# RIGHT-OF-WAY (ROW) PLAN ROUTING MANUAL

March 18, 2025



DEPARTMENT OF PUBLIC SERVICE
DEPARTMENT OF PUBLIC UTILITIES
DEPARTMENT OF RECREATION AND PARKS
DEPARTMENT OF TECHNOLOGY

#### **PREFACE**

The standards and procedures described in this document are designed to achieve efficiencies in the creation, and submittal, of drawings, and revisions, to the City of Columbus to support review, and approval, of ROW Permits pertaining to utility facility projects. The City of Columbus has developed this submittal guide with the intent of establishing a comprehensive reference document to support that goal.

This is a revision to the version of the ROW Plan Routing Manual issued in 2021. The City will accept any comments and suggestions about possible changes to these standards.

Those making such suggestions are invited to submit them to the Department of Public Service Division of Data Solutions and Compliance – Right of Way Permit Section email at ColsPermits@columbus.gov

Please make comments and suggested changes as specific as possible.

The City will reissue new versions of this manual as conditions warrant.

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# SECTION 1 INTRODUCTION

# 1. Overall Purpose and Intent

The City of Columbus strives to provide quality and timely review of plans submitted for utility work within its corporation limits. Plan review is essential for new development and various construction projects in the public rights-of-way.

The Right-of-Way (ROW) Plan Routing Manual is a guideline for companies proposing to construct facilities in the City's rights-of-way.

All work must comply with City Code, Chapter 903, Standard Drawing 1441, 2301, 2319, 2332, 2301, the City Construction and Material Specifications (latest edition) (CMSC) and rules and regulations promulgated by the Director of Public Service for all work in the City of Columbus.

#### 2. Chapter 903 Rule

All public service agencies, companies, corporations, utility companies, and individuals wishing to dig into, under, open holes, ditches, or trenches in any sidewalk, roadway pavement, or public right-of-way or to occupy the right-of-way of any street, alley, or public way of the City of Columbus for any purpose defined under City Code chapter 903 shall obtain the prior consent of the Director of Public Service and/or their designee. Such consent shall be obtained in writing as set forth in the rules of this regulation.

# SECTION 2 ONLINE APPLICATION SUBMITTAL PROCESS / PLAN ROUTING FORM:

#### 1. Citizen Access Portal

All ROW permits are shall be submitted to the Department of Public Service Permit Section by way of the Citizen Access Portal:

## City of Columbus - Online Portal

Applicants shall include an updated plan routing form along with a set of design drawings of the proposed work. The Plan Routing Form is available at:

# Get a Right of Way Permit - City of Columbus, Ohio

- Provide single PDF of full size permit drawing.
- PDF shall be flattened and the page labels shall match the printed page numbers.
- The PDF will follow the CAD standards, as outlined by the Division of Design and Construction, available at: City of Columbus CAD Standards

# 2. Permit Reference Number and Application Status

Upon submission, a permit reference number is generated. Permit staff will review each submittal for completeness of required information according to the manual, and will identify each City department involved in the plan review process. Specific division information can be found on the online portal by utilizing the permit reference number.

In addition to email updates, the applicant will be able to view updates to the processing status through the online portal. The 'Processing Status' tab in the dropdown menu highlights the divisions that are actively reviewing, requiring revisions, or have approved the request.

#### 3. Revisions

In the case of revisions, the reviewer will upload comments or redlined plans, which the applicant can download should it be required. Once the revised drawings are complete, the applicant shall:

- Upload the revised plans through the portal:
  - 1. In the portal, navigate to the **Record Info** drop down list and select **Attachments**.
  - 2. Select the ADD button and then select the file you wish to upload.
  - 3. Select **ROW Plans** from the **Type** menu
  - 4. Enter a description of your upload and select SAVE.
- Contact any/or all reviewers at <a href="mailto:ROWPermitReviewers@columbus.gov">ROWPermitReviewers@columbus.gov</a> and inform them that revisions have been made that address any redline markups.

# SECTION 3 PLAN REVIEW AND APPROVAL

# 1. Approval Updates

The applicant will receive emails with updates informing them of application status changes when the reviewer has performed their review. The applicant shall be responsible to:

• Check the review status to verify approvals from each city department identified on their permit plan routing form and in the processing status of the online portal.

# 2. Review and Processing Timelines

Each city department identified as required for review will have twenty (20) business days from the date of initial review, by ROW Permit Section or Utility Coordinator, to complete the initial review.

A plan drawing rejected for any reason, shall be resubmitted with the necessary changes, uploaded into the portal, and labeled as revised drawing with the date.

- Ten (10) business days will be allowed for all re-submittals to department(s) for approval.
- Permit reviews cannot be due on a weekend or holiday.
- Due dates should be set for the next business day.

## 3. Plans Requiring Relocation

A proposed drawing, rejected for any reason, resulting in the proposed work to be relocated, shall be resubmitted for review, to **all** identified City departments, including department(s) granting initial approval.

- The new revised drawings will need to choose ROW Plans under category and this will email reviewers automatically.
  - See Section 2.3 Revisions for instructions on uploading documents in the portal.

Once the drawings are uploaded to the portal the Applicant shall:

- Email all reviewers and notify of plan upload.
- Provide a brief description of the corrections made in the body of the email and include this info (or something similar): "Revisions have been uploaded to Accela for EP-##-#####, addressing MOT & UT's rejections, and Water's approval with comments"

# 4. Plan Approval Verification

To view your plan approval status navigate to the **Record Info** drop down list in the Citizen Access Portal and select **Processing Status**. A checkmark icon will appear next to all City Departments relevant to the project that have completed their review and granted approval. An hourglass icon will appear next to All City Departments that are still in the review process.

When a plan is approved for permit issuance a check mark icon will appear next to all City departments relevant to the project, and an hourglass icon will be shown next to Plan Coordination.

# 5. Permit Issuance Request

To request a permit to be issued the Applicant shall:

- Verify plan approval in the Citizen Access Portal
- Upload the Final Approved Plans in the Citizen Access Portal and identify them as "Final Approved Plans"

See Section 2.3 Revisions for instructions on uploading documents in the portal.

The Applicant shall then email the ROW Permit Section at <a href="mailto:ColsPermits@columbus.gov">ColsPermits@columbus.gov</a> and:

- Request the permit to be issued
- Provide the approximate start date.
- Provide complete contact information for contractors conducting the work.

A permit will be issued with a start date no sooner than 48 hours after start date submitted in the email to the ROW Permit Section with the condition that final approved plans have been uploaded into the portal and identified as "**Final Approved Plans**".

The balance due on the permit, including any inspection fees, or deposits that the plans deem required must be paid before issuance will be approved.

