



Southwest Tennessee Electric
Membership Corporation

**SERVICE INSTALLATION
SPECIFICATIONS AND DRAWINGS**

EFFECTIVE DATE: FEBRUARY 2024



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SOUTHWEST TENNESSEE ELECTRIC MEMBERSHIP CORPORATION

OPERATING PROCEDURE

TITLE: CONSTRUCTION: RESIDENTIAL UNDERGROUND SERVICE

DATE: FEBRUARY 20, 2024

TO: ENGINEERING AND OPERATIONS PERSONELL

ISSUED BY: VP OF ENGINEERING,
SYSTEM ENGINEER – DISTRIBUTION/PLANNING

PURPOSE:

The purpose of this procedure is to provide standards for the installation of electric service and communication conduit in residential applications.

Members or their electrical contractor shall install conduit, pads, and enclosures to the following specifications for underground secondary service. STEMC shall provide transformer pads, secondary vaults, communication vaults and cable. Remember to dial 811 three days prior to any excavation.

- STEMC must approve meterbase location prior to installation of conduits. Failure to get approval may result in refusal to connect service. See Drawing UK0.1G (MB&SVC).
- Conduit shall extend all the way from the meterbase to the STEMC point of feed.
- Point of feed may be considered a padmounted transformer, service stub, handhole, or pole.
- A ditch/conduit inspection is required at all underground services. All conduits and elbows (90s/45s) shall be visible. All joints must be glued. Contact your nearest STEMC office to schedule an inspection.
- In newly developed subdivisions, service stubs are installed at transformer so member or contractor can tie conduits to service stub without entering the transformer. See drawing “UF1.FG (PM 1P SD).”
- Each service ditch shall contain two conduits: one 3-inch and one additional conduit, 3/4-inch minimum.
- 3/4-inch conduit shall be stubbed up and capped (unglued) outside point of feed, marked by STEMC, and at meter base.

Conduit Installation Requirements:

- Conduit shall be 3-inch PVC or rigid schedule 80 at ground level.
- Conduit shall be PVC or HDPE schedule 40 or 80 below ground.
- Plumbing fittings and conduit shall not be used.
- All conduit shall have pull string installed throughout the entire length
- Conduit shall be installed at a minimum of 30 inches below final grade.
- Warning tape shall be installed at a depth of approximately 12 inches below final grade.
- Overhead or Underground residential services shall not exceed 250 ft from point of feed to meterbase.
- If point of feed is pole, 1 stick of 3-inch schedule 80 PVC conduit shall be provided by member or contractor. Leave at pole to be installed by STEMC. See drawing “UP7.4G (TD SEC).”
- Elbows at STEMC point of feed and meterbase may be short sweeping 90 (minimum 24-inch radius).
- Two 45-degree elbows may be used at the meterbase given they are separated by a minimum of 2 feet of straight conduit to avoid foundation.

SOUTHWEST TENNESSEE ELECTRIC MEMBERSHIP CORPORATION

OPERATING PROCEDURE

TITLE: CONSTRUCTION: GENERAL POWER UNDERGROUND SECONDARIES

DATE: FEBRUARY 20, 2024

TO: ENGINEERING AND OPERATIONS PERSONELL

ISSUED BY: VP OF ENGINEERING,
SYSTEM ENGINEER – DISTRIBUTION/PLANNING

PURPOSE:

The purpose of this procedure is to provide standards for the installation of underground electric secondary and communication conduit in general power applications.

Members, or their electrical contractor, shall install conduit, cable, pads, and enclosures to the following specifications for general power underground secondaries. STEMC shall provide transformer pads, secondary vaults, and communication vaults. Remember to dial 811 three days prior to any excavation.

- STEMC must approve meterbase location prior to installation of conduits. Failure to get approval may result in refusal to connect service.
- Members with general power accounts own the secondary cable and conduit. The member or their electrician is responsible for sizing the cable and conduit appropriately.
- The State of Tennessee requires a rough-in inspection on trench for member owned secondaries. This applies to commercial general power accounts. Please contact the local inspector.
- Conduit shall extend all the way from the meterbase to the STEMC point of feed.
- Each service ditch shall contain two sets of conduits: secondary conduits owned by member plus one additional conduit, 3/4 inch minimum, to be owned by STEMC.
- STEMC owned conduit shall be stubbed up and capped (unglued) outside point of feed, marked by STEMC, and at meter base location.

Conduit and Cable Installation Requirements:

- For installations where point of feed is a padmounted transformer, members or their electrical contractor shall be responsible for providing terminating lugs. STEMC will terminate wire at transformer.
- If the point of feed is a pole, 1 stick of schedule 80 PVC shall be provided by member or contractor for each conduit and left at the base of the pole. Do not install.
- Conduit and secondary wiring shall be installed per specification drawing “UP7.4G (TD SEC).” This includes single and 3 phase applications.
- Installation must conform to the latest NESC and NEC requirements.

Low Usage General Power Accounts on Residential Property:

- Single-phase general power accounts located on residential properties are exempt from providing secondary wire to the point of feed, so long as they are not being used as a place of business.
 - Examples: Shops, gates, barns, pool houses.
 - These locations shall be installed per “Residential Procedures: Underground Service.”

SOUTHWEST TENNESSEE ELECTRIC MEMBERSHIP CORPORATION

OPERATING PROCEDURE

TITLE: CONSTRUCTION: UNDERGROUND PRIMARY EXTENSION

DATE: FEBRUARY 20, 2024

TO: ENGINEERING AND OPERATIONS PERSONELL

ISSUED BY: VP OF ENGINEERING,
SYSTEM ENGINEER – DISTRIBUTION/PLANNING

PURPOSE:

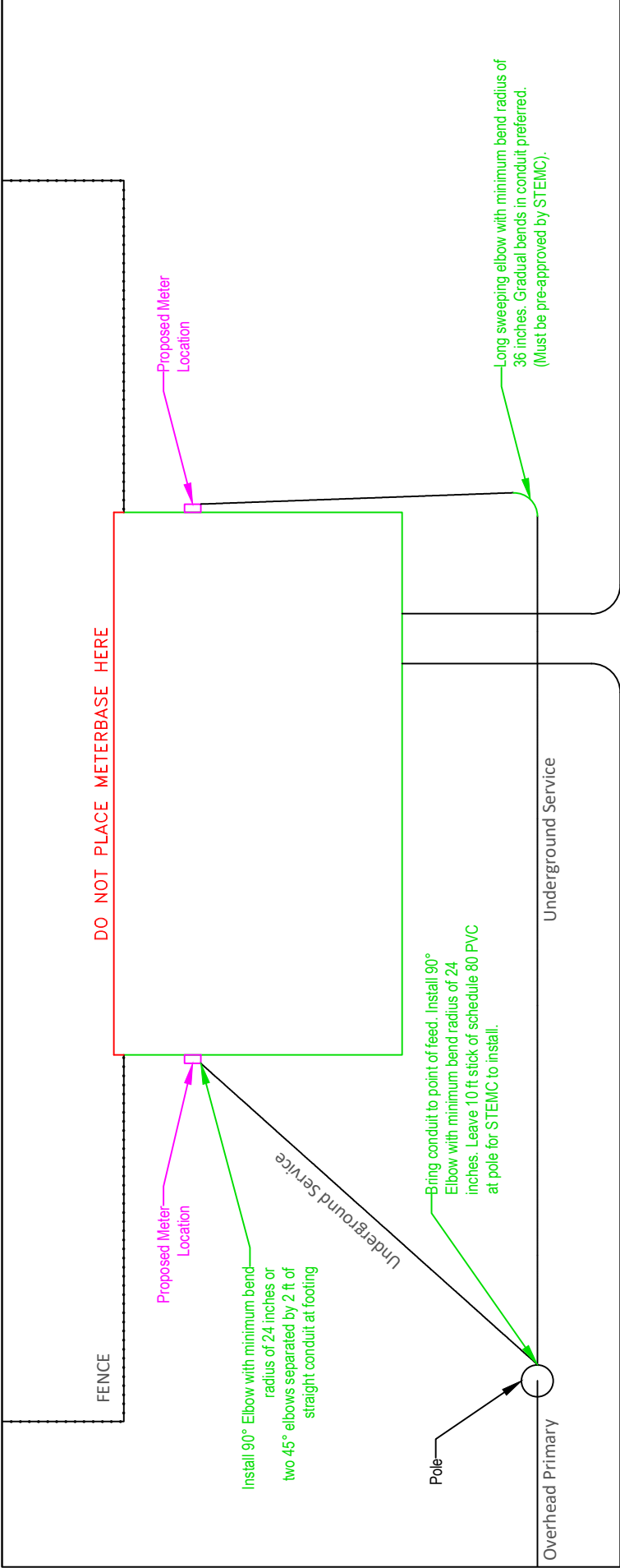
The purpose of this procedure is to provide standards for the installation of electric primary and communication conduit in residential and general power applications.

Members, or their electrical contractor, shall install conduit, pads, and enclosures to the following specifications for underground primary extensions. STEMC shall provide transformer pads, primary vaults, communication vaults and cable. Remember to dial 811 three days prior to any excavation.

- STEMC must approve transformer and meterbase location prior to installation of conduits. Failure to get approval may result in refusal to connect service.
- Conduit shall extend all the way from the point of feed to the padmount transformer location.
- Point of feed may be considered a pole, junction box, or other transformer.
- Direct burial method is limited and may only be utilized with the approval of STEMC Engineering.
- A ditch/conduit inspection is required at all underground primary extensions. All conduits and elbows (90s/45s) shall be visible. Contact your nearest STEMC office to schedule an inspection.
- Depending on length of installation, STEMC may require placement of primary junction boxes and vaults to reduce pulling length.
- Each primary ditch shall contain two sets of conduits; one or three 2-inch primary conduits as needed plus one additional 2-inch conduit.
- Additional 2-inch conduit shall be stubbed up and capped (unglued) outside point of feed, marked by STEMC, and at meter base location.

Conduit Installation Requirements:

- Conduit shall be 2-inch PVC or rigid schedule 80 at ground level.
- Conduit shall be 2-inch PVC or HDPE schedule 40 or 80 below ground.
- Steel elbows (minimum 36-inch radius) may be required at the discretion of STEMC engineering. Typically, this applies to runs 300 ft or longer.
- Plumbing fittings and conduit shall not be used.
- All conduit shall have pull string installed throughout the entire length
- Conduit shall be installed at a minimum of 42 inches below final grade.
- Warning tape shall be installed at a depth of approximately 12 inches below final grade.
- If point of feed is pole, 1 stick of 2-inch schedule 80 PVC conduit shall be provided by member or contractor. Leave at pole to be installed by STEMC. See drawings “UP7.1G & UP7.3G(TRD).”



GENERAL NOTES:

1. Meterbase location must be approved by STEMC prior to installation.
2. Meterbase must be installed on one of the three road facing walls of the building.
3. Meterbase must not be installed inside fence or underneath awnings.
4. If electrical panel must be located in an unacceptable location for meterbase by STEMC standards, it is possible for member or electrician to locate meterbase at an acceptable location and run service wire between meterbase and electrical panel per NEC standards.

UNDERGROUND SERVICE NOTES:

1. See *Residential Procedures: Underground service*
2. Services must not exceed 250 ft in length.
3. Services must be at a minimum depth of 30 inches to top of conduit.
4. Conduits are allowed two elbows, minimum 24-inch radius, one at each end. A single long sweeping elbow, minimum of 36-inch radius, may be added in between with STEMC approval.
5. A ditch/conduit inspection is required at all underground services.
6. 2500 lb pull string (mule tape) must be installed in conduit.



**Southwest Tennessee Electric
Membership Corporation**

STEMC APPROVAL REQUIRED FOR METER BASE, SERVICE, AND UNDERGROUND DITCH LOCATIONS.

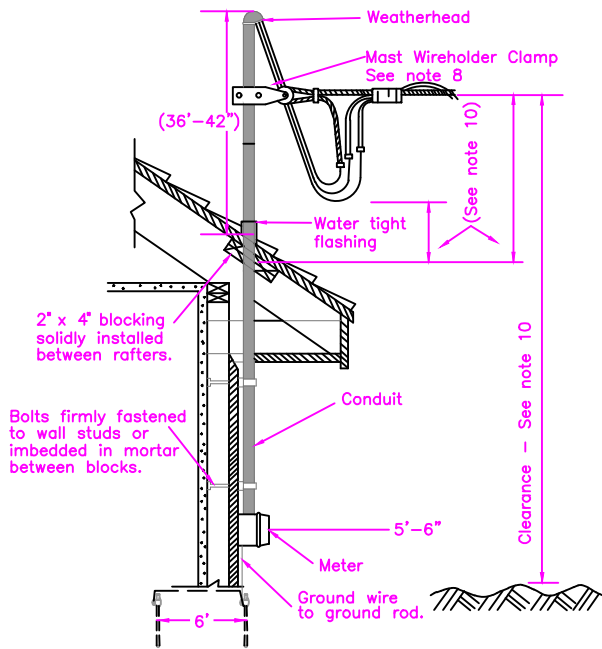
METER BASE AND SERVICE LOCATIONS

JANUARY 2024

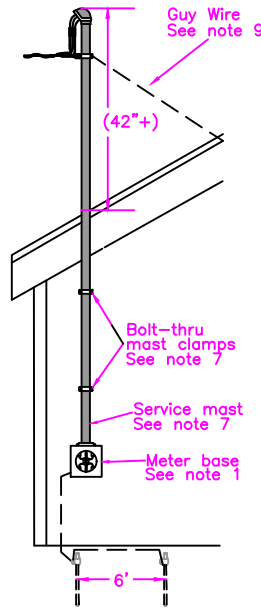
UK0.1G
(MB&SVC)

ALWAYS CHECK WITH LOCAL INSPECTOR TO VERIFY LOCAL AND NEC CODE REQUIREMENTS

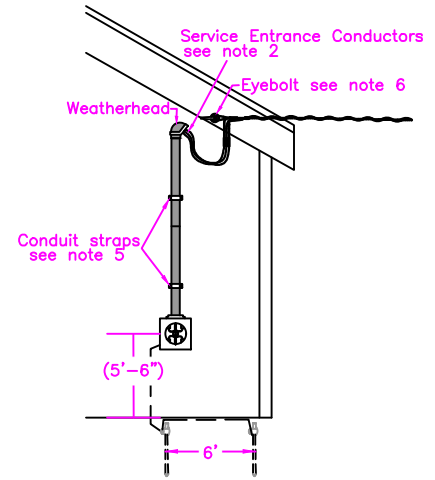
MAST TYPE



MAST TYPE WITH GUY



WALL TYPE



General Notes:

1. Meter base shall be located between 5 and 6 feet above final grade at a location approved by STEMC engineering.
2. Service entrance conductors shall extend a minimum of 18 inches out of weatherhead.
3. Service conductor must meet or exceed NESC requirements. Minimum service clearance is 16 feet over roads and driveways and 12 feet at locations subject to pedestrian traffic only.
4. Communications lines cannot attach to the electric service hardware including service mast and conduit. Must be 12 inches from service conductor.

