



# SUBDIVISION DEVELOPERS GUIDE

## Welcome to Douglas County PUD

**We are committed to providing the best possible utility services at the lowest possible cost consistent with sound business principles**

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To better serve you, please fill out an Application for Service electronically and email to [newservice@dcpud.org](mailto:newservice@dcpud.org) OR print and fill out prior to visiting our office. A Service Request will be generated using the information in this application. You will be asked to review and sign the Service Request to begin processing and engineering for your project.

The Distribution Engineering department will assign an engineer to your project upon receipt of your application. Fees will be calculated based on the project type. All fees must be paid in advance of construction.

Please review the Developer Checklist below and complete the necessary items to get your service energized as soon as possible.

### DEVELOPER CHECKLIST

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- Application for Service.
- Detailed plans of site/project.
- Deposit (if applicable).

**Before construction of your project can begin:**

- Line extension and service connection fees paid.
- Complete and returned easements and permits as necessary.
- Supply and install equipment and materials per specifications.
- Application and Inspections: Washington State Department of Labor and Industries Electrical Inspection AND Douglas County PUD field inspection prior to service being energized.

## Developer Responsibilities

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- Provide and install the primary and secondary service conduit per standard drawing.
- Install communication conduit per standard drawing.
- Trench inspection by Douglas County PUD field representative.
- Furnish trenching and backfill of the conduits per standard drawing.
- Install concrete vaults (if required) per standard drawing.
- Provide, install and maintain all required service entrance equipment per standard drawings and applicable codes.
- Provide, install and maintain all required secondary conductors per applicable codes for development related services (i.e., lighting, pump systems, etc).
- Application and Inspections: Washington State Department of Labor and Industries Electrical Inspection AND Douglas County PUD field inspection prior to service being energized.

## Applicable Standard Drawings

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Please review the standard drawings attached in this document before starting construction. Drawings contain important information required for your project.

Trench and Conduit Requirements

Single Phase Junction Box Excavation/Conduit Installation

Three Phase Junction Box Excavation/Conduit Installation

Transformer Pad Excavation/Conduit Installation

Conduit Layout for Subdivisions

## Site Plan Submittal

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Please submit a detailed plan (preferably engineered) of your subdivision. If your project is in preliminary stages, please include the following information on a drawing:

- Nearest public road and distance to proposed home/building site
- Nearest District facility (pole or transformer)
- Proposed building site and transformer/metering location
- Proposed drain field and septic lines
- Fences (existing & future)
- North arrow

## Development Conduit Design - Engineering

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It is the responsibility of the developer to provide an underground conduit design for and within the proposed development. Further, it shall be the developer's responsibility to resolve utility location conflicts. The conduit design must be acceptable to the District and shall not be considered approved until signed and dated by the District's Distribution and Communications Departments.

## Design Considerations

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In addition to the requirements stated in the Subdivision Development Standard drawings, the following design considerations must be taken into account during subdivision planning.

### **Conduit:**

Conduit systems shall be located within the dedicated public right-of-way or utility easement, except for service conduit, which is generally not placed within an easement as it serves a specific property (note: if a service conduit must cross another property then it shall be placed within a dedicated right-of-way or utility easement area).

Where conduit systems come together at a common location they shall be swept (elbowed) and brought up where they will be bound together and capped for ease of vault, transformer box or secondary handhole installation.

### **Transformers:**

It is important that the developer be aware that the conduit systems (primary and secondary) begin and end at the transformer locations.

Transformers are installed on fiberglass boxes (TBX's) supplied by the District and normally installed by the District. Transformers shall be located along front lot lines. They shall be located adjacent to 2 or more adjoining lot lines whenever possible. They shall be located as close to the center of loads as possible.

It is assumed that one transformer location will serve 4 to 6 homes having a 200 to 225 amp service entrance and 15 to 20kW of heat load each. Transformers serving homes exceeding 225 amp service entrances, with 25kW and above heat loads, shall normally serve no more than 4 homes.

### **Handholes:**

If possible, handholes shall be located along front lot lines, adjacent to 2 or more lot lines, close to the center of loads as possible, and within 100 feet of source transformer. Handholes shall not be placed in areas of vehicular traffic. It is assumed that each handhole will serve 2 homes having 200 to 225 amp service entrances with 15 to 20kW of heat loads each. Handholes supplying electrical capacities exceeding those described above shall be reviewed by the District.

### **Services:**

When designing transformer and handhole locations, both length and trespass are important factors. Low voltage services shall originate at a transformer or handhole. Services shall not exceed 150' from a transformer location. Services shall only run on the property they are serving, and not trespass on adjacent property.

## **Primary Circuits:**

There may be multiple primary circuits within a subdivision. Each single circuit shall normally commence at a source origin (riser pole or existing vault) as specified by the District. Where primary circuits branch or tie together, equipment such as vaults or TBXs shall be installed as specified by the District.

## **Vaults/Junction Cabinets/Pad Mounted Switchgear:**

Vaults, junction cabinets and pad mounted switchgear may be required where primary circuits branch or tie together. Single circuits normally employ 4'x4'x4' deep vaults. Multiple circuit systems normally employ 5' x 7' x 5' deep vaults but may require larger vaults depending on the circuits involved. Junction cabinets, TBXs and padmounted switchgear shall be located behind the sidewalk unless otherwise approved. Vaults may be permitted within the sidewalk depending on space allowance.