Upon approval of the plan, the applicant has 180 days from the last signature date on to submit the email to the Permit Section requesting the permit be issued.

If 180 days has elapsed, the applicant may be required to resubmit a new online application / plan routing form and a new set of plan drawings for approval.

# SECTION 4 PLAN DESIGN REQUIREMENTS

#### 1. OHIO 811 Requirement

Developers, designers, engineers, consultants etc., who create and/or submit drawings or plans for review by the City of Columbus, shall adhere to the provisions in the Ohio Revised Code, specifically 3781.27 and 153.64, that require those parties to submit a Design notification to the protection service.

 A Design notification may be submitted to OHIO811 by calling 811, 1-800-362-2764 or by utilizing the i-dig remote ticket entry program. More information can be found at www.OHIO811.org.

Subsequently, the applicant is responsible for showing the vertical and horizontal alignment of all City facilities identified as a part of the above Design notification requirement on their proposed design drawings. If additional information is required the applicant should contact each City department for those details.

# 2. Required Plan Design Criteria

Plan drawings shall be approved based on the information below. If one or more of these items are not reflected on the proposed design drawings, they are subject for rejection. Plan drawings shall include the following basic criteria for submittal:

- 1. Project Title Sheet with a clearly distinguishable Site Location Map This site location map should clearly delineate all proposed work locations and limits, with all street names being clearly legible
- When roadways and/or sidewalks are impacted by proposed construction activities, a
  maintenance of traffic plan (vehicular and pedestrian) is required. This plan shall be
  prepared in accordance with maintenance of traffic standard drawings available within the
  Department of Public Service's web site "Document Library", and/or the Manual of Urban
  Traffic Control devices.
- A north arrow should always be provided and should precisely define the north-south orientation of the drawing. The north arrow should point to the top of the sheet or to the right
- 4. Street, and/or intersection on plans where work is proposed
- 5. The distance to the nearest intersections when there is no intersection included on the proposed plan
- 6. Include all addresses of each parcel in the working zone
- 7. Excavation dimensions (W x L x D)
- 8. Show & label all existing and proposed city utilities, pull boxes, manholes, controller cabinets, trees, poles etc.
- 9. Identify existing pavement markings, signs, signals, traffic conduit, cables, loop detection (TR)
- 10. Include a note on plan requiring the contractor to replace any disturbed pavement marking, lane lines, etc.

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- 11. Proposed work clearly identified (bold, highlight, etc.)
- 12. Do not use "red" for proposed route or call-outs for non-Electrical features. That is reserved for Electric Utility features and redline corrections/revisions.
- 13. Size of proposed pipe, conduit, or cable with proposed depth Clearly identify station breaks when no work is proposed
- 14. Identify limits of required paving per CoC Standard Drawing 1441 on plan sheet (by light shading or hatching)
- 15. Identify specialized pavements on plan sheets (i.e. Bricks, cobbles, granite slabs, etc.)
- 16. Identify specialized sidewalk per type on plan sheet (i.e. Brick, Buff-Wash per CMSC Item 608.031, etc.)
- 17. Distance off of ROW or centerline to outside edge of conduit, pipe, pole or equipment
- 18. Must state on plans: Proposed facilities shall maintain a minimum 3' horizontal and 1' vertical clearance from existing utilities
- 19. Scaled plan and profile view; minimum 1" = 40'. Must display the horizontal and vertical scale on each page
- 20. Include a line type legend and symbols list on the proposed plan
- 21. Push and receiving pits identified with dimensions.
- 22. Must state if plan being submitted is based upon other state or local government project improvement plans and include the project number, contract number, E-Plan, CC plan, purchase order, etc.
- 23. Bore, push, or open cut method of construction must be clearly stated
- 24. Include pole details for proposed poles being placed
- 25. Water & sewer lines to include the construction plan number
- 26. Utility crossings shall be shown installed perpendicular
- 27. The proposed alignment shall maintain a consistent distance from the R/W or center line of roadway, with the intent of minimizing the number of crossings to any City of Columbus owned utilities in the area. If alignment has to vary, please be prepared to indicate why.
- 28. Notes indicating that any contractor performing excavation, including but not limited to disturbing the earth with powered or non-powered equipment, drilling and/or boring, shall cause notice to be given to the Ohio Utilities Protection Service (OUPS) now doing business as OHIO811 by calling 811 or 1-800-362-2764, or online at <a href="https://www.ohio811.org">www.ohio811.org</a> at least 48 hours but not more than 10 working days before excavating.

#### 3. Additional Department Plan Requirements

Each City department that reviews and approves design plans for proposed utility work has established guidelines that may not be included in the required Plan Design Criteria listed above.

- Applicants shall incorporate the following guidelines from each division.
- City plan reviewers reserve the right to amend the requirements based upon the current circumstances for the proposed plan area.

# A) DEPARTMENT OF RECREATION & PARKS

#### **DIVISION OF FORESTRY**

- 1. Any work on or within the Critical Root Zone of a Public Tree is considered an impact to the Public Tree. A Public Tree Plan and Forestry permit from Columbus Recreation & Parks Forestry is required for any plan with Public Trees in the work limits. The Public Tree Plan shall denote all public trees in the project's Work Limits. Tree information shall conform to the Columbus Tree Technical Manual requirements and be provided by a Natural Resource Professional. Failure to receive a Forestry permit in advance of construction will result in the Contractor reimbursing Forestry for the cost of any and all damage to Public Trees.
- 2. All Public Trees and the ground in the Critical Root Zone (CRZ), whether shown or not shown on the plans, are to be protected unless a permit to remove is approved by Columbus Recreation & Parks (CRPD) Forestry. The Contractor shall protect trees near or adjacent to the work area to avoid damage to all trees that are to remain.
- 3. Heavy equipment will not be allowed to compact the soil over the CRZ of existing public trees. Restricted equipment access routes shall be coordinated with CRPD Forestry at <u>Forestry@columbus.gov</u> or (614) 645-6640 before work begins. Surface protection, such as plywood, lumber or rubber matting, may be required to prevent soil compaction in the root zone of Public Trees.
- 4. Construction materials, excavation debris, fuel, equipment, or vehicles are not to be stockpiled, stored, dumped, or parked within the CRZ of Public Trees. Vehicles and equipment shall remain on paved surfaces unless specifically used for the excavation.
- 5. All Trees must be protected against injury or damage to branches, trunks, or roots from construction and excavation, as described in the CRPD Tree Technical Manual. If there is a question regarding tree protection needs, the Contractor must contact the City Forestry Section at Forestry@columbus.gov or (614) 645-6640.
- 6. Installation of utilities under the CRZ of existing trees must be directionally bored. The top of the bore or tunnel should be no higher than 2 feet deep and 1-2 feet away from the tree's center. The insertion point (bore pit) must be located outside the defined CRZ of each tree. Open trenching is not allowed in the CRZ without a Forestry Permit.
- 7. No Public Tree removal shall be attempted by construction personnel or equipment. Tree removals shall only occur under the supervision of a Certified Arborist. All Trees removed shall include stump removal ground to 18 inches; if the removed tree is within 36" of a protected tree the stump shall only be ground to 2" depth. All wood debris on City of Columbus property shall be removed and disposed of by the Contractor by the end of each work day. Trees approved for removal by CRPD Forestry shall be mitigated in accordance with the Columbus Tree Technical Manual and Columbus City Codes Chapter 912.