Wall Type Service:

5. Service conduit shall be a minimum of 2 inch metallic rigid conduit. Service entrance raceways shall be fastened through the exterior wall with a minimum of 2 conduit straps; the lower being within 3 feet of top of meter base.
 - * For 200 amp service, 2 inch conduit is required.
 - * For 400 amp service, 3 inch conduit is required.
6. A 5/8 inch eyebolt, must be furnished and installed by the member or contractor within 18 inches of weatherhead.

Mast Type Service:

7. Service mast shall be a minimum of 2 inch metallic rigid conduit secured with a minimum of 2 mast clamps fastened through the wall with 1/2 inch clambolts: the lower being within 3 feet of meter base.
 - * For 200 amp service, 2 inch conduit is required.
 - * For 400 amp service, 3 inch conduit is required.
8. Service clamp and wireholder shall be furnished and installed by STEMC.
9. Where a mast riser is used, weatherhead shall be a minimum of 36 inches above roof. If weatherhead is more than 42 inches above roof, a guy wire with eyebolt through rafter is required.
10. Minimum vertical clearance from service conductor to roof shall be 18 inches within a 6 foot radius of the service mast, and 3 feet and 6 inches outside of the 6 foot radius. Roofs that are readily accessible to pedestrian traffic shall have a minimum of 11 feet of vertical clearance.

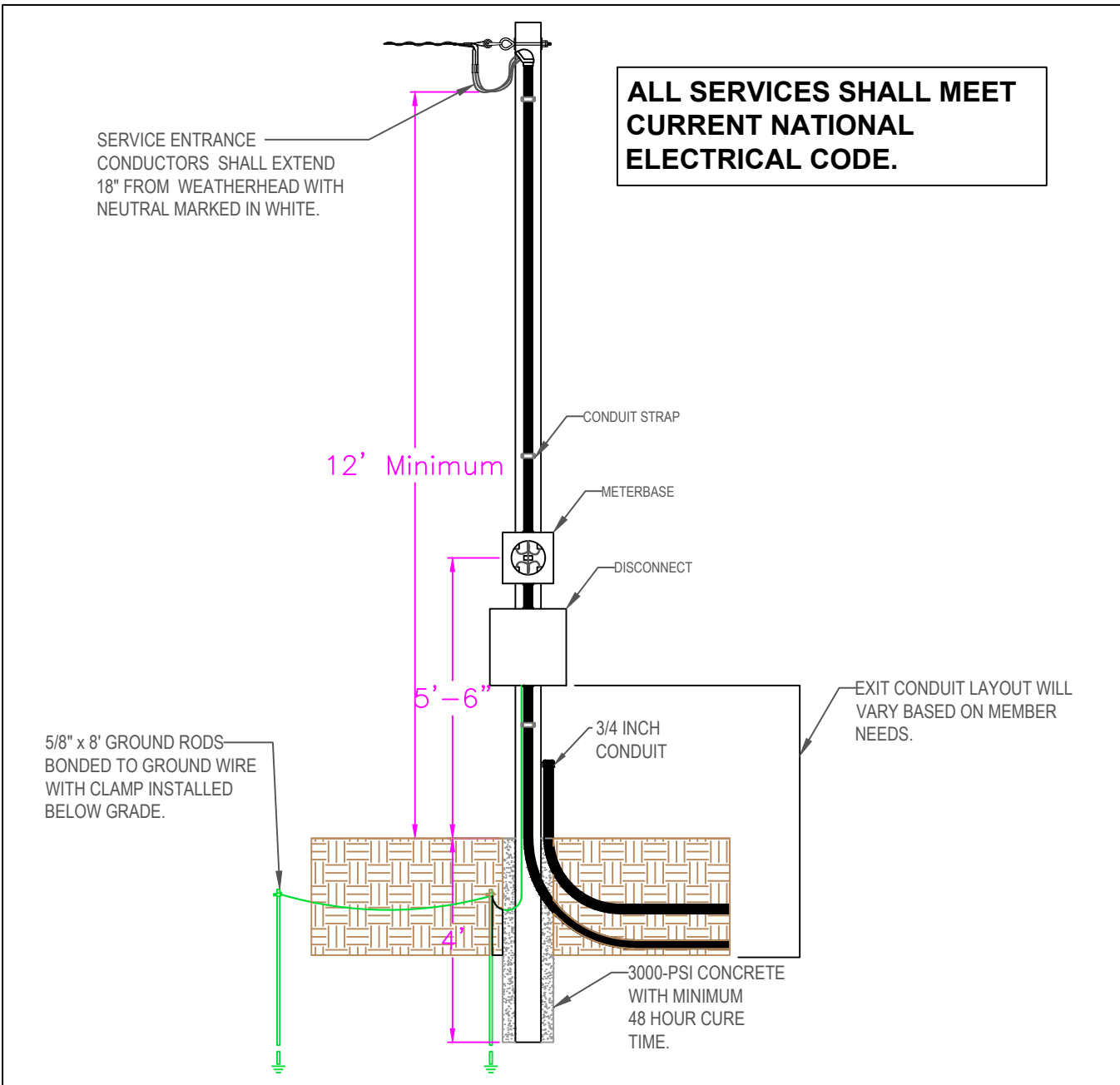


Southwest Tennessee Electric Membership Corporation

OVERHEAD SERVICE ASSEMBLY GUIDE

JANUARY 2024

K4.2G



NOTES:

1. Obtain approval for pole location and height from STEMC engineering prior to commencing work.
2. STEMC no longer issues permits.
3. Pole height should be 20 feet with minimum 6 inch diameter. It shall be buried 4 feet below ground level. Any pole height other than 20 feet must be approved by STEMC engineering.
4. Concrete shall be placed around pole, visible at ground level, and cured 48 hours.
5. Guy and anchor shall be set if service length exceeds 100 feet, or as required by STEMC engineering.
6. Clearance to drip loop shall be a minimum of 12 feet above ground level for residential buildings if restricted to pedestrian traffic. Where service conductor crosses driveways, public streets, or areas subject to traffic taller than 8 feet or horses, minimum clearance shall be 16 feet.
7. Service wire crossing a roof shall have minimum clearance of 3 feet 6 inches if roof is inaccessible, 10 feet if accessible.
8. Eyebolt shall be installed 6" from top of pole.



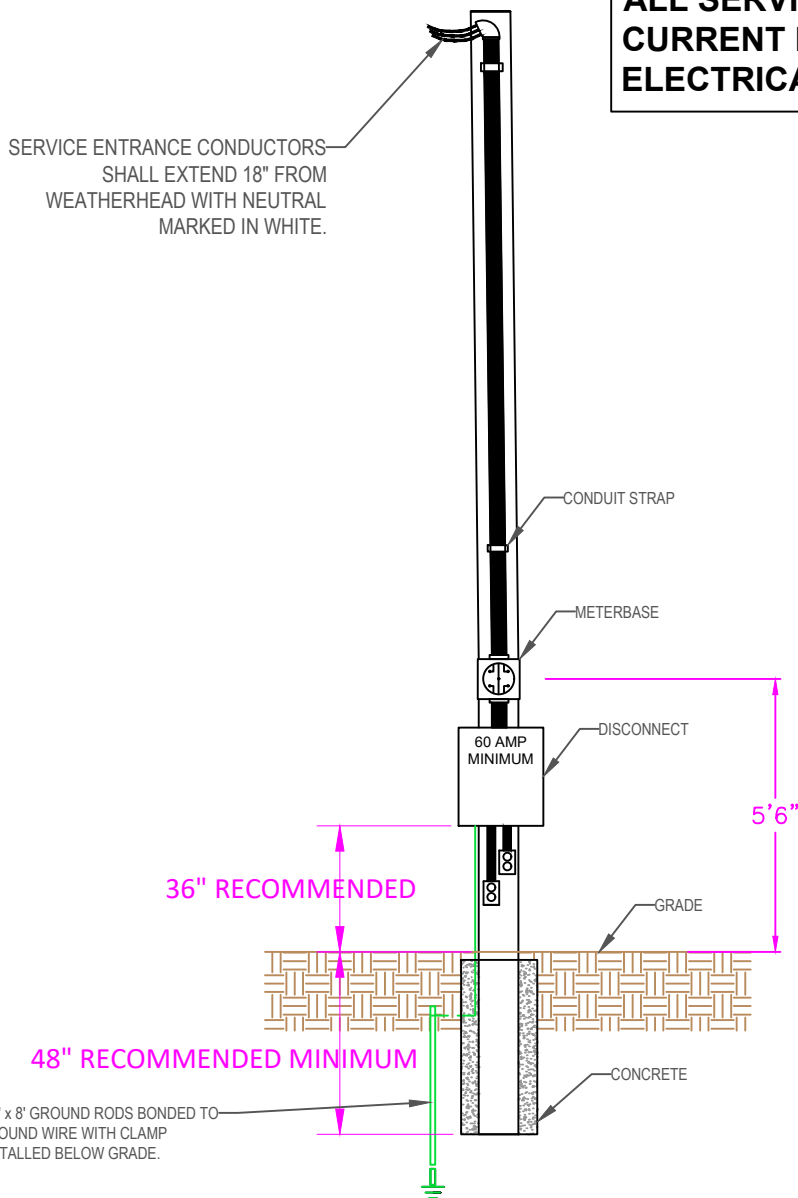
Southwest Tennessee Electric Membership Corporation

MEMBER OWNED SERVICE POLE SPEC

JANUARY 2024

K5.1G
(MBR SVC POLE)

**ALL SERVICES SHALL MEET
CURRENT NATIONAL
ELECTRICAL CODE.**



NOTES:

1. Minimum 1 inch conduit and weatherhead must extend to top of pole. Raceway may be rigid, IMC or Schedule 40 PVC.
2. A ground wire of #6 copper or larger shall be run, unspliced, from the meter socket to a driven ground rod.
3. Pole shall be a minimum of 16 feet tall, 6x6 inch square or 6 inch diameter (at top) round pole buried a minimum of 4 feet below ground. Concrete or bracing, such as member installed down guy, is required.
4. Point of attachment (eyebolt) must be of sufficient height to provide proper clearance by NESC.
5. Point of attachment must be mounted at or below weatherhead.
6. Meter socket shall be located between 5 and 6 feet above final grade.
7. All 120/240 volt receptacles shall be GFCI protected and have "in use" covers.
8. Clearance to drip loop shall be a minimum of 10 feet above ground level for residential services if restricted to pedestrian traffic. Where service conductor crosses driveways, public streets, or areas subject to traffic taller than 8 feet or horses, minimum clearance shall be 16 feet.



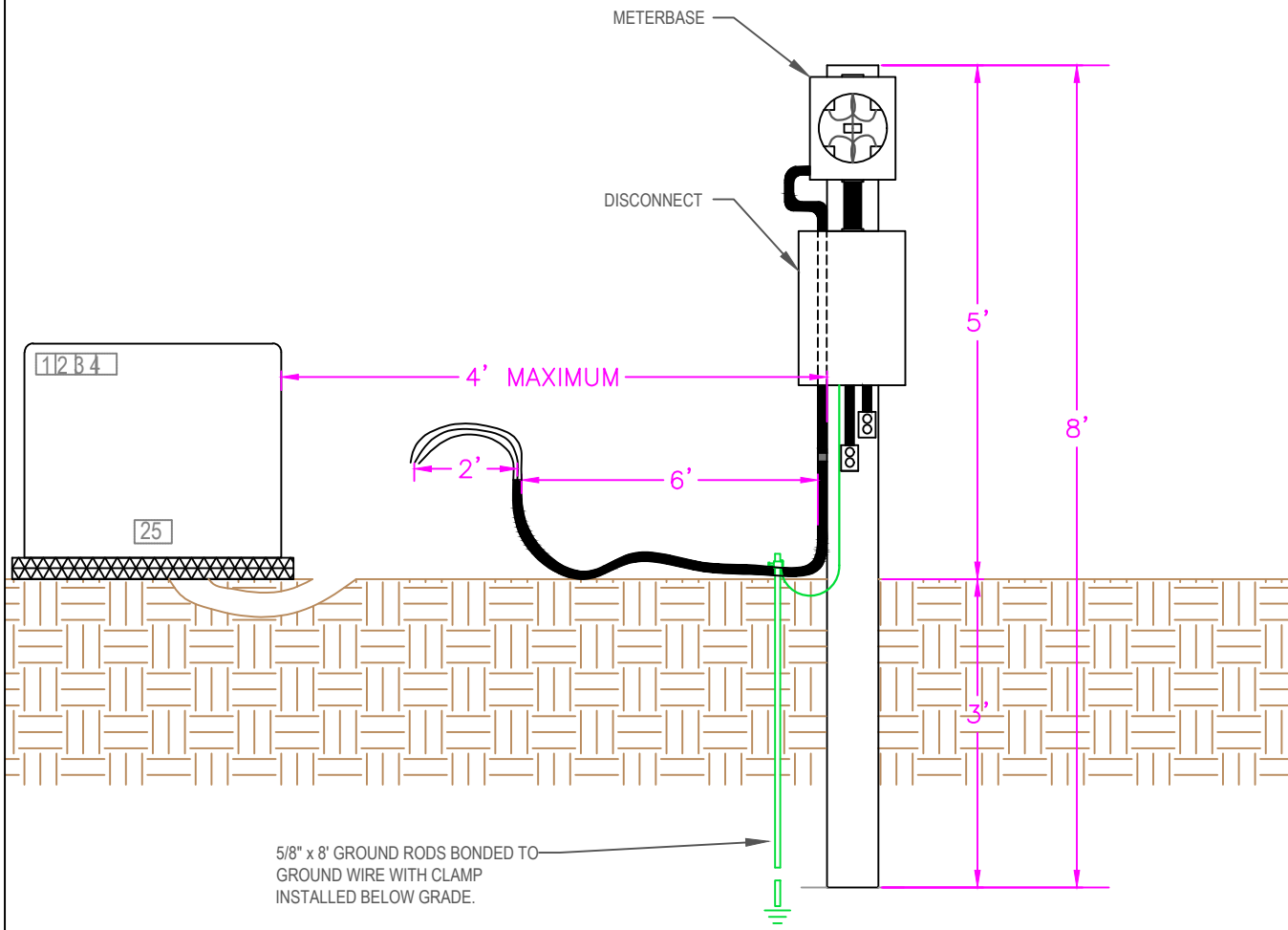
**Southwest Tennessee Electric
Membership Corporation**

