposed facility location.

4. If new pole, justify new pole through analysis of nearby poles deemed unsuitable.

5. Sidewalks, pedestrian ramps, curb-gutter approaches:

- Avoid placing vaults in sidewalks, pedestrian ramps, or curb-gutter.
- Include repair plan for damaged concrete structures.
- Replacement of the structures must meet ADA specification.

PARK PLANNING CONTACT POINT

Randy Scott

Randy.Scott@AustinTexas.gov

512-974-9484



AUSTIN TRANSPORTATION DEPARTMENT TEMPORARY TRAFFIC CONTROL REVIEW GENERAL GUIDELINES

1. Plan must be legible and include:
 - 1.1. North arrow
 - 1.2. Properly aligned matchlines
 - 1.3. Scale
 - 1.4. Sheet numbers
 - 1.5. Legend
 - 1.6. Street names
 - 1.7. Cover sheet
 - 1.8. Development permit number
 - 1.9. All approaches to work area
2. Plan must describe existing conditions
 - 2.1. Roadway classification
 - 2.2. Lane configuration
 - 2.3. Posted speed limit
 - 2.4. Pedestrian facilities
 - 2.5. Driveway approach locations
 - 2.6. Construction entrances and exists
 - 2.7. Proposed and existing utilities
 - 2.8. Pavement restoration plan
3. Plan must describe all parts of temporary traffic control area
 - 3.1. Advance warning area
 - 3.2. Transition area
 - 3.3. Activity area
 - 3.4. Termination area
 - 3.5. Devices and device type
 - 3.6. Device spacing
 - 3.7. Flag stations
4. Plan must describe duration of activity and daily work hours



1.

TRAFFIC CONTROL CONTACT POINT

Traffic Control Plan Review:	TCPreview@AustinTexas.gov	
Shawn Jackson	Shawn.Jackson@AustinTexas.gov	512-974-7832



TEXAS GAS SERVICE GENERAL GUIDELINES

1. Describe all gas facilities (above and below ground) accurately
 - 24-inches separation from gas distribution mains
 - 60-inches separation from high pressure gas transmission lines
 - High Pressure transmission lines so labelled on plan and profile
 - **REQUIRED NOTE** on all plan and profile sheets:

When digging within ten (10) feet of a transmission or High Pressure Distribution line please contact Texas Gas Service:

- 1.1. Eddie Marenco 512-423-8466 edward.marenco@onegas.com
- 1.2. minimum 48 hours in advance so that a TGS representative can be scheduled to be present during excavation activity
- 1.3. Please maintain at least 5 feet separation OD to OD from the transmission or HPD line as well.

TEXAS GAS CONTACT POINT

Chelsiegh Hart

Chelseigh.Hart@OneGas.com

512-465-1122

Other gas utility providers in Austin:

<i>Atmos Energy</i>	<i>512 275 7343</i>
<i>CenterPoint Energy</i>	<i>512 481 1215</i>



TO APPLY FOR A UTILITY COORDINATION CASE

- ☐ Visit abc.AustinTexas.gov to create an Austin Build + Connect user account or to log in.

Your ROWMAN website username and password should work for Austin Build + Connect.

- Select Apply for Right-Of-Way Permits.
 - **Select Utility Coordination.**
 - Complete the application. Application is not complete until you click **Submit For Billing** and the status of your application says: **Internet Pending**.

If you click Save and Continue Later your application will not be reviewed.

- ☐ Print Screen or screen-capture an image of the project ID number generated by your application (2018-000000-000-00-UC).

Austin Build + Connect does not provide a confirmation page.

- ☐ Visit ftp.ci.austin.tx.us/ATD_AULCC to obtain the AULCC Data Transmittal Workbook
 - Complete the Transmittal Sheet tab in the Data Transmittal Workbook.
 - Save As Excel 97-2003 (.xls) format file and store on USB stick or CD storage media.
 - ☐ Save As plan set to a single file in .pdf format and store on USB stick or CD storage media OR upload file through Austin Build + Connect website: abc.AustinTexas.gov.
 - ☐ Provide a location map in .pdf format on USB stick or CD storage media OR upload file through Austin Build + Connect website: abc.AustinTexas.gov.
 - ☐ Provide three (3) paper copies of your plan set in 11-inch by 17-inch (11x17) or 12-inch by 18-inch (12x18) format.
- Utility plan and profile sheets shall be drawn to scale.
- ☐ Deliver to: Austin Transportation Department Attention: AULCC; 3701 Lake Austin Blvd; Austin, Texas 78703

1. Cover letter

2. Three (3) paper plan sets

3. Storage media containing

- a. Plan Set in Single PDF format 11-in x 17-in or 12-in x 18-in **to scale**
- b. Location map in PDF format
- c. Data Transmittal Workbook in Excel 97-2003 format
- d. Screen Capture of completed application

RESUBMITTALS do not require a new online application. Resend 1, 2, 3a, 3b & 3c from above.