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- 8. Any work on or within the Critical Root Zone of a Public Tree requires a Forestry Permit. All applicable fees must be paid prior to permit issuance. Refer to the CRPD Tree Technical Manual for tree removal, pruning, protection, and mitigation standards.
- 9. If excavation of a construction project occurs within the CRZ of a privately owned tree, the permit holder shall be required to notify the owner of the tree in writing about the conflict, and the potential dangers of an unstable tree.
- 10. Applicant must contact Forestry, <u>Forestry@columbus.gov</u> or (614) 645-6640, <u>prior</u> to any impact to any public tree.
- 11. Your Public Tree Plan should include:
  - A. CRPD standard Public Tree Notes in the plan's "General Notes" section.
  - B. All public trees within the work limits.
    - i. Label with Public Tree Inventory number OR a Tree Tag number if there is no Public Tree Inventory number. (see Public Tree Inventory Web May)
    - ii. Label with critical root zone (CRZ).
    - iii. Trees that need to be removed due to construction clearly label by placing an "X" over each affected area. Trees removed in the ROW or public property shall be mitigated by replanting or fee-in-lieu.
    - iv. Trees to not be disturbed marked with outline of the tree protection zone (TPZ).
  - C. Location of proposed replacement trees (with an ID number), taking into account spacing requirements.
  - D. Natural Resource Professional's contact information
  - E. Standard Details:
    - i. STD DWG 1700 Tree Planting Detail,
    - ii. STD DWG 1701 Curbed Planter Detail,
    - iii. STD DWG 1702 Tree Pruning Detail, and/or
    - iv. STD DWG 1703 Tree Protection Detail
  - F. Data tables
    - v. Table 1 Existing Tree Data Table
      - 1. Protected and removed trees
      - 2. Tree tag number if tree is not in Public Tree Inventory, corresponding to site plan OR Columbus Public Tree Inventory ID number if available (see Public Tree Inventory Web Map)
      - 3. Botanical name
      - 4. Common name
      - 5. Diameter at Standard Height (DSH)
      - 6. Condition (good, fair, poor, dead)
      - 7. Critical Root Zone (CRZ)
      - 8. Action (Do not disturb, To be removed, Pruning.)
      - 9. Mitigation required (Y/N)
      - 10. Other notes (including reason for removal)
      - 11. Protection Measures
      - 12. Item 1: Total Removed Inches
      - 13. Item 2: Total Inches to be Mitigated

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- vi. Table 2 Proposed Tree Data Table
  - 1. Key (corresponding to species label on site plan)
  - 2. Quantity
  - 3. Size
  - 4. Botanical name
  - 5. Common name
  - 6. Stock (B&B, container, bare root)
  - 7. Total inches by species
  - 8. Sheet number where tree is located on a site plan
  - 9. Total number of trees to be planted
  - 10. Item 2: Total Inches to be Mitigated
  - 11. Item 3: Total Inches Provided
  - 12. Fee-in-lieu Payment (Item 2 Item 3 \* \$260/inch)
  - 13. Planting Inspection Fee
  - 14. Tree Fund Payment

# B) **DEPARTMENT OF PUBLIC SERVICE**

#### MAINTENANCE OF TRAFFIC AND TRAFFIC CONTROL

- 1. Any work to be performed within the influence area of a signalized intersection, (any work within 500 feet of a signalized intersection approach stop bar, shall have all traffic control items shown. This includes, but not limited to, the signal control box, signal strain poles, signal mast arm poles, signal span or mast arm with type and location of signal heads and overhead signs, pedestals, pedestrian heads, pushbutton locations, type and location of vehicular detection, conduits, pull boxes, street name signs, lane control signage, all signage within the ROW and all pavement markings. Label traffic facilities TR. Use legible colors (black or dark gray). Draft all signal poles at 3' diameter or 3'x3' square.
- 2. When work affects pavement lane markings or within a lane with markings extending beyond the called out influence distances, then all elements associated with those markings shall be shown in their entirety. For example, a signal with turn lanes over 500', the entire turn lane(s) shall be shown as part of the signal.

#### TRAFFIC CONTROL PLAN

- All existing and proposed traffic control items shall be shown within the project limits and 200 feet beyond the project limits; this is 200' before the first and after the last sign for the TCP design, having each intersection shown in full including side street lane markings when work is performed within the public ROW. If within 500 feet of a signalized intersection, the entire signalized intersection must be included.
- Items to include are all pavement markings (stationed), lane widths (dimensioned), all driveways and curb cuts, signage with sign design codes and sizes(stationed with offsets), street names labeled, street name signs, public ROW lines, sidewalks, ADA ramps, crosswalks, utility poles and street lighting, hydrants, edge of pavement and parking meters.
- 3. Include a note on plan to replace any disturbed pavement marking, lane lines, etc.

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#### **MAINTENANCE OF TRAFFIC (MOT) PLAN**