TEMPORARY OVERHEAD SERVICE DETAIL

FEBRUARY 2024

K5.2G
(OH TEMP)

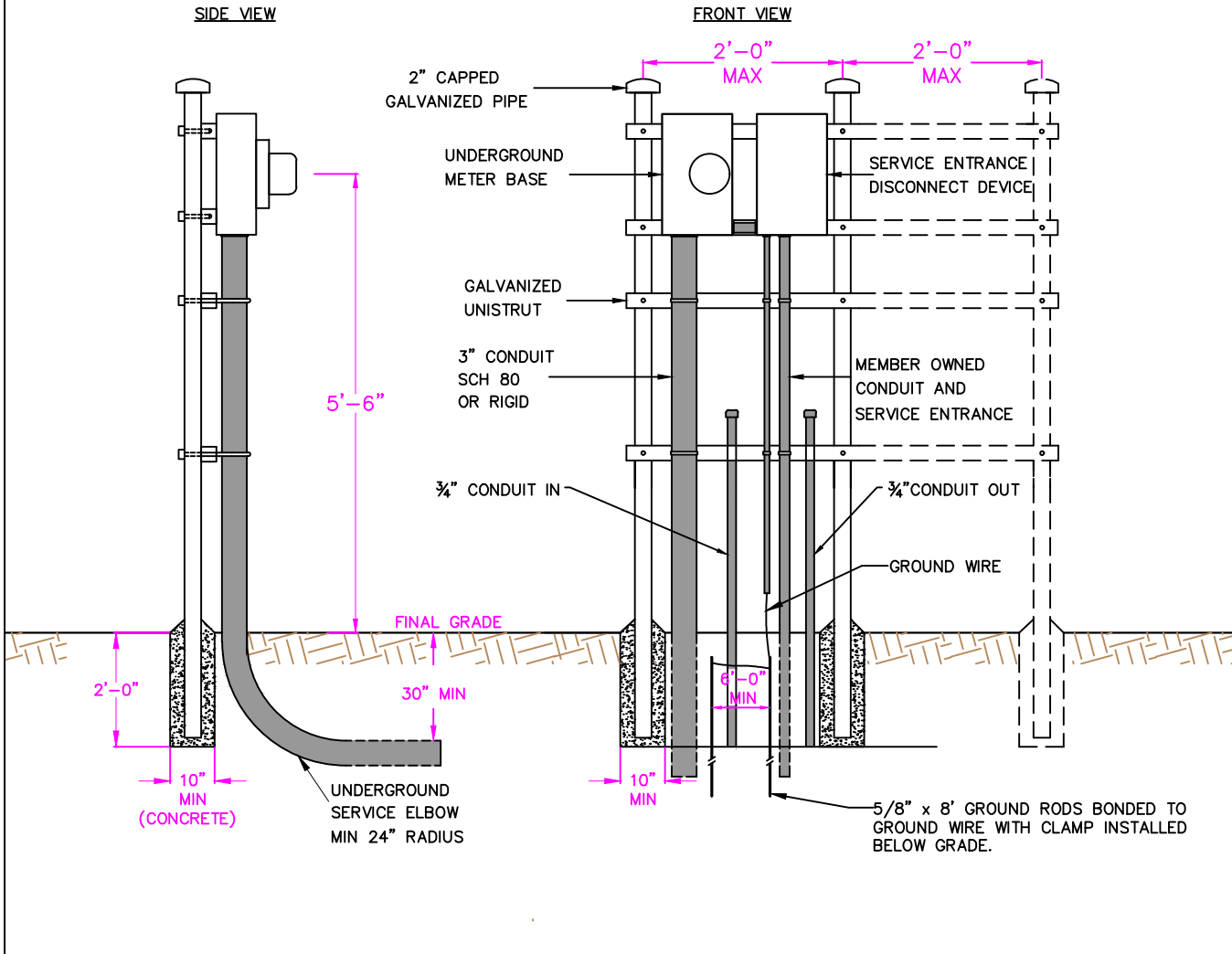
**ALL SERVICES SHALL MEET
CURRENT NATIONAL
ELECTRICAL CODE.**



NOTES:

1. Pole or timber 8 feet tall with 4 inch minimum diameter shall be buried 3 feet below ground level.
2. Backfill and tamp with clean native earth. Tamping shall provide sufficient support to set meter. Unsecured temporaries will be turned down upon inspection.
3. Service whip shall be a minimum of 6 feet in length when extended from pole. Whip shall be comprised of flexible, non-metallic conduit, containing appropriately sized wire for disconnect.
4. In addition to whip, conductor pigtail must extend 2 feet from end of flexible conduit.
5. Coordinate transformer entry with local STEMC engineering.
6. Temporary service pole must be set within 4 feet of existing STEMC padmount transformer.
7. All 120/240 volt receptacles shall be GFCI protected and have "in use" covers.

**ALL SERVICES SHALL MEET
CURRENT NATIONAL
ELECTRICAL CODE.**



Notes:

1. Meter base shall be located between 5 and 6 feet above final grade at a location approved by STEMC engineering.
2. Member is responsible for installing structure and all conduit cabinets, meter base, and disconnect per current NEC requirements.
3. Member shall install string ("mule tape" preferred) with minimum rating of 2,500 lbs in conduit and cover ends to keep out water.
4. Minimum 36 inch sweeping elbows shall be used. Rigid elbows may be required, as determined by STEMC engineering.
5. Concrete shall be 3000-PSI minimum placed around pole, visible at ground level, and cured 48 hours.
6. STEMC shall inspect conduit ditch from pole to meter prior to closing.
7. STEMC shall provide meter and conductor to meter from transformer.
8. See UQ2.4G and UQ2.5G for instrument based (CT & PT) installations.
9. If H structure must exceed 2 feet in width, posts shall be no further than 2 feet apart.
10. The State of Tennessee requires a rough-in inspection on trench for member owned secondaries. This applies to commercial general power accounts. This does not apply to STEMC installed residential secondaries.



**Southwest Tennessee Electric
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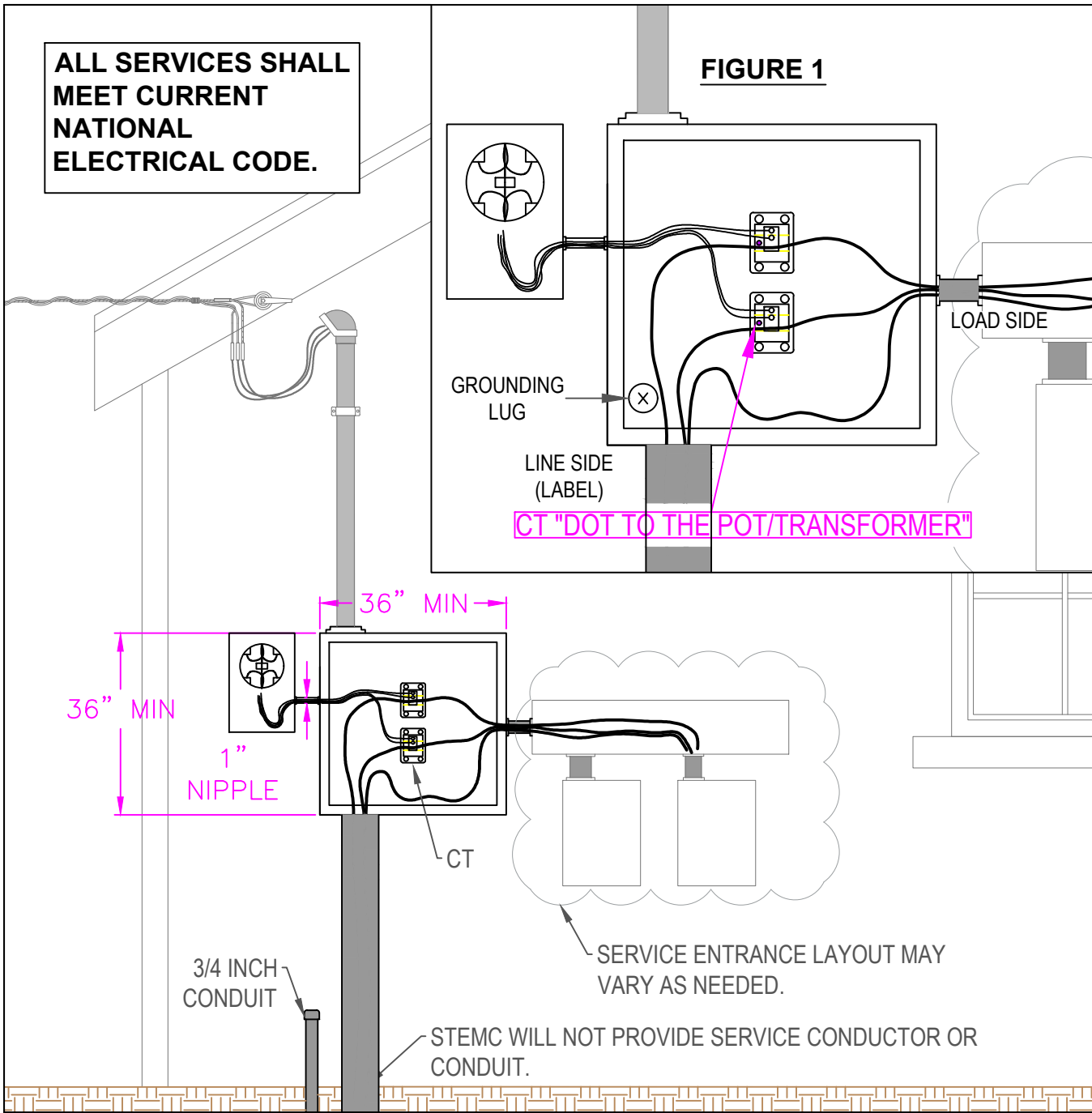
**H STRUCTURE METER CENTER
UNDERGROUND SERVICE**

JANUARY 2024

UK5.3G
(H STR)

ALL SERVICES SHALL MEET CURRENT NATIONAL ELECTRICAL CODE.

FIGURE 1



NOTES:

1. STEMC to provide "4s" meterbase and two "CTs."
2. Homeowner / Electrician to provide 36x36x12 inch minimum weatherproof enclosure with backplate and locking provisions. Cabinet shall be grounded.
3. Homeowner / Electrician to install "4s" meterbase and 36 inch enclosure connected with 1 inch nipple.
4. Homeowner / Electrician to install CTs on backplate of 36 inch enclosure. Polarity dot on CTs must be on line side of cable. See Figure 1.
5. Homeowner / Electrician to label wires going into the CT / PT cabinet.
6. Wiring from CTs to meter will be completed by STEMC.
7. OH or UG to be determined by load and transformer sizing per STEMC engineering.
8. Installations over 800 amps shall have CTs and PTs placed inside STEMC transformer cabinet. Such Installations do not require a 36x36x12 enclosure.

