

**CITY OF LONGMONT
SECTION 800 – URBAN NEIGHBORHOOD DESIGN
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1. PURPOSE

- A. This Section, which shall be known as the Urban Neighborhood Design Standards, applies to properties zoned Residential (R) or Mixed Use (MU) generally with residential densities of eight (8) units or greater per acre as outlined in 15.03.080 of the Development Code.
- B. The Urban Neighborhood Design Standards minimize public transportation and utility corridors within the properties governed by this Section. These standards facilitate development to increase affordable and attainable housing opportunities within these neighborhoods supporting the broader housing needs of the Longmont community.
- C. These standards establish a connected pattern of development where the area of lots and/or building envelopes are maximized while providing construction of infrastructure, walkable neighborhoods with a high level of accessible pedestrian connectivity, alternative parking and drainage design options, and optimized utility corridors without detriment to City of Longmont services, emergency access and response.

2. RELATION TO DESIGN STANDARDS

- A. Section 800 outlines approved exceptions to the Public Improvement Design Standards and Construction Specifications (Design Standards), Sections 200, 300, 400, 500 and 700, when applied in full compliance with this section. Non-compliance or other deviations from this standard may require a formal exception as provided in Section 100.
- B. The general Design Standards shall apply for any design elements not addressed in Section 800.

3. REQUIREMENTS

- A. All neighborhood design shall meet the requirements of the Development Code found in Title 15 of the Municipal Code. The intent of Section 800 is to demonstrate how the Development Code can be implemented to efficiently provide public infrastructure supporting Urban Neighborhood design densities.
- B. The location of public utilities and drainage structures as modified from the Design Standards require consideration of access, maintenance, and operation. The modifications shown herein may require certain street cross sections and neighborhood design elements be incorporated to allow the utility placements demonstrated in this Section.
- C. All design elements in these standards are meant to be fully incorporated into the design. The intent of the design of each element relies upon the other design elements to act in unison for the development layout to function. Individual design elements cannot be considered alone, but must be considered in the context of the design of the entire development.

4. NATURAL GAS SERVICE:

- A. The utility corridor and layouts in this Section do not include specific easements, setbacks, or other elements as may be required to provide natural gas service. If a development chooses to include natural gas in the subdivision, the Developer shall coordinate easements, corridors and utility placement with the natural gas provider. All proposed easements and utility placement shall be depicted on the submittal documents for development review as outlined in Title 15 of the Municipal Code.

1. GENERAL

- A. The street system design shall have a high level of connectivity to adjacent street systems, either existing or proposed. The proposed higher density development necessitates the dispersion of traffic by providing numerous opportunities for ingress, egress, and internal circulation within the development.
- B. Use of these Section 800 design criteria are intended for Local Street design and construction in mixed use and residential zoning. Any construction or design of Collector or Arterial Streets shall conform to Section 200 of the Design Standards.

2. STREET DESIGN

- A. The street network design shall conform to a connected system approach and shall consider a street pattern that provides the most advantageous configuration to serve adjoining areas and the entire neighborhood. Streets and pedestrian ways shall be interconnected so that vehicular, bicycle, and pedestrian access throughout the community is direct and convenient while providing multiple access routes to properties.
- B. For a connected transportation system, dead end streets and cul-de-sacs shall not be designed or constructed in the Urban Neighborhood. Circulation shall be provided by connecting public rights-of-way to the adjacent public rights-of-way. Temporary turn arounds may be approved by the City Engineer where a connection will be made to future improvements. The turn around shall be designed and constructed within public right-of-way or an easement granted to the city and shall be paved in accordance with the standard street design, as provided in Section 200.
- C. Local street geometry shall be designed such that it will encourage low operational traffic speeds of twenty-five (25) mph or less.
- D. Maximum curb return radii of twenty (20) feet shall be used at intersections of local streets. Additional concrete and reinforcement design may be required for curb returns subject to large vehicles overrunning the curb. Areas of overrunning vehicles shall be designed with roll over curb (not vertical curb).
- E. Adequate sight distance triangles meeting criteria in Section 200 shall be provided at all intersections.
- F. Two-way streets of twenty-eight (28) feet of pavement or less shall provide emergency access and staging areas of no less than sixty (60) feet in length and shall be provided for block lengths greater than 300 feet. The staging area shall be placed at midblock for emergency vehicle purposes and be designated as fire lanes with no parking.
- G. No above ground obstructions, except for streetlights, traffic signals or required traffic signage, are permitted within fifteen (15) feet of an intersection of two-way streets. Above-ground obstructions include but are not limited to fire hydrants, trees or other landscaping greater than thirty (30) inches above the centerline street grade.
- H. Streets or alleys intended to serve emergency service vehicles or trash collection vehicles, shall be designed to 75,000-pound carrying capacity and provide adequate turning radii. A geotechnical engineering report shall be submitted to the DRC outlining the pavement section design for each street in accordance with Section 200.
- I. Additional traffic signs may be required depending upon site configuration and constraints. Final sign requirements, including type and placement, will be determined by the City Engineer on a case-by-case basis. The need for local street pavement markings or special pavement treatments may be allowed on a case-by-case basis as determined by the City Engineer.

3. STREET SECTIONS

- A. Streets shall have minimum ten (10) foot wide drive lanes when parking, bike lanes or other buffers are provided for a minimum two-lane width of twenty (20) feet to accommodate vehicular and emergency traffic flow in two directions.

- B. Streets with no parking, bike lanes or other buffer on either side, shall have minimum twelve (12) foot wide drive lanes exclusive of the curb and gutter for a minimum two lane width of twenty-four (24) feet.
- C. Reduced travel lane widths may be considered with approval of the City Engineer and the Fire Marshal. Additional emergency response mitigation will be required, and all transportation design elements and utility corridors will need to meet the minimum requirements of this section.
- D. Vertical curb shall be used on all streets, except alleys. City Standard six (6) inch vertical curb is required except where roll over curb is needed to meet emergency vehicle access requirements and where private driveways are provided in the front of lots and alley access is not available.
- E. Right-of-Way Section Requirements
 - (1) Local Street Layout – The following is a table of possible street sections. See the Details section for graphical representations.

Section	Alley	Lane Width (ft)	Sidewalk Width (ft)	Parking Width* (ft)	C&G (ft)	Tree Lawn (ft)	Total ROW (ft)
Detached Sidewalk Roadway Sections							
Standard Local Parking 2 Sides	Optional	10	5	7	2	8	61
Local-Reduced TL / Parking 2 Sides	Optional	10	5	7	2	5	55
Attached Sidewalk Roadway Sections							
Attached Walk Parking 2 Sides	Optional	10	5	7	2	0	45
Attached Walk Parking 1 Side	Required	12 min.	5	7	2	0	39.5
Attached Walk No Parking	Required	12 min.	5	0	2	0	38
Urban Section No Parking	Required	12 min.	8	0	2	5 (tree grate)	54
Alleyway Sections (2 lanes)							
Standard Alley	NA	20	NA	NA	NA	NA	22
Reduced Alley	NA	18	NA	NA	NA	NA	20
Narrow Alley	NA	12**	NA	NA	NA	NA	18

* Parking includes 1.5 ft of gutter

** with 3 ft gravel shoulder each side

- (2) Alley access is recommended for all site designs to provide additional connectivity and emergency access. Proposed street right-of-way with less than thirty-four (34) feet of pavement (two (2) ten (10) foot wide travel lanes and two (2) seven (7) foot wide parking areas), shall require alley access to accommodate traffic, emergency response and utility corridors. Where street pavement is thirty-four (34) feet wide or greater, alleys may be required to provide adequate utility corridors as determined by the City Engineer or additional emergency access as determined by the Fire Marshal.

4. SIDEWALKS AND TREE LAWNS

- A. All streets shall have sidewalks provided on both sides of the street unless one side of a street does not serve pedestrian traffic, then the sidewalk may be omitted as approved by the City Engineer.

- B. Tree lawns with detached sidewalks are required for all street sections in accordance with the Development Code, except as otherwise provided for herein. The tree lawn will be a minimum five (5) feet wide utilizing appropriate vegetation and columnar type trees. For the use of standard canopy trees, the tree lawn will be a minimum of eight (8) feet wide. Tree canopies should not impede the walking area in any manner, in compliance with the Municipal Code.
- C. Detached sidewalks are recommended to be five (5) feet wide but shall not be less than four (4) feet wide. Sidewalks attached to curb and gutter shall be a minimum of five (5) feet wide exclusive of the top of curb width.
- D. As determined by the City Engineer, in instances where the surrounding area is served by attached walks and the conditions of the transitions to detached walks are prohibitive or unsafe, attached sidewalks may be approved.
- E. If attached sidewalks are proposed, an area beyond the back of walk within the adjacent property shall be reserved for planting of trees. The trees shall be placed within eight (8) feet of the back of walk, but no closer than four (4) feet, to provide a canopy similar to a tree lawn. Tree placement along with type and species shall be shown in the approved Site Plan for the development.

5. ALLEYS

- A. Alleys shall be public right-of-way dedicated to the city in accordance with Municipal Code Section 15.05.050(D)(8). Alleys generally provide secondary vehicular and pedestrian access to residents. Alleys shall be designed to accommodate waste services and maintenance vehicles.
- B. Minimum alley right-of-way shall be eighteen (18) feet wide with twelve (12) feet of pavement centered within the right-of-way and gravel or other acceptable material to the City Engineer within the three (3) feet of shoulder. Alleys of this width cannot be the primary access to a residential or commercial unit and must connect from one local street to another without intersecting with other alleys (i.e. a "T" intersection).
- C. Minimum alley right-of-way for uses without frontage onto a local street (i.e. front on a green space) shall be twenty (20) feet wide with eighteen (18) feet of pavement centered within the right-of-way. Depending upon utility and emergency access requirements, the City Engineer may require twenty-two (22) feet for alley right-of-way width with twenty (20) feet of pavement centered within the right-of-way or larger as needed to meet pedestrian, vehicular, emergency or maintenance access.
- D. Alleys shall be graded with an inverted crown at two (2) percent (50:1 slope) fall from the edge of pavement to the center flowline. Alleys may be paved either in full width concrete or in asphalt. Asphalt alleys shall be constructed with a minimum twenty-four (24) inch wide concrete pan. A concrete pan in the center of an asphalt alley shall have one (1) inch of fall from the edge of pan to the center and be a minimum of ten (10) inches deep and graded with a minimum 0.7% fall longitudinally. Where the alley intersects the local roadway, the inverted crown shall be transitioned over a minimum of twenty (20) feet to meet the cross slope of the adjacent right-of-way.
- E. Property having vehicular access from the alley will provide a paved driveway or ramp from the edge of the alley pavement into the property. The access ramp shall be maximum twenty-four (24) feet wide and minimum ten (10) feet wide and have a minimum transverse slope of one and one half (1.5) percent (66:1 slope) but not exceed ten (10) percent (10:1 slope). Paving the entire frontage of a lot between the alley and the property will not be allowed.
- F. A five (5) foot wide utility easement shall be provided immediately adjacent to the alley right-of-way on both sides.
- G. There shall be a minimum of twenty-eight (28) feet of distance between building faces on opposite sides of an alley to accommodate vehicular movements and utility corridors.
- H. Garages and accessory dwelling units accessed from an alley shall display addresses that are clearly visible from the alley.

- I. No dead-end alleys will be allowed. Any alley right-of-way shall extend to another public street at each end. Shared private driveways from the public alley may be considered if they serve no more than six (6) residential units and do not extend more than one-hundred (100) feet from the right-of-way. Shared drives shall be placed in a private outlot owned by the HOA or other common entity. If shared driveways are utilized, a common trash collection area shall be provided adjacent to the public right-of-way.
- J. Tee intersections of alleys are generally discouraged, but if utilized, the design shall provide adequate turning radii and paved surface to accommodate maintenance as well as waste services and relevant emergency vehicles. The alley may not be required to accommodate a fire engine if adequate access is provided from the street or by other means approved by the Fire Marshal.

6. INTERSECTIONS

- A. All street intersections are intended to provide adequate safety measures for all vehicles, bicycles and pedestrians and shall meet the minimum requirements of the MUTCD for signage and striping and AASHTO guidelines for the appropriate design speed.
- B. When two streets intersect between ninety (90) degrees and seventy-five (75) degrees and do not extend beyond the intersection in either direction (an “L” intersection), a stop condition is not warranted. In this instance, a horizontal curve may be designed. The minimum center line radius of an “L” intersection shall be forty-five (45) feet to accommodate emergency vehicles and efficient property layout.
- C. Horizontal curves with a minimum centerline radius of forty-five (45) feet require adequate sight distance and cannot introduce a safety hazard to the street users. No driveway or other access will be allowed within the curve and any adjacent access shall be a minimum of thirty (30) feet from the point of beginning or point of tangency of the curve.
- D. No parking shall be allowed within thirty (30) feet of the point of tangency either side of the intersection.
- E. Intersection sight distance requirements as specified in Section 200 shall be provided. Special consideration shall be given to placement of above-ground obstructions (fire hydrants, electrical transformers, light poles, signs, landscape, fencing, etc.) and building setbacks in the vicinity of intersections such that intersection sight distance is not obstructed.
- F. The minimum street width through an “L” intersection shall be twenty-four (24) feet exclusive of curb and gutter section.
- G. If commercial driveway access or alley access is aligned with an “L” intersection, the alley or driveway may become the third leg of a Tee intersection. Tee intersections shall be controlled by stop signs at all three corners including a driveway. The center line of the alley or driveway shall align with the centerline of the adjoining street. Parking and other access points shall not be allowed within thirty (30) feet of the Tee intersection as measured from the centerline of the right-of-way to the center line of the adjacent access.
- H. Street intersections with an interior angle less than seventy-five (75) degrees shall be designed as a traffic circle.

7. PARKING

- A. Parking shall be provided in accordance with the Municipal Code Title 15. If no on-street parking is proposed for local residential street sections, an Alternative Parking Plan will be required providing off-street parking or other alternatives.
- B. Parallel parking within the public right-of-way on local streets will not be striped, but design of the street shall allow for a minimum of seven (7) feet from the flow line of the curb to the drive lane and a length of at least twenty-four (24) feet per parking space.
- C. Angled parking adjacent to the public right-of-way may be considered through an Alternative Parking Plan. The plan shall outline the ownership and maintenance of the parking area. The design will incorporate a minimum of a two (2) foot overhang of vehicles either by providing parking blocks or extending the width of the sidewalk to seven (7) feet adjacent to the parking stalls. No 90-degree parking stalls shall be designed within or directly access public right-of-way.

- D. No parking is permitted within thirty (30) feet of the intersection of two-way streets. No parking is permitted within twenty (20) feet of the intersection of an alley and a street. Such areas shall be designated as fire lanes and posted no parking.

8. OTHER STREET DESIGN REQUIREMENTS

- A. See Section 800.02 for additional street design requirements related to storm drainage.
- B. See Section 800.05 for additional street design requirements related to public safety.

1. GENERAL

- A. All development shall meet the storm drainage requirements of the Longmont Storm Drainage Criteria Manual (LSDCM), Title 15 and Section 14.26 of the Municipal Code as well as any applicable State and Federal requirements.
- B. All new development shall not increase storm water flows downstream of the site or impede the historic flow of off-site basins. Development shall not increase flows or raise the elevation of ponded water on other properties or within right-of-way.