- 1. A copy of the Approved Permit with MOT plan must be on site at all times and available upon request
- 2. Required Sheets and Tables:
  - A. Sheet 1500, 6H-29 (TA-29), Columbus MOT typical(s) or Site Specific TCP's & MOT notes
  - B. MOT Sheet 1500 (updated 1/2020) with the following:
  - C. MOT Symbols examples of common symbols used to design a traffic control plan
  - D. MOT Notes MOT Notes 1-6 that provide guidance in TTC, MOT, & TCP design
  - E. Table 1 Taper calculation chart to determine length of Shoulder, Merging, Shifting tapers.
  - F. Table 2 Spacing calculation chart to determine Advance Warning Sign spacing
  - G. Table 3 Tangent calculation chart to determine Tangent length between shift & merge tapers.
  - H. Table 4 Bikes, recommended signs & spacing for Bike Lane closures & Bike detours.
  - I. MOT Signs recommended signs when necessary to close sidewalk & detour pedestrians
- 3. All work in the public ROW requires a MOT plan including locates for utilities, vacuum excavations or "POTHOLING", hand holes, and turn pits within paved areas.
- 4. Site specific detailed Traffic Control Plans (TCP) are required for work within signalized intersections and may require phased (multiple) TCP's. Site specific TCP's must address all possible potential users' impacted which include but not limited to pedestrian safety, Bike safety & school buses, stops & school zones, COGO bike stations & COTA buses.
- 5. City typical MOT drawings, tables, notes and charts may be used with permission of the Maintenance of Traffic Coordinator Plan/Permit reviewer (614-645-2682) or where lane configurations are an exact match.
- 6. The plan will be determined by the type of work performed and must be specific to that work.
- 7. A detailed MOT plan may consist of, barricades, portable concrete barriers, pedestrian barrier, drum locations and spacing (see OMUTCD part 6 figure 6F-4), use of temporary pavement, use of temporary markings, detour routes, detour and work zone warning signage (OMUTCD table 6C-1), flashing arrow panels, street closures, pedestrian detours and sidewalk barricades with signage, proper taper rates in accordance with OMUTCD part 6 Table 6C-2, flagging set-ups when used, covering of existing signs and signal heads, temporary vehicle detection, and signal timing changes.
- 8. All items shall be clearly labeled, stationed or distances shown. Sign design codes and sign sizes shall be shown with each sign.
- Special attention must be given to provide the safest and least inconvenient plan for motorists, pedestrians and bicycles alike. ODOT standard MT-drawings will not be accepted.

#### TEMPORARY AND PERMANENT TRAFFIC CONTROL NOTES

- 1. Temporary and permanent traffic control notes shall be inserted into <u>all</u> plans requiring work within the public ROW.
- 2. Notes shall be modified to coincide with the scope of work being performed within the public ROW along with the maintenance of traffic plan. The plan reviewers will provide a traffic control notes packet and will direct what notes are required to be incorporated.
- 3. Notes shall be inserted as plan pages. Notes are to be in a legible font and readable when printed to scale.
- 4. Notes related to the MOT shall be modified specifically for the project.
- 5. Acceptable clearance for traffic strain poles and mast arms are different from other utilities. See traffic notes packet for more information on the various clearance requirements and the notes required. No excavation is allowed within five (5) feet of any foundation of a signal pole that supports signal span or a mast arm with traffic signal displays or signs. Excavation includes boring. The Contractor is responsible for following the requirements listed in the standard notes, including support and relocations.

#### **UNDERGROUND TRAFFIC UTILITIES**

- Any work being performed within the influence of underground traffic facilities shall have all existing/proposed traffic control items shown (excluding aerial traffic utilities) and labeled as (TR). This includes, but not limited to, the signal control box, signal strain poles, mast arm poles, location of pedestals, manholes, CTSS underground fiber, push-button locations, vehicle detection loops, conduits and pull boxes
- 2. Use legible colors to identify underground traffic facilities (except red and black). Draft all signal poles at 3' diameter or 3' x 3' square (unless notified by the underground traffic reviewer that the foundation is a 4' x 4') and pedestal poles at 2' diameter or 2' x 2' square. Refer to Traffic Signal Standard Drawings for traffic item details on the City of Columbus website: Standard Drawings Link.
- 3. Acceptable clearances for traffic strain poles and mast arms are different from other utilities. See the current temporary and permanent Maintenance of Traffic Notes for more information on the various clearance requirements and the notes required for submittals. The Contractor is responsible for following the requirements listed in the Maintenance of Traffic Notes, including support and relocations. Refer to the Maintenance of Traffic Notes in the Design Documents section on the City of Columbus website: Maintenance of Traffic Notes Link
  - Note: No excavation is allowed under traffic foundational structures including but not limited to; traffic strain poles, mast arm poles, controller cabinets, nodes, pull boxes, manholes or pedestals.

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#### C) **DEPARTMENT OF PUBLIC UTILITIES**

Contact information for all three City of Columbus utilities must be included on ROW plans

 Division of Sewerage & Drainage 1250 Fairwood Ave.
 Columbus, OH 43206

Phone: 614 645-7102 (SMOC 24/7 dispatch line)

Division of Water
 910 Dublin Rd
 Columbus, OH 43215
 (614) 645-7788

Division of Power 3500 Indianola Avenue Columbus, Ohio 43214 Engineering: 614-645-7294

Outage/Emergency: 614-645-7627 <u>DOPEngineering@columbus.gov</u>

#### **DIVISION OF POWER**

- 1. Identify the location of all Division of Power (DOP) poles, manholes, pad mount transformers, overhead and underground lines, and duct banks within 25 feet of the work zone.
- 2. Label these facilities, in addition to the "UGE" and "OHE" line designators for distribution, use "OHL" and "L" for lighting, as belonging to DOP. For example: "DOP UG Street Lighting" with an arrow to the line. Label all DOP pole number(s) and circuit number(s) in the work area.
- 3. Consider a redesign of work when a conflict with DOP facilities is identified.
- 4. A profile showing when project construction crosses DOP facilities, with facilities and depths labeled
- Where overhead DOP facilities are getting transferred such as on cut and kick pole replacements, add requested notes with DOP circuit and pole numbers labeled, and note to follow DOP conductor safety requirements including log on and off information with DOP central dispatch – Examples
  - TRANSFER DOP OHE PRIMARY CIRCUIT #XXX AND STREET LIGHT CIRCUIT #XXX. CONTRACTOR TO COORDINATE W/ DOP DISPATCH 614.645.7627 to LOG ON AND OFF THE CIRCUIT
  - Contractor to coordinate with DOP Dispatch At 614-645-7627 for logging on/off DOP lighting & primary circuits. Please reference street lighting or primary circuit number when contacting DOP Dispatch.
  - See DOP general note for safety procedures.
  - Questions on permits send to DOP permit reviewer group email. DOPPermitReviewers@columbus.gov
- 6. Contractor is responsible for following the requirements listed in the standard note, including support, protection and relocation.

7. DOP standard note to be added to the plans' notes. Include the underlined title and all paragraphs. Verify with Power the most current note to use. *The standard note is*:

# **FOR THE DIVISION OF POWER**

The Division of Power (DOP) may have overhead and underground primary, secondary, and street lighting at this work location. The contractor is hereby required to contact Ohio 811 (previously OUPS) at 811 or 1-800-362-2764 forty-eight hours prior to conducting any activity within the construction area.

Any project, both public or private, with impacts requiring relocation, support, protection, or any other activity concerned with the City's electrical facilities in the construction area is to be performed by the contractor under the direction of DOP personnel and at the expense of the project.

Unless previously authorized, DOP shall make all final connections to DOP's existing electrical system at the expense of the project.