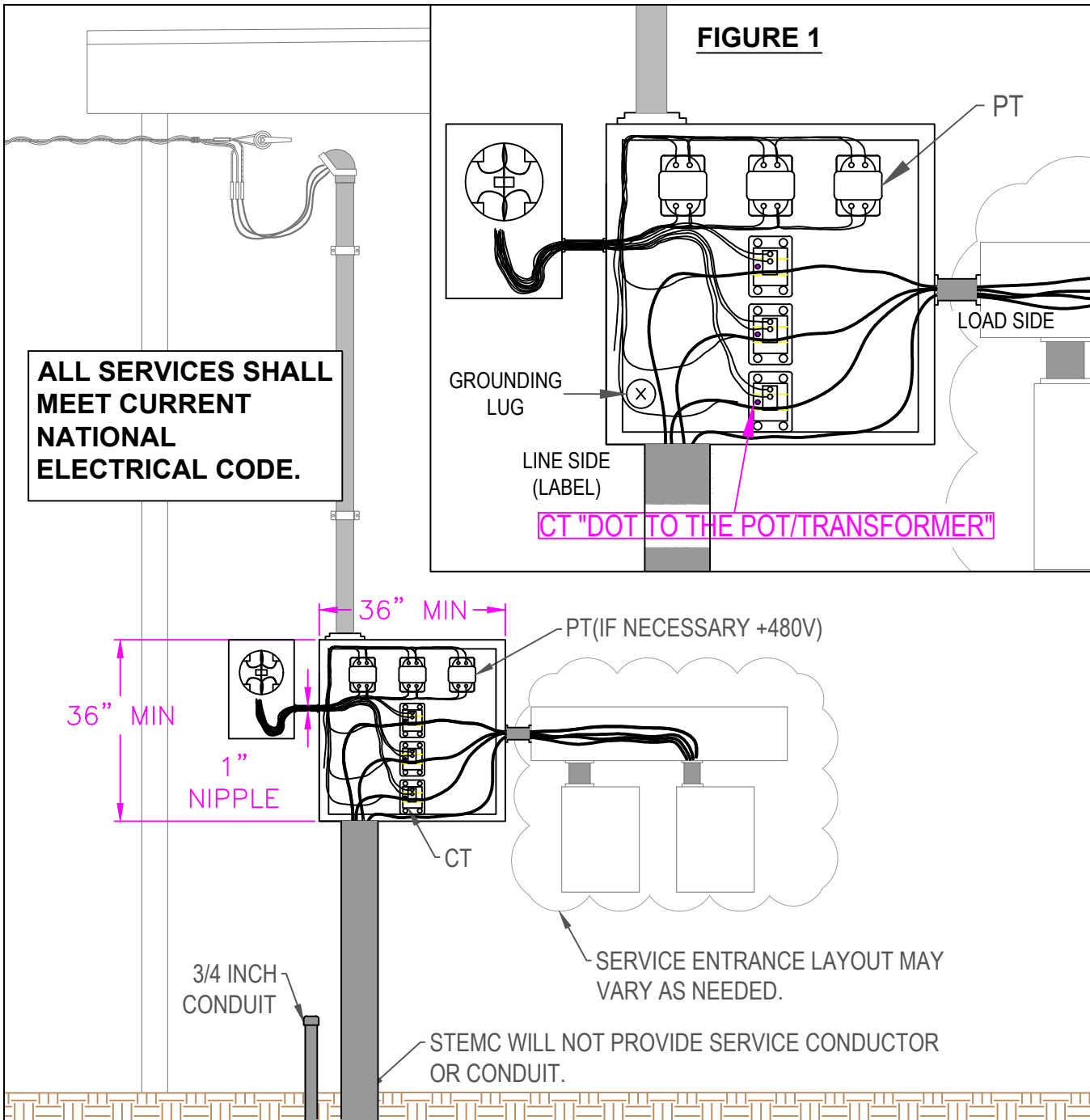


**Southwest Tennessee Electric
Membership Corporation**

**SINGLE PHASE INSTRUMENT RATED
SERVICE TYPICAL DETAIL
(600 - 800 AMP)**

JANUARY 2024

UQ2.4G
(CT 1P)



NOTES:

1. STEMC to provide "9s" Meterbase, 3 "CTs," and 3 "PTs" if necessary. (PTs only on 277/480 installations).
2. Homeowner / Electrician to provide 36x36x12 inch minimum weatherproof enclosure with backplate and locking provisions. Cabinet shall be grounded
3. Homeowner / Electrician to install "9s" meterbase and 36 inch enclosure connected with 1 inch nipple.
4. Homeowner / Electrician to install CTs on backplate of 36 inch enclosure. Polarity dot on CTs must be on line side of cable. See Figure 1.
5. Homeowner / Electrician to label wires going into the CT / PT cabinet.
6. Wiring from CTs and PTs to meter will be completed by STEMC.
7. OH or UG to be determined by load and transformer sizing per STEMC engineering.
8. Installations over 800 amps shall have CTs and PTs placed inside STEMC transformer cabinet. Such installations do not require an enclosure.

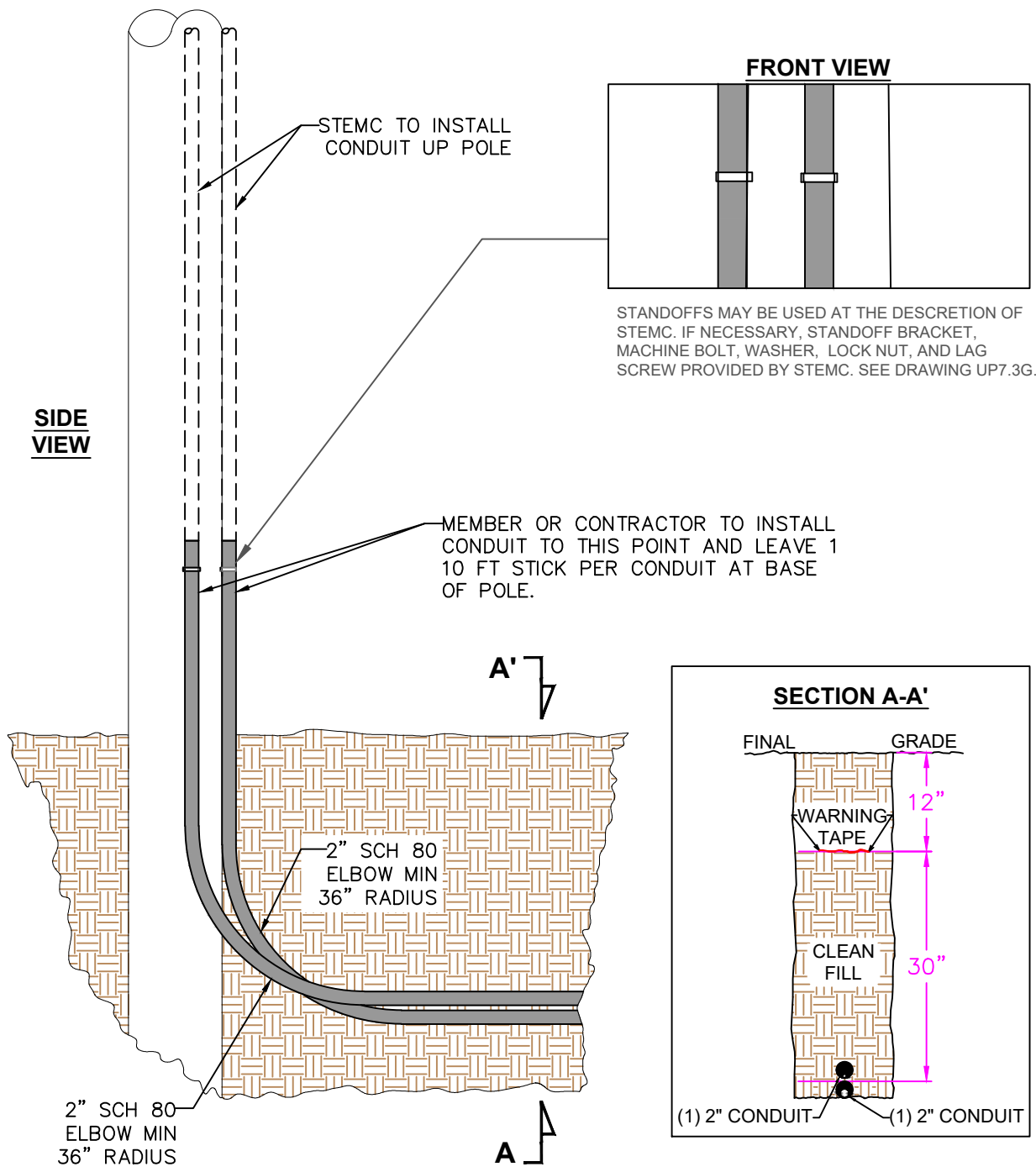


Southwest Tennessee Electric
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THREE PHASE INSTRUMENT RATED SERVICE
TYPICAL DETAIL
(600A - 800A)

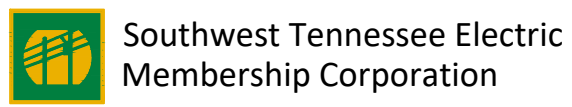
JANUARY 2024

UQ2.5G
(CT 3P)



NOTES:

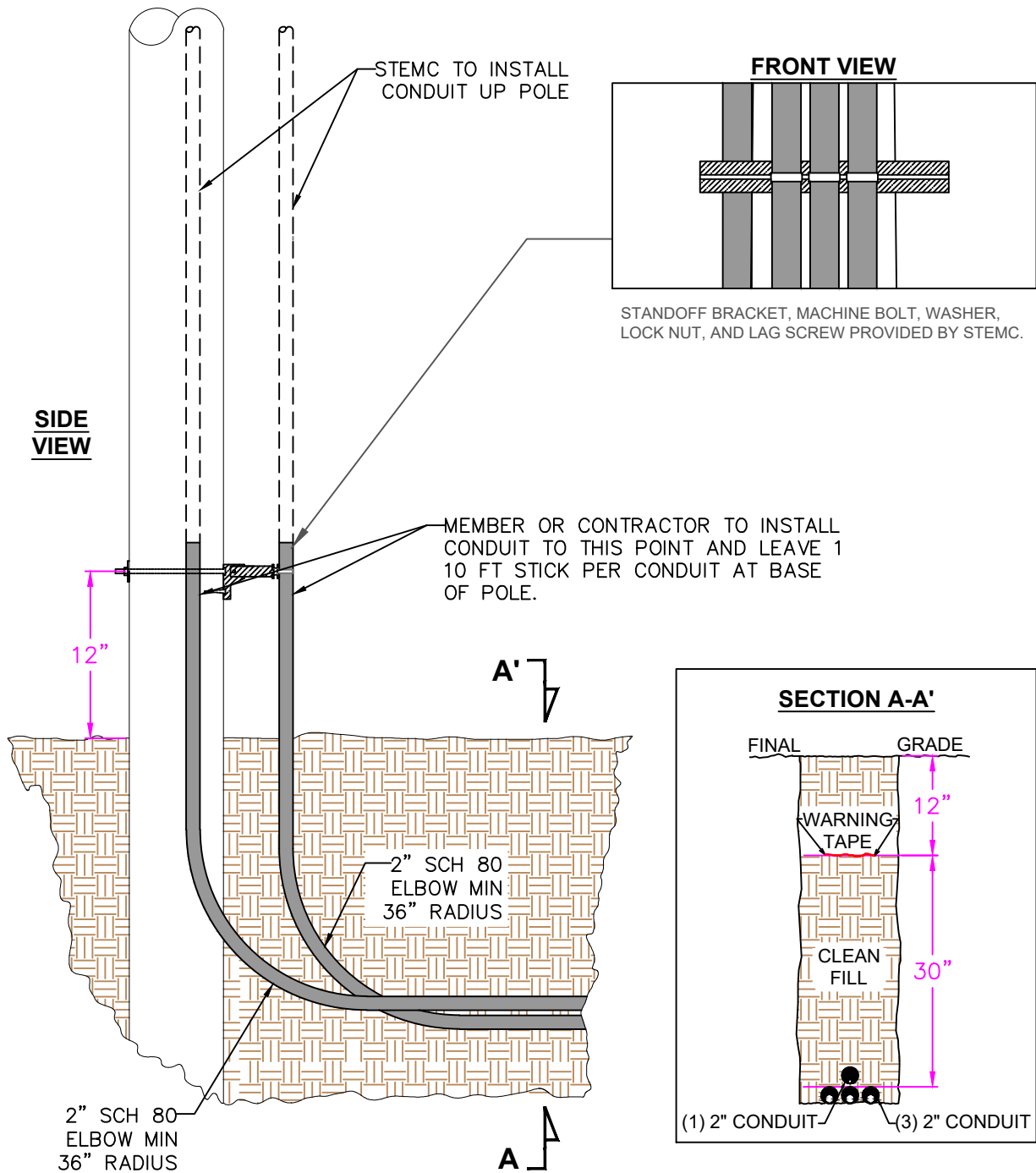
1. Trench shall be inspected by STEMC engineering before backfilling.
2. Member shall backfill with clean native earth and machine tamp.
3. Member shall install string ("mule tape" preferred) in each conduit with minimum rating of 2,500 lbs in conduit and cover ends to keep out water.
4. Member or contractor shall provide 1 stick (10-foot) of schedule 80 pvc or rigid per conduit. Leave at pole to be installed by STEMC.
5. Conduit below final grade shall be pvc, hdpe or rigid (schedule 40 or 80).
6. Rigid elbows may be required, as determined by STEMC engineering.



**TRENCH AND RISER DETAIL FOR 1Ø
PRIMARY CONDUIT INSTALLATION**

JANUARY 2024

UP7.1G



NOTES:

1. Trench shall be inspected by STEMC engineering before backfilling.
2. Member shall backfill with clean native earth and machine tamp.
3. Member shall install string ("mule tape" preferred) in each conduit with minimum rating of 2,500 lbs in conduit and cover ends to keep out water.
4. Member or contractor shall provide 1 stick (10-foot) of schedule 80 pvc or rigid per conduit. Leave at pole to be installed by STEMC.
5. Conduit below final grade shall be pvc, hdpe or rigid (schedule 40 or 80).
6. Rigid elbows may be required, as determined by STEMC engineering.