2. STORM HYDROLOGY CALCULATIONS**A. Impervious Calculations**

- (1) Each development will be required to calculate imperviousness as a weighted average by the area of buildings, paving, and landscaping. The anticipated increased density of development does not align with general impervious values for business, residential and industrial imperviousness as provided in Table 600 of the LSDCM or Table 6-3 of the Mile High Flood District Storm Drainage Criteria Manual No. 1, therefore the calculated weighted average will be used to determine the impervious value of the developed drainage basins.

3. DETENTION

- A. Traditional open surface detention ponds, without structural walls, are the preferred approach to storm water control, but to utilize the property more fully, regional detention and underground detention may be considered.
- B. Regional Ponds may be utilized if accounted for in a master drainage plan for the area. Additional agreements and financial participation may be required for multiple developments to utilize a regional detention facility. A development may be required to perform a regional master drainage plan if regional detention is desired, and no master plan exists.
- C. Underground Detention may be considered given the following conditions:
 - (1) No regional detention is available, and the site is constrained in such a manner that traditional detention ponds are not feasible.
 - (2) Storm water quality WQCV must be provided on grade, even if detention is provided below ground.
 - (3) Adequate maintenance access capable of supporting the required equipment shall be provided. The underground facilities and access shall be within an easement dedicated to the city either by plat or separate instrument.
 - (4) Ownership and maintenance responsibilities shall be delineated on the Site Plan. If no Site Plan is required for development, a separate maintenance agreement shall be provided by the property owner to the city.
 - (5) Underground detention facilities shall have a gravity outfall, no storm water pump system shall be allowed.
 - (6) Adequate cover must be provided in accordance with the specifications of the manufacturer and all applicable structural analysis.
 - (7) No structures shall be allowed over an underground detention facility. Private retaining walls and private fences or parking areas may be placed over the facility if considered in the underground chamber design.
 - (8) The detention facility shall not be located within a floodplain.
 - (9) An operations and maintenance manual shall be provided within the Drainage Report.

4. LOW IMPACT DEVELOPMENT (LID) CONSIDERATIONS

- A. All developments shall incorporate LID design as much as practical in accordance with Municipal Code Chapter 14.26.
- B. Where the neighborhood layout lends to the creation of commonly owned outlots, these areas should be considered for low impact and distributed water treatment (WQCV elements).

5. STREETS AND STORM SEWER SYSTEMS

- A. Storm sewer inlets must be placed where the allowable street flows, in accordance with the Longmont Storm Drainage Criteria Manual, are exceeded. The design engineer shall compute the allowable flow capacities and flow depths for streets using equivalent values in the Storm Drainage Criteria Manual and the following criteria:
 - (1) For local streets, the Minor Storm (5 year) Flow must not cross the street crown from one side to the other and should not overtop the curb. The Major Storm (100 year) Flow must not exceed the lesser of twelve (12) inch depth at the gutter or inundate private property without the appropriate drainage easement. In no case shall storm water flood adjacent buildings. If possible, the 100-year flow should be contained within the public right-of-way but in no instance shall Major Storm Flows adversely impact any structures or private property. If the Major Storm Flow path crosses private property, a public drainage conveyance easement will be required.
 - (2) Allowable alley storm flows shall be limited to the flows generated from the rear of the lots along the alley. Alleys shall not convey storm water from adjacent streets or other basins.
 - (3) Alley flows shall not cross the intersecting streets but shall be captured via an inlet or directed along the intersecting street gutter.
 - (4) Flow spread shall be confined to the right-of-way at a depth not to exceed ten (10) inches.
 - (5) Inlets shall conform to the standard Type R inlets in street right-of-way. Combination type inlets may be allowed in right-of-way when physical constraints will not allow a Type R. Area Inlets such as CDOT Type C and D Inlets may be utilized outside of right-of-way. Slotted or trench drains are prohibited within right-of-way.
- B. Public storm sewer infrastructure shall be placed within street right-of-way or on private property within an adequate easement dedicated to the public. Storm sewer infrastructure is generally discouraged within alleys, but if proposed, additional alley width may be required to meet utility separation and maintenance access.
- C. Underdrain systems, if required, shall remain privately owned and maintained. Any underdrain collection system within public right-of-way will require an Infrastructure Permit.

1. GENERAL

- A. Public water and sanitary sewer services shall be extended to all properties in a manner which provides for efficient operation and maintenance by the City.
- B. Reduced width of street sections may not provide adequate separation between water, sewer, storm and other utilities within the street right-of-way necessitating location of one or more utilities within other corridors such as the alley or an easement on private property. Alley right of way is only wide enough to accommodate one public utility.
- C. The impact of utility corridors may be reduced by strategic placement and coordinated development of a site.

2. HORIZONTAL LOCATION

- A. Water mains shall be placed in public right-of-way at the front of lots. Water mains may be located within common greenspaces within public easements between buildings when fronts of buildings do not face public right-of-way and are served by alley access only. Adequate operation and maintenance access to meters and valves is required.
- B. Water mains shall be designed so that valves and valve boxes are located outside of concrete, including but not limited to sidewalk, drainage pans, curb and gutter.
- C. Sanitary sewer mains shall generally be located within alley right-of-way or within street pavement area greater than thirty-three (33) feet wide. Manholes shall be located so that the manhole frame and cover are outside of the flowline of the alley.
- D. Water mains shall be a minimum of fifteen (15) feet from any structure with a foundation.
- E. Sanitary sewer mains shall be a minimum of twelve (12) feet from any structure with a foundation and additional separation will be required for mains deeper than ten (10) feet from the final grade to the top of pipe.

3. VERTICAL LOCATION

- A. Vertical clearances of utilities shall not vary from the standards listed in Section 100.

4. EASEMENTS

- A. For any utility placed outside of public right-of-way, the property owner shall dedicate an easement for city access, maintenance, and operation.
- B. Pocket easements shall be provided for water meters, fire hydrants or other appurtenances in areas outside of the right-of-way or easement for a water main. The dimensions of the pocket easement will be such that a minimum three (3) foot wide buffer is provided around the appurtenances.
- C. When water and electrical service is provided at the front of lots for single-family attached and detached units, a combined pocket easement for water and electric may be provided as long as adequate clearances, as defined in Section 100, are maintained.

5. WATER METERS AND CURB STOPS

- A. For single family development (detached and attached), a dedicated water service line shall be provided to each unit. Water meters up to and including one (1) inch in size will be placed in a meter pit on private property within an easement, which may be shared with electrical equipment. Each service shall have a curb stop installed. In certain cases when the City Engineer agrees that an easement on the property is not viable, a meter may be placed in a tree lawn as indicated below.
- B. Water Meter and Curb Stop Locations.

(1) Detached walk with eight (8) or five (5) foot wide tree lawn and pocket easement on the property.

a. Meter pit shall be six (6) feet behind the walk.

- b. Meter pit shall be five (5) feet from the adjacent property line.
 - c. Curb stop shall be centered in the tree lawn.
- (2) Attached Walk, no tree lawn.
 - a. Meter pit shall be six (6) feet behind the walk.
 - b. Meter pit shall be five (5) feet from the adjacent property line.
 - c. Curb stop shall be four (4) feet from the back of walk.
- (3) Detached walk with eight (8) foot wide tree lawn, no easement.
 - a. Meter pit shall be six (6) feet from top back of curb.
 - b. Meter pit shall be five (5) feet from the adjacent property line.
 - c. Curb stop shall be four (4) feet from the top back of curb.
- (4) Detached walk with five (5) foot tree lawn, no easement.
 - a. Meter pit shall be three (3) feet from the top back of curb.
 - b. Meter pit shall be five (5) feet from adjacent property line.
 - c. Curb stop shall be one (1) foot from the top back of curb.
- C. Any meter and curb stop installation within the public right-of-way will require special construction sequencing to ensure adequate compaction under the curb and gutter as well as the sidewalk. Any meter pit or curb stop installed prior to the construction of the curb and gutter or sidewalk must be protected from damage.
- D. Water meters greater than one (1) inch in size shall be placed in a vault on private property within a dedicated easement. For commercial and multi-family development, the water meter may be placed inside a building within a dedicated utility room. The utility room shall provide adequate maintenance and operational space and be accessible to the city at all times. No water meter vaults shall be placed in public right-of-way.
- E. Multi-family development may serve several units through a single meter in accordance with Section 500 of these standards.

1. GENERAL

- A. Design and construction of all City of Longmont electrical and City of Longmont communications infrastructure shall conform to Section 700 of these Standards. To facilitate the layout of Urban Neighborhood developments, the City will consider alternative routing locations with the intent of reducing utility corridor widths.
- B. The proposed street sections and allowable reductions of structural setbacks will guide the final design of the electrical and communication infrastructure.

2. LONGMONT POWER AND COMMUNICATIONS (LPC)/NEXTLIGHT INFRASTRUCTURE AND FACILITIES LOCATIONS

A. Detached walk with tree lawn:

- (1) LPC/Nextlight may install City of Longmont electric and City of Longmont communications subsurface infrastructure within the public right-of-way under the walk, with power transformers, junction vaults, street lights and fiber handholds installed in pocket easements on private property (generally at property corners).
- (2) When pocket easement locations are not feasible on private property, LPC/Nextlight equipment may be installed within the tree lawn if the following conditions are met:
 - a. Tree lawn is a minimum of eight (8) feet wide.
 - b. Vertical equipment is placed a minimum of twenty-four (24) inches from the edge of walk and top back of curb.
 - c. Adequate protection is provided by the means of bollards or similar landscape features.
 - d. The equipment does not interfere with pedestrian or traffic movements.
 - e. The placement of street trees allows for the placement of equipment without reducing the required number of trees.

B. Attached walk, no tree lawn:

- (1) Preferred design is to provide a seven (7) foot wide easement behind the walk for standard installation.
- (2) If running an easement behind the walk is not feasible, LPC/Nextlight may install subsurface infrastructure under the walk and require pocket easements at property corners or other equipment locations, in accordance with Section 700 of the Design Standards.
- (3) Street lighting shall be placed behind the walk on private property within a pocket easement.

C. Alleys:

- (1) If no front or side lot equipment locations are available, LPC may install subsurface infrastructure in the five-foot-wide easement adjacent to the alley right-of-way. Additional pocket easements for power transformers, vaults and hand holes are required to be coordinated with LPC during the project design.
- (2) Street lighting on the residential road sections will require additional design considerations and easements.
- (3) All transformers and junctions within the alley require protection in the form of raised curbs and/or bollards.
- (4) Pocket easement dimensions may be increased based on other utility needs.

D. Co-location of dry utilities

- (1) Due to the restricted area and maintenance issues, only LPC and Nextlight infrastructure can be located within the easements and trench paths. No other utilities may be co-located within the easement or trench paths.

3. LPC EQUIPMENT EASEMENTS

- A. Easements may be based on front or back lot design policy, as determined by LPC.

4. METER LOCATIONS:

- A. Meters will be located as indicated in Section 700.

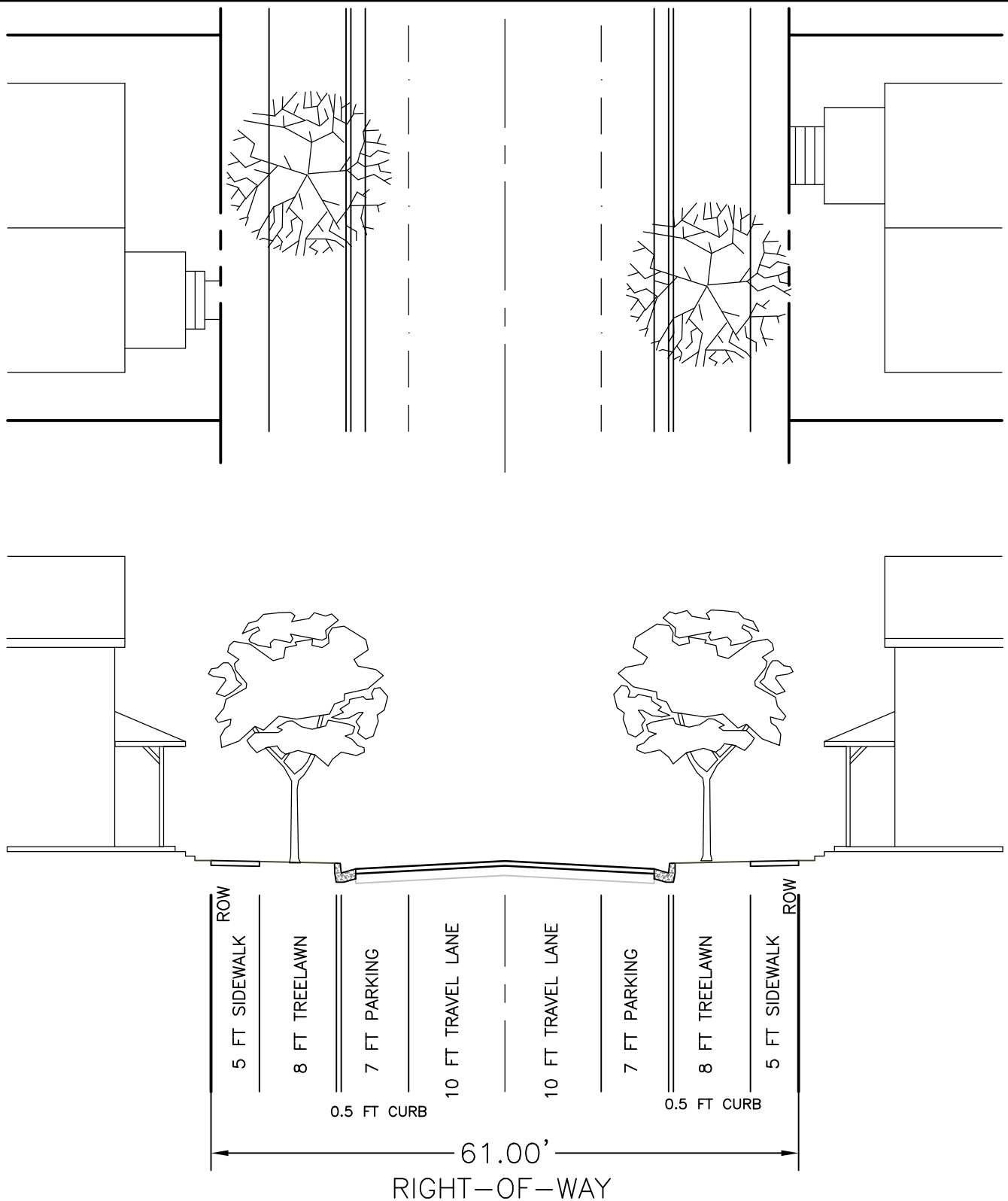
1. GENERAL

- A. All designs shall meet the regulations of the National Fire Protection Association (NFPA) and International Fire Code (IFC), as adopted by the city.
- B. All design elements related to emergency access are subject to review and approval by the Fire Marshal.