## **Douglas County Community Network (DCCN) Communication Conduit:**

The developer/contractor shall supply all communication conduit. DCCN communication conduit shall follow the electrical design layout verbatim, except that one conduit per run will be installed. DCCN conduit shall be swept up next to every transformer and handhole location per Development Standard SDS-004. DCCN communication conduit shall be swept up a minimum of 24" behind sidewalks (field side).

## **Future Secondary Services & Meter Base Locations**

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Secondary service and meter base locations for homes in the subdivision must be in accordance with the standards set forth in the Residential Construction Service Guide. These standards should be considered during subdivision design.

## **Easements and Permits**

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Before installation of any poles or equipment, or commencement of any work, all easements and permits must be executed and on file with the District.

The customer will provide the necessary signatures on easement forms prepared by the District and will furnish such easements to the District. An easement is required from owner(s) of all properties that District facilities will cross, in addition to the property being served. The Customer, at the customer's expense, and to the satisfaction of the District, shall secure all necessary easements.

Trenching in a public right-of-way or crossing under a public roadway requires a roadway use permit from the governing jurisdiction. This must be applied for and issued to the licensed and bonded contractor doing the work in the right-of-way. The Customer is responsible for all fees associated with this permit. No work in the right-of-way shall be performed until this permit has been secured. The customer may be required to provide a copy of the permit prior to District work commencing.

## **Fees - Contribution In Aid of Construction (CIAC):**

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A customer is required to pay for a line extension in advance of construction. The CIAC will be calculated based on approved engineering plans, and may include primary cable, vaults, junction cabinets, switches, transformers and other associated facilities. Costs may also include relocation of existing electrical facilities, professional engineering design services and other costs including, but not limited to the cost of permits, easements, road crossings, clearing and any other special costs to provide service. The CIAC does not give the customer ownership rights of any facilities constructed with these funds.

## **Inspections**

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Electrical installations must be applied for and inspected by the Washington State Department of Labor and Industries Electrical Inspector AND a Douglas County PUD field representative prior to energizing the service. The customer (or customer's electrician) is responsible for meeting all of the requirements for temporary and permanent service equipment in compliance with the National Electric Code (NEC), Washington Administrative Code (WAC) and any other federal, state and local codes and ordinances that apply to the project. The Washington State Department of Labor and Industries Electrical Inspections Department can be reached at 509-886-6500, the 24 hour inspection line is 509-886-6520.



# APPLICATION FOR SERVICE – Large Commercial & Developments

New Douglas County PUD Customers may be asked to provide a LETTER OF CREDIT or a DEPOSIT to start service.  
This is NOT an electrical permit application – Electrical Permits may be obtained at WA Dept. of Labor & Industries.

Please submit this application with an **ELECTRONIC CAD FILE** of your preliminary plat to [newservice@dcpud.org](mailto:newservice@dcpud.org).

Applicant/Owner Name: \_\_\_\_\_ Spouse/Alt Contact: \_\_\_\_\_

Development Name (if applicable): \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Work: \_\_\_\_\_ Cell: \_\_\_\_\_

Washington State Driver's License # \_\_\_\_\_

UBI #: \_\_\_\_\_

Email Address: \_\_\_\_\_

Contractor Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Excavator Name: \_\_\_\_\_ Phone: \_\_\_\_\_

## Service Information

Quarter Section: \_\_\_\_\_ Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_

Tax Parcel # \_\_\_\_\_ Nearest Intersection: \_\_\_\_\_

Number of Parcels/Lots: \_\_\_\_\_ Size of Parcels: \_\_\_\_\_ (acres) Approx Sq Ft of Homes: \_\_\_\_\_