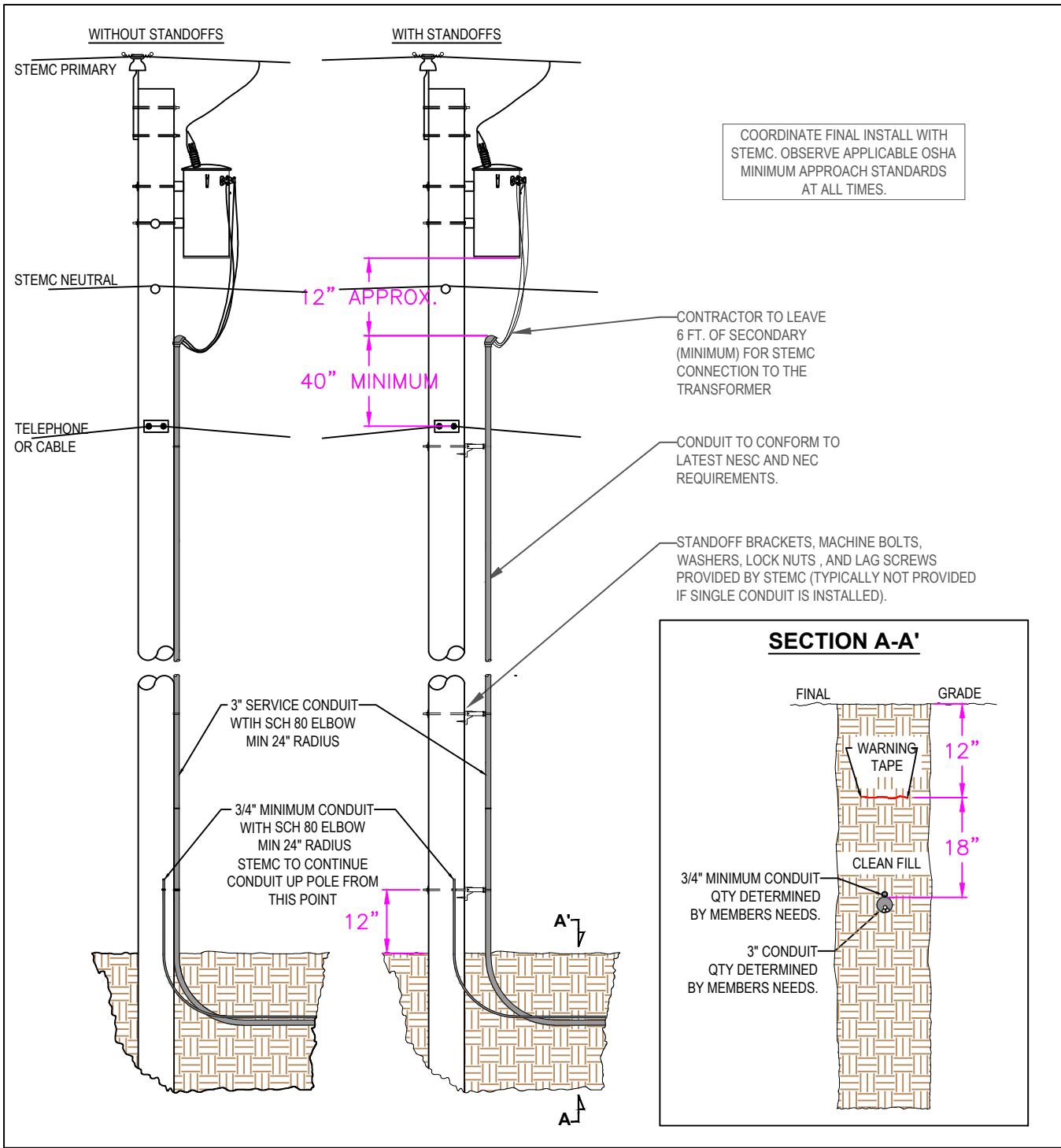


Southwest Tennessee Electric
Membership Corporation

TRENCH AND RISER DETAIL FOR 3Ø
PRIMARY CONDUIT INSTALLATION

JANUARY 2024

UP7.3G
(TRD)



NOTES:

1. All conduit at grade shall be schedule 80 pvc or rigid steel.
2. All conduit below final grade shall be pvc or hdpe (schedule 40 or 80).
3. Member shall backfill with clean native earth and machine tamp.
4. Member shall install string ("mule tape" preferred) with minimum rating of 2,500 lbs in conduit and cover ends to keep out water.
5. The State of Tennessee requires a rough-in inspection on trench for member owned secondaries. This applies to commercial general power accounts. This does not apply to STEMC installed residential secondaries.
6. STEMC does not issue permits.



Southwest Tennessee Electric
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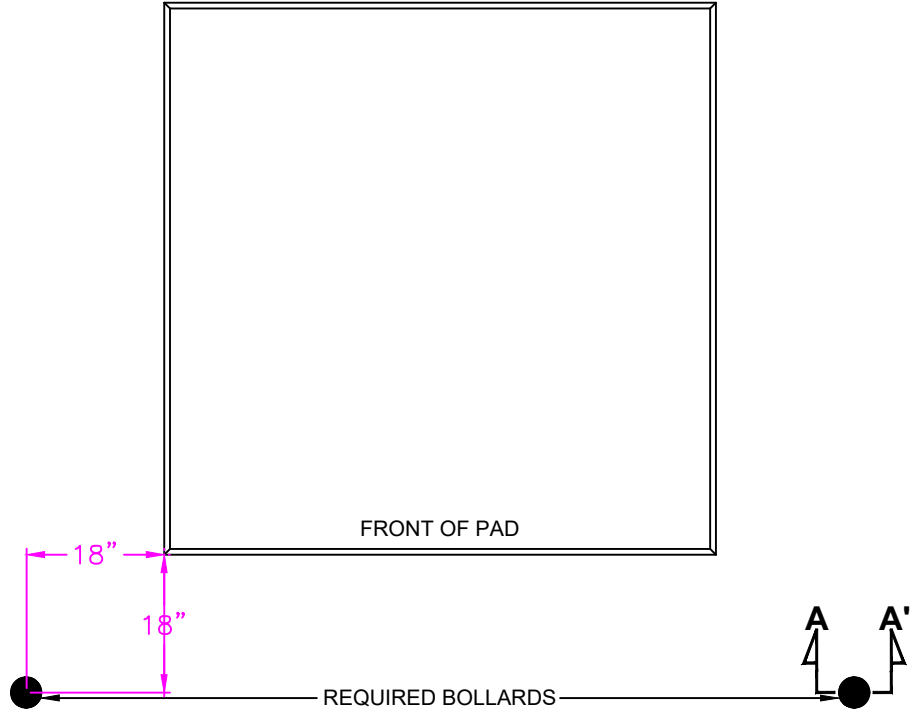
TRENCH AND RISER DETAIL FOR
UNDERGROUND SECONDARY

JANUARY 2024

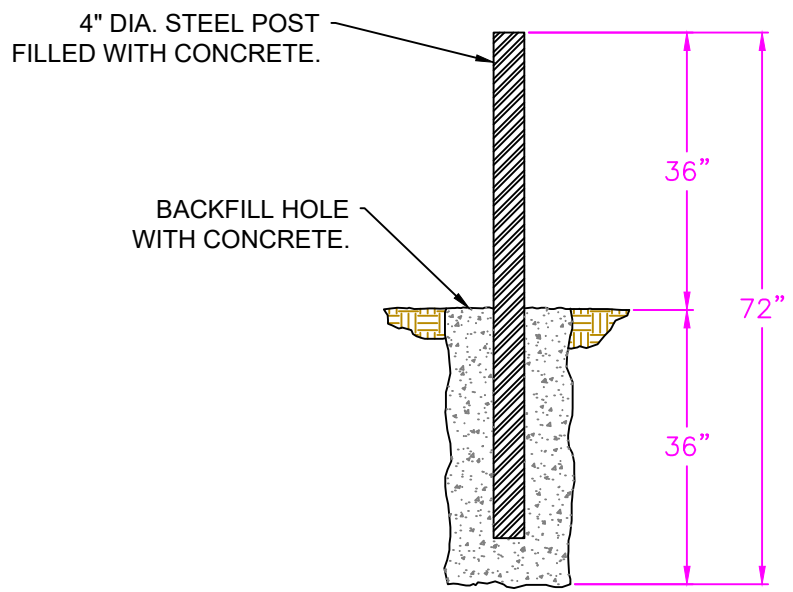
UP7.4G
(TD SEC)

BOLLARD LOCATION

POSSIBLE ADDITIONAL BOLLARD LOCATIONS (AS REQUIRED BY STEMC).



SECTION A-A'



NOTES:

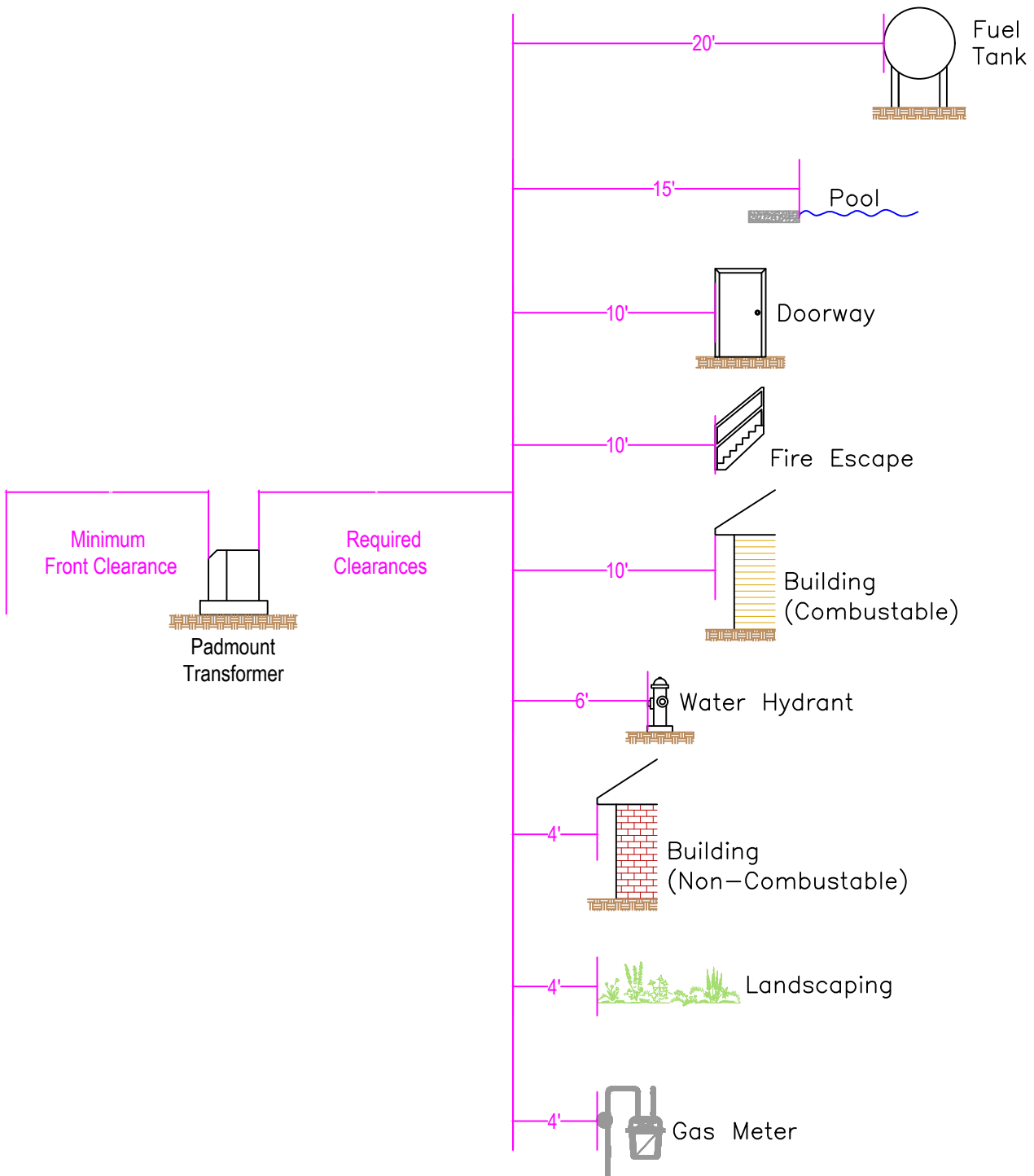


Southwest Tennessee Electric Membership Corporation

PROTECTIVE BOLLARD DETAIL

JANUARY 2024

UP9.1G
(PBD)



NOTES:

- Clearances from padmount transformer to structures are measured from the nearest metal portion of the transformer to the structure or any over hang.



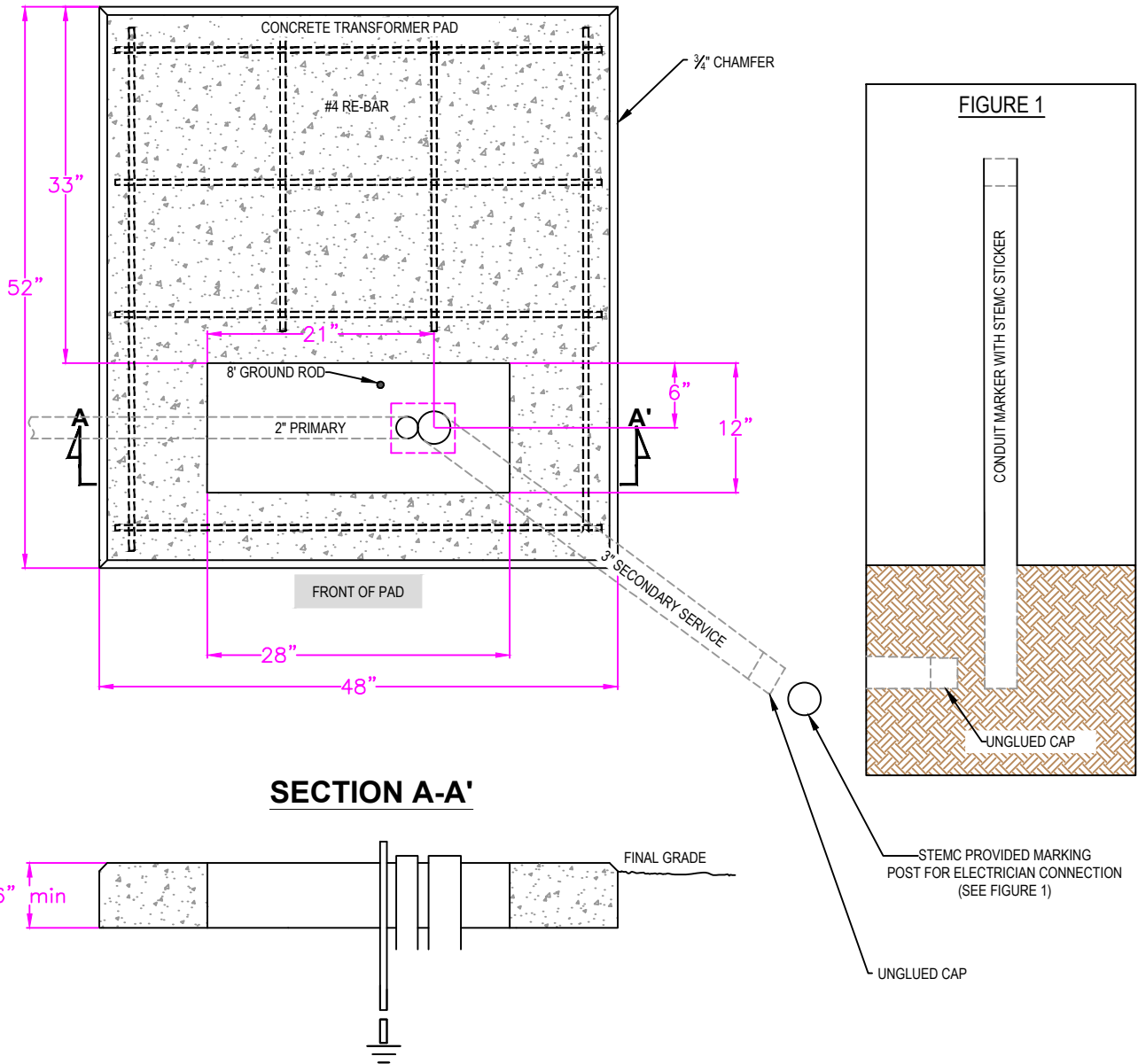
Southwest Tennessee Electric
Membership Corporation