2. STREET DESIGN

- A. The street network design shall conform to a grid system and shall consider a street pattern that provides the most advantageous configuration to provide emergency access to the development as well as the adjoining areas and the entire neighborhood.
- B. The intent of the street standards includes fire apparatus access from street rights-of-way with alleys providing secondary access for smaller emergency vehicles. Alley design may be modified to allow fire apparatus access where necessary if turning radii and adequate travel lane widths as provided in 800.01, or as approved by the Fire Marshal. Any alley emergency access shall be approved by the Fire Marshal.
- C. Travel Lane reduction may be allowed if mitigated by additional suppression and reduction in building height and setbacks as approved by the Fire Marshal.
- D. Developments providing structures greater than thirty (30) feet in height require aerial apparatus emergency access. This type of development shall provide a minimum twenty-six (26) foot wide paved area clear of all vertical obstructions, a minimum of fifteen (15) feet and maximum thirty (30) feet from the face of the structure, as acceptable to the Fire Marshal. To meet this requirement within the adjacent right of way, options to be considered include:
 - (1) The drive lanes may be extended to thirteen (13) feet each direction to provide twenty-six (26) foot wide access.
 - (2) Streets with parking may provide "No Parking Fire Lane" restricted areas placed according to Fire Marshal direction. Depending upon the length of the block, restricted parking areas a minimum of thirty (30) feet long will be provided at each end of the block and an area sixty (60) feet long at the center of the block.
 - (3) Streets with no parking or parking on one side, may utilize attached concrete walks to meet the minimum twenty-six (26) foot width. The sidewalk will be designed to support additional loading from aerial apparatus out rigging.
 - (4) Narrow street sections with tree lawns may provide concrete infill of the tree lawn in locations specified by the Fire Marshal to meet the minimum access width.

- 800-01 Local Residential Street Section 61 ft ROW
- 800-02 Local Residential Street Section 55 ft ROW
- 800-03 Local Residential Street Section 45 ft ROW
- 800-04 Local Residential Street Section 40 ft ROW
- 800-05 Local Residential Street Section 38 ft ROW
- 800-06 Urban Residential Street Section 54 ft ROW
- 800-07 Small Radius Curve
- 800-08 Tee Intersection/Private Drive
- 800-09 Emergency Access Mid-Block & Intersections
- 800-10 Alley Section 22 ft ROW
- 800-11 Alley Section 20 ft ROW
- 800-12 Alley Section 18 ft ROW
- 800-13 Attached Sidewalk 5 ft wide
- 800-14 – 800-20 Reserved
- 800-21 Typical Utility Layout 61 ft ROW
- 800-22 Typical Utility Layout 55 ft ROW
- 800-23 Typical Utility Layout 45 ft ROW
- 800-24 Typical Utility Layout 40 ft ROW
- 800-25 Typical Utility Layout 35 ft ROW
- 800-26 Typical Utility Layout Urban Street Section
- 800-27 Alley Utility Layout 20 ft ROW
- 800-28 Utility Easements



- NOTES:
1. ACCEPTABLE FOR ALL RESIDENTIAL STREETS.
 2. POSTED AND DESIGN FOR 25 MPH TRAFFIC SPEED.
 3. NO STRIPING ON LOCAL STREET BUT PARKING DELINEATED FOR CLARITY IN THIS DETAIL.



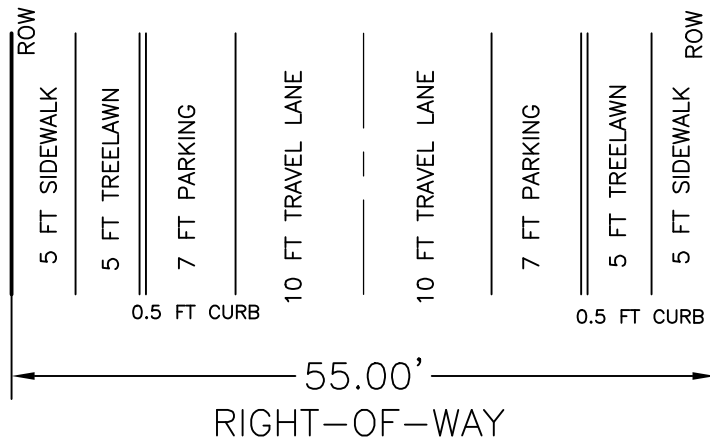
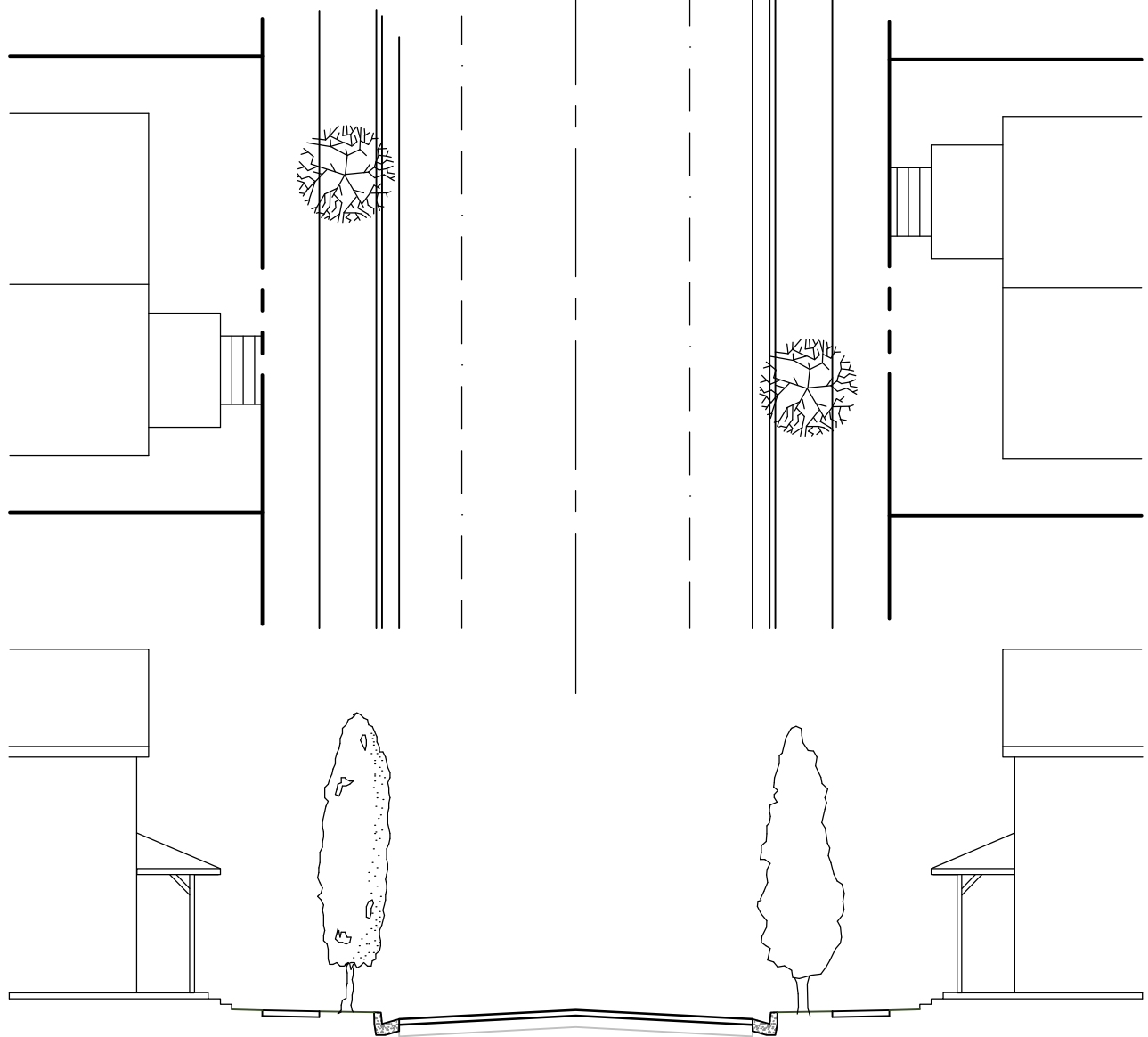
LOCAL RESIDENTIAL STREET DETACHED WALK W/ PARKING 61 FT ROW

DATE: 09/12/2024

SCALE: NOT TO SCALE

DETAIL

800-01



NOTES:

1. ACCEPTABLE FOR ALL RESIDENTIAL STREETS.
2. POSTED AND DESIGN FOR 25 MPH TRAFFIC SPEED.
3. NARROW TREE LAWN REQUIRES COLUMNAR TREES NO CANOPY TREES ALLOWED.



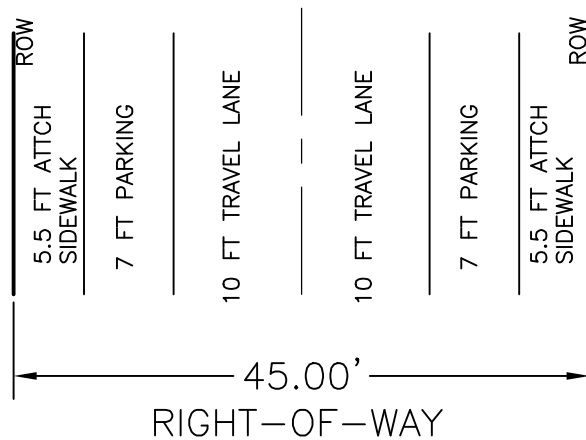
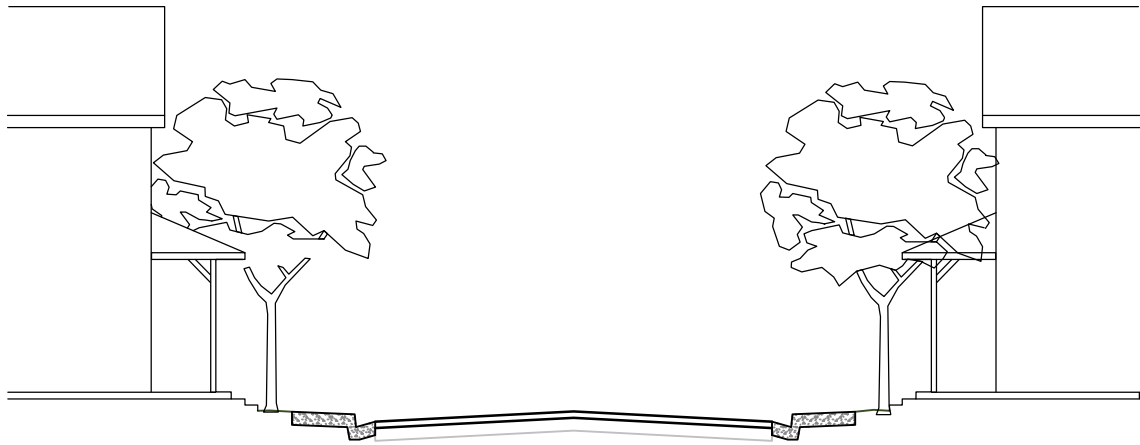
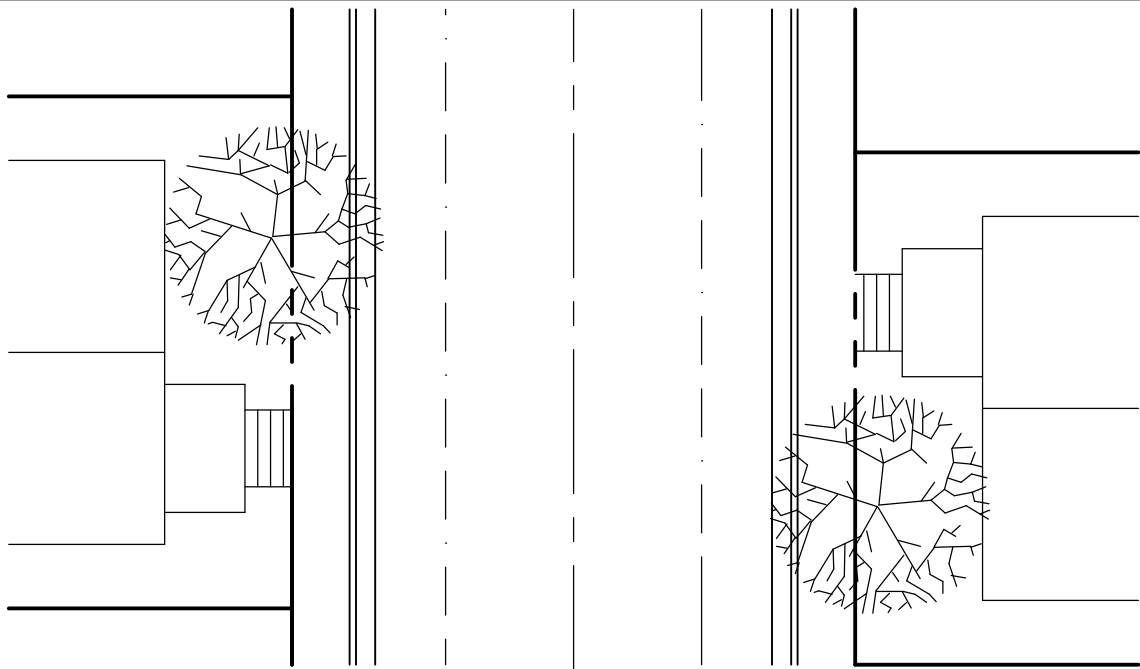
LOCAL RESIDENTIAL STREET DETACHED WALK W/ PARKING 55 FT ROW

DATE: 9/12/2024

SCALE: NOT TO SCALE

DETAIL

800-02



NOTES:

1. ACCEPTABLE FOR ALL RESIDENTIAL STREETS.
2. POSTED AND DESIGN FOR 25 MPH TRAFFIC SPEED.



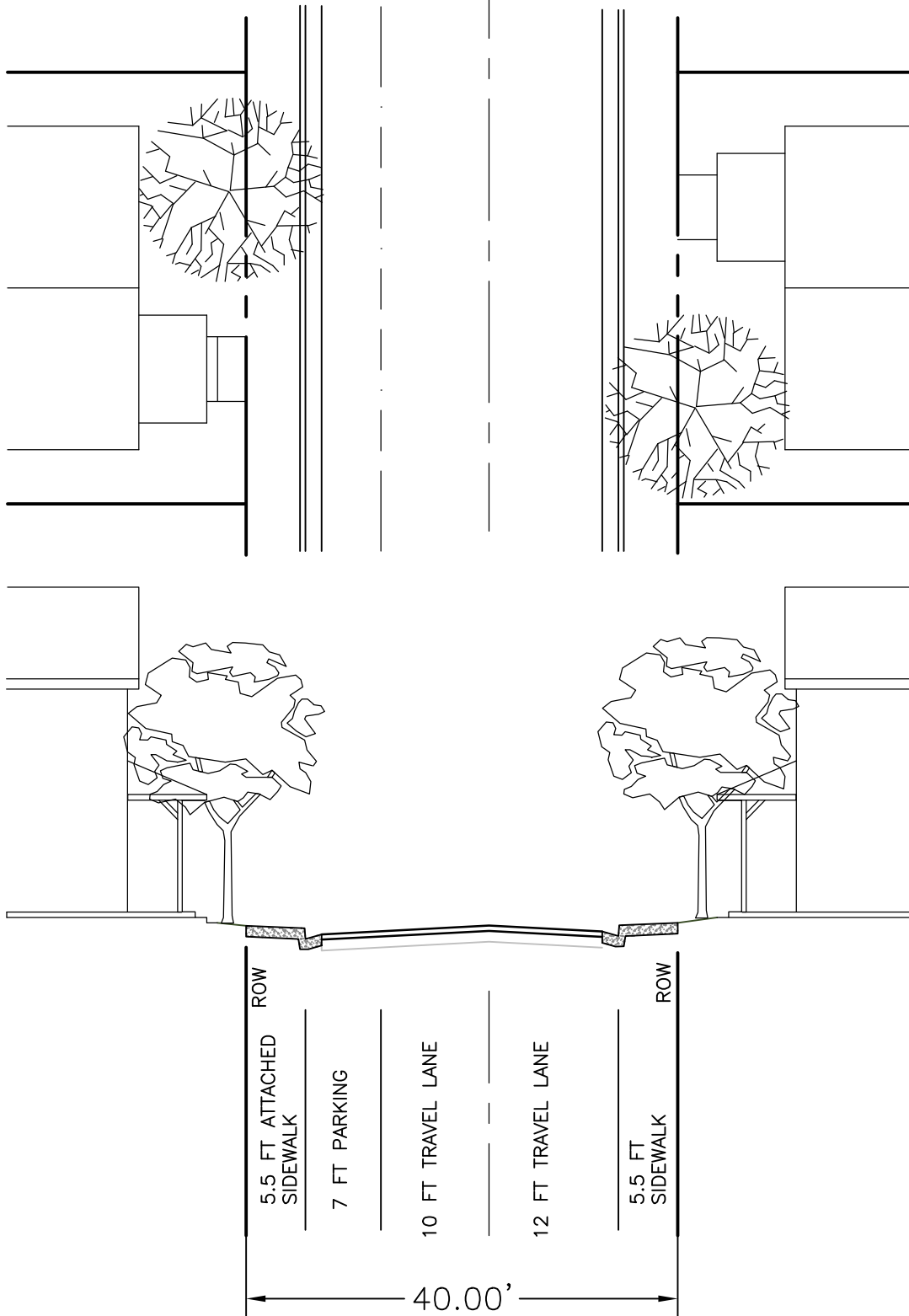
LOCAL RESIDENTIAL STREET ATTACHED WALK W/ PARKING 45 FT ROW

DATE: 09/12/2024

SCALE: NOT TO SCALE

DETAIL

800-03



NOTES:

1. ACCEPTABLE FOR ALL RESIDENTIAL STREETS.
2. ALLEY'S REQUIRED BASED UPON UTILITY CORRIDOR NEEDS AND LAYOUT.
3. POSTED AND DESIGN FOR 25 MPH TRAFFIC SPEED.

RIGHT-OF-WAY



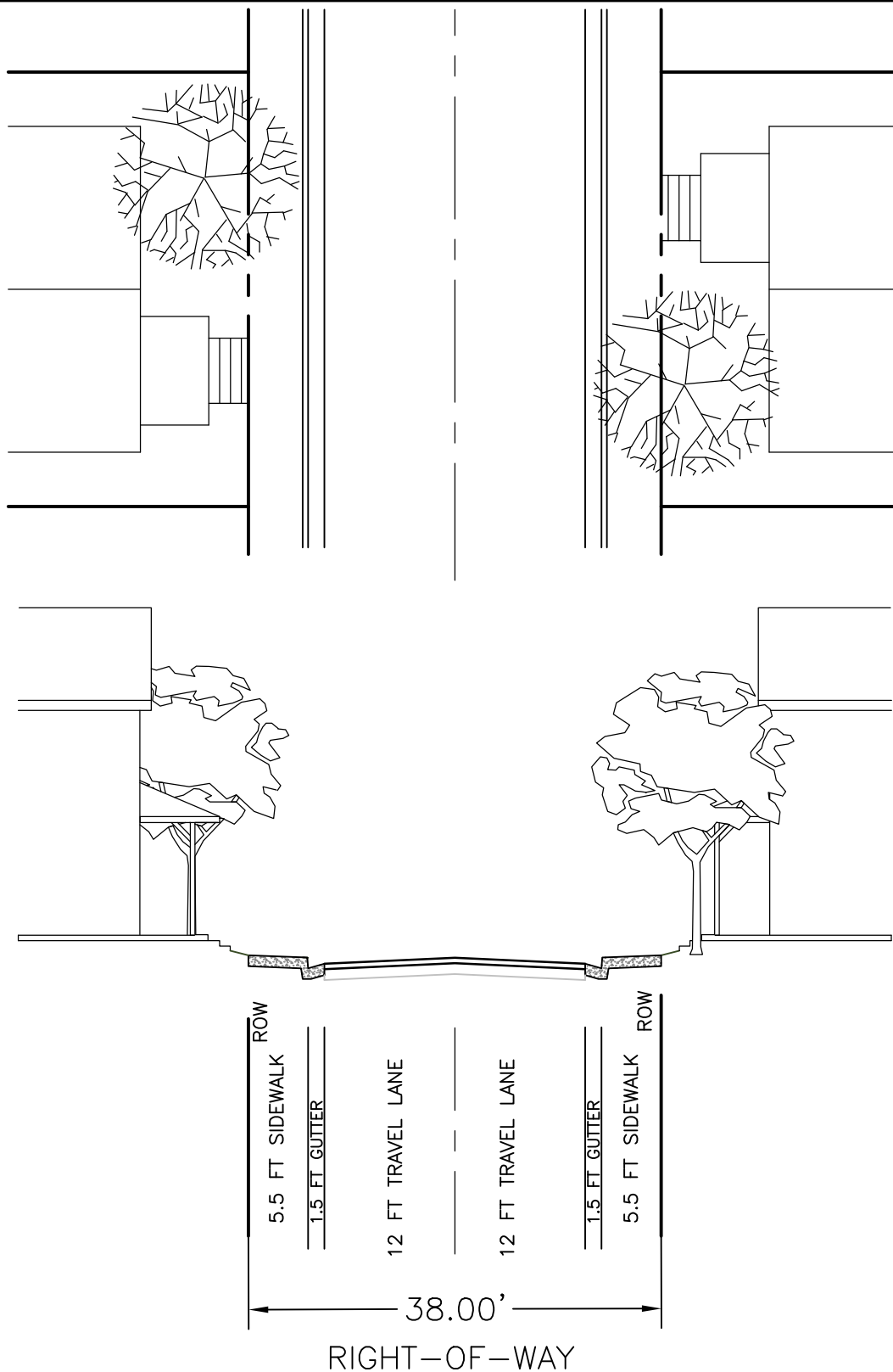
LOCAL RESIDENTIAL STREET ATTACHED WALK 1 SIDE PARKING 40 FT ROW

DATE: 09/12/2024

SCALE: NOT TO SCALE

DETAIL

800-04



NOTES:

1. ACCEPTABLE FOR ALL RESIDENTIAL STREETS.
2. ALLEYS REQUIRED FOR ADEQUATE UTILITY CORRIDORS.
3. POSTED AND DESIGN FOR 25 MPH TRAFFIC SPEED.



LOCAL RESIDENTIAL STREET ATTACHED WALK NO PARKING 38 FT ROW

DATE: 03/28/2024

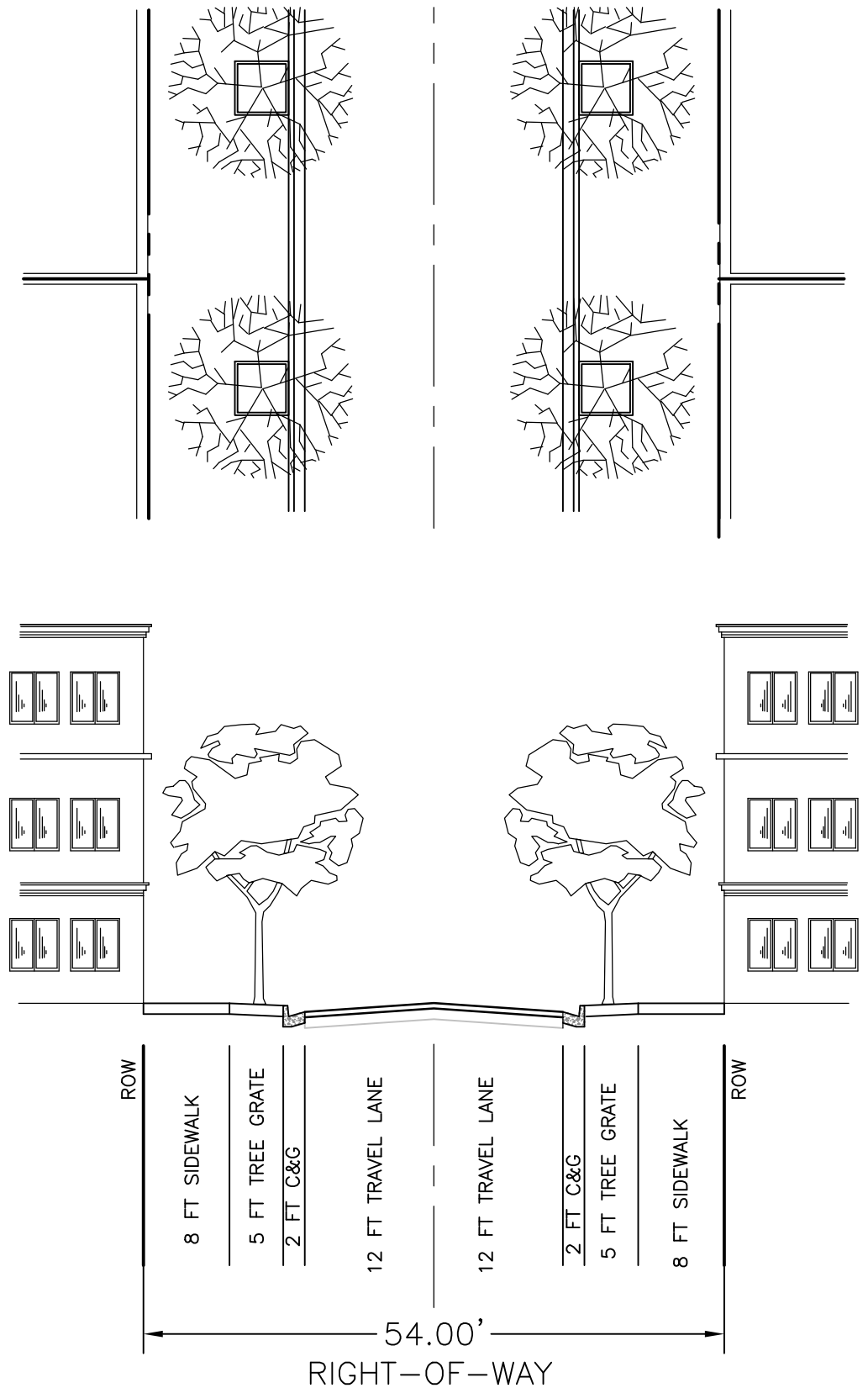
SCALE: NOT TO SCALE

DETAIL

800-05

NOTES:

1. INTENDED FOR DOWNTOWN AND URBAN DEVELOPMENT. GENERALLY MULTIFAMILY AND MIXED USE WITH ZERO LOT LINE SET BACKS.
2. ALLEY'S AND ADDITIONAL OFF STREET PARKING REQUIRED.
3. SECTION CAN BE EXPANDED TO 34 FEET FL TO FL TO ADD ON STREET PARKING (7 FT WIDE PARALLEL PARKING).
4. POSTED AND DESIGN FOR 25 MPH TRAFFIC SPEED.
5. TREE GRATES TO MEET CITY STANDARD 5 FT X 5 FT FRAME. ALL TREE GRATES PROVIDED DRIP IRRIGATION FROM ADJACENT PROPERTY.
6. ZERO SETBACK BUILDINGS SHALL PROVIDE ACCESS RECESSED FROM THE ROW A MINIMUM OF 5 FEET. NO PORTION OF THE FOUNDATION SYSTEM MAY EXTEND INTO THE ROW. AWNING AND OTHER OVERHANG FROM BUILDINGS A MINIMUM OF 14 FEET ABOVE ADJACENT GRADE MAY BE ALLOWED THROUGH THE USE OF PUBLIC PLACES PERMIT PROCESS.



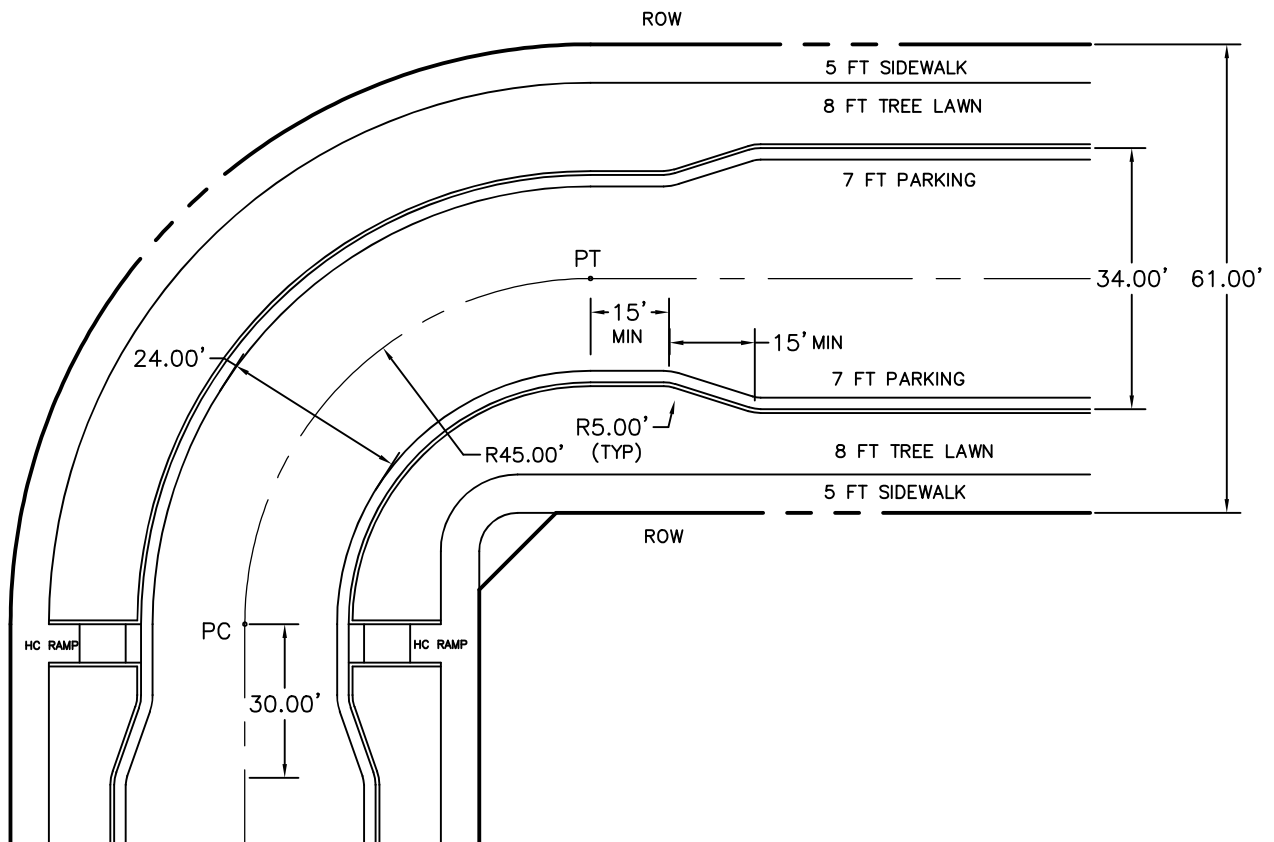
URBAN RESIDENTIAL STREET NO PARKING 54 FT ROW

DETAIL

800-06

DATE: 11/13/2024

SCALE: NOT TO SCALE



NOTES:

1. CURVE MAY BE POSTED 20 MPH.
2. NO DRIVE ACCESS TO STREET WITHIN THE CURVE.
3. IF PEDESTRIAN CROSSING IS NECESSARY, IT SHALL BE LOCATED OUTSIDE OF THE CURVE AND PARKING AREA.