OR Square Footage of Commercial Building/Development: \_\_\_\_\_

**Desired Service Date:** \_\_\_\_\_

Have you been a Douglas County PUD Customer before? Yes  No

If yes, last service address: \_\_\_\_\_

## Service Requested

Subdivision  Three Phase Commercial  Line Extension in excess of one mile

## Load Information (Commercial/large load)

### DESIRED VOLTAGE

Three Phase 120/208 volts, 4 wire  277/480 volts, 4 wire  120/240 volts, 4 wire

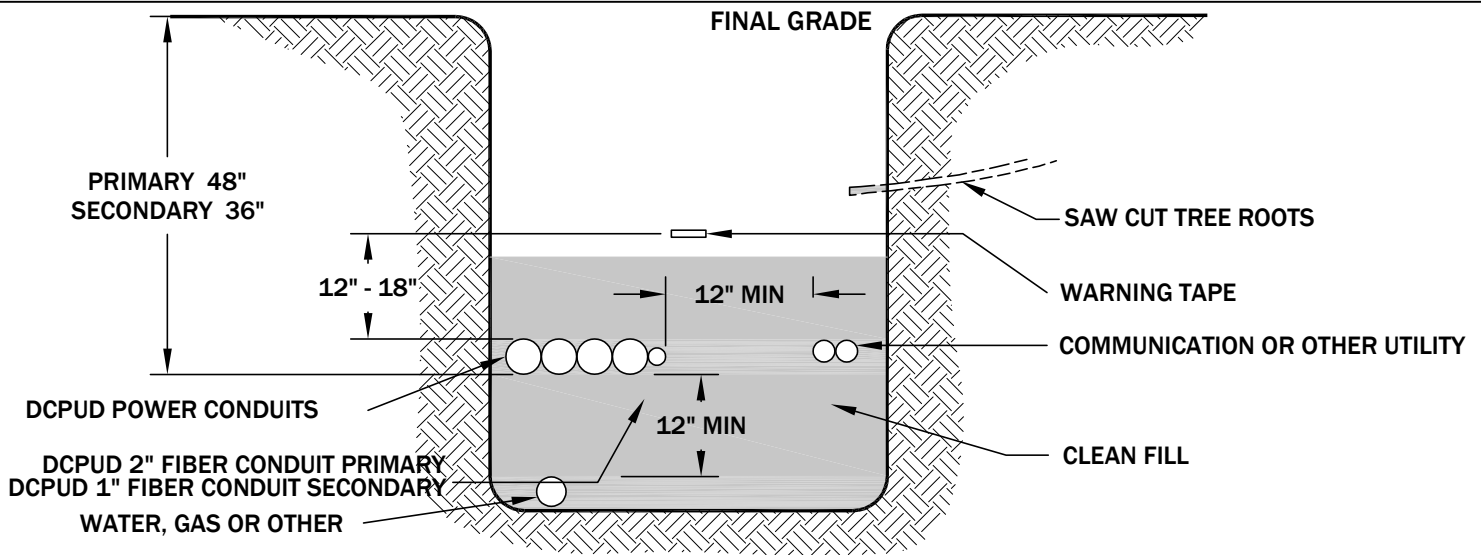
Calculated Load \_\_\_\_\_ Amps

Motor Load \_\_\_\_\_ HP

Lighting Load \_\_\_\_\_ Amps

HVAC Load \_\_\_\_\_ Amps

Misc Load (Describe) \_\_\_\_\_ Amps



PRIMARY POWER CONDUIT MINIMUM DEPTH	48"
SECONDARY POWER CONDUIT MINIMUM DEPTH	36"
COMMUNICATION CONDUIT MINIMUM DEPTH	18"

### CONDUIT & INSTALLATION

- All material supplied by customer unless otherwise noted.
- All primary conduit and secondary conduit shall be 3" schedule 40 gray electrical PVC. Conduit from a 3-phase transformer to a secondary cabinet shall be 4" schedule 40 gray electrical PVC.
- 36" radius sweeps are required and no more than three sweeps are allowed. There must be a minimum of 10-feet between sweeps. Back to back sweeps are not allowed.
- Backbone communication shall be 2" gray schedule 40 PVC. Install 1" gray schedule 40 PVC from DCPUD transformer, handhole, or pole location to home/business.
- Warning tape is required between 12" and 18" above DCPUD power conduit
- Cap ends of power conduits to prevent material from entering.
- Cap ends of communication conduits (no glue, please).
- Provide pull string in conduit. String shall pull freely and shall not be glued to conduit.
- Conduit fitting and joints shall be installed clean, square and thoroughly glued.

### TRENCHING

- Customers are to provide trenching, backfilling and compaction in accordance with Douglas County PUD standards.
- Trench shall be as straight as possible.
- Backfill with a minimum 3 inch layer of clean backfill, rocks no larger than 1 inch and no sharp objects placed over conduits. (clean native backfill meeting the aforementioned standards is acceptable).
- Trench shall be free of trash and frozen or organic material and be thoroughly compacted throughout.
- Trenching in a public right-of-way or crossing under a public roadway requires a roadway use permit, applied for and issued to the licensed and bonded excavation contractor who will perform all work in the public right-of-way.

### SPECIAL NOTES

CALL BEFORE YOU DIG! 811

ALL CONDUIT MUST BE INSPECTED BEFORE COVERING - CALL DCPUD AT 881-2366 TO SCHEDULE INSPECTION. CALL 686-4501 FOR AN INSPECTION IN THE BRIDGEPORT AREA INCLUDING ALL AREAS NORTH AND EAST OF WITHROW.