No person shall work on DOP facilities unless they have completed Contractor Safety Orientation with DOP. Any person working on DOP facilities on live conductors or conductors that may become live shall comply with DOP's conductor safety policy (TDMIS-1603), hold card system (TDMIS-1604) and street light lock out tag out procedure (MIS-1). Prior to beginning work on DOP facilities, each person shall contact DOP's Dispatch Office at 614-645-7627 and provide their name, phone number, location, description of work and circuit number. At completion of work, each person shall notify DOP's Dispatch Office.

The contractor shall use material and make repairs to a City of Columbus Street Lighting system by following DOP's "Material and Installation Specifications" (MIS) and the City of Columbus "Construction and Material Specifications" (CMSC). Any new or re-installed street light system shall require testing as referred to in section 1001.18 of the CMSC manual. Contractors working on street lighting shall conform to DOP's existing Street Light Lockout/Tagout (LOTO) Procedure, MIS-1, copies of which are available from DOP and on the city website.

Emergencies: If any electric facility belonging to DOP is damaged in any manner by the contractor, its agents, servants, or employees, and requires emergency repairs, the DOP Dispatch Office should be contacted immediately at (614) 645-7627. DOP shall make all necessary repairs, and the expense of such repairs and other related costs shall be paid by the contractor to the Division of Power, City of Columbus, Ohio.

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#### **DIVISION OF WATER**

- 1. In the plan view, all water mains with diameter equal to or greater than 20-inches should be shown with two lines to delineate the actual size.
- 2. All water mains lines must be identified by size and water record plan number.
- 3. Show all water service lines, fire hydrants, curb boxes and valves.
- 4. All addresses must be shown in the work area zone.
- 5. The designer shall maintain a minimum of 3' horizontal and 1' vertical clearance from the outside diameter of all water lines and 8' from any "tee" connection, bends, and ends of the water lines, from outside diameter to the nearest edge of the excavation, construction or facility being placed.
- 6. If designer cannot maintain 8' clearance or not able to cross perpendicular then they are required to do 8' under the water line. If clearances cannot be maintained, please reach out to Water Plan Permit reviewer.
- 7. Provide the distance from ROW/Center line to proposed conduit, cable or pipe and to existing/proposed water line outside diameter.
- 8. The following DOW of notes must be included for every plan submittal:
  - A) Expose water line at crossing(s) to verify depth and location prior to and during any directional boring.
  - B) The contractor is responsible for locating all customers owned service lines. The contractor shall field verify the horizontal and vertical location of any City or customer owned main or service line that may be affected by the proposed construction activities. Field verification shall take place prior to an activity that may jeopardize the integrity of the facility and at a location nearest the point of possible conflict.
  - C) Any repair to City or customer owned water lines are the responsibility of the contractor. The contractor shall contact the City of Columbus, Division of Water at 614-645-7788 prior to any repairs on City owned water facilities. The contractor must be a City of Columbus licensed water contractor. The contractor shall maintain a minimum of 3' horizontal and 1' vertical clearance from the outside diameter of all water lines and 8' from any "Tee" connection, bends and ends of the water lines to the outside diameter of the nearest edge of the facility, excavation, construction being placed.
  - D) If during excavation, the polyethylene encasement of the existing water main becomes damaged, the contractor shall repair the polyethylene encasement per manufacture's specifications and DOW Standard Drawings L-1003 and L-1004, at their own expense. Ensure that the entire exposed area shall be covered with new polyethylene encasement and securely taped, prior to backfill.
  - E) If a lead or galvanized water service line is encountered and not damaged, the Contractor shall report the presence of the tap via email to <a href="MaterQuality@columbus.gov">WaterQuality@columbus.gov</a>. Include the site's address and a photo of the tap in the email. If the service is damaged, immediately contact The Division of Water Distribution Engineering Office at 614-645-7677 to request the shut off of the existing curb stop.

- 9. Maintain consistent distance from the ROW; explain if not.
- 10. If the alignment of the proposed infrastructure is crossing or is parallel (within in 5-feet) of a 20-inch or larger prestressed concrete cylinder pipe (PCCP), the following note must be included on the plan submitted for Water review:
  - A. Prior to installation of the proposed infrastructure that is to cross or is parallel (within in 5-feet) of the identified prestressed concrete cylinder pipe (PCCP), the Contractor shall expose the existing PCCP water main. The PCCP water main shall be exposed sufficiently enough to verify that no damage will occur during installation of proposed infrastructure.
  - B. When paralleling, the existing PCCP water main shall be exposed at the beginning, end and every 100-feet through the proposed infrastructure alignment. When crossing, the existing PCCP water main shall be exposed where the proposed infrastructure crosses the existing PCCP water main.
  - C. A City inspector will be required to be on-site to witness the excavation of the existing PCCP water main. The Contractor is to contact the DPS Division of Design & Construction at 614-645-0433 to schedule the inspection.
- 11. The following notes must be included for every plan submitted that is proposing any infrastructure near DOW Lime Slurry Discharge (Sludge) Lines:
  - A. Field verification of the sludge line shall take place prior to any activity that may jeopardize the integrity of the line. Where trenchless installation methods are used, field verify the sludge line depth and location by exposing the line at all proposed trenchless crossing locations prior to performing the trenchless installation.
  - B. New or relocated utilities shall be installed with a minimum 1' vertical and 3' horizontal clearance from the sludge line.
  - C. In addition to notifying the Ohio Utilities Protection Service (OHIO811), provide 24 hours advanced notification to City of Columbus Division of Water Technical Support Section, 614-645-7100, and the Hap Cremean Water Plant, 614-645-7168, prior to exposing the sludge line.
  - D. If the polyethylene encasement on the existing sludge line becomes damaged, it shall be repaired per manufacturer's specifications and DOW Standard Drawings L-1003 and L-1004 at no extra cost to the City. Ensure that the entire exposed area is covered with new polyethylene encasement and securely taped prior to backfilling.
- 12. All sludge lines shall be labeled with the size of pipe and the extension SL. Ex) 12" SL
- 13. Add the sludge line to the Legend for Lines
- 14. In plan view, the sludge line is to be called out as:
- 15. "VERIFY DEPTH OF EXISTING 12" SLUDGE LINE ELEVATION"
- 16. In profile, the sludge line is to be called out as:
- 17. "VERIFY TOP/BOTTOM OF PIPE ELEVATION AND MAINTAIN A MINIMUM OF 18" CLEARENCE"

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## **DIVISION OF SEWERAGE AND DRAINAGE**

1. The following Division of Sewers and Drains notes must be included on all ROW plans:

#### **GENERAL NOTES FOR THE DIVISION OF SEWERS AND DRAINS:**

Utility locators will only locate and mark mainline sewers, after an OH-811 locate request is placed. The contractor is responsible for field verifying the location of all main line sewers and locating all private sewer service laterals. The Contractor will be held responsible for any damages to sewer mains and/or service laterals caused during construction. All repairs to the sewer lines and/or service laterals must be completed by a City of Columbus licensed sewer contractor under a separate sewer permit.