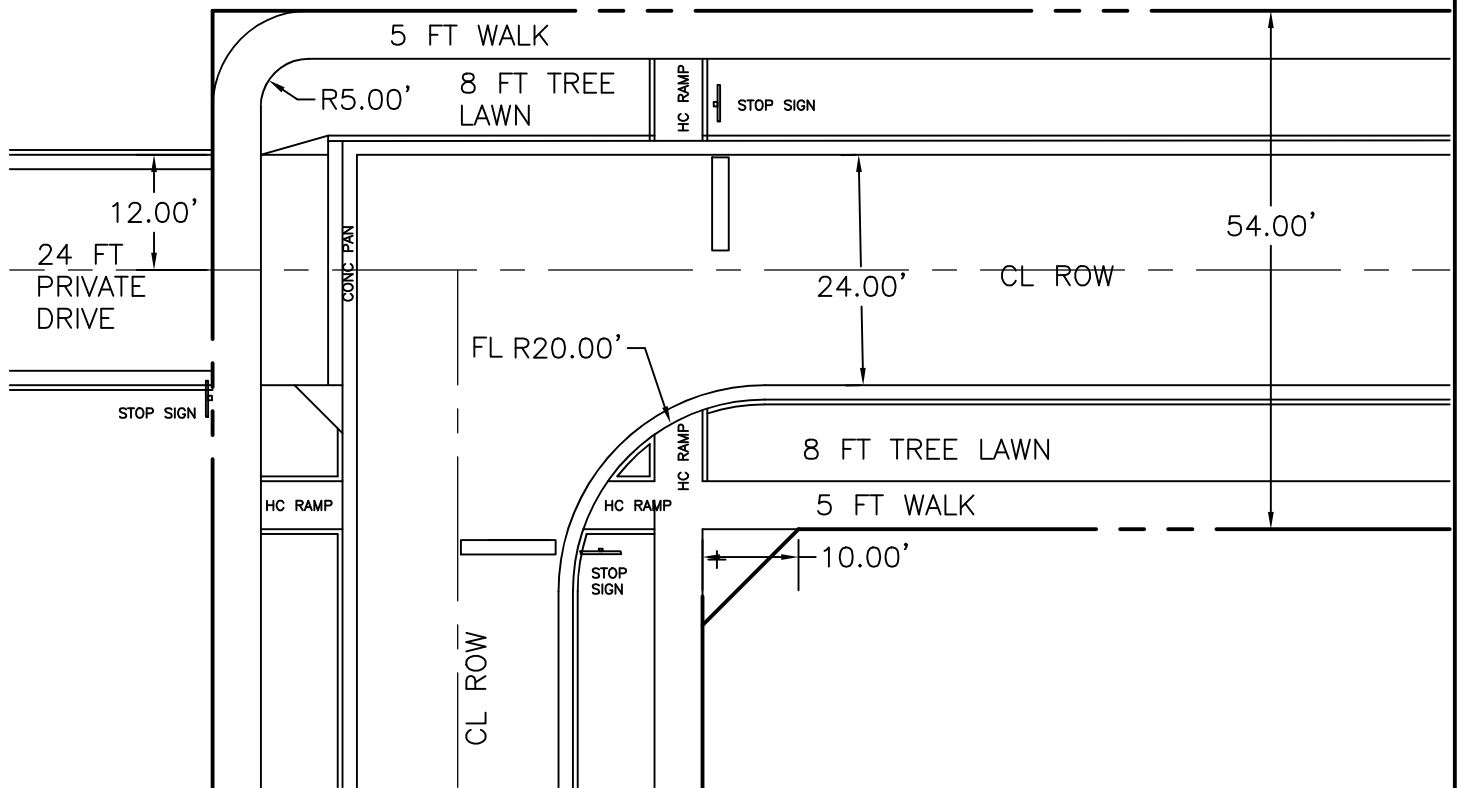
SMALL RADIUS CURVE 45 FT CL RADIUS 61 FT ROW

DETAIL

800-07

DATE: 09/12/2024

SCALE: NOT TO SCALE



NOTES:

1. PRIVATE DRIVE MAY BE FOR COMMERCIAL USES OR MULTIFAMILY PARKING LOT. NO SINGLE FAMILY RESIDENTIAL ACCESS.
2. THE DRIVE SHALL BE CENTERED ON THE CENTER OF THE STREET ROW.
3. NO PARKING WITHIN 30 FEET OF INTERSECTION.
4. STOP SIGNS AND STOP BARS SHALL BE PLACED BEHIND THE HC RAMPS AND CROSSING LOCATIONS.
5. HC RAMPS AND CROSSINGS SHALL MEET MINIMUM ADA AND DESIGN STANDARDS SECTION 200.
6. GRADING OF THE INTERSECTION SHALL PROVIDE FOR DRAINAGE SO THAT PONDING WILL NOT OCCUR.



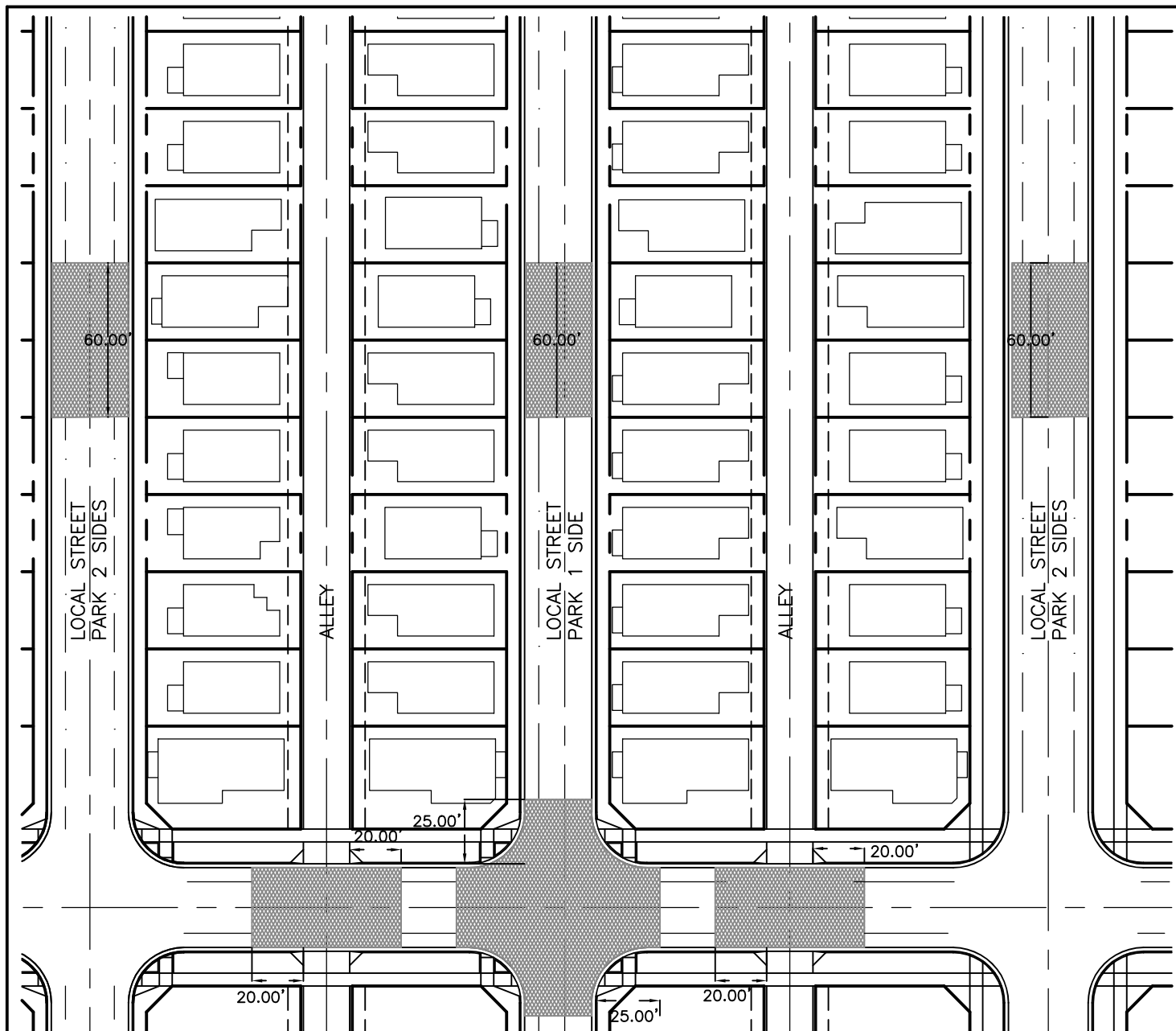
TEE INTERSECTION
W/ PRIVATE DRIVE
54 FT ROW

DETAIL

800-08

DATE: 09/12/2024

SCALE: NOT TO SCALE



NOTES:

1. EMERGENCY ACCESS AREA SHALL BE PROVIDED AT THE MID-POINT OF A BLOCK. IT SHALL BE SIGNED NO PARKING FIRE LANE.
2. THE AREA SHALL BE A MINIMUM 60 FEET IN LENGTH AND PROVIDE A MINIMUM 26 FEET WIDE AREA FOR EQUIPMENT.
3. AT THE DIRECTION OF THE FIRE MARSHAL, PAVEMENT MAY BE DESIGNED TO SUPPORT OUTRIGGING OF AN AERIAL APPARATUS.
4. NO PARKING SHALL BE ALLOWED WITHIN 15 FEET OF THE ALLEY ROW.
5. AT STREET INTERSECTIONS, PARKING IS NOT ALLOWED WITHIN 20 FEET OF THE CURB RETURN.



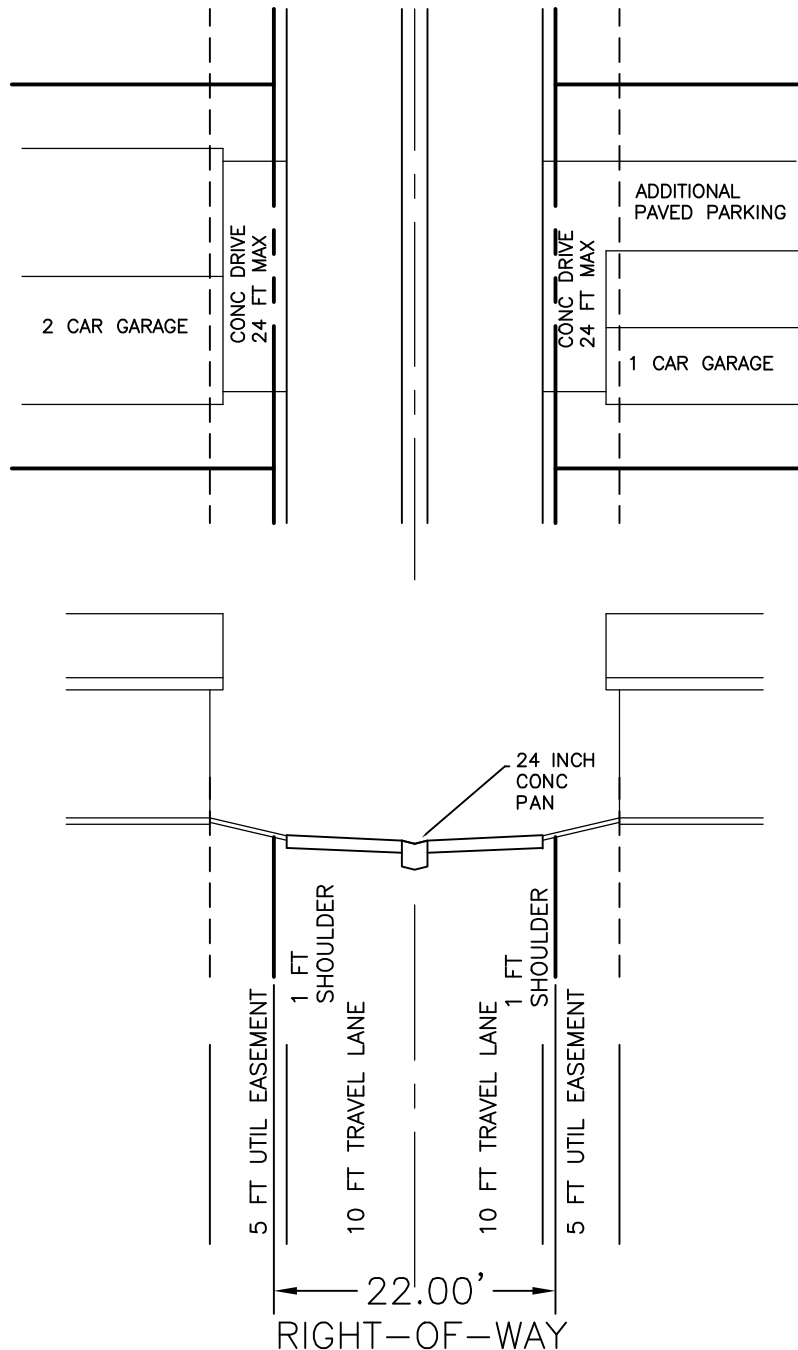
EMERGENCY ACCESS MID-BLOCK AND INTERSECTIONS NO PARKING AREAS

DATE: 11/13/2024

SCALE: NOT TO SCALE

DETAIL

800-09



NOTES:

1. ALLEY SHALL BE PAVED 20 FEET WIDE EITHER IN CONCRETE OR ASPHALT. IF ASPHALT, A 24 INCH WIDE CONCRETE PAN SHALL BE PROVIDED, CENTERED ON THE ALLEY SECTION.
2. PAVEMENT SHALL SLOPE MIN. 2% TO MAX 4% FROM THE EDGE OF ALLEY TO THE CENTER OR EDGE OF PAN.
3. A MINIMUM 5 FT WIDE UTILITY EASEMENT SHALL BE PROVIDED ON EACH SIDE OF THE ALLEY. THE EASEMENT MAY BE REQUIRED TO BE DEDICATED AS A GENERAL UTILITY EASEMENT OR AS AN EXCLUSIVE LPC/NEXTLIGHT EASEMENT DEPENDING UPON THE DESIGN OF THE PROJECT.