DO NOT INSTALL CONDUITS INTO EXISTING TRANSFORMERS, HANDHOLES, VAULTS OR ANY ENERGIZED EQUIPMENT



DOUGLAS  
COUNTY  
PUD

## THREE PHASE CONSTRUCTION STANDARDS

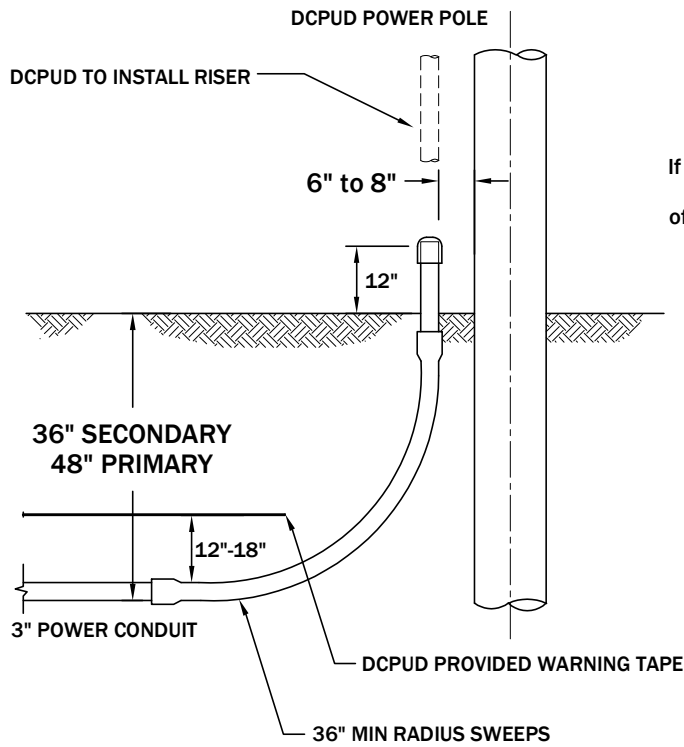
### 3-PH TRENCH & CONDUIT REQUIREMENTS

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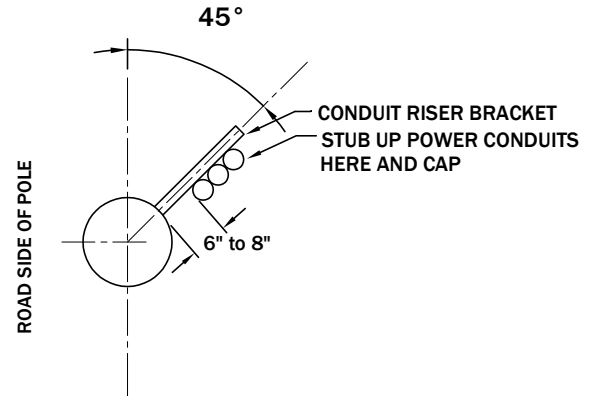
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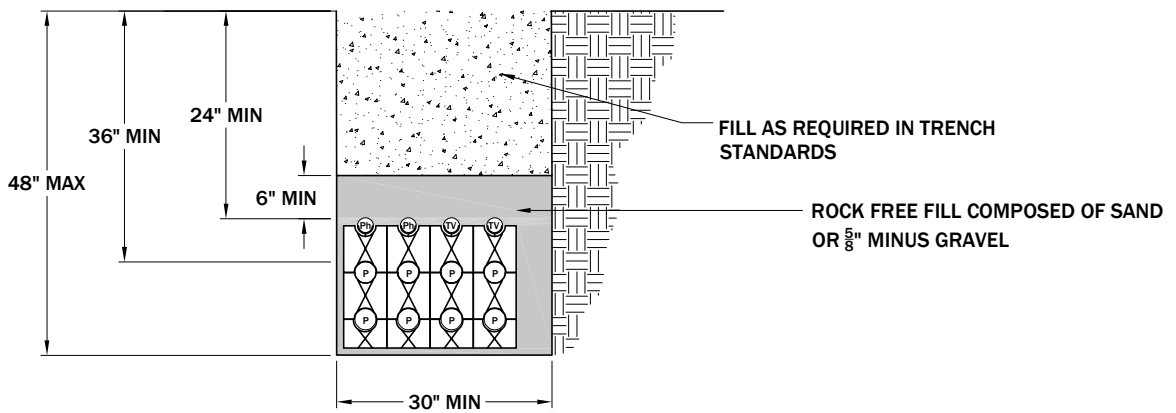
C13-001



If no bracket exists at pole, stub conduit up to within 8" (but no closer than 6") of pole at a preferred quadrant location.



**CONDUIT STUB UP AT POLE**



MULTI CONDUIT CROSS SECTION



- THE USE OF CONDUIT SPACERS MAY BE REQUIRED FOR MULTI CIRCUIT TRENCHES
- CONCRETE DENSITY FILL (CDF) MAY BE REQUIRED BY DISTRIBUTION ENGINEERING

**MULTI CIRCUIT TRENCH GUIDELINES**



DOUGLAS COUNTY  
PUD

THREE PHASE CONSTRUCTION STANDARDS

3-PH TRENCH & CONDUIT REQUIREMENTS

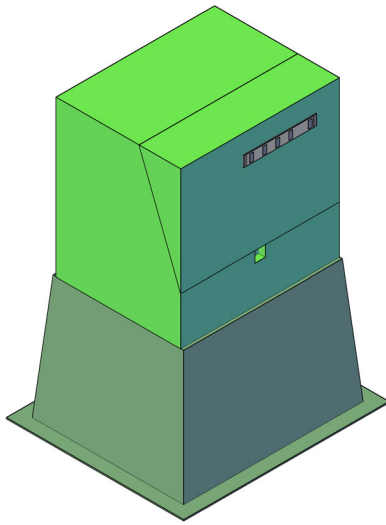
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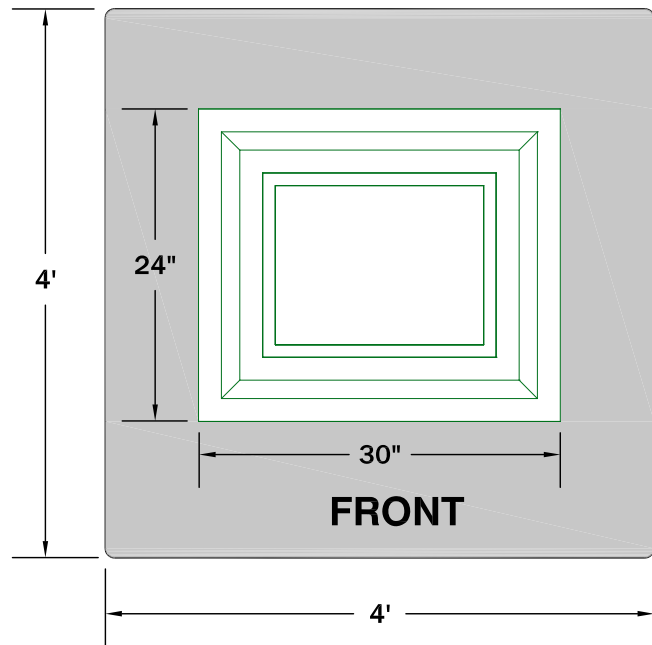
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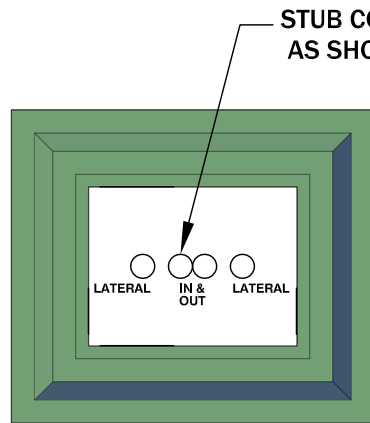
**SINGLE PHASE  
JUNCTION CABINET**