AULCC CONTACT

T POINT

Reza Sedghy	Reza.Sedghy@AustinTexas.gov	512-974-7912
Isaiah Lewallen	Isaiah.Lewallen@AustinTexas.gov	512-974-1479
Jaclyn Lozano	Jaclyn.Lozano@AustinTexas.gov	512-974-2412



TO APPLY FOR SMALL CELL

- ☐ Visit abc.AustinTexas.gov to create an Austin Build + Connect user account or to log in.
 - Select Apply for Right-Of-Way Permits.
 - Select Small Cell Permit.
 - Complete the application. Application is not complete until you click Submit For Billing and the status of your application says: Internet Pending.

If you click Save and Continue Later your application will not be reviewed.

- ☐ Required documents in PDF format:
 - Complete Site plan (See A.U.L.C.C. Minimum Requirements for site plan guidelines)
 - Complete Pole Application
 - Structural Pole Load Analysis
 - Artistic rendering or pictures showing the network provider's equipment.
- ☐ Submit the traffic control plan for review 6 weeks prior to construction.
TCPreview@AustinTexas.gov
- ☐ Visit AustinTexas.gov/departments/wireless-telecommunications for more information on the Small Cell application process

SMALL CELL CONTACT POINT

April Sellers Oldag

April.Sellers@AustinTexas.gov

512-974-3430



TO APPLY FOR GENERAL PERMIT

GENERAL PERMIT CONTACT POINT

O. B. McKown	OB.Mckown@AustinTexas.gov	512-974-6330
Zackary Martin	Zackary.Martin@AustinTexas.gov	512-974-6356



Apply for General Permit after AULCC Completeness Letter is issued

GENERAL PERMIT CONTACT POINT

O. B. McKown	OB.Mckown@AustinTexas.gov	512-974-6330
Zackary Martin	Zackary.Martin@AustinTexas.gov	512-974-6356

Deliver General Permit Submittals to: 505 Barton Springs Rd - 4th Floor LUR Intake

Apply for Right-Of-Way Permits(s) after
General Permit status is *Approved and Released*
OR
Small Cell Permit is *Approved*

1. Apply for permits at: abc.AustinTexas.gov

Right-Of-Way permit info: AustinTexas.gov/Department/Right-Way-Row-Permits

RIGHT-OF-WAY MANAGEMENT CONTACT POINT

3701 Lake Austin Blvd	RightOfWay@AustinTexas.gov	512-974-1150
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2. Coordinate with Austin Center for Events Calendar: AustinTexas.gov/CityStage

ACE CONTACT: Betty Torres Betty.Torres@AustinTexas.gov 512-974-2779

Before starting excavation in the Right-Of-Way

3. Schedule preconstruction meeting with utility cut inspector by calling number on permit.

To schedule inspection:	512-480-0623
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ROW UTILITY CUT INSPECTORS SUPERVISOR

Michael Jones	Michael.Jones2@AustinTexas.gov	512-974-3523
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Closing a vehicle lane or sidewalk in an Arterial-class roadway or the Central Business District?

Phone 3-1-1 at least three (3) days before work

- Ask the 3-1-1 Ambassador to open a Lane Closure Customer Service Request.
- Have your permit number, approved lane or sidewalk closure times, and dates ready.



Contact List

Austin Center for Events (ACE)

Betty Torres	Betty.Torres@AustinTexas.gov	512-974-2779
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Austin Energy

Network & Downtown

Rudy Vela	Rudy.Vela@AustinEnergy.com	512 505 7650
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Gary Simmank	Gary.Simmank@AustinEnergy.com	512 505 7120
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Northwest & Northeast

Daniel McReynolds	Daniel.McReynolds@AustinEnergy.com	512 505 7868
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Brian Van Dyke	Brian.VanDyke@AustinEnergy.com	512 505 7247
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Mora Asadi	Mora.Asadi@AustinEnergy.com	512 505 7010
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Southeast & Southwest

John Biehn	John.Biehn@AustinEnergy.com	512 505 7647
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Southeast & Southwest AULCC Representative