CLEARANCE SPECIFICATIONS
FOR PAD MOUNTED TRANSFORMERS

JANUARY 2024

UG0.1G
(PMC1)

COMMERCIAL / GENERAL POWER



NOTES:

1. Pad shall be inspected by STEMC engineering before pouring concrete.
2. Ground beneath the transformer pad shall be leveled and thoroughly compacted.
3. The primary and secondary conduits shall be positioned as shown in the drawing.
4. Install 5/8 inch x 8 feet copper ground rod as indicated.
5. Bond # 4 solid copper to re-bar and ground rod.
6. Fiber reinforcement may be used in lieu of re-bar.
7. The concrete's minimum 28 day compressive strength shall be 2500 psi.
8. Install string ("mule tape" preferred) with minimum rating of 2,500 lbs in primary conduit and cover ends to keep out water.
9. Equipment shall be secured to pad according to manufacturers instructions.
10. If pad is installed prior to service conduit, elbows shall be installed and labeled as shown in figure 1.



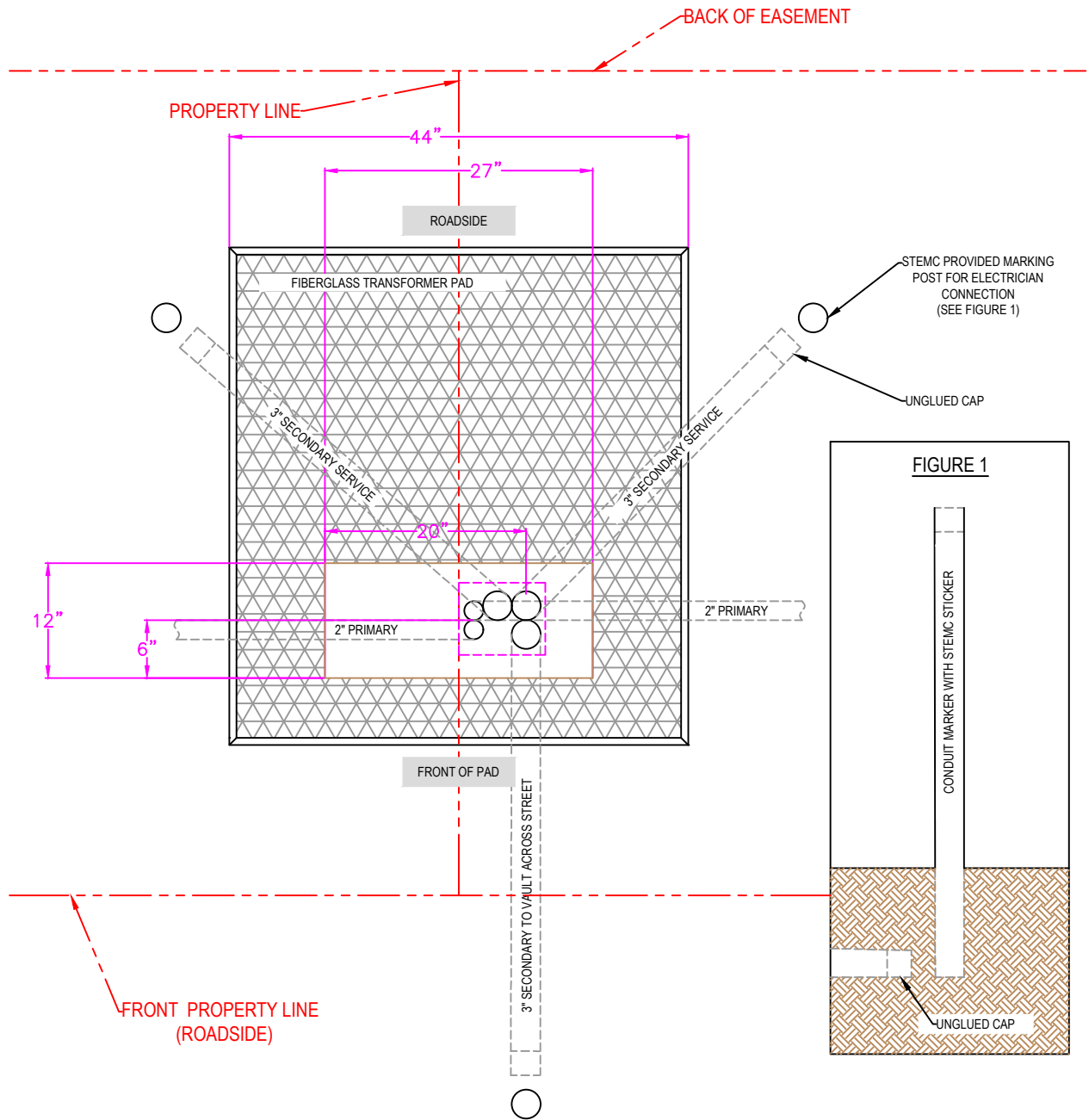
**Southwest Tennessee Electric
Membership Corporation**

CONCRETE PAD DETAIL FOR SINGLE PHASE(1Ø) PAD-MOUNT
TRANSFORMER

JANUARY 2024

UF1.C
(PM 1P)

RESIDENTIAL / SUBDIVISIONS



NOTES:

1. STEMC's standard is for ground sleeves to be installed on new transformers. Exceptions for fiberglass pads shall be approved by STEMC engineering. See drawing UF1.GS.
3. Pad shall be installed on level, compacted earth.
4. Transformer pad is to be centered on property line at 2 feet from back of easement, opening facing road, if within subdivision.
5. Conduit is to be bundled at 3/4 distance from left side of conduit opening with primary conduits on the left and secondary conduits on the right as shown above.
4. If pad is installed prior to service conduit, elbows shall be installed with labels as shown in figure 1.
5. Conduits markers will be provided by STEMC to mark the secondary conduit stubs, If necessary.
6. Member shall install string ("mule tape" preferred) with minimum rating of 2,500 lbs in conduit and cover ends to keep out water.



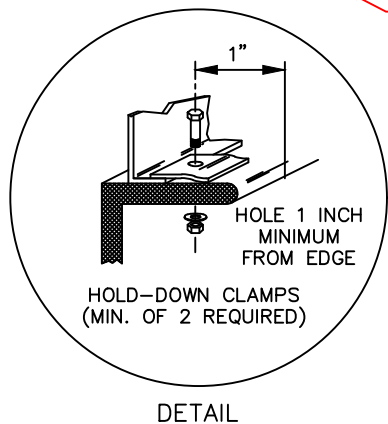
Southwest Tennessee Electric
Membership Corporation

FIBERGLASS PAD DETAIL FOR SINGLE PHASE(1Ø) PAD-MOUNT
TRANSFORMER

JANUARY 2024

UF1.FG
(PM 1P SD)

RESIDENTIAL / SUBDIVISIONS



DETAIL

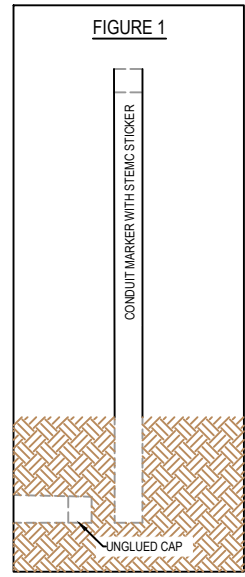
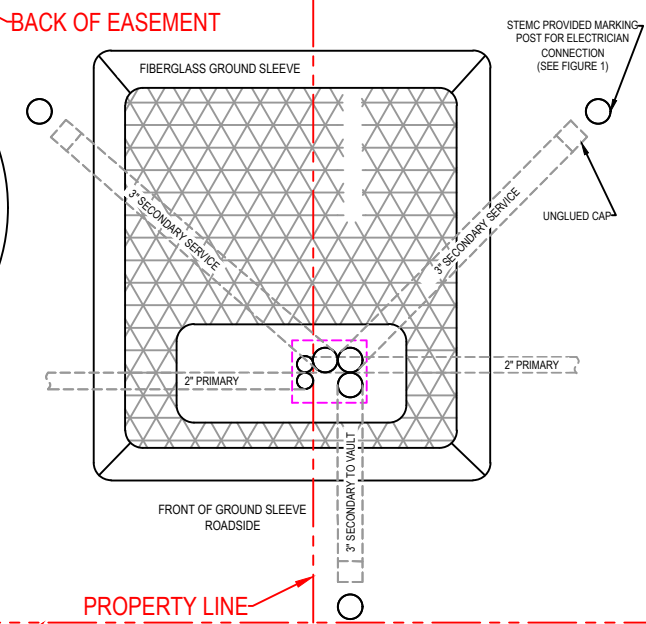
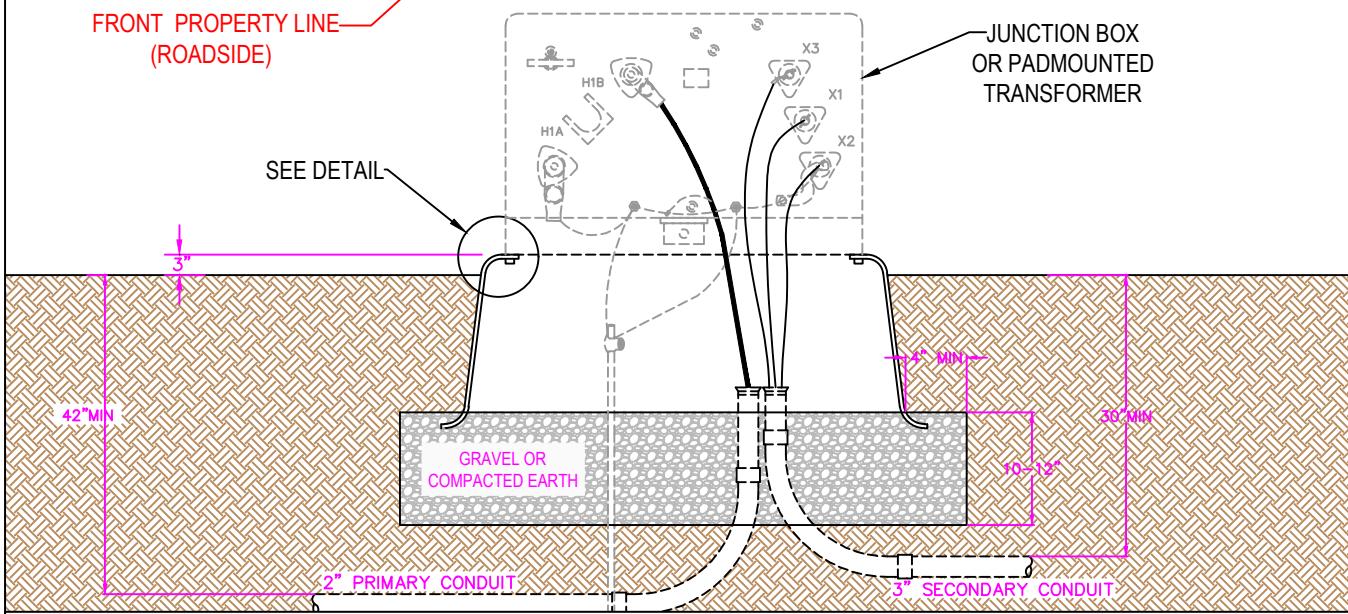


FIGURE 1

FRONT PROPERTY LINE (ROADSIDE)

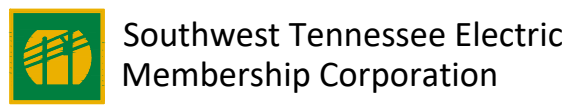
PROPERTY LINE

JUNCTION BOX OR PADMOUNTED TRANSFORMER



NOTES:

1. Ground sleeve shall be installed so that the surface is level.
2. Conduit is to be bundled at 3/4 distance from left side of conduit opening with primary conduits on the left and secondary conduits on the right as shown above.
3. Conduit elbows shall have 36 inch radius minimum.
4. If pad is installed prior to service conduit, elbows shall be installed and labeled as shown in figure 1.
5. Conduits markers will be provided by STEMG to mark the secondary conduit stubs. If necessary.
6. Openings in the top of ground sleeves may vary based on availability. Member shall confirm conduit placement with STEMG engineering.
7. Transformer ground sleeve is to be centered on property line at 2 feet from back of easement, if within subdivision.
8. Member shall install string ("mule tape" preferred) with minimum rating of 2,500 lbs in conduit and cover ends to keep out water.
9. Equipment shall be secured to pad according to manufacturers instructions.