**PLAN VIEW - EXCAVATION AREA**



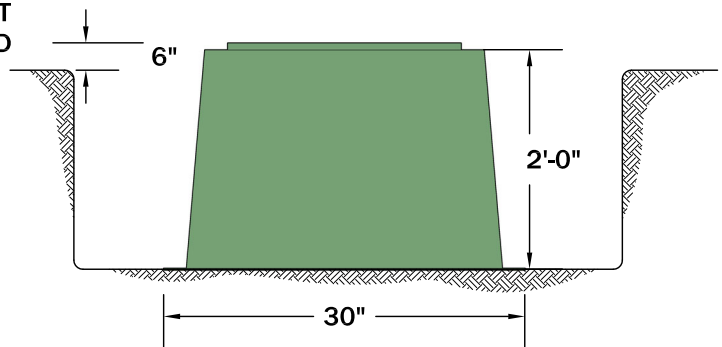
**GENERAL NOTES**

- Excavation & conduit installations must be inspected by Douglas County PUD representative.
- Pad area is to be select backfill and firmly tamped.
- Cap all conduit stubs.
- Douglas County PUD will supply and install all grounding materials.



**SINGLE PHASE TOP VIEW**

BURY ALL BUT  
TOP 6" OF PAD



**FRONT VIEW**



DOUGLAS  
COUNTY  
PUD

RESIDENTIAL CONSTRUCTION STANDARDS

JUNCTION BOX PAD EXCAVATION/CONDUIT INSTALLATION

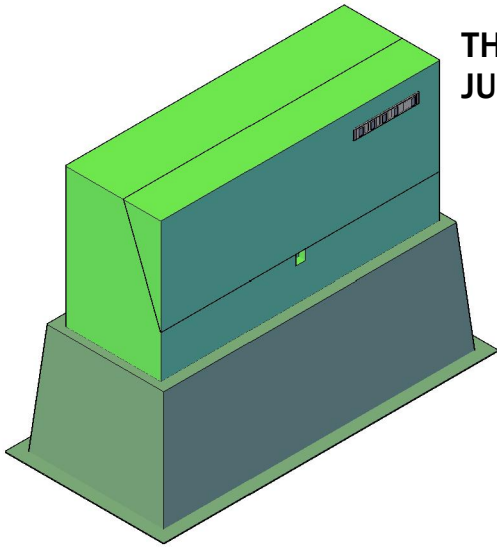
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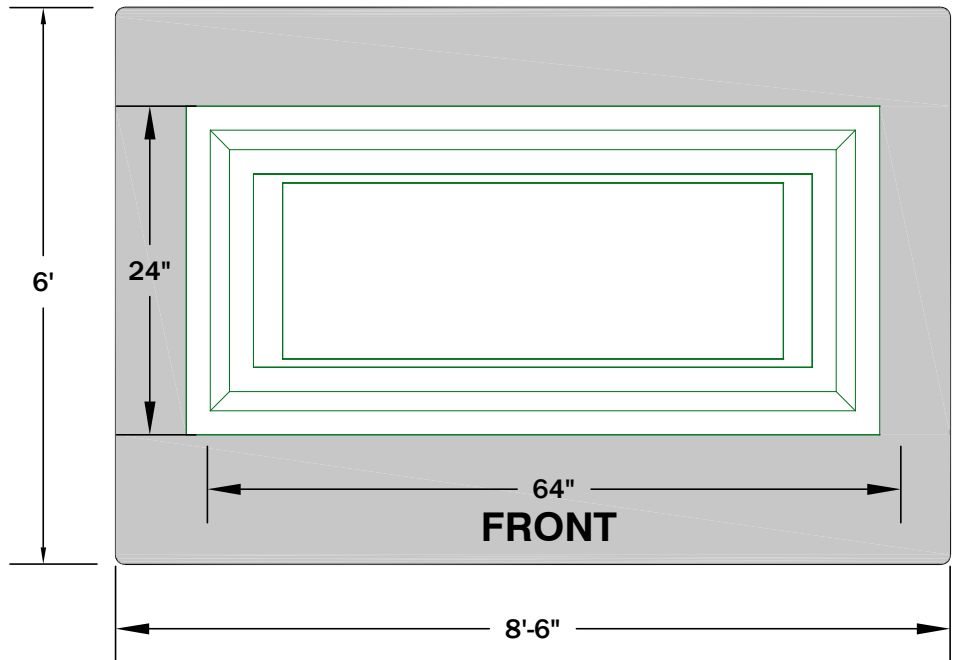
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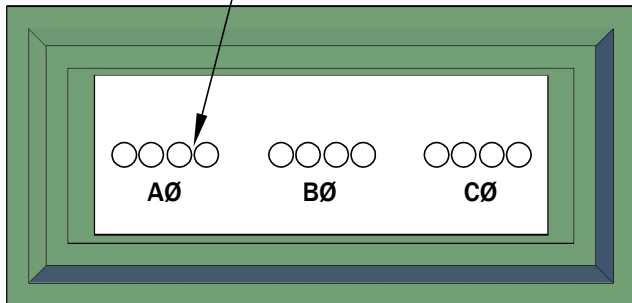
**THREE PHASE  
JUNCTION CABINET**