The contractor must maintain a 3' Horizontal & 1'Vertical clearance from the O.D. of all sewers and appurtenances to the nearest edge of the facility being placed. For brick sewers maintain 10' Horizontal & 5' Vertical clearance from O.D. to nearest edge of proposed facility.

\*See specific note for PROPOSED sewers\*

#### PAVEMENT CUTTING, SAWING AND EXCAVAION OPERATIONS NOTE:

All public agencies and private contractors performing pavement-cutting operations on City of Columbus streets and roadways shall protect the environment from discharges created by their pavement cutting operations. Note that Columbus City Code 1145 prohibits non-Storm water discharge into the City of Columbus sewer system, curb inlets and any part of its MS4 (municipal separate storm sewer system).

The requirement includes but is not limited to wet or dry saw-cutting, jack hammering, excavation equipment use, etc. The public agency and/or private contractor work crews shall recover and dispose of debris, polluted waters, or such discharges resulting from their pavement cutting operations and protect all storm sewer inlets from receiving any discharges from the construction operations. The agency or contractor responsible for each pavement cutting activity shall be solely liable for Notice of Violations (NOV/s) and fines issued by City of Columbus and/or State of Ohio Authorities.

Equipment, materials and methods shall be provided by the responsible public agency and/or private contractor to work crews performing the pavement cutting activity and made available to work crews for use in cleaning up discharges resulting from such cutting activities and preventing runoff. All work crews shall be trained to exercise and employ equipment, materials, and environmental protective measures to prevent polluted discharges from entering the City of Columbus storm sewer system and waters of the State of Ohio.

The public agency and/or private contractors are solely responsible for ensuring that the inlet protection is adequate. The most stringent project plans, notes and/or drawings including Storm water Pollution Prevention Plan (SWP³) or Spill Prevention/Remediation Plan shall apply to all pavement cutting, sawing or excavation operations.

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- 2. The contractor shall maintain a 3' horizontal & 1' vertical clearance from the outside diameter (O.D.) of all non-brick sewers and appurtenances. Clearances must be measured from the outside diameter to the nearest edge of the facility being placed, not center to center.
- 3. For brick or block sewers ONLY. The contractor shall maintain a 10' horizontal and 5' vertical clearance from all brick sewers
- 4. Brick sewers must NOT be exposed as this may cause a collapse or the sewer
- 5. Brick sewer wall thickness shall be shown as 4" for every ring of brick. The number of rings is typically shown on the associated sewer plans. The brick sewer shall be shown as 12" (3 rings) if not otherwise called out on the sewer plan.
- 6. The contractor must maintain a 3' clearance from the O.D. (horizontal and vertical) of all proposed sewers and appurtenances unless otherwise stated on the proposed sewer plan. This is to allow for excavation and backfill in preparation of the new sewer being placed.
- 7. Approximate pipe wall thickness (for sewers): Calculate 1" for every foot of the diameter of the concrete pipe and add 1" to the total.
- a. Example: 36" pipe = 3" + 1" = 4" (+/-) Total wall thickness
- 8. All sewer lines shall be labeled with the size of pipe and the type of sewer: SAN = sanitary; STM = Storm; CMB = combination of sanitary and storm
- 9. All brick /segmented block sewers shall be labeled BRICK
- 10. The applicant MUST state on the ROW permit application of the plan being submitted is based upon the other state or local government proposed plans and include the plan number, project number or CIP number such as Dr-E###, CC-#####. The proposed sewer must also be shown and labeled on the ROW plan being submitted.
- 11. Storm sewer plans often contain Best Management Practices otherwise known as Green Infrastructure or GI. All GI must be shown and labeled on all ROW plans. Green Infrastructure is shown on the Department of Public Utilities Atlases and individual storm or street plans. See the atlas legend for symbols that identify GI and use plans for specific details. GI must NOT be disturbed. GI often consist of specific layers of materials or design to aid in storm water mitigation. For more details on GI please go to the City of Columbus, Department of Public Utilities website and search for the GREEN INFRASTRUCTURE DESIGN GUIDELINES under Blueprint Columbus. GI can consist of a swale, or ditch, an oversized pipe or detention pond as well as many other structures. Please refer to the details on each individual sewer or Dr. E road plan. GI is an integral part of the City's Sewer Infrastructure and must be included on all ROW plans.
- 12. All sewer symbols should look like the sewer symbols shown on the Atlas map symbols legend
- 13. The width of all sewer lines over 24" in diameter shall be shown to scale on plans and include the wall thickness of the pipe

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- 14. A Brick sewer deposit and video(s) will be required when crossing all brick/block sewers. The deposit will be calculated based on the final approved ROW plan. All preconstruction videos shall be turned into the requestor of the DOSD plan review group, for sewer assessment prior to excavation.
- 15. The post construction video shall be turned into the DOSD plan review group within 30 days of the completion of the ROW project. Deposits will be refunded, in full, after pre and post construction videos have been turned in and reviewed. Please allow 4-6 weeks for funds to be returned. The plan review group must view the pre-construction video prior to construction to ensure there is no existing damage to the brick sewer. This will certify that existing damages were not caused by the contractor and allow DOSD to make necessary repairs prior to the contractor beginning work.
- 16. Private sewer service lateral information may be obtained at the Public Utilities Permit Counter located at 111 N Front St, Columbus, OH, 1<sup>st</sup> floor DPU permit counter or by calling (614)-645-7490
- 17. For answers to sewer questions or design concerns please contact one of the DOSD plan reviewers listed on the ROW Permit Routing form

Optional for all designers, a KML file can be uploaded to the portal in addition to the required .pdf plan documents for alignments over 1000' to help expedite review process.