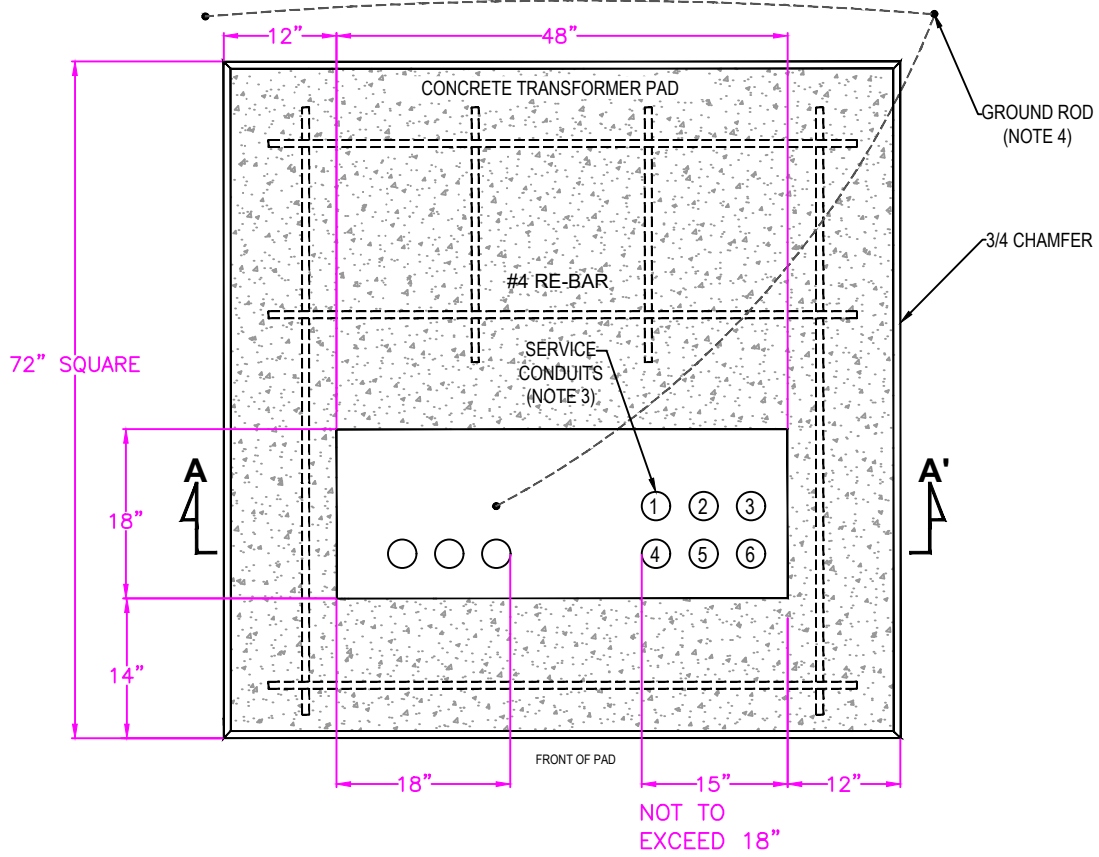
Southwest Tennessee Electric Membership Corporation

FIBERGLASS GROUND SLEEVE DETAIL FOR SINGLE PHASE(1Ø)
PAD-MOUNT TRANSFORMER

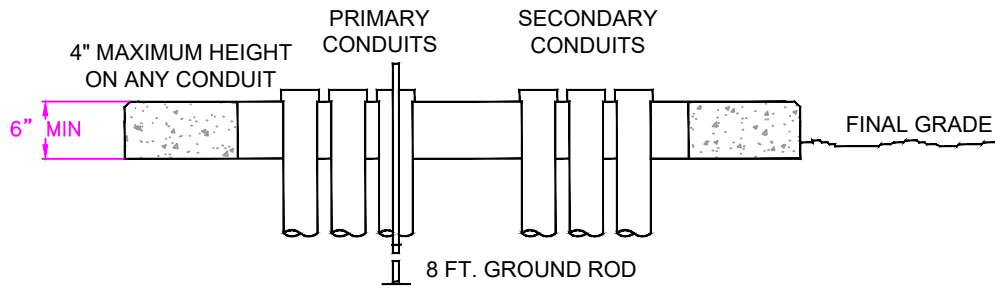
JANUARY 2024

UF1.GS

COMMERCIAL / GENERAL POWER



SECTION A-A'



NOTES:

1. Pad shall be inspected by STEMC engineering before pouring concrete.
2. Ground beneath the transformer pad shall be level and thoroughly compacted.
3. Service conduit positions are numbered according to location preference.
4. Three 5/8" x 8' copper ground rods (copperweld or equal) shall be installed; one in primary compartment of transformer, and two on the back side of the transformer pad. a #4 copper wire shall be installed between ground rods and attached to each ground rod with a ground rod clamp.
5. Bond #4 solid copper to rebar and ground rod.
6. 3-2 inch primary conduit to have min. 36 inch radius elbows and to be extended beyond edge of pad in direction indicated by engineering. Rigid elbows may be required, as determined by STEMC engineering.
7. The concrete minimum 28 day compressive strength shall be 2500 PSI.
8. Member shall install string ("mule tape" preferred) with minimum rating of 2,500 lbs in conduit and cover ends to keep out water.



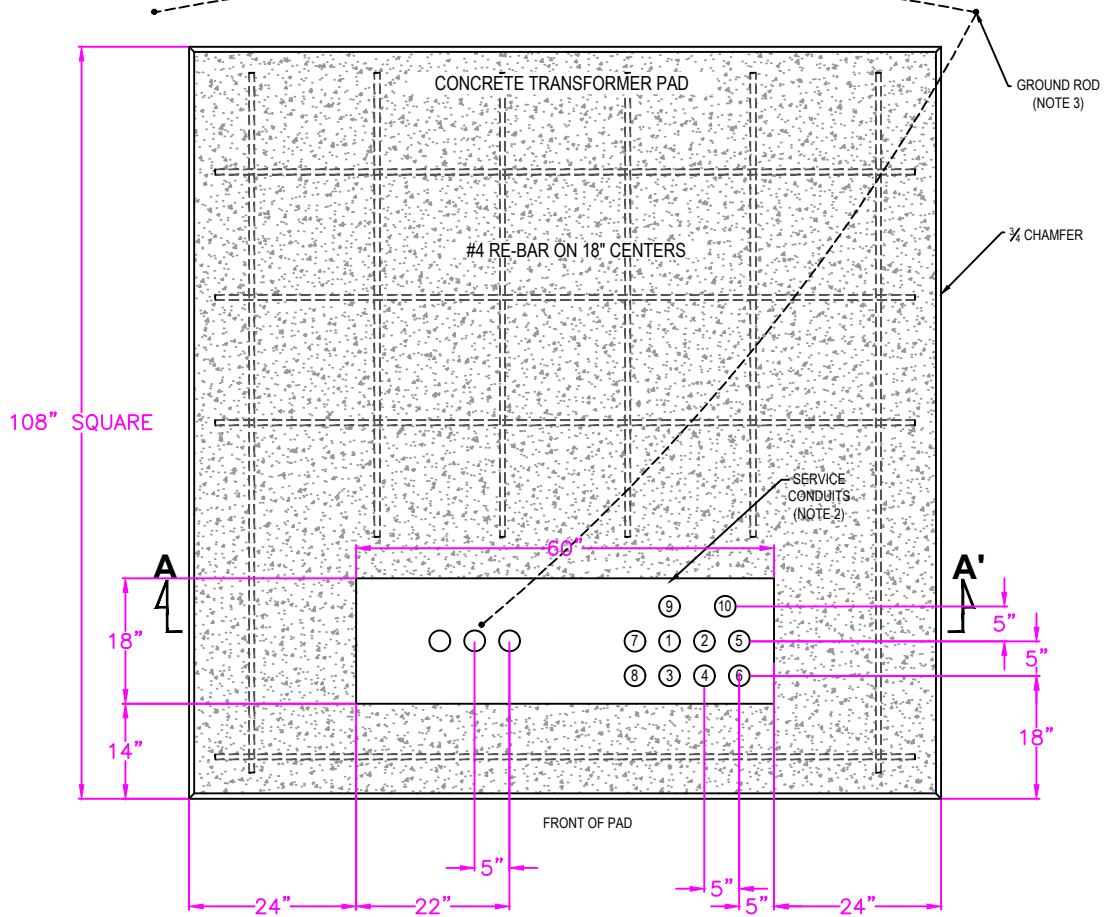
**Southwest Tennessee Electric
Membership Corporation**

**CONCRETE PAD DETAIL FOR 75-500 KVA, THREE-PHASE(3Ø)
PAD-MOUNT TRANSFORMER**

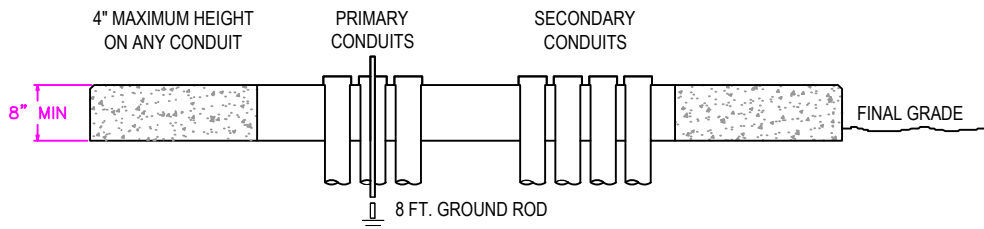
JANUARY 2024

UF3.1C
(PM 3P 75-500)

COMMERCIAL / GENERAL POWER



SECTION A-A'



NOTES:

1. Pad shall be inspected by STEMC engineering before pouring concrete.
2. Ground beneath the transformer pad shall be level and thoroughly compacted.
3. Service conduit positions are numbered according to location preference.
4. Three 5/8" x 8' copper ground rods (copperweld or equal) shall be installed; one in primary compartment of transformer, and two on the back side of the transformer pad. a #4 copper wire shall be installed between ground rods and attached to each ground rod with a ground rod clamp.
5. Bond #4 solid copper to rebar and ground rod.
6. 3-2 inch primary conduit to have min. 36 inch radius elbows and to be extended beyond edge of pad in direction indicated by engineering. Rigid elbows may be required, as determined by STEMC engineering.
7. The concrete minimum 28 day compressive strength shall be 2500 PSI.
8. Member shall install string ("mule tape" preferred) with minimum rating of 2,500 lbs in conduit and cover ends to keep out water.

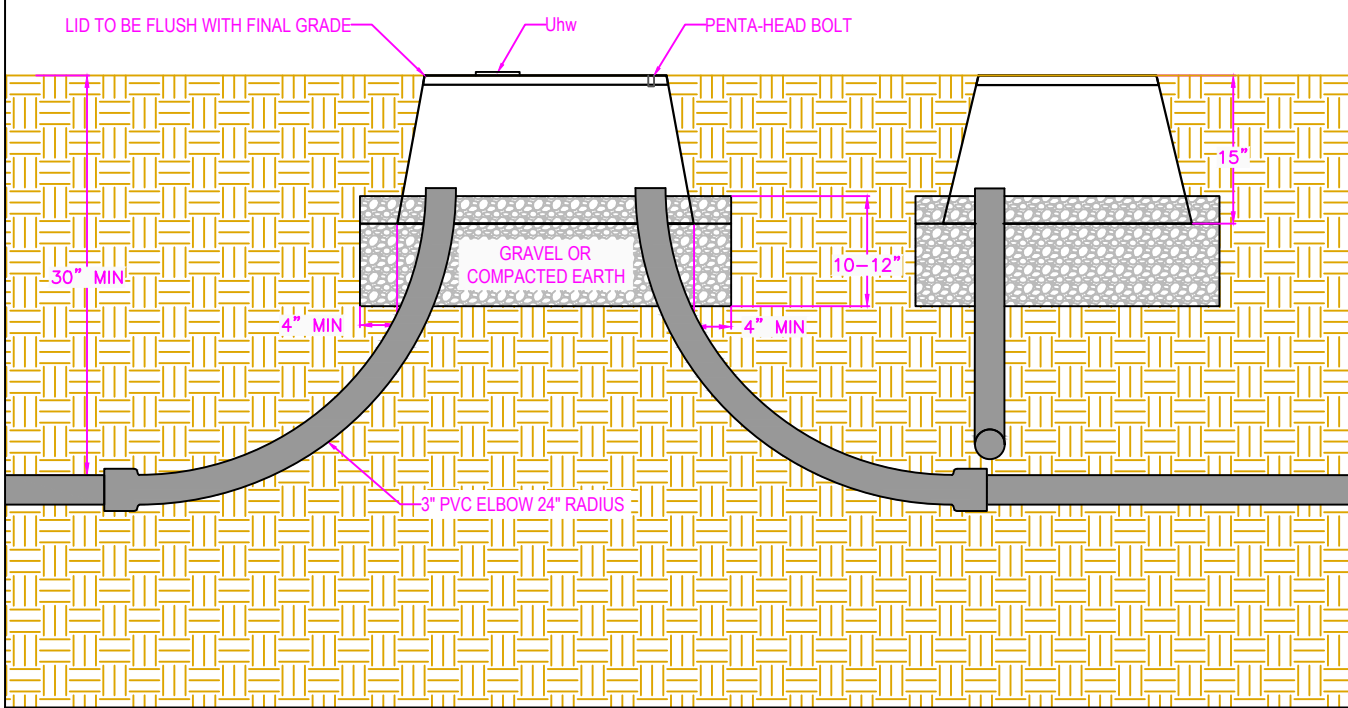
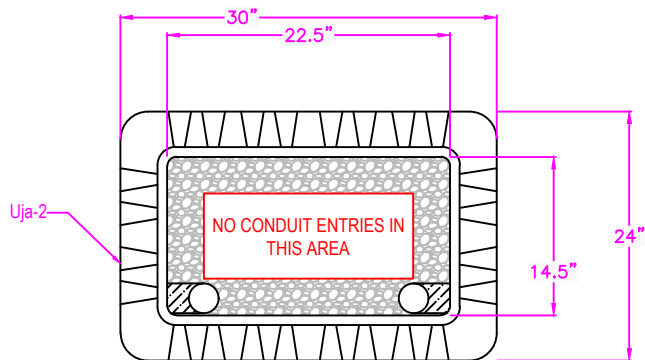