**PLAN VIEW - EXCAVATION AREA**



STUB CONDUITS UP  
AS SHOWN

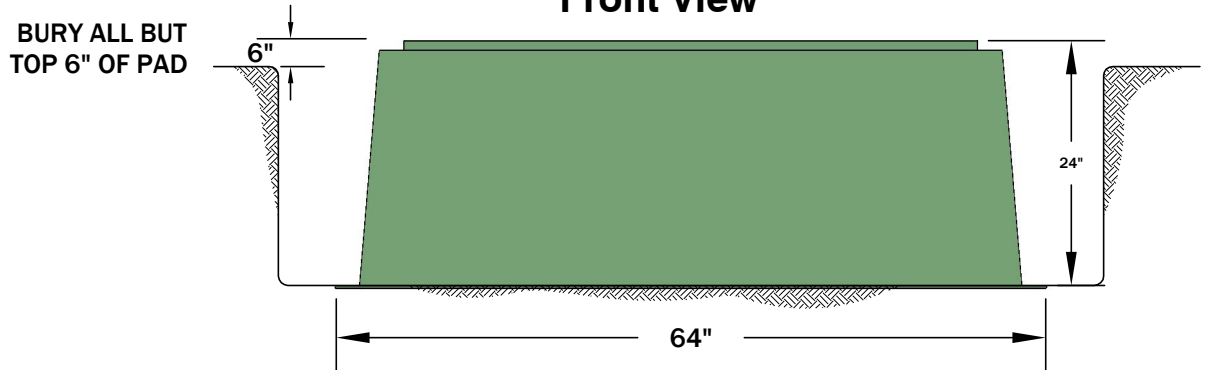


**Top View**

**GENERAL NOTES**

- Excavation & conduit installations must be inspected by a Douglas County PUD field representative.
- Pad area is to be select backfill and firmly tamped.
- Cap all conduit stubs.
- Douglas County PUD will supply and install all grounding material.

**Front View**



**DOUGLAS  
COUNTY  
PUD**

**DEVELOPMENT CONSTRUCTION STANDARDS**

**3PH JUNCTION BOX PAD EXCAVATION/CONDUIT INSTALLATION**

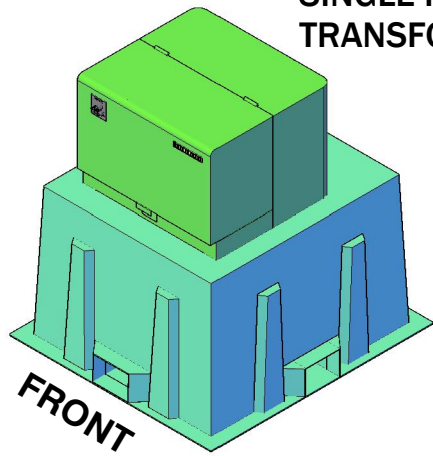
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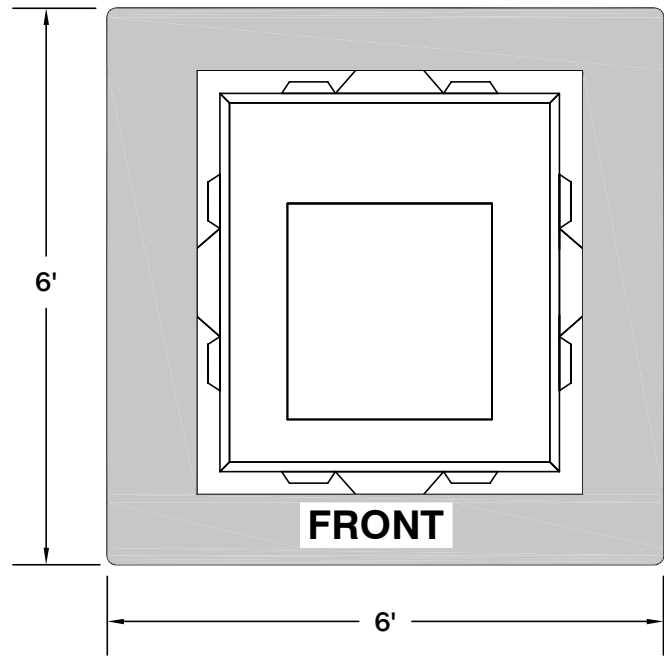
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CI3-003