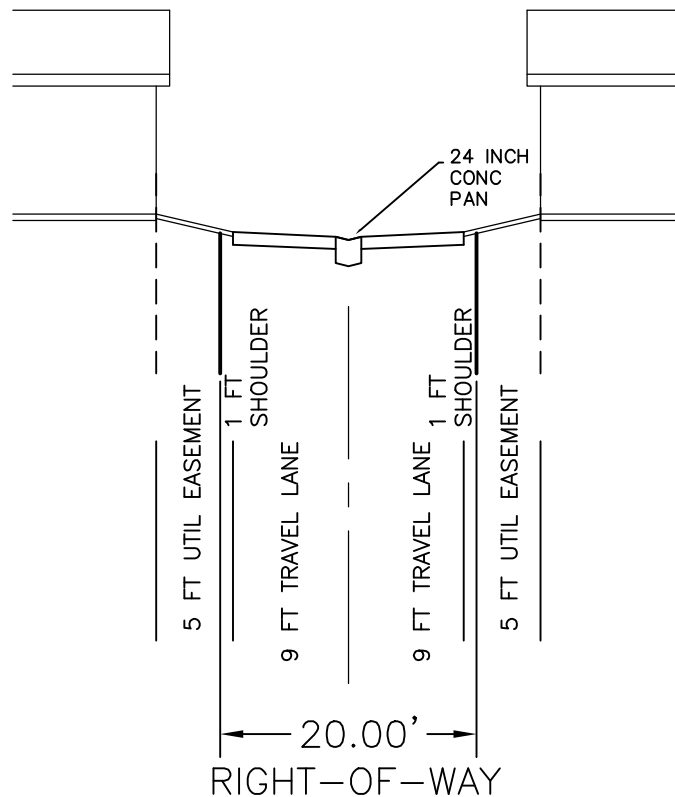
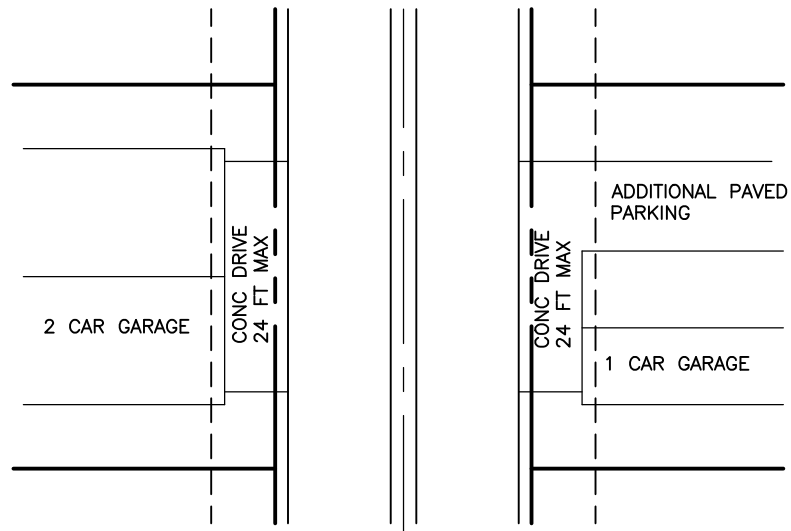
ALLEY SECTION
20 FT PAVEMENT
22 FT ROW

DETAIL

800-10

DATE: 11/13/2024

SCALE: NOT TO SCALE



NOTES:

1. ALLEY SHALL BE PAVED 18 FEET WIDE EITHER IN CONCRETE OR ASPHALT. IF ASPHALT, A 24 INCH WIDE CONCRETE PAN SHALL BE PROVIDED, CENTERED ON THE ALLEY SECTION.
2. PAVEMENT SHALL SLOPE MIN. 2% TO MAX 4% FROM THE EDGE OF ALLEY TO THE CENTER OR EDGE OF PAN.
3. A MINIMUM 5 FT WIDE UTILITY EASEMENT SHALL BE PROVIDED ON EACH SIDE OF THE ALLEY. THE EASEMENT MAY BE REQUIRED TO BE DEDICATED AS A GENERAL UTILITY EASEMENT OR AS AN EXCLUSIVE LPC/NEXTLIGHT EASEMENT DEPENDING UPON THE DESIGN OF THE PROJECT.



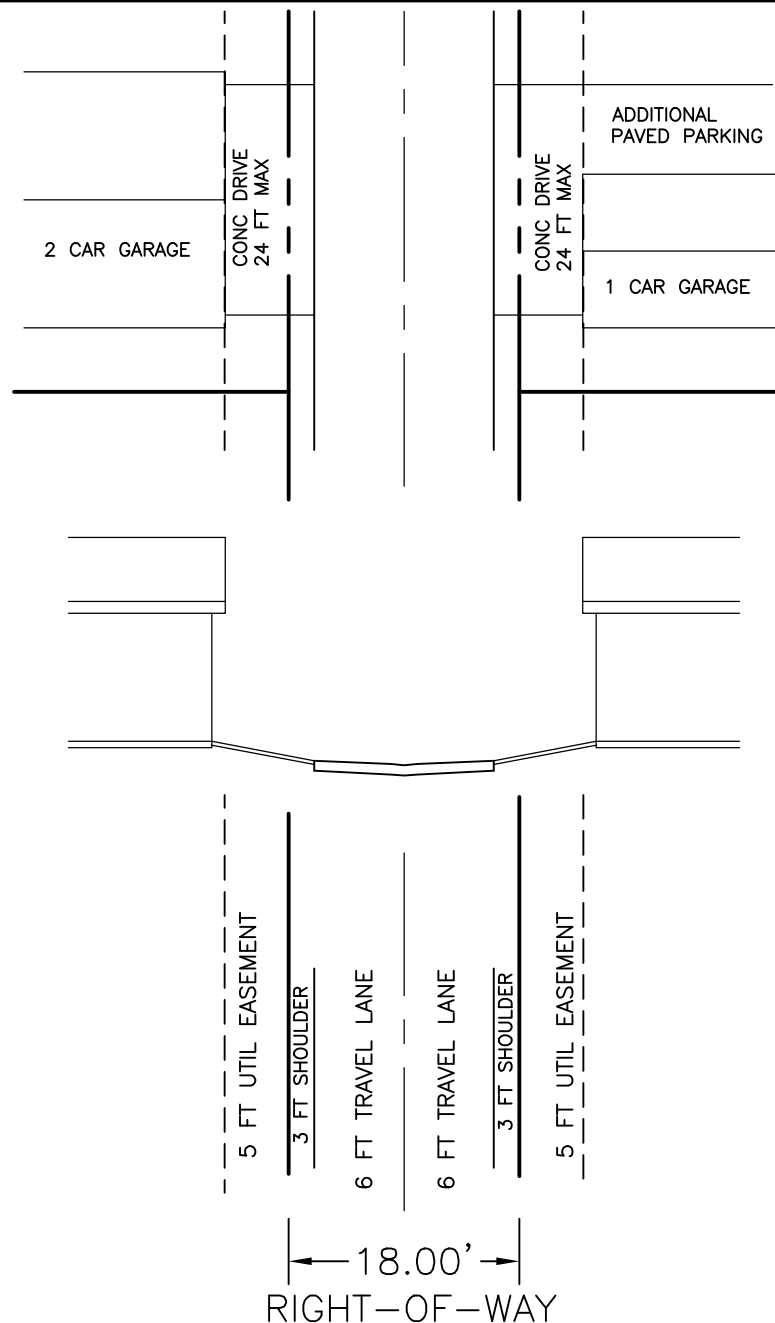
ALLEY SECTION 18 FT PAVEMENT 20 FT ROW

DETAIL

800-11

DATE: 11/13/2024

SCALE: NOT TO SCALE



NOTES:

1. ALLEY SHALL EXTEND FROM ONE INTERSECTING STREET ROW TO ANOTHER WITH NO CURVES AND NO INTERSECTIONS WITH OTHER ALLEYS.
2. PROPERTY SHALL HAVE ACCESS TO A FULL STREET SECTION ON THE FRONT OF THE LOT (NOT FRONTING A GREEN SPACE OR OUTLOT).
3. ALLEY SHALL BE CONCRETE PAVED 12 FEET WIDE WITH A 3 FT GRAVEL SHOULDER.
4. PAVEMENT SHALL SLOPE MIN 2% TO MAX 4% FROM THE EDGE OF ALLEY TO THE CENTER.
5. A MINIMUM 5 FT WIDE UTILITY EASEMENT SHALL BE PROVIDED ON EACH SIDE OF THE ALLEY. THE EASEMENT MAY BE REQUIRED TO BE DEDICATED AS A GENERAL UTILITY EASEMENT OR AS AN EXCLUSIVE LPC/NEXTLIGHT EASEMENT DEPENDING UPON THE DESIGN OF THE PROJECT.
6. THE CITY ENGINEER MAY REQUIRE A WIDER ALLEY RIGHT OF WAY TO ACCOMMODATE EMERGENCY ACCESS OR ADEQUATE UTILITY CORRIDORS.
7. NO BUILDING EVES MAY OVERHANG THE EASEMENT.



ALLEY SECTION

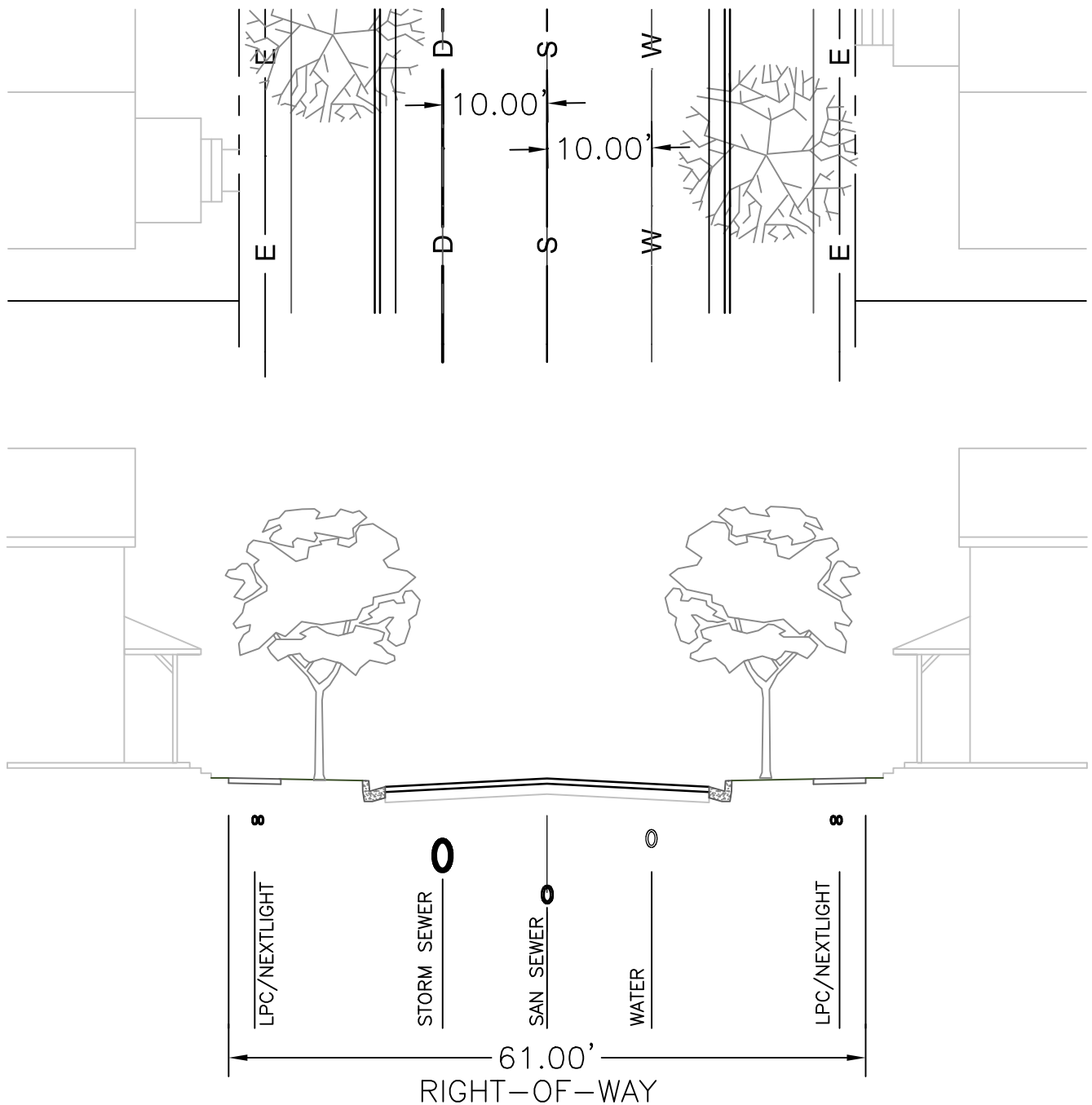
MIN PAVING 12 FT
18 FT ROW

DETAIL

800-12

DATE: 11/13/2024

SCALE: NOT TO SCALE



NOTES:

1. WATER, SAN SEWER AND STORM SEWER SHALL BE PLACED MINIMUM 10 FT FROM CL OF PIPE TO CL OF PIPE. SAN SEWER SHALL BE PLACED AT THE CENTER OF THE ROW.
2. FOR LPC DESIGN AND SERVICE, ELECTRICAL CONDUITS SHALL BE CENTERED ON THE WALK WITH POCKET EASEMENTS PROVIDED ON PRIVATE PROPERTY FOR JUNCTION BOXES, TRANSFORMERS AND OTHER APPURTENANCES. BASED ON SITE DESIGN AND BUILDING ENVELOPES, LPC AND NEXTLIGHT FACILITIES MAY BE PLACED IN THE TREELAWN IF SEPARATION AND PROTECTION REQUIREMENTS ARE MET.
3. ACCEPTABLE FOR STORM SEWER 24-IN DIAMETER AND LESS.
4. FOR STORM SEWER GREATER THAN 24-IN DIAM, THE SANITARY SEWER SHALL BE PLACED IN ALLEY TO MAINTAIN REQUIRED SEPARATION.