**Southwest Tennessee Electric
Membership Corporation**

**CONCRETE PAD DETAIL FOR 750-2500 kVA, THREE-PHASE(3Ø)
PAD-MOUNT TRANSFORMER**

JANUARY 2024


UF3.2C
(PM 750-2500)

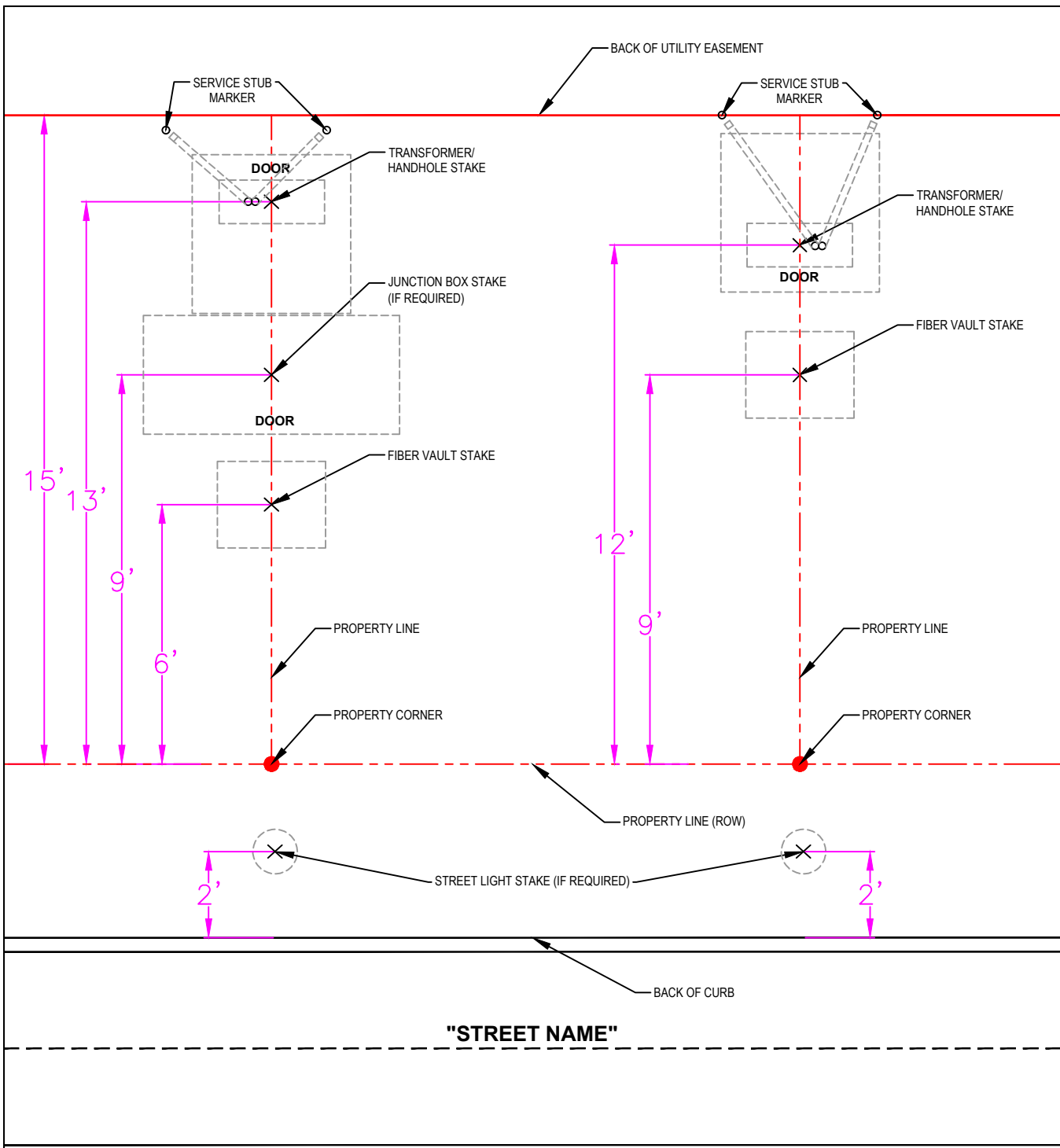


NOTES:

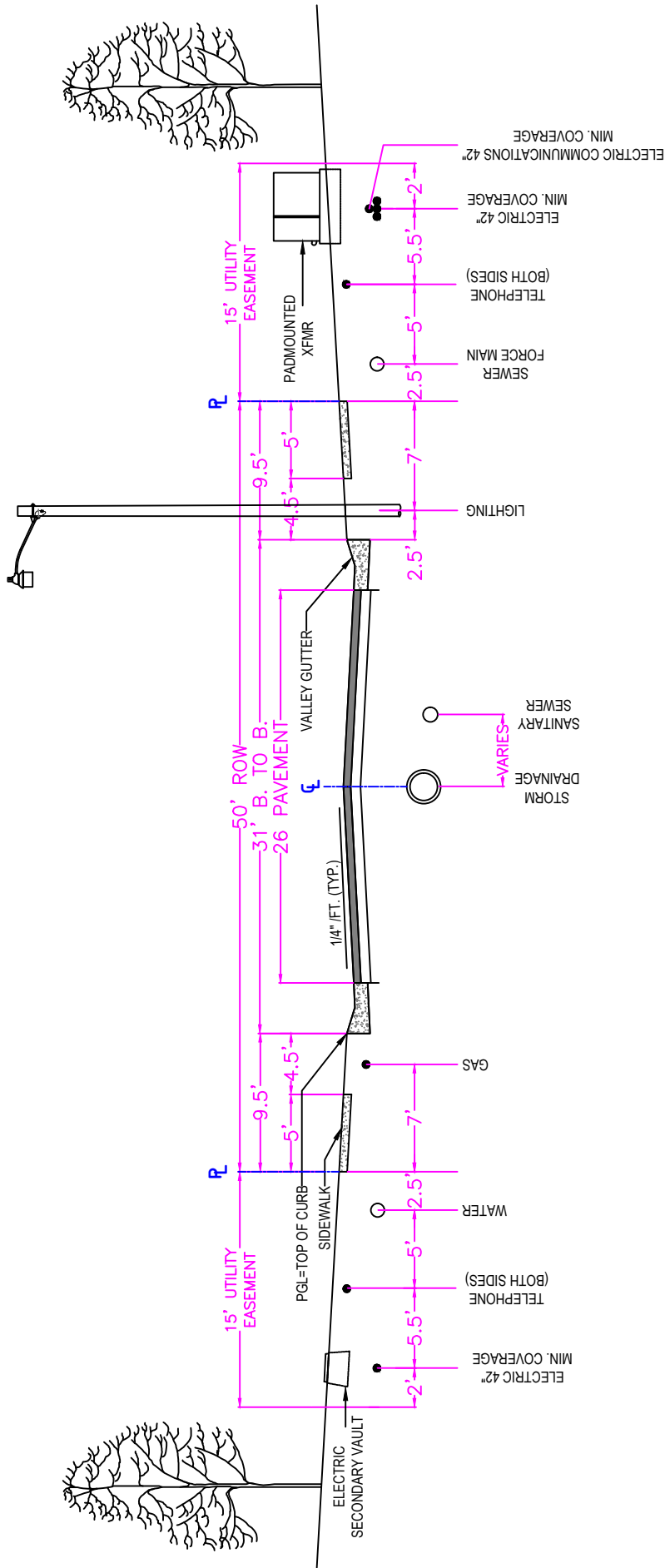
1. STEMC shall provide secondary vaults to member for installation.
2. Member or member's contractor is responsible for installation of 3 inch conduit, elbows, and vault.
3. Conduit elbows shall have 24 inch radius minimum.
4. Vault shall be installed such that the lid is flush with final grade.
5. STEMC will install secondary cable.
6. STEMC may require gravel backfill.

ASSEMBLY: UJ6			.1	-
ITEM	#	MATERIAL	QTY	
Uja-2	7605	Equipment box, fiberglass	1	
Uhw	-	Safety signs	-	
-	-	PVC Elbows as required	-	
-	-	-	-	

DESIGN PARAMETERS: -		SECONDARY VAULT (HANDHOLE) BELOW GRADE ENCLOSURE	
		12.47/7.2 KV	UJ6.1
JAN 2024			



- NOTES:
1. Any requested street light locations shall be staked 2 feet away from back of curb in line with the members property line.
 2. All junction boxes shall be staked 9 feet away from the property corner on the member's property line.
 3. All transformers and handholes shall be staked 12 feet away from the property corner on the member's property line unless junction box is required. Then stake 13 feet from back of curb.
 4. Property line starts at edge of ROW. 50 foot ROW is typical, 25 foot from centerline of road.



NOTES:

1. If ROW is not 50 ft, adjust distance from curb using URD Staking drawing to maintain distances from back of easment.
2. In general, Electric is installed along one side of the roadway at every other lot line with secondary cables crossing to the other side of the roadway. In some instances, primary cable and transformers will be required on both sides of the roadway.
3. Power Communications is installed in the same ditch as the power conduit. This applies to trenching, boring, and road crossings.
4. Specific locations of utilities may vary by jurisdiction.



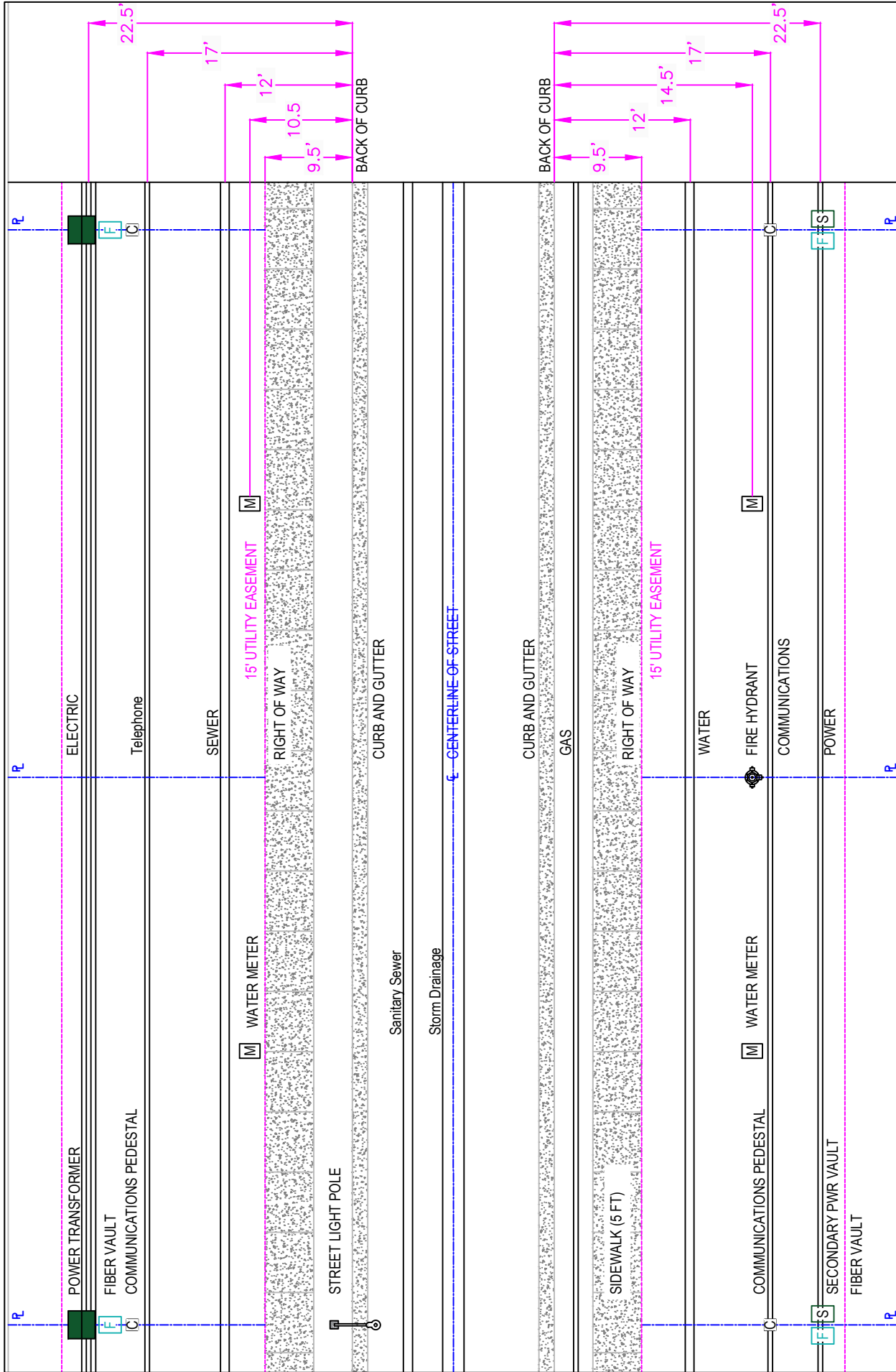
**Southwest Tennessee Electric
Membership Corporation**


TYPICAL UTILITIES CROSS SECTION WITH 50' RIGHT OF WAY

NOT TO SCALE

OCTOBER 2023

UZZ.1G
(TUCS)



 <p>Southwest Tennessee Electric Membership Corporation</p>	<p>TYPICAL UTILITIES PLAN WITH 50' RIGHT OF WAY</p>	<p>UZZ2G (TUP)</p>
<p>NOT TO SCALE</p>	<p>OCTOBER 2023</p>	<p>UZZ2G (TUP)</p>