**SINGLE PHASE TRANSFORMER**



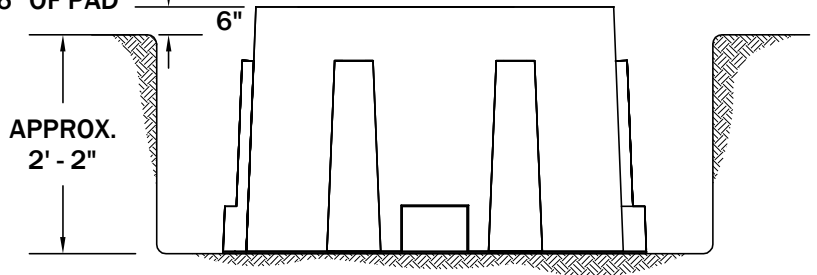
**PLAN VIEW - EXCAVATION AREA**



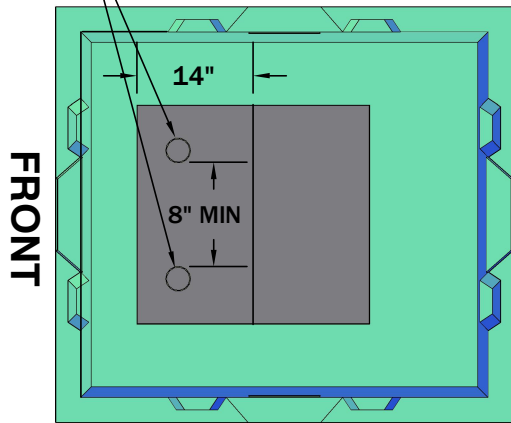
**GENERAL NOTES**

- Excavation & conduit installations must be inspected by Douglas County PUD representative.
- Pad area is to be select backfill and firmly tamped.
- Cap all conduit stubs.
- Douglas County PUD will supply and install all grounding materials.

BURY ALL BUT TOP 6" OF PAD



PRIMARY & SECONDARY CONDUITS MUST STUB UP IN THE FIRST 14" OF THE FRONT SIDE OF THE TBX.

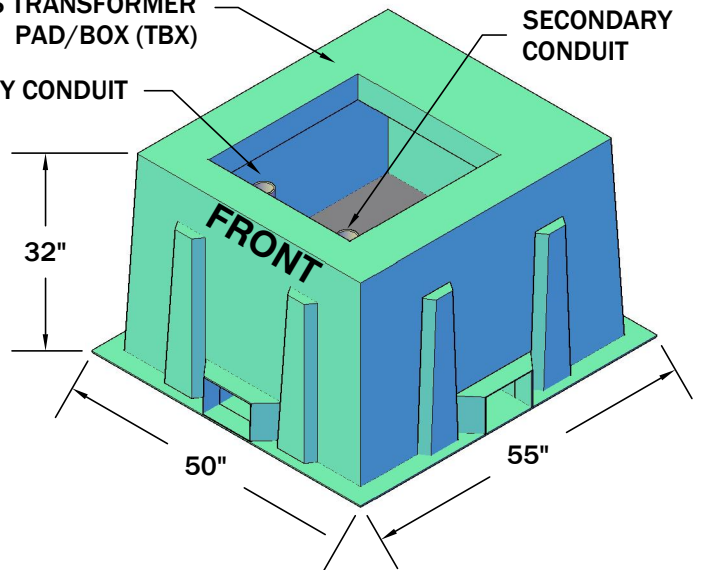


**Top View**

FIBERGLASS TRANSFORMER PAD/BOX (TBX)

SECONDARY CONDUIT

PRIMARY CONDUIT



**DOUGLAS COUNTY PUD**

**RESIDENTIAL CONSTRUCTION STANDARDS**

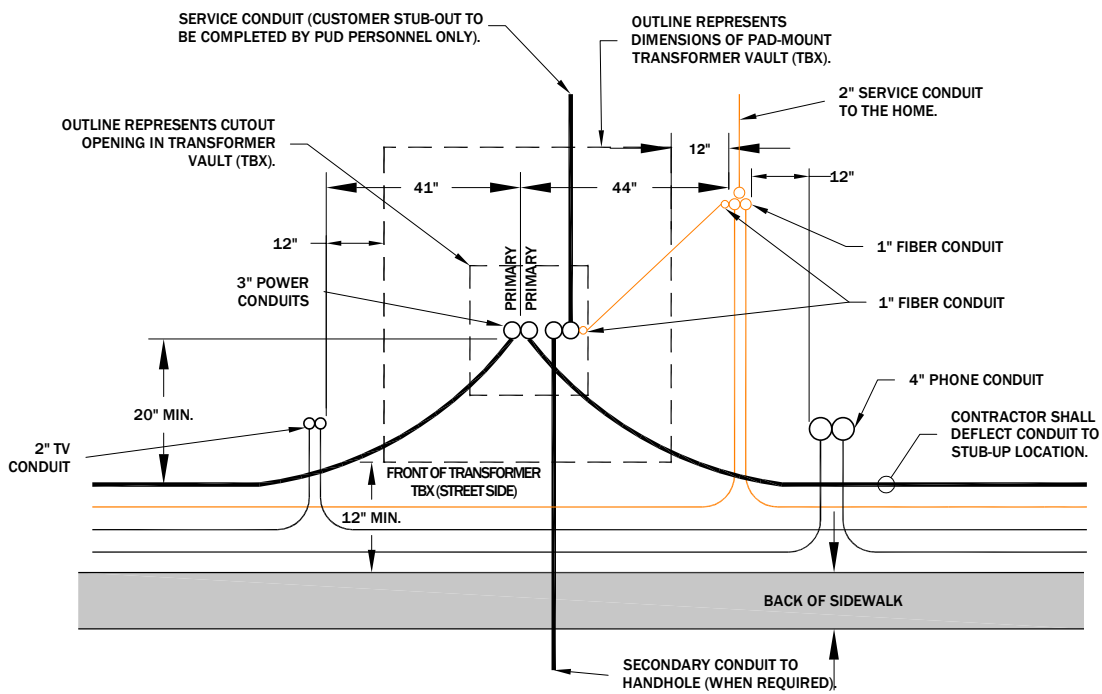
**TRANSFORMER PAD EXCAVATION/CONDUIT INSTALLATION**