Megan Willis	Megan.Willis@AustinEnergy.com	512 505 7503
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Austin Energy Chilled Water

Muller Energy Center

Barrett Story	Barrett.Story@AustinEnergy.com	512 505 3840
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Domain

Whitney Moyer	Whitney.Moyer@AustinEnergy.com	512 505 7148
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Central Business District

Tim McGowan	Tim.Mcgowan@AustinEnergy.com	512 505 3527
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Richard Hengst	Richard.Hengst@AustinEnergy.com	512 505 3838
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Austin Transportation

Austin Utility Location & Coordination Committee

Reza Sedghy	Reza.Sedghy@AustinTexas.gov	512-974-7912
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Isaiah Lewallen	Isaiah.Lewallen@AustinTexas.gov	512-974-1479
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Jaclyn Lozano	Jaclyn.Lozano@AustinTexas.gov	512-974-2412
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Traffic Control Review

Traffic Control Plan Review:	TCPreview@AustinTexas.gov	
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Shawn Jackson	Shawn.Jackson@AustinTexas.gov	512-974-7832
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Signal Operations

Chris Dixon	Chris.Dixon@AustinTexas.gov	512-974-4052
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Seyed Ghazinezhadian	Seyed.Ghazinezhadian@AustinTexas.gov	512-974-4065
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Ben Henson	Ben.Henson@AustinTexas.gov	512-974-4899
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Austin Water

Eric Sermenio Eric.Sermenio@AustinTexas.gov 512-972 0497

Corridor Program Office

Gregory Pepper Greg.Pepper@AustinTexas.gov 512-974-7282

Development Services | General Permit Program

O. B. McKown OB.Mckown@AustinTexas.gov 512-974-6330

Zackary Martin Zackary.Martin@AustinTexas.gov 512-974-6356

Parks and Recreation | Park Planning

Randy Scott Randy.Scott@AustinTexas.gov 512-974-9484

Planning and Zoning | Urban Design

Anne Milne Anne.Milne@AustinTexas.gov 512-974-2868

Benjamin Campbell Benjamin.campbell@austintexas.gov 512-974-7691

Public Works | Street & Bridge

Daren Duncan Daren.Duncan@AustinTexas.gov 512-974-8774

David Boswell David.Boswell@AustinTexas.gov 512-974-7071

Telecommunications and Regulatory Affairs | Small Cell

April Sellers Oldag April.Sellers@AustinTexas.gov 512-974-3430

Texas Gas Service

Chelsiegh Hart Chelseigh.Hart@OneGas.com 512 465 1122

Watershed Protection

Reyes Camacho Reyes.Camacho@AustinTexas.gov 512-974-3506

Natalie Ortiz Natalie.Ortiz@AustinTexas.gov 512-974-1455

Engineering

Rebeka McKay Rebeka.Mckay@AustinTexas.gov 512-974-3353

Sergio Mendoza Sergio.Mendoza@AustinTexas.gov 512-974-3346

As-Built Drawings

Patrick Dowley Patrick.Dowley@AustinTexas.gov 512-974-7290



Helpful Links

Austin Center for Events Calendar

<http://www.austintexas.gov/citystage>

Austin Transportation – Right of Way Division Management Website

<http://www.austintexas.gov/department/right-of-way-management>

ABC Portal

<https://abc.austintexas.gov/web/permit/login?reset=true>

Right of Way Permit Information Website

<http://austintexas.gov/department/right-way-row-permits>

Austin Utility Location & Coordination Committee FTP Website

ftp://ftp.ci.austin.tx.us/ATD_AULCC

Austin Water GIS Data Request Form

https://www.austintexas.gov/water/GIS_EXTERN/GIS_AccessRequest_Form.cfm

City of Austin Code

<https://library.municode.com/tx/austin>

Standards Manual

https://library.municode.com/tx/austin/codes/standards_manual

Transportation Criteria Manual

https://library.municode.com/tx/austin/codes/transportation_criteria_manual

Utilities Criterial Manual

https://library.municode.com/tx/austin/codes/utilities_criteria_manual

Corridor Program Office Website

<https://www.austintexas.gov/corridoroffice>

Planning & Zoning Great Streets Program Website

<http://www.austintexas.gov/department/great-streets-program>

Public Works Department – Street & Bridge Website

<http://www.austintexas.gov/streetandbridge>

Parks and Recreation Department – Interactive Map / GIS

<http://www.austintexas.gov/department/parks-and-recreation> Telecommunications &
Regulatory Affairs Website

<http://austintexas.gov/department/wireless-telecommunications>