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#### DAMAGE PREVENTION REQUIREMENTS

- 1. The City of Columbus Department of Public Utilities (DPU) is a member of OHIO811 and receives excavation notices that will be submitted as part of this project. DPU Damage Prevention Staff will mark all DPU owned facilities to the best of its ability. Any contractor performing excavation activities shall also follow all applicable provisions in the Ohio Revised Code 3781.25-3781.38 and 153.64 as it relates to their work. Contractors may notify OHIO811 by calling 811, 1-800-362-2764 or by utilizing the i-dig remote ticket entry program. More information can be found at OHIO811
- 2. The excavator shall protect and preserve the markings until those markings are no longer needed.
- 3. After obtaining excavation notice(s), DPU Damage Prevention Staff will contact the individual listed on the excavation notice to initiate determining a mutually agreed upon marking schedule that coordinates the marking of underground utilities with actual excavation activity and field conditions. DPU staff will be requesting some basic information about the project including but not constrained to:
  - A. Start date/location(s) within the project boundaries
  - B. Number of crews expected to be onsite
  - C. Contact information for company representative who has knowledge of the project and authority to coordinate marking activities with DPU Damage Prevention Staff for this project
  - D. Determine if onsite meeting will be needed and schedule accordingly
- 4. It is expected that during the course of this project, both the Contractor and DPU Damage Prevention Staff will remain in contact with each other to communicate changes of work locations/scope/schedule etc. or other information pertinent to the coordination of utility marking with actual excavation activity and field conditions.
- 5. In order to facilitate the exchange of pertinent information, please email locating questions pertaining to DPU owned facilities to the following email: <u>JLJohnson@Columbus.Gov</u>
- 6. The contractor is responsible for locating all customer owned service lines/laterals. The contractor shall field verify the horizontal and vertical location of any City or customer owned main or service line/lateral that may be affected by the proposed construction activities. Field verification shall take place prior to any activity that may jeopardize the integrity of the facility and at a location nearest the point of possible conflict.
  - Any damages to City or customer owned facilities should first be reported to OHIO811 by calling 811 or 1-800-362-2764. The permit holder may also call the City utility company at the time of the hit, but OHIO811 must be contacted first.
  - Any repair to City or customer owned water or sewer facilities are the responsibility of the contractor. Such repairs shall be completed by a City of Columbus licensed sewer and/or water contractor. Repairs to sewer facilities shall require a separate sewer permit.
  - For more information regarding **OHIO811** please visit <u>O</u>HIO811

# D) **DEPARTMENT OF TECHNOLOGY**

#### **NETWORK INFRASTRUCTURE /TELECOMMUNICATIONS**

- 1. The Contractor will provide all required notes to the City of Columbus (CoC) Department of Technology (DoT), Cable Interconnect Section (I-Net) Network Group.
- 2. The Contractor will identify the location of all CoC-DoT poles, manholes, hand holes, pull boxes, pad mount cabinets, overhead and underground lines, inner ducts and duct banks within 25 feet of the work zone.
- 3. Label these facilities as belonging to City of Columbus Department of Technology with an arrow to the object or the "CoC-DoT" label on the conduit line, manhole, hand hole, pull box, pad mount cabinet or other CoC-DoT facility.
- 4. CoC-DoT standard note is to be added to the plans' notes. The plans will include the underlined title and the following paragraph as shown below:

#### FOR THE CITY OF COLUMBUS - DEPARTMENT OF TECHNOLOGY

CoC-DoT may have overhead and underground fiber cables existing at this work site. Any required relocation, support, protection, or any other activity concerned with CoC-DoT's cables, conduits, manholes, hand holes, pull boxes, pad mount cabinets or other facilities and/or materials in the construction area is to be performed by the Contractor under the direction of CoC-DoT personal and at the expense of the project. The Contractor shall use materials and make repairs to a CoC-DoT's system by following the CoC-DoT material and installation specifications in I-Net's General Specifications Document, hereafter referred to simply as the "IGSD". Any re-installed fiber shall require testing as referred to in IGSD. The Contractor shall be City of Columbus approved for fiber splicing plus meet IGSD requirements. If any cable facility belonging to the CoC-DoT is damaged in any manner by the Contractor, his agents, servants or employees, that would require emergency repairs, the CoC-DoT Maintenance Contractor shall make all necessary repairs, and the expense of such repairs and other related costs shall be paid by the Contractor to the Division of Technology City of Columbus. NOTE: Any work performed or materials installed by the Contractor that has not been approved by CoC-DoT personal or has been constructed outside of the requirements of the IGSD will be replaced or rebuilt at the Contractors expense. Contact (614) 645-0031 CoC-DoT Fiber Physical personal for questions.

- Any contractor performing excavation or installation, including but not limited to disturbing the earth with powered or non-powered equipment, must contact OUPS at 811 or 1-800-362-2764 forty-eight (48) hours prior to conducting any activity within the construction area.
- 6. Any damage done to the City of Columbus cables, conduits, manholes, hand holes, pull boxes, pad mount cabinets or any other City owned facilities will be the sole responsibility of the Contractor to repair or replace at the Contractors expense per the discretion and direction of the DoT Engineer or Agent. These repairs and/or replacements will be done per the requirements of the CoC-DoT General Specifications Document.

- 7. The Contractor will expose all known CoC-DoT ducts at all crossings prior to and during any directional boring to verify depth and location of CoC-DoT facilities.
- 8. The contractor shall contact the City of Columbus, DoT, and Cable-Interconnect Section at (614) 645-0031 prior to performing any repairs on City owned fiber optic lines, conduits, inner-ducts, manholes, hand holes, pull boxes, pad mount cabinets or any other City owned facilities. Failure to do so may result in the Contractor being required to replace the installed materials at **the Contractor's expense** as directed by the Manager or the Engineer.
- 9. The Contractor is responsible for locating all CoC-DoT customer owned laterals. The contractor shall field verify the horizontal and vertical location of any City customer owned cables, conduits, man-holes, hand holes, pull boxes or other facilities and/or materials in the construction area that may be affected by the proposed construction activities. Field verification shall take place prior to any activity that may jeopardize the integrity of the facility. Failure to do so may result in the Contractor being required to replace the installed materials at the Contractor's expense as directed by the Manager or the Engineer.

# 4. Data, Mapping, and GIS requests

## **DEPARTMENT OF PUBLIC UTILITIES MAPROOM (GIS)**

Email all infrastructure data requests to: <a href="mailto:DPU\_GIS\_Mapping@columbus.gov">DPU\_GIS\_Mapping@columbus.gov</a>. Please include:

- Name:
- Company Name:
- Contact Number (in case we need to contact you for clarification of your request):
- City Project Manager (if project has a City Project Manager assigned):
- Type of Data requested (Shapefiles or TIFF Images, Electric, Water, Sewer or All):
- Summarized purpose of the data being requested:
- Attach an image or GIS/CAD file to the email which clearly shows a bounding box of the area needed (.jpg, .shp, .dwg, etc.)

Individuals calling into the Maproom to make a data request will be referred to the email address listed. The request will not be processed until an email is received.

Pursuant to O.R.C. §149.433(A) (2) and O.R.C. §149.433(A) (3) (B), the data being provided is not considered a public record and is not to be redistributed in any form. The information being provided is for construction purposes only. Any other use of this data is not permitted. This exemption applies to all images, drawings and maps, both hardcopy and in electronic form, as well as any associated electronic GIS/CAD data which shows the location of the utility's infrastructure assets.