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PAGE 1 OF 1

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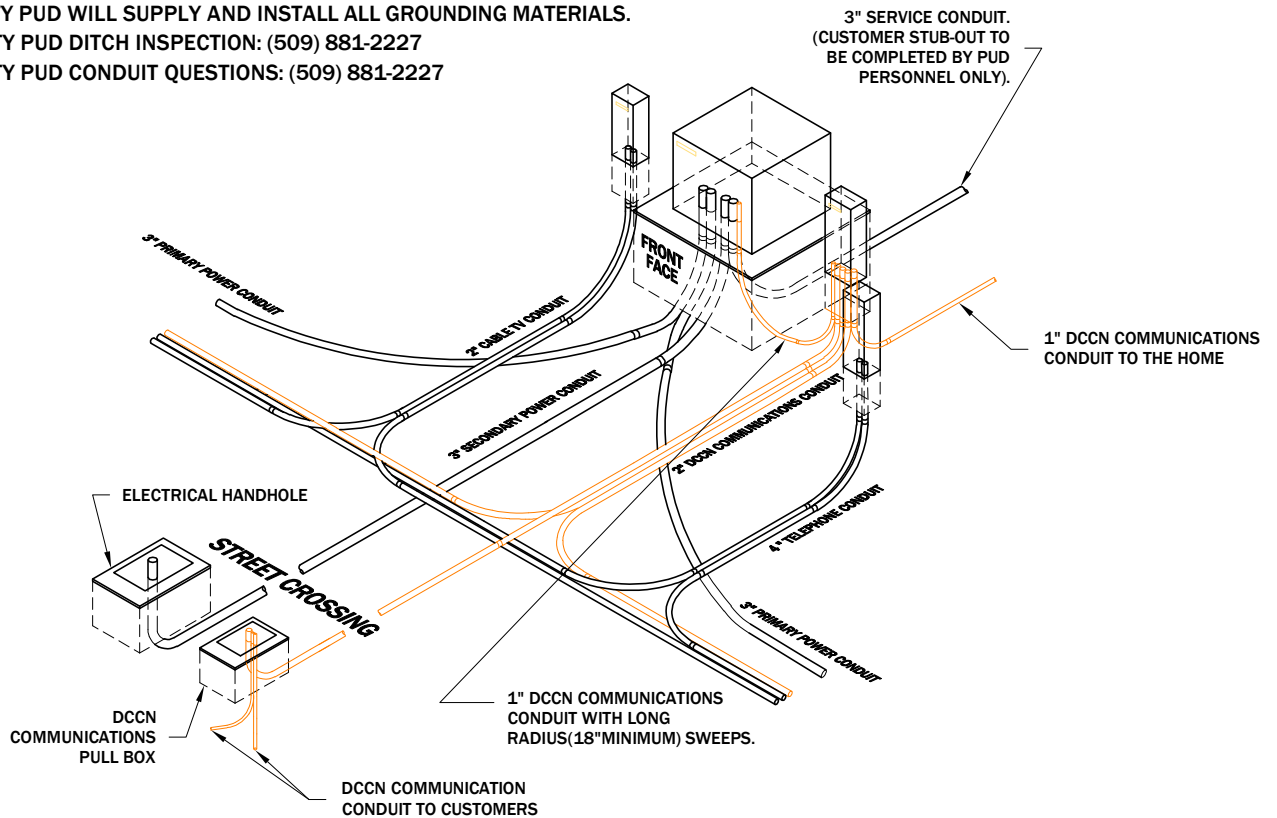
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**PLAN VIEW**

**NOTES:**

- DOUGLAS COUNTY PUD WILL SUPPLY AND INSTALL ALL GROUNDING MATERIALS.
- DOUGLAS COUNTY PUD DITCH INSPECTION: (509) 881-2227
- DOUGLAS COUNTY PUD CONDUIT QUESTIONS: (509) 881-2227



**OBLIQUE VIEW**



DOUGLAS  
COUNTY  
PUD

THREE PHASE CONSTRUCTION STANDARDS

CONDUIT LAYOUT FOR DEVELOPMENTS

APPROVED:

REV DATE: 01/23/2024

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