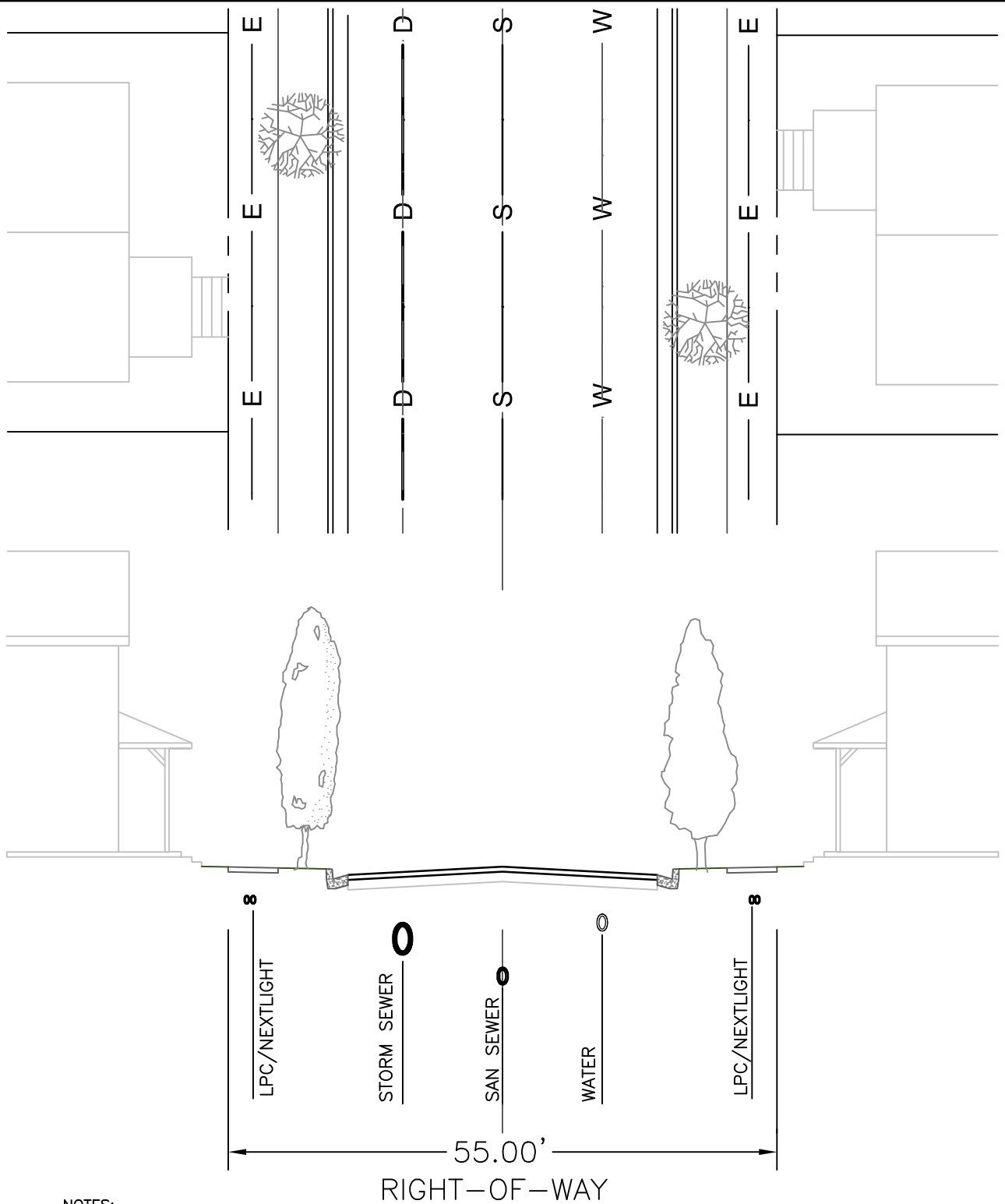
TYPICAL UTILITY LAYOUT DETACHED WALK W/ PARKING 61 FT ROW

DATE: 10/15/2024

SCALE: NTS

DETAIL

800-21



NOTES:

1. WATER, SAN SEWER AND STORM SEWER SHALL BE PLACED MINIMUM 10 FT FROM CL OF PIPE TO CL OF PIPE.
2. FOR LPC DESIGN AND SERVICE, ELECTRICAL CONDUITS SHALL BE CENTERED ON THE WALK WITH POCKET EASEMENTS PROVIDED ON PRIVATE PROPERTY FOR JUNCTION BOXES, TRANSFORMERS AND OTHER APPURTENANCES. LPC/NEXTLIGHT FACILITIES CANNOT BE PLACED IN THE TREELAWN.
3. ACCEPTABLE FOR STORM SEWER 24-IN DIAMETER AND LESS.
4. FOR STORM GREATER THAN 24-IN DIAM, PLACE SANITARY SEWER IN ALLEY TO MAINTAIN SEPARATION REQUIREMENTS.



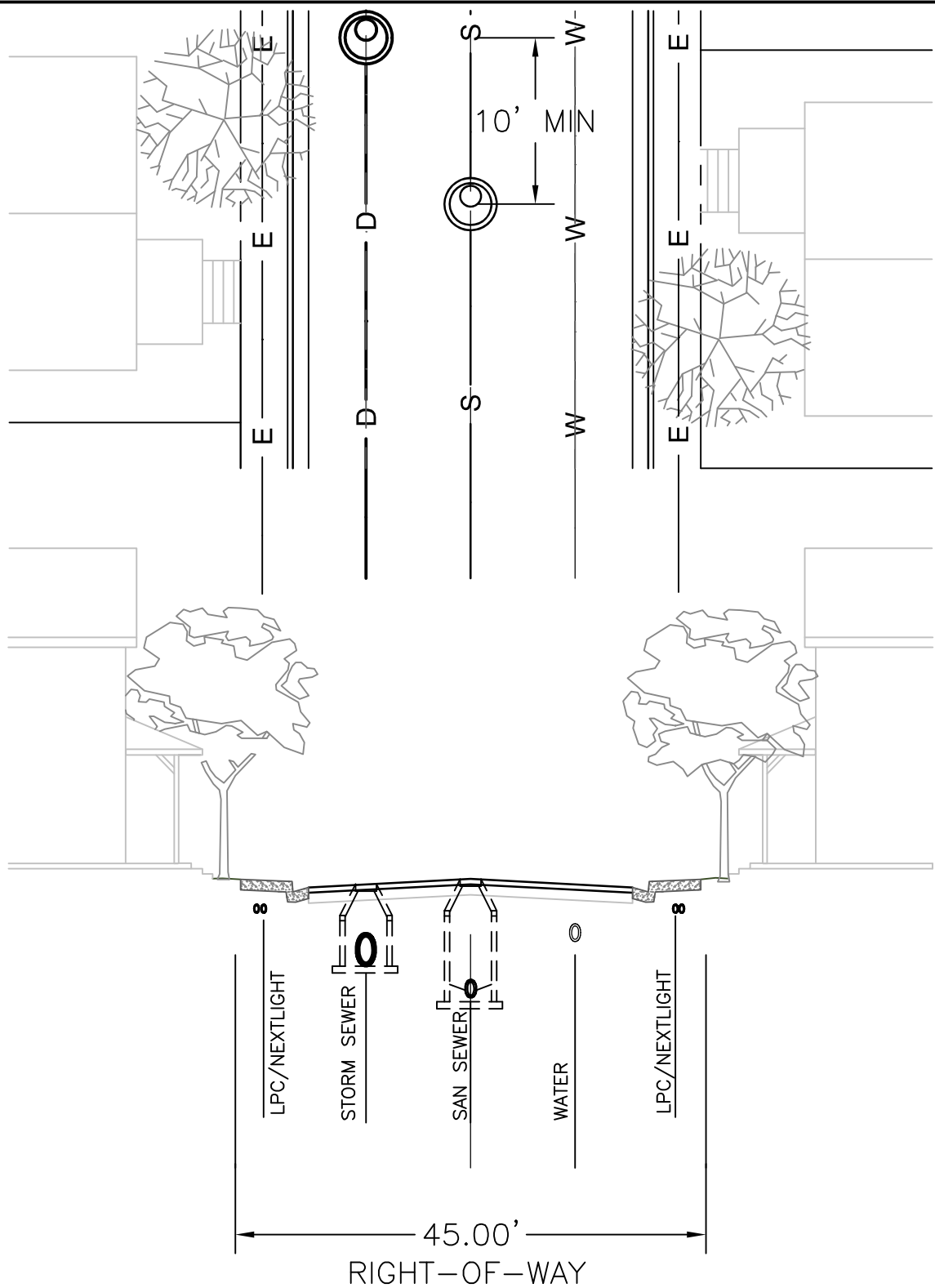
TYPICAL UTILITY LAYOUT DETACHED WALK W/ PARKING 55 FT ROW

DATE: 10/15/2024

SCALE: NTS

DETAIL

800-22



NOTES:

1. ACCEPTABLE FOR STORMSEWER 24 IN DIAMETER AND LESS.
2. SANITARY SEWER MH SHALL BE PLACED A MIN OF 10 FT LINEARLY FROM ANY STORM SEWER MH. NO MH SHALL BE PLACED IMMEDIATELY ADJACENT TO ANY OTHER MH.
3. FOR LPC DESIGN AND SERVICE, EITHER PROVIDE POCKET EASEMENTS BEHIND ROW FOR ELECTRIC/WATER, OR PLACE LPC/NEXTLIGHT INFRASTRUCTURE IN 5-FT EASEMENT ALONG ALLEY.
4. FOR STORM GREATER THAN 24 IN DIAM, PLACE SANITARY SEWER IN ALLEY.



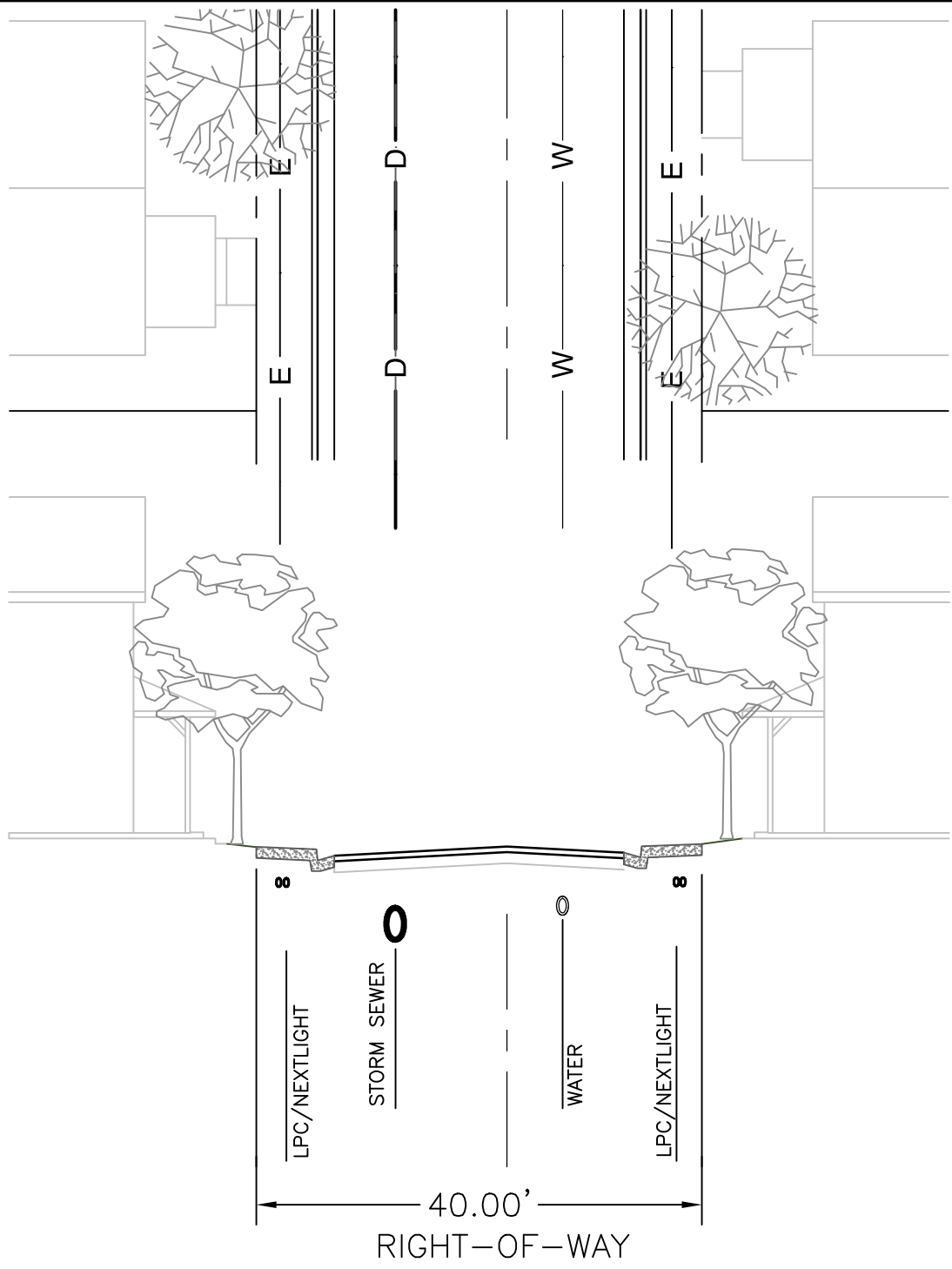
TYPICAL UTILITY LAYOUT ATTACHED WALK W/ PARKING 45 FT ROW

DATE: 10/15/2024

SCALE: NTS

DETAIL

800-23



- NOTES:
1. SANITARY SEWER MAINS SHALL BE PLACED IN ALLEY.
 2. FOR LPC DESIGN AND SERVICE, EITHER PROVIDE POCKET EASEMENTS BEHIND ROW FOR ELECTRIC/WATER, OR PLACE LPC/NEXTLIGHT INFRASTRUCTURE IN 5-FT EASEMENT ALONG ALLEY. ADDITIONAL EASEMENTS FOR STREET LIGHTS MAY BE REQUIRED.



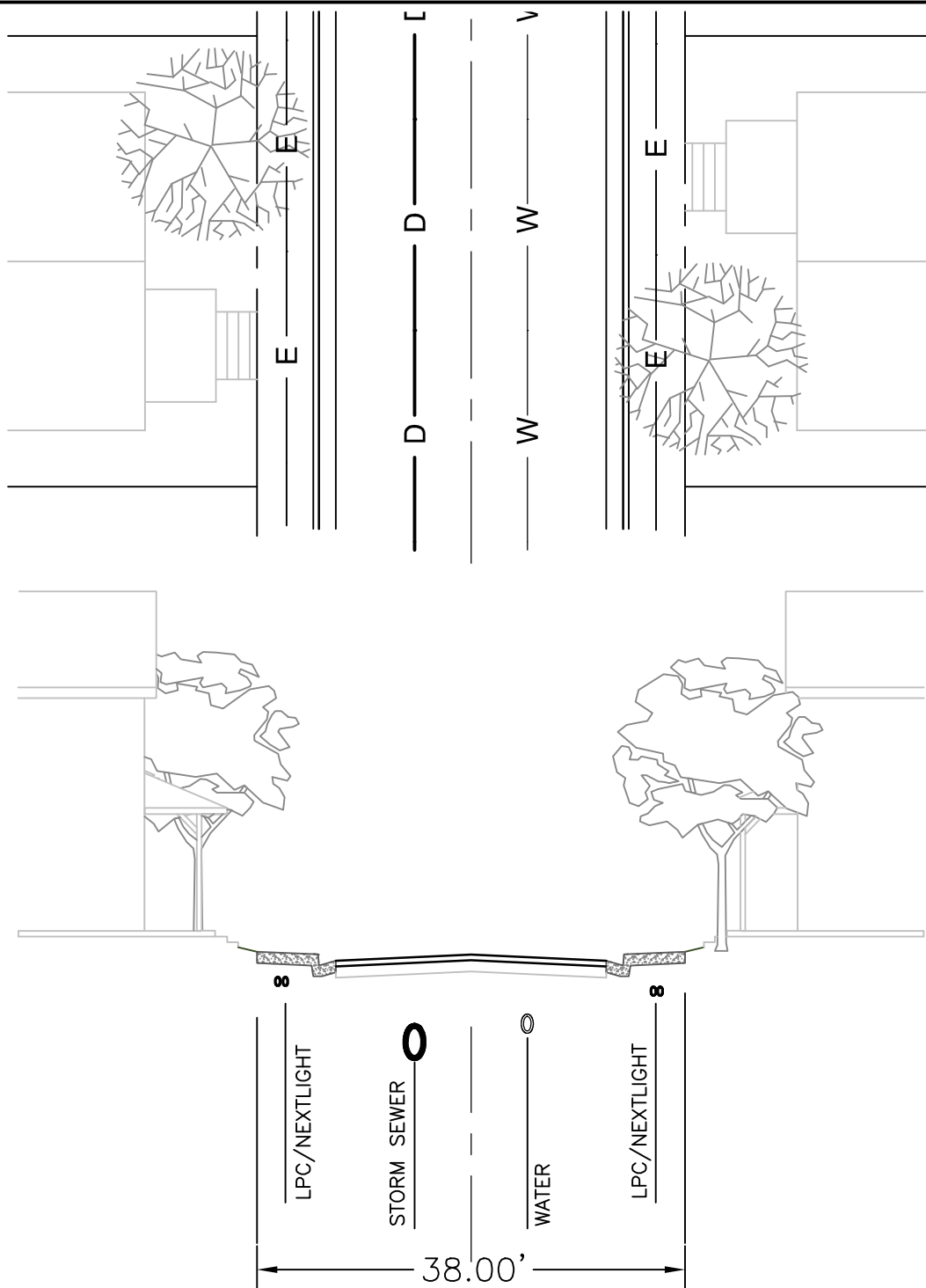
TYPICAL UTILITY LAYOUT ATTACHED WALK PARKING ONE SIDE 40 FT ROW

DATE: 10/15/2024

SCALE: NTS

DETAIL

800-24



NOTES:

1. SANITARY SEWER MAINS PLACED IN ALLEY.
2. FOR LPC DESIGN AND SERVICE, EITHER PROVIDE POCKET EASEMENTS BEHIND ROW FOR ELECTRIC/WATER, OR PLACE LPC/NEXTLIGHT INFRASTRUCTURE IN 5-FT EASEMENT ALONG ALLEY. ADDITIONAL EASEMENTS FOR STREET LIGHTS MAY BE REQUIRED.