While every reasonable effort has been made to ensure the accuracy of this information, it is provided without warranty of any kind, whether expressed or implied. The City of Columbus assumes no liability arising from any use of this information and is not responsible for its accuracy or completeness. Those using this information for any reason are solely responsible for its use and do so at their own risk.

#### DEPARTMENT OF PUBLIC SERVICE DIVISON OF DESIGN & CONSTRUCTION

#### ROADWAY PLAN RECORDS REQUEST PACKAGE

The Department of Public Service (DPS) retains record files for roadway improvement plans developed for the department, such as Drawer E & D plans.

- DPS Plan Request Forms can be obtained by emailing: DPSPlanRequests@columbus.gov.
- Plan request are returned in the order that they are received.

The City of Columbus Department of Public Service maintains City roadways including portions of State routes 315, 33, and 104. The work to repair and improve roadways ranges from pothole patching to road reconstruction.

The applicant is required to determine if proposed work is subject to a Pavement Moratorium by viewing: <u>Street Resurfacing Projects - City of Columbus, Ohio</u>

If proposed work is required within a Pavement Moratorium area, and no other viable route is possible, the applicant shall contact the Department of Public Service Utility Coordinator for approval at: <a href="mailto:COC DODC CIPUtilityPermitReview@columbus.gov">COC DODC CIPUtilityPermitReview@columbus.gov</a>

#### **DIVISION OF TRAFFIC MANAGEMENT**

#### REQUESTING UNDERGROUND TRAFFIC FACILITY RECORD DRAWINGS

The Division of Traffic Management is a member of OHIO811, formerly known as Ohio Utility Protection Service (OUPS).

Requests for underground traffic facilities should be made through the Ohio 811 service as a design ticket prior to submitting any permits for review.

Provide the project limits on the design ticket.

Please use public streets and footages from public streets as reference points of the work area as this is how the Division catalogs its records.

If the Division has facilities in the area, plans will be emailed to the requestor at the email listed on the OHIO811 ticket using the assigned OHIO811 ticket number.

Note that Traffic Management is a separate entity from Public Utilities. A request to the Public Utilities Map Room does NOT include underground traffic facilities.

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#### **APPENDIX A: ADDITIONAL RESOURCES**

#### **OHIO 811 THE LAW:**

https://www.oups.org/the-law/

#### **OHIO 811 EXCAVATOR MANUAL:**

https://oups.org/excavator-manuals/

#### OHIO 811 i-Dig:

https://www.oups.org/idig/

#### THE DIVISION OF DESIGN AND CONSTRUCTION DOCUMENT LIBRARY:

https://www.columbus.gov/Business-Development/Design-Construction

#### **DEPARTMENT OF PUBLIC UTILITIES:**

https://www.columbus.gov/Services/Public-Utilities

#### **DEPARTMENT OF PUBLIC UTILITIES DOCUMENT LIBRARY:**

https://www.columbus.gov/Services/Public-Utilities/Information-for-Customers/Document-Library

# **DEPARTMENT OF PUBLIC UTILITIES CONTRACTORS:**

https://www.columbus.gov/Services/Public-Utilities/Information-for-Customers/Public-Utility-Contractors

## DIVISION OF SEWERAGE AND DRAINAGE: ABBREVIATIONS AND DEFINITIONS

RCP	Reinforced Concrete Pipe
VCP	.Vitrified Clay Pipe
CONC	.Concrete
BR	.Brick and/or Segmented Block
STM	.Storm line also abbreviated ST or STM
SAN	. Sanitary line also abbreviated SA or SAN
COMBO	. Combination Sewer (combined storm and sanitary)
	. Invert the inside bottom of a pipe. Most sewer elevations
	are measured to the invert.
TP	. Top of Pipe
BP	·
Crown	Inside top of pipe
RP-123 Record Plan	. As built plans that have been verified and become record
	This plan could be preliminary and not built yet
CO-123	. Usually refers to County sewers annexed into the City of
	Columbus
MM-123	. Older city sewer plans that have not been record planned
	.The sewer department used to document sewers maps.
	These plans usually do not contain profile information.

# **DIVISION OF POWER: COMMON STREET LIGHTING SYMBOLS**

ELECTRIC			
⊞ Handhole			
Manhole			
▼ Vault			
☑ Dynamic Protective Device			
∜ Fuse			
→ Power Factor Correcting Equipment			
M Primary Meter			
Switch			
Miscellaneous Network Feature			
Lighting Control Center			
<ul><li>Other</li></ul>			
R Riser			
Electric Station			
► ServicePoint			
Anchor Guy			
Streetlight			
Support Structure			
O H-Frame			
Non-Wood Power Pole			
Non-Wood Streetlight Pole			
OTower			
Wood Power Pole			
○ Wood Streetlight Pole			
Primary Conductor			
Primary Underground Primary Overhead			
Secondary Conductor			
Streetlight Overhead			
Streetlight Underground			
- Secondary Overhead			
Secondary Underground Conduit System			
- <all other="" values=""></all>			
- Duct Bank			

EXISTING

O WOOD POLE DWNED BY OTHERS.

WOOD POLE DWNED BY CITY

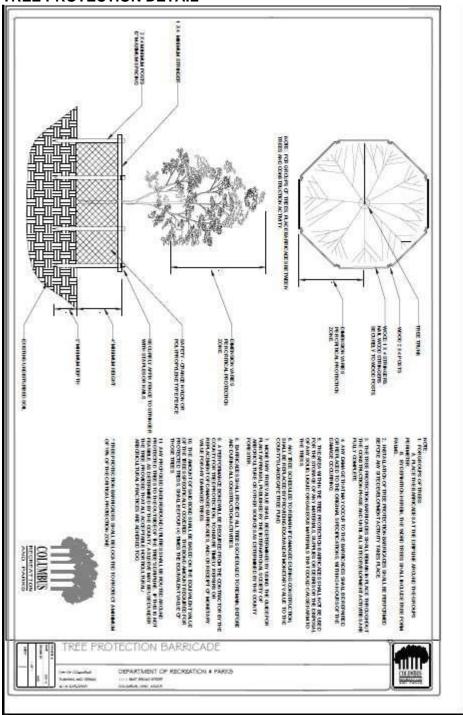
STANDARD (STEEL OR ALUMINUM)

480V OVERHEAD CIRCUIT

UNDERGROUND CIRCUIT

RISER POLE

# DEPARTMENT OF RECREATION AND PARKS DIVISION OF FORESTRY: TREE PROTECTION DETAIL



#### **SUMMARY**

This handbook serves as a valuable resource for companies planning utility projects within Columbus, ensuring compliance with city regulations and fostering efficient collaboration between developers and city departments.

By following the outlined procedures and design criteria, companies can streamline the plan review process and successfully obtain their permits while maintaining the integrity and functionality of the city's infrastructure.



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