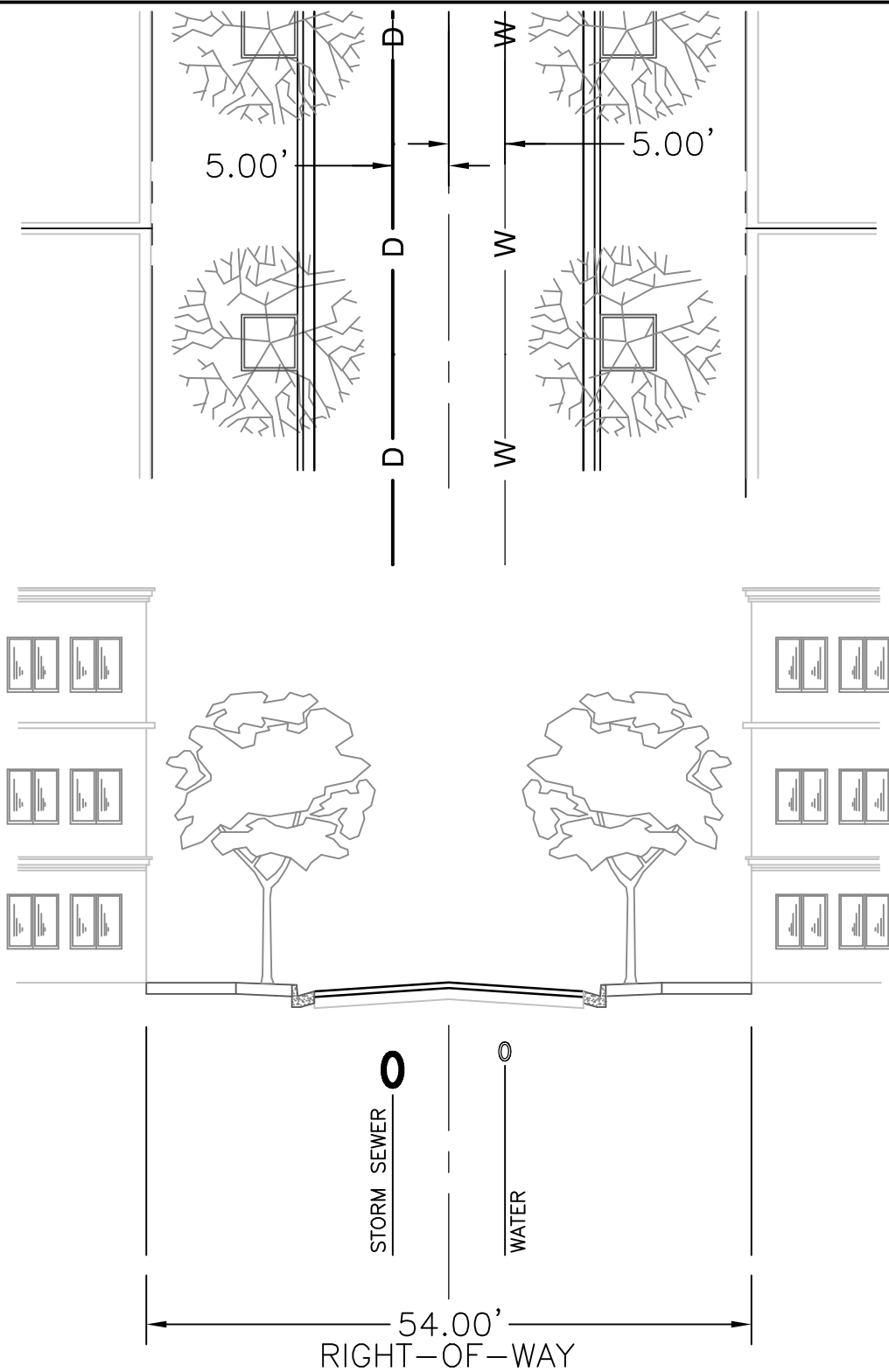
TYPICAL UTILITY LAYOUT ATTACHED WALK NO PARKING 35 FT ROW

DATE: 10/15/2024

SCALE: NTS

DETAIL

800-25



NOTES:

1. SEWER SERVICE FROM ALLEY, NO SANITARY SEWER MAIN IN STREET.
2. WATER METER GENERALLY INTERNAL TO BUILDING, WATER METER VAULTS MAY BE PLACED IN THE SIDEWALK WITHIN 5 FT OF THE BUILDING FACE AS DETERMINED BY THE CITY ENGINEER. ALL OTHER WATER SERVICE REQUIREMENTS MUST BE MET.
3. ELECTRICAL TRANSMISSION LINES AND TRANSFORMERS TO BE PLACED IN ALLEY OR IN EASEMENTS WITHIN THE PRIVATE PROPERTY.



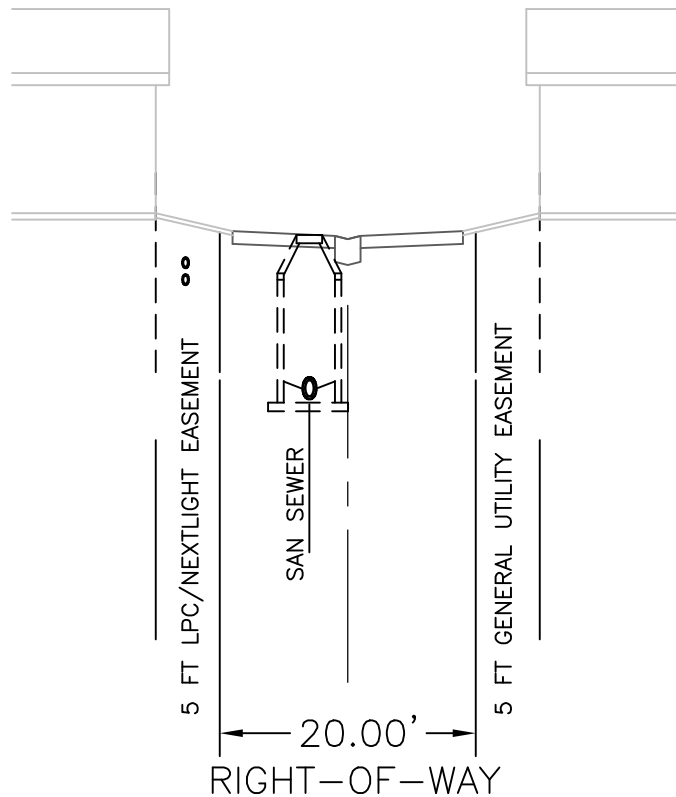
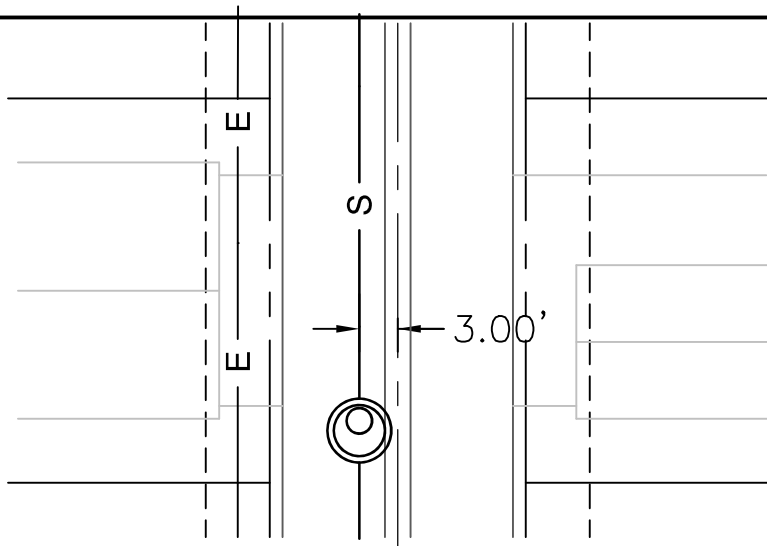
TYPICAL UTILITY LAYOUT URBAN STREET SECTION 54 FT ROW

DATE: 10/15/2024

SCALE: NTS

DETAIL

800-26



NOTES:

1. SAN SEWER SHALL BE PLACED A MIN OF 3 FT FROM CL OF ALLEY. HORIZ LOCATION SHALL PROVIDE A MIN 10 FT FROM ANY STRUCTURE.
2. THE ECCENTRIC CONE SHALL BE PLACED SO THAT THE MH DOES NOT INTERFERE WITH THE CONC PAN. MH OPENING SHALL GENERALLY BE OVER THE UPSTREAM INCOMING PIPE.
3. CLEANOUT ON SAN SEWER SERVICE SHALL BE PLACED WITHIN 2 FT OF THE FOUNDATION OF ANY STRUCTURE THE SERVICE PASSES UNDER.
4. DRY UTILITIES SHALL BE PLACED IN THE 5 FT EASEMENTS OUTSIDE OF ROW.



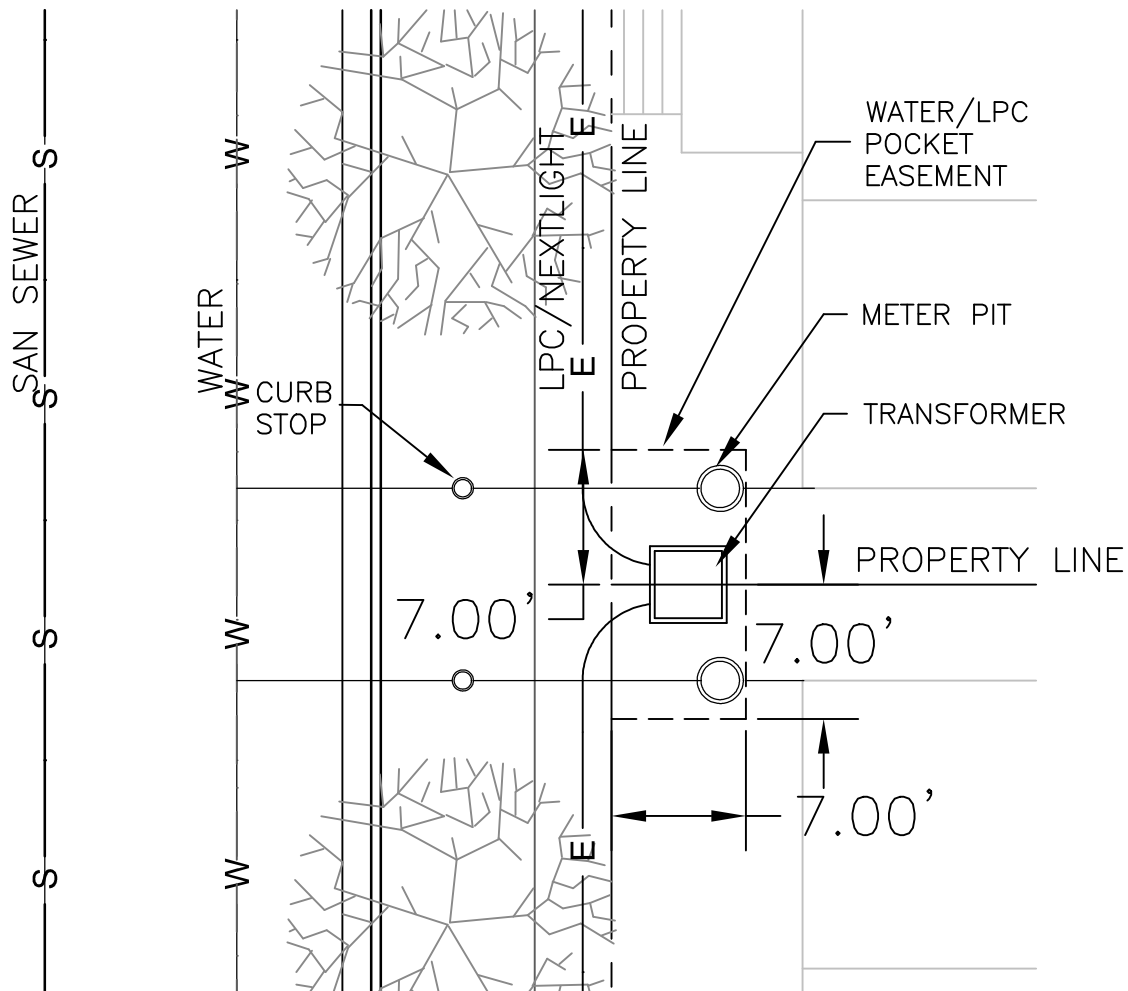
ALLEY UTILITY LAYOUT 20 FT ROW ASPHALT ALLEY W/ CONC PAN

DETAIL

800-27

DATE: 00/00/00

SCALE: NTS



NOTES:

1. FOR AREA CONTAINING A TRANSFORMER AND WATER METERS, A POCKET EASEMENT SHALL BE GRANTED BEHIND RIGHT OF WAY A MINIMUM OF 7 FEET WIDE AND A MINIMUM OF SEVEN FROM THE COMMON LOT LINE BETWEEN BUILDINGS.
2. WATER METER SHALL BE LOCATED FIVE FEET FROM ADJACENT COMMON LOT LINE AND SIX FEET FROM RIGHT OF WAY.
3. THE CURB STOP SHALL BE CENTERED IN THE TREE LAWN WITHIN RIGHT OF WAY.
4. THE TRANSFORMER SHALL BE PLACED A MINIMUM OF TWO FEET FROM THE SIDEWALK AND RIGHT OF WAY AND CENTERED ON THE COMMON LOT LINE.
5. SEE SECTION 500 FOR ADDITIONAL WATER LINE AND MEETER PLACEMENT.
6. SEE SECTION 700 FOR ADDITIONAL TRANSFORMER AND J-BOX LOCATIONS.



UTILITY EASEMENTS STREETS WITH TREE LAWN POCKET EASEMENT FRONT LOT

DETAIL

800-28

DATE: 10/15/2024

SCALE